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World Heritage Committee

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Evaluations of Cultural Properties

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Secrétariat ICOMOS International

49-51 rue de la Fédération

75015 Paris

France

Tel : 33 (0)1 45 67 67 70

Fax : 33 (0)1 45 66 06 22

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I Introduction

ICOMOS Analysis of nominations

In 2010, ICOMOS was called on to evaluate 50 nominations.

They consisted of:

21 new nominations,
6 referred back nominations,
1 deferred nomination,
1 renomination on the basis of cultural criteria,
5 extensions, and
16 minor modifications

The *geographical spread* is as follows:

<i>Europe and North America</i>	Total: 23 nominations 18 countries (8 new nominations, 7 minor modifications, 4 referred back, 4 extensions) (22 cultural properties, 1 mixed properties)
<i>Latin America Caribbean</i>	Total: 3 nominations 2 countries (2 new nominations, 1 referred back) (3 cultural properties)
<i>Arab States</i>	Total: 6 nominations 2 countries (1 new nomination, 5 minor modifications) (6 cultural properties)
<i>Africa</i>	Total: 3 nominations 3 countries (2 new nominations and 1 renomination on the basis of cultural criteria) (3 cultural properties)
<i>Asia-Pacific</i>	Total: 15 nominations 11 countries (8 new nominations, 1 referred back, 1 deferred, 1 extension, and 4 minor modifications) (14 cultural properties, 1 mixed property)

General remarks

1. Quality and complexity of nomination dossiers

Generally speaking, ICOMOS notes that nominations are increasingly complex, sometimes to the detriment of the dossiers' clarity and coherence.

Certain nominations would benefit if more time were taken over legal questions and over the finalisation or adoption of plans and the carrying out of research.

ICOMOS hopes that the publication of the *Resource Manual for the Preparation of Nominations*, of which the printed version will be presented at the World Heritage Committee session in Brasilia, will help the States Parties to improve the quality of nomination dossiers.

In general, the weakest parts of the nomination dossiers from a methodological viewpoint are the comparative analysis, integrity and monitoring.

When evaluating the comparative analysis included in nomination dossiers, ICOMOS examines the methodology used by the State Party and the relevance of the examples given by using the following parameters. Comparisons should be drawn with properties expressing the same values as the nominated property and within a defined geo-cultural area. Therefore the values need to be clearly defined and the geo-cultural framework should be determined according to these values. Comparisons should be drawn with similar properties already inscribed on the World Heritage List and with other examples at national and international level within the defined geo-cultural area.

On the basis of the above, ICOMOS is thus able to state if the comparative analysis is complete or not and if it justifies or not consideration of the property for the World Heritage List.

If the material provided by the State Party is considered incomplete or insufficient according to the parameters given above, ICOMOS initiates a range of actions such as seeking and receiving further information from the State Party, checking relevant ICOMOS thematic studies, and the wealth of information available about properties already evaluated and/or inscribed on the World Heritage List, and on the Tentative List and consulting the

ICOMOS network of experts to provide further insights.

ICOMOS wishes to point out that its role is to evaluate the properties and not the nominations (i.e. the dossiers). Similarly, it evaluates the protection, conservation and management of the property **at the time of the nomination** and not at some time in the future after the adoption of the laws and management plans. It is the duty of ICOMOS to indicate to the Committee whether or not adequate protection and management are in place prior to inscription. It should be noted that in all cases, intelligent protection, conservation and management measures are of greater value than hypothetical plans.

2. ICOMOS evaluations

In its recommendations, ICOMOS clearly distinguishes between nominations which are recommended to be *referred back* and those which are *deferred*. For referred back nominations, outstanding universal value has been demonstrated to the satisfaction of ICOMOS; supplementary information must be supplied to satisfy other requirements of *Operational Guidelines*, but no further technical evaluation mission will be required. For deferred nominations, the very nature of the information requested (a more thorough study, major reconsideration of boundaries, a request for a substantial revision, or serious gaps as regards management and conservation issues) means that a new mission and consideration by the full ICOMOS World Heritage Panel are necessary to evaluate the nomination again, and to ensure that it has the consideration needed to advance the nomination further.

At the request of the World Heritage Committee, ICOMOS will present at the 34th session in Brasilia an information document concerning the processes, points of reference and time constraints arising from decisions to refer back or defer the examination of a nomination.

The objective of ICOMOS is the conservation and long-term protection and presentation of the cultural heritage, whether or not it is of outstanding universal value. In formulating its recommendations, ICOMOS aims to be as helpful as possible to State Parties.

ICOMOS is well aware that it cannot please everyone. Despite being under considerable pressure, not only from State Parties, it must remain objective, rigorous and scientific, and its first duty remains the conservation of properties.

3. Strengthening of dialogue with State Parties

Two measures introduced in 2008 with a view to improving and strengthening dialogue with the State Parties have been maintained.

The ICOMOS World Heritage Panel meeting was held at the beginning of December 2009 instead of during January 2010, so that the letters requesting additional information could be sent out earlier, leaving the State Parties more time to reply.

Furthermore, the process of sending out requests for additional information has been made on the same systematic basis as last year. The quality of the replies provided by the State Parties has in many cases confirmed or assisted the final recommendations adopted by ICOMOS.

4. "Minor" modifications to boundaries

The number of such requests has greatly increased (from 2 requests in 2005 to 16 requests in 2010). They originate either from monitoring, the retrospective inventory or periodic reporting.

The examination of these requests involves substantial work for ICOMOS in terms of examining the initial nomination, progress reports on conservation and earlier decisions of the World Heritage Committee, research, consultations and analysis. This year several requests for minor modifications were made by State Parties in respect of a report on the state of conservation or a retrospective inventory. To ensure that they are examined in the most favourable conditions, ICOMOS encourages State Parties to submit a separate request within the prescribed deadlines, i.e. 1st February at the latest, while complying with the procedures set out in the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS also notes that all modifications to the boundaries of a property and its buffer zone are proposed as "minor" modifications, even when they constitute in fact substantial modifications to the property, or even in some cases an extension of the property. According to the *Operational Guidelines*, proposals for major modifications, whether extensions or reductions, constitute a new nomination (paragraph 165). ICOMOS recommends to the Committee that this provision should be consistently and rigorously applied.

5. Serial nominations and extensions

The *Operational Guidelines* stipulate that for serial properties, the component parts must be related and the series **as a whole** must have outstanding universal value (paragraph 137).

ICOMOS is aware that this is an active matter for consideration by the World Heritage Committee.

This year, ICOMOS has examined 10 serial nominations, including 822 monuments, ensembles and sites. These require a more substantial investment in terms of human and financial resources at all levels of evaluation of the properties. Because the number of serial nominations is growing, this needs to be taken into account in the budgets and contracts. Furthermore, ICOMOS notes that there are also calendar pressures arising from the task of evaluating these large and complex serial nominations and suggests that the World Heritage Committee give consideration to an extended timeframe for these.

A specific evaluation format has been set up in 2009 for the serial nominations and extensions. ICOMOS has tried to make explicit for the Committee, the questions it asks in relation to the nature of serial nominations:

- a) What is the justification for the serial approach?
- b) How were the chosen sites selected? (How do they each relate to the overall Outstanding Universal Value of the property?)
- c) Does the comparative analysis justify the selection of sites?
- d) Are the separate components of the property functionally linked?
- e) Is there an overall management framework for all components?

The answers to these questions have been integrated in the evaluation format under relevant sections.

This year, ICOMOS evaluated 5 extensions to properties already inscribed on the World Heritage List.

In evaluating these extensions, ICOMOS examines the attributes of the original nomination and considers how these might be exemplified, extended, complemented or amplified by the attributes of the proposed extension, while bearing the same outstanding universal value.

The assessment of criteria is carried out in relation to the criteria used for the existing inscription and how they might apply to the proposed extension. The

same criteria should be justified for the original inscription and the proposed extension. For a small extension, the proposed area might amplify some of the attributes of the original nomination but not all of them. Different or new attributes might also be identified within the proposed extension but they should bear the same values as those already recognised as outstanding.

6. Development projects

To address the growing need to identify development projects within World Heritage properties during the evaluation cycle, ICOMOS has introduced to its letters sent to the States Parties a specific question to bring to our attention any development projects that are planned within the nominated property and in its vicinity and to receive any information concerning these potential projects. This has been introduced to respond to growing concern by the World Heritage Committee about such development plans and projects. The Committee might wish to apply similar provisions for nominations during their assessment procedure as those stipulated by paragraph 172, inviting the States Parties to inform the Committee of "their intention to undertake or to authorize in an area protected under the *Convention* major restorations or new constructions which may affect the outstanding universal value of the property [...]."

Furthermore, ICOMOS has prepared a "Guidance on impact assessments for cultural World Heritage sites", which will be made available in English and French at the 34th session of the World Heritage Committee.

7. Issue of calendar and timing

ICOMOS is working under increasing time pressure due to the growing number of complex nominations (serial properties and cultural landscapes). Furthermore, in the past, supplementary information received from States Parties was examined after the meeting of the Bureau of the World Heritage Committee, following the initial assessment process for nominations. Today this examination encroaches upon this assessment period.

ICOMOS procedure

The ICOMOS procedure is described in Annex 6 of the *Operational Guidelines for the Implementation of the World Heritage Convention*. It is regulated by the *Policy for the implementation of the ICOMOS World Heritage mandate* (revised in November 2007), a document which brings together a variety of practices and decisions that have been previously adopted by the Advisory Body in the context of its work with the evaluation of nominations to the World Heritage List, and other aspects of implementation of the World Heritage Convention. This document is available on the ICOMOS web site: (www.international.icomos.org).

This policy makes public the existing procedure, and sets out how ICOMOS approaches its world heritage remit in a fair and credible manner, in order to avoid conflicts of interest.

The evaluation of nominations is coordinated by the *World Heritage Unit* of the International Secretariat of ICOMOS, in collaboration with the ICOMOS World Heritage Working Group and the ICOMOS World Heritage Panel.

The ICOMOS World Heritage Working Group consists of officers of ICOMOS, the World Heritage Unit and ICOMOS advisers. It meets three or four times a year, and is responsible for the guidance and orientation of work relating to the World Heritage.

The ICOMOS World Heritage Panel, which brings together some thirty persons, is made up of members of the ICOMOS Executive Committee and of experts who are invited each year depending on the specific types of heritage represented in the nominations (rock art, 20th century heritage, industrial heritage, etc.). TICCIH and DoCoMoMo are also invited to participate in discussions relevant to their expertise on a year by year basis. The high diversity of the Panel represents the various professional, geographical and cultural sensibilities present at the international level. It prepares the ICOMOS recommendations for each nomination.

For each nominated property, ICOMOS assesses:

- Whether it bears testimony of an outstanding universal value:
 - whether it meets the criteria of the *Operational Guidelines*;
 - whether it meets the conditions of authenticity and integrity;
- Whether legal protection is adequate;
- Whether the management processes are satisfactory.

All properties are given equal attention, and ICOMOS also makes every effort to be as objective, scientific and rigorous as possible.

In order to reinforce consistency of the evaluations and recommendations, including requests for supplementary information to be sent to State Parties, ICOMOS uses a check box tool.

A specific session with the advisers was organized in October 2009 to ensure consistency of approach on certain aspects throughout all evaluations.

ICOMOS has completed the external review process of the principles, methods and procedures used in evaluating nominations. The final report has been formally accepted by the ICOMOS Executive Committee and it will be made available to the World Heritage Committee together with the ICOMOS response.

1. Preparatory work

The preparatory work is done in several stages:

a. Initial study of dossiers: This first stage of the work consists of the creation of an inventory of the nomination dossier documents, a study of them to identify the various issues relating to the property and the choice of the various experts who will be called on to study the dossier (ICOMOS advisers, experts for mission, experts for consultations). A compilation of all relevant comparative material (Tentative Lists, properties already on the World Heritage List, nomination dossiers, "filling the gaps" ICOMOS study...) is prepared in order to assist the work of the advisers on the specific item of comparative analysis.

b. Consultations: Experts are consulted to obtain their opinion about the comparative analysis and the

outstanding universal value of the nominated properties with reference to the ten criteria set out in the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), § 77.

For this purpose, ICOMOS calls on the following:

- ICOMOS International Scientific Committees;
- Individual ICOMOS members with special expertise, identified after consultation with International and National Committees;
- Non-ICOMOS members with specific expertise, identified after consultation within the ICOMOS networks.

For the nominations to be considered by the World Heritage Committee at its 34th session, 100 experts have been consulted for desk reviews in the framework of the consultation process.

c. Technical evaluation missions: ICOMOS, when choosing its experts, as a rule calls on a person from the region in which the nominated property is located. The missions are required to study the authenticity, integrity, factors affecting the property, protection, conservation and management (*Operational Guidelines*, § 78).

Experts are sent a copy of the nomination (or all relevant parts of it, when the dossier is very extensive), a note with key questions based on a preliminary examination of the dossiers, documentation on the Convention and detailed guidelines for evaluation missions.

All experts have a duty of confidentiality. Their opinion about the nomination does not necessarily reflect that of the organisation; it is the ICOMOS World Heritage Panel which, after acquainting itself with all the information, analyses it and determines the organisation's position.

Missions are sent to all the nominated properties except in the case of nominations referred back for which the *Operational Guidelines* do not stipulate that a mission is necessary. (Note: The principle is that properties are referred back because additional information is necessary, and not because thorough or substantial modifications are needed; the deadlines set in the *Operational Guidelines* mean moreover that it is not possible to organise missions, desk reviews or consideration by the full ICOMOS World Heritage Panel for properties referred back).

31 experts representing 25 countries took part in field missions as part of the evaluation of the 28

nominated properties, which in turn represented 24 countries.

In view of the scale and complexity of three properties, particularly those included in serial nominations, ICOMOS had to send two experts instead of one to carry out the mission for the properties concerned.

Technical evaluation missions were carried out jointly with IUCN for the nomination of two mixed properties and one renomination on the basis of cultural criteria.

This year IUCN attended ICOMOS panel meeting as observer and ICOMOS participated to a conference call that was organised during IUCN panel meeting. ICOMOS and IUCN have also exchanged views and draft recommendations concerning mixed properties.

ICOMOS received comments from the IUCN concerning five cultural landscapes nominations. This information has been taken into account by ICOMOS in its recommendations, as indicated in the reports.

This year, ICOMOS has evaluated the potential cultural values of natural properties nominated for inscription. The evaluations were communicated to the IUCN during their evaluation period, and have moreover been included in this volume of evaluations.

2. Evaluations and recommendations

a. ICOMOS World Heritage Panel: Draft evaluations and recommendations (in either English or French) were prepared on the basis of the information contained in the nomination dossiers, mission reports, consultations and research and examined by the ICOMOS World Heritage Panel at a meeting in Paris from 3 to 6 December 2009.

b. Additional information request: Additional information requests for some of the nominated properties were sent to the State Parties by 31 January 2010, in accordance with the normal procedure. All documents received by 28 February 2010 were examined by the World Heritage Working Group at its meeting on 15-17 March 2010.

c. Finalisation of the evaluation volume and its presentation to the World Heritage Committee: Following these meetings, revised evaluations have been prepared in both working languages, printed and dispatched to the UNESCO World Heritage Centre for distribution to members of the World Heritage Committee for its 34th session in July 2010.

Nominated properties and ICOMOS recommendations will be presented to the World Heritage Committee by ICOMOS advisers in PowerPoint form.

As an advisory body, ICOMOS makes a recommendation based on an objective, rigorous and scientific analysis. However, decisions are the responsibility of the World Heritage Committee. The process relies on the Committee members and their knowledge of the nominations and the evaluations published by the advisory organisations.

3. Dialogue with State Parties

ICOMOS makes every effort to maintain dialogue with the State Parties throughout the nomination evaluation process, i.e. following receipt of the nominations, during and after the technical evaluation mission, and following the meeting of the ICOMOS World Heritage Panel. The information requested relates to precise details or clarifications, but does not invite a complete reformulation of the nomination dossier.

4. Referred back nominations and requests for minor modifications

On 1st February preceding the World Heritage Committee meeting, ICOMOS also receives supplementary information on nominations referred back during previous sessions of the Committee. As indicated above, ICOMOS does not organise technical evaluation missions for the evaluation of this supplementary information. It was examined by the World Heritage Working Group, which this year met on 15-17 March 2010.

ICOMOS also examines requests for "minor" modifications to boundaries or creation of buffer zones, and for changes of criteria or name for some properties already inscribed on the World Heritage List. 16 requests were submitted by the State Parties concerned before 1st February this year, however ICOMOS received for examination 5 requests well past this deadline. At the request of the World Heritage Centre, all requests have been examined and included in the following document: WHC-10/34.COM/INF.8B1.Add.

5. Conclusion

All the evaluated cultural properties are remarkable and deserving of protection and conservation. In reaching its recommendations to the World Heritage Committee, ICOMOS relies on the *Operational Guidelines* and the direction of the World Heritage Committee.

The opinion of ICOMOS is both independent and institutional. The opinion of one of its members is not binding on the organisation, and the evaluation texts are each the work of between 40-50 persons for each nomination, with several stages of in-depth peer review. ICOMOS represents cultural heritage experts throughout the five regions and is working to protect the entire cultural heritage of the world.

ICOMOS takes a professional view of the dossiers reviewed, and when appropriate makes recommendations for all the properties for which nominations have been submitted to it, independently of the outstanding regional or universal scope of their values.

Paris, April 2010

Cultural and Mixed Properties
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Brazil	C 1272rev	São Francisco Square in the Town of São Cristóvão	Add
China	C 1305rev	Historic Monuments of Dengfeng in “The Centre of Heaven and Earth”	Add
Ethiopia	C 1333	The Konso Cultural Landscape	40
France	C 1337	The Episcopal City of Albi	231
Germany	C 623ter	Upper Hartz Water Management System (Extension to Mines of Rammelsberg and Historic Town of Goslar)	297
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Israel	C 1105rev	The Triple-arch Gate at Dan	Add
Israel	C 1309	Sites of Christianity in the Galilee	245
Kenya	C 1295	Fort Jesus, Mombasa	51
Marshall Islands	C 1339	Bikini Atoll	144
Mexico	C 1351	Camino Real de Tierra Adentro	Add
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United Republic of Tanzania	C 39bis	Ngorongoro Conservation Area	62
United States of America	C 1327	Mount Vernon	288
United States of America	N/C 1326	Papahānaumokuākea Marine National Monument	30
Vietnam	C 1328	The Central Sector of the Imperial Citadel of Thang Long – Hanoi	171

Cultural and Mixed Properties

Nominations by category

New nominations (21)		
Australia	C 1306	Australian Convict Sites
Belarus/Poland	C 1304	Augustowski Canal: a work of man and nature
Belgium	C 1344	The Major Mining Sites of Wallonia
Ethiopia	C 1333	The Konso Cultural Landscape
France	C 1337	The Episcopal City of Albi
India	C 1338	The Jantar Mantar, Jaipur
Iran	C 1345	Sheikh Safi al-din Khānegāh and Shrine Ensemble in Ardabil
Iran	C 1346	Tabriz Historic Bazaar Complex
Israel	C 1309	Sites of Christianity in the Galilee
Kenya	C 1295	Fort Jesus, Mombasa
Marshall Islands	C 1339	Bikini Atoll
Mexico	C 1351	Camino Real de Tierra Adentro
Mexico	C 1352	Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca
Netherlands	C 1349	Seventeenth-century canal ring area of Amsterdam inside the Singelgracht
Republic of Korea	C 1324	Historic Villages of Korea: Hahoe and Yangdong
Saudi Arabia	C 1329	At-Turaif District in ad-Dir'yah
Sri Lanka	N/C 1203	The Central Highlands of Sri Lanka: Its Cultural and Natural Heritage
United Kingdom	C 1247	Darwin's Landscape Laboratory
United States of America	C 1327	Mount Vernon
United States of America	N/C 1326	Papahānaumokuākea Marine National Monument
Vietnam	C 1328	The Central Sector of the Imperial Citadel of Thang Long – Hanoi
Referred back nominations (6)		
Austria	C 931bis	City of Graz – Historic Centre and Schloss Eggenberg
Brazil	C 1272rev	São Francisco Square in the Town of São Cristóvão
China	C 1305rev	Historic Monuments of Dengfeng in “The Centre of Heaven and Earth”
Israel	C 1105rev	The Triple-arch Gate at Dan
Romania	C 598bis	Church of the Resurrection of Sucevița Monastery (Extension to the Churches of Moldavia)
Spain/Mexico/Slovenia	C 1313rev	The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí
Deferred nomination (1)		
Tajikistan	C 1141rev	Sarazm
Renomination on the basis of cultural criteria (1)		
United Republic of Tanzania	C 39bis	Ngorongoro Conservation Area

Extensions (5)

Germany	C 623ter	Upper Hartz Water Management System (Extension to Mines of Rammelsberg and Historic Town of Goslar)
India	C 944quater	Matheran Light Railway (Extension to the Mountain Railways of India)
Norway	C 55bis	Røros Mining Town and the Circumference (Extension to Røros Mining Town)
Spain	C 866bis	Palaeolithic Rock Art Ensemble in Siega Verde (Extension to Prehistoric Rock-Art Sites in the Côa Valley, Portugal)
Ukraine	C 527ter	Kiev: Saint-Sophia Cathedral with Related Monastic Buildings, St. Cyril's and St. Andrew's Churches, Kiev Pechersk Lavra (Extension to Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra)

Cultural and Mixed Properties

Geographical spread of nominations

Africa		
3 State Parties, 3 nominations		
Ethiopia	C 1333	The Konso Cultural Landscape
Kenya	C 1295	Fort Jesus, Mombasa
United Republic of Tanzania	C 39bis	Ngorongoro Conservation Area
Arab States		
1 State Party, 1 nomination		
Saudi Arabia	C 1329	At-Turaif District in ad-Dir'yah
Asia – Pacific		
9 State Parties, 11 nominations		
Australia	C 1306	Australian Convict Sites
China	C 1305rev	Historic Monuments of Dengfeng in “The Centre of Heaven and Earth”
India	C 944quater	Matheran Light Railway (Extension to the Mountain Railways of India)
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Marshall Islands	C 1339	Bikini Atoll
Republic of Korea	C 1324	Historic Villages of Korea: Hahoe and Yangdong
Sri Lanka	N/C 1203	The Central Highlands of Sri Lanka: Its Cultural and Natural Heritage
Tajikistan	C 1141rev	Sarazm
Vietnam	C 1328	The Central Sector of the Imperial Citadel of Thang Long – Hanoi
Europe – North America		
15 State Parties, 16 nominations		
Austria	C 931bis	City of Graz – Historic Centre and Schloss Eggenberg
Belarus/Poland	C 1304	Augustowski Canal: a work of man and nature
Belgium	C 1344	The Major Mining Sites of Wallonia
France	C 1337	The Episcopal City of Albi
Germany	C 623ter	Upper Hartz Water Management System (Extension to Mines of Rammelsberg and Historic Town of Goslar)
Israel	C 1309	Sites of Christianity in the Galilee
Israel	C 1105rev	The Triple-arch Gate at Dan
Netherlands	C 1349	Seventeenth-century canal ring area of Amsterdam inside the Singelgracht
Norway	C 55bis	Røros Mining Town and the Circumference (Extension to Røros Mining Town)
Romania	C 598bis	Church of the Resurrection of Sucevița Monastery (Extension to the Churches of Moldavia)
Spain	C 866bis	Palaeolithic Rock Art Ensemble in Siega Verde (Extension to Prehistoric Rock-Art Sites in the Côa Valley, Portugal)
Spain/Mexico/ Slovenia	C 1313rev	The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí
Ukraine	C 527ter	Kiev: Saint-Sophia Cathedral with Related Monastic Buildings, St. Cyril's and St. Andrew's Churches, Kiev Pechersk Lavra (Extension to Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra)
United Kingdom	C 1247	Darwin's Landscape Laboratory
United States of America	C 1327	Mount Vernon

United States of America	N/C 1326	Papahānaumokuākea Marine National Monument
Latin America and the Caribbean		
2 State Parties, 4 nominations		
Brazil	C 1272rev	São Francisco Square in the Town of São Cristóvão
Mexico	C 1351	Camino Real de Tierra Adentro
Mexico	C 1352	Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca
Spain/Mexico/ Slovenia	C 1313rev	The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí

Cultural and Mixed Properties
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598	bis	Romania	Church of the Resurrection of Sucevița Monastery (Extension to the Churches of Moldavia)	Add
623	ter	Germany	Upper Hartz Water Management System (Extension to Mines of Rammelsberg and Historic Town of Goslar)	297
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931	bis	Austria	City of Graz – Historic Centre and Schloss Eggenberg	Add
944	quater	India	Matheran Light Railway (Extension to the Mountain Railways of India)	197
1105	rev	Israel	The Triple-arch Gate at Dan	Add
1141	rev	Tajikistan	Sarazm	184
1203		Sri Lanka	The Central Highlands of Sri Lanka: Its Cultural and Natural Heritage	19
1247		United Kingdom	Darwin's Landscape Laboratory	273
1272	rev	Brazil	São Francisco Square in the Town of São Cristóvão	Add
1295		Kenya	Fort Jesus, Mombasa	51
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1305	rev	China	Historic Monuments of Dengfeng in "The Centre of Heaven and Earth"	Add
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Cultural and Mixed Properties
Technical evaluation mission experts

State Party	ID number	Name of the property	Field mission	Date
New Nominations				
Australia	C 1306	Australian Convict Sites	Christophe Sand (New Caledonia) Aidan Challis (New Zealand)	August/ September 2009 August 2009
Belarus/Poland	C 1304	Augustowski Canal: a work of man and nature	Stephen Hughes (United Kingdom)	September 2009
Belgium	C 1344	The Major Mining Sites of Wallonia	Helmuth Albrecht (Germany)	October 2009
Ethiopia	C 1333	The Konso Cultural Landscape	John Sutton (Kenya)	October/ November 2009
France	C 1337	The Episcopal City of Albi	Werner Desimpelaere (Belgium)	September 2009
India	C 1338	The Jantar Mantar, Jaipur	Sharif Shams Imon (Bangladesh)	September/ October 2009
Iran	C 1345	Sheikh Safi al-din Khānegāh and Shrine Ensemble in Ardabil	Ratish Nanda (India)	October 2009
Iran	C 1346	Tabriz Historic Bazaar Complex	Zeinep Ahunbay (Turkey)	August 2009
Israel	C 1309	Sites of Christianity in the Galilee	Amund Sinding-Larsen (Norway)	October 2009
Kenya	C 1295	Fort Jesus, Mombasa	Bako Rakotomamonjy (Madagascar)	August 2009
Marshall Islands	C 1339	Bikini Atoll	Stephen Brown (Australia)	September 2009
Mexico	C 1351	Camino Real de Tierra Adentro	Ruben García Miranda (Uruguay) Paul Daniel Marriot (United States of America)	August 2009 August/ September 2009
Mexico	C 1352	Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca	Maria Isabel Hernandez Llosas (Argentina)	October 2009
Netherlands	C 1349	Seventeenth-century canal ring area of Amsterdam inside the Singelgracht	Giancarlo Barbato (Italy)	September/ October 2009
Republic of Korea	C 1324	Historic Villages of Korea: Hahoe and Yangdong	Lynne di Stefano (Canada)	September 2009
Saudi Arabia	C 1329	At-Turaif District in ad-Dir'yah	Mahmoud Hawari (United Kingdom)	September/ October 2009
Sri Lanka	N/C 1203	The Central Highlands of Sri Lanka: Its Cultural and Natural Heritage	Jane Lennon (Australia)	September/ October 2009
United Kingdom	C 1247	Darwin's Landscape Laboratory	Bernhard Furrer (Switzerland)	September/ October 2009

State Party	ID number	Name of the property	Field mission	Date
United States of America	C 1327	Mount Vernon	Julian Smith (Canada)	September 2009
United States of America	N/C 1326	Papahānaumokuākea Marine National Monument	Ian Lilley (Australia)	August 2009
Vietnam	C 1328	The Central Sector of the Imperial Citadel of Thang Long – Hanoi	Lu Zhou (China)	September 2009
Referred back nominations				
Austria	C 931bis	City of Graz – Historic Centre and Schloss Eggenberg	Joseph Stulc (Czech Republic)	September 2008
Brazil	C 1272rev	São Francisco Square in the Town of São Cristóvão	Dora Arizaga Guzmán (Ecuador)	August 2007
China	C 1305rev	Historic Monuments of Dengfeng in “The Centre of Heaven and Earth”	Juliet Ramsay (Australia)	September 2008
Israel	C 1105rev	The Triple-arch Gate at Dan	John Hurd (United Kingdom)	September 2007
Romania	C 598bis	Church of the Resurrection of Sucevița Monastery (Extension to the Churches of Moldavia)	Elka Bakalova (Bulgaria)	September 2008
Spain/Mexico/ Slovenia	C 1313rev	The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí	Spain/Slovenia: Nikos Belavilas (Greece) Mexico: Jaime Migone (Chile)	September/ October 2008 August 2008
Deferred nomination				
Tajikistan	C 1141rev	Sarazm	Yelena Khorosh (Kazakhstan)	August 2009
Renomination on the basis of cultural criteria				
United Republic of Tanzania	C 39bis	Ngorongoro Conservation Area	Ntsizi November (South Africa) Tyler Faith (United States of America)	October 2009 October 2009
Extensions				
Germany	C 623ter	Upper Hartz Water Management System (Extension to Mines of Rammelsberg and Historic Town of Goslar)	Hildebrand de Boer (The Netherlands)	September 2009
India	C 944quater	Matheran Light Railway (Extension to the Mountain Railways of India)	Gion Caprez (Switzerland)	October/ November 2009
Norway	C 55bis	Røros Mining Town and the Circumference (Extension to Røros Mining Town)	Cristina Castel-Branco (Portugal)	August 2009
Spain	C 866bis	Palaeolithic Rock Art Ensemble in Siega Verde (Extension to Prehistoric Rock-Art Sites in the Côa Valley, Portugal)	Jean Clottes (France)	August 2009
Ukraine	C 527ter	Kiev: Saint-Sophia Cathedral with Related Monastic Buildings, St. Cyril's and St. Andrew's Churches, Kiev Pechersk Lavra (Extension to Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra)	Alkiviades Prepis (Greece)	September 2009

III Nominations of mixed properties to the World Heritage List

A Asia - Pacific

New Nominations

Central Highlands (Sri Lanka) No 1203

Official name as proposed by the State Party:

The Central Highlands of Sri Lanka: Its cultural and natural heritage

Location:

Central and Sabaragamuwa Provinces
Sri Lanka

Brief description:

The nominated property is located in the mountainous region of the central highlands and comprises the Peak Wilderness Protected Area (PWPA), the Horton Plains National Park (HPNP), and the Knuckles Conservation Forest (KCF). Adam's Peak in the PWPA bears witness to a cultural-religious tradition dating back to the pre-Christian era, the HPNP contains traces of human occupation since the Mesolithic era and of early agricultural practices (17,600–16,000 years BP), the KCF has revealed traces of human occupation in the Mesolithic period and the Iron Age and is still inhabited by traditional communities that have been isolated until recently.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a serial nomination of three *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), paragraph 47, it is also nominated as a *cultural landscape*.

[Note: The property is nominated as a mixed cultural and natural site. IUCN will assess the natural significance and ICOMOS the cultural significance.]

1. BASIC DATA

Included in the Tentative List: 20 March 2006

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 29 January 2008

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committees on Cultural Landscapes, Archaeological Heritage Management, and Intangible Heritage. ICOMOS has also consulted several independent experts.

Literature consulted (selection):

CINSA (Cultural Information Network for South Asia) Cultural Abstracts Volume One, Number one *Special issue on Archaeology in Sri Lanka*, 1990 Colombo, Central Cultural Fund, 1994.

Deraniyagala, S.U., *Early man and the rise of civilisation in Sri Lanka: the archaeological evidence*, in Nandana Chutiwongs and Nimal De Silva (eds.), *Roland Silva Felicitation Volume*, Colombo, 2008.

Wijeratne, A. P., *Religio-cultural tourism and the local community: Sri Lankan experience*, ICOMOS-Korea, Seoul, 2006.

Wijesuriya, G., *The past is in the present: Perspectives in caring for Buddhist heritage sites in Sri Lanka*, ICCROM, Rome, 2005.

Wijesuriya, G., *La vie du Bouddha à travers les sites du patrimoine mondial*, *World Heritage Review*, 33 (2003), pp. 4-19.

Technical Evaluation Mission: A joint ICOMOS/IUCN mission visited the site on 23 September-2 October 2009.

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property consists of three different areas: the Peak Wilderness Protected Area (PWPA) covering 20,596ha; the Horton Plains National Park (HPNP) covering 3,109ha; and the Knuckles Conservation Forest (KCF) covering 31,305ha. The PWPA is buffered by an area of 37,571ha, the HPNP has no buffer zone, and the KFC has a buffer zone of 35,074ha.

The PWPA consists of a rugged mountainous region covered by rainforest with a cone-shaped physiographic feature, Adam's Peak, as the highest feature in the range. At its summit the Peak has an indentation that is believed to be the footprint of the Lord Buddha; this has endowed the mountain with religious significance, which has attracted devotees since early times. At the present time some two million people, mostly pilgrims, climb the peak each year using trails. There are numerous religious practices associated with the Peak, mostly related to the pilgrimage.

The HPNP comprises a tableland (2,000m a.s.l.) with a cold climate and subject to strong winds. The Plains are

for the most part covered with grass and herbaceous plants. Recent archaeological and palaeoecological surveys have revealed several prehistoric sites dating back to as much as 24,000 years BP. The dimensions of these sites suggest that the earliest occupation was probably in the form of seasonal camps, whilst the palaeoecological evidence provides information on the adaptation of prehistoric man's lifestyle to changing climate conditions. In the Post-Glacial period, under more favourable conditions, hunter-gatherer practices became associated with early slash-and-burn agriculture, herding, and the initial steps in cereal (oats, barley) cultivation around 17,600–16,000 years BP), whilst the first signs of systematic cultivation appear between 13,000 and 8,700 years BP when wild species of rice were grown.

The KCF is a mountainous area, separated from the PWPA and the HPNP, which are located in the Central Massif, by a 80km wide stretch of forested mountainous land. Recent archaeological investigations in the area have discovered caves with evidence of occupation starting in the Mesolithic period. The Gorahadigala Caves have produced bones of several species and stone implements with faint traces of retouching. Other interesting sites are the Uyangamuwa, Valagamba, and Nariyagala Caves, where traces of a much later period have been identified, mainly consisting of a 'drip ledge' chiselled along the brow of the overhanging boulder at the entrance of the cave, so as to divert rainwater away from the entrance. These caves were used by Buddhist monks from around 200–100 BCE.

Despite the remoteness of the area, there are a number of villages in the Knuckles Range, some of which were hardly touched by modern civilization until recent times. Pre-Colonial texts record the presence of several Vedda settlements in the Knuckles region, some of which have been identified. The impact of modern developments over recent years is resulting in the disappearance of the traditional culture of these communities.

History and development

The history of Adam's Peak is full of legends. According to the *Mahavamsa*, the Great Chronicle of Sri Lanka, the projection of Buddha's image is believed to have visited Sri Lanka in 550 BCE and to have planted one foot at the north of the royal city (Anuradhapura) and the other at the top of a mountain (*Sri Pada* or Adam's Peak). In the 11th century CE the reigning monarch, King Vijayabahu I, climbed the Peak with his army for the first time. In the 13th century King Panditha Parakrama Bahu I climbed the Peak and decided to make it less difficult for the pilgrims to reach the summit. Marco Polo visited the place in the 13th century and Ibn Battuta a century later. During the reign of King Magha, Buddhists were persecuted and monks fled in great numbers to neighbouring countries such as Burma, Thailand, and Laos. To continue their worship of the Buddha's footprint, the *Sri Pada*, they made replicas that were

installed in temples abroad. As a result, the worship of the *Sri Pada* spread in South-East Asia, a practice that has continued unbroken since the 13th century. When the monks returned they brought these replicas back to the temples of Sri Lanka and the cult of the *Sri Pada* by means of small-scale copies became popular in the country. Over the centuries, right up to the present day, Adam's Peak has grown in importance as a place for worship.

The cultural heritage of the HPNP is connected with its prehistory. Archaeological findings demonstrate that the area was occupied by Mesolithic people. Recent systematic archaeological investigations based on scientific analysis have yielded evidence of hunting and foraging during the glacial maximum (24,000–18,500 BP). Traces of slash-and-burn and grazing practices have been detected in the following period, whilst during the Post-Glacial period (17,600–16,000 BP) evidence of the beginning of the management of cereals (oats and barley) has been found. The systematic cultivation of rice occurred in the period 13,000–8,700 BP. By that time the cultivation of oats and barley had decreased. Between 8,000 and 3,600 BP with increasingly dry conditions agriculture decreased and in the following period the area appears to have been almost deserted.

The KCF has traces of human life dating back to the Mesolithic period, the Early Iron Age, and the Pre-Colonial period (before 1505 CE). Several sites dated at 30,000 BP have been identified and associated relics, primary tool types, and microliths, have been found. A number of caves that were occupied by Mesolithic man have recently been identified. The area is rich in prehistoric evidence and further research is expected to provide additional information about its occupation in prehistory.

Several caves with drip-ledges dating from the Iron Age (2nd century BCE to 1st century CE) have been discovered.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis included in the nomination dossier is developed independently for the components of the serial nomination. With regard to Adam's Peak in the PWPA, the nomination dossier acknowledges that other Buddhist monuments and places of worship have been inscribed on the World Heritage List (in India and Nepal, for example), but it asserts that Adam's Peak possesses many distinctive features that make it unique in relation to those sites. These include the centuries-old cultural and religious practices followed by hundreds of thousands of devotees who climb the Peak every day to venerate the Sacred Footprint.

So far as the archaeological evidence from Horton Plains is concerned, the significance relates to its global context, the origin of agriculture, which marks the dawn of the Neolithic Revolution, dating back to 14,000–10,000 years BP. East Asian sites such as Xianrendong (China) have yielded evidence of rice-based subsistence patterns as early as 14,000 BP. In South-East Asia, in Mesopotamia, and in the Ghaba Valley in north-west Syria evidence has been found of systematic cereal cultivation as early as 13,000 BP. Siliceous microfossil evidence indicates that early agriculture appeared in the New World in 10,000 BP. The results of exhaustive research carried out at Horton Plains have revealed that agriculture flourished there 13,000 years ago and that this region witnessed the development of the earliest civilization based on rice, oats, and barley domestication dating back to more than 15,000 BP.

ICOMOS first considers that the comparative analysis should have been carried out for the whole serial nomination and not for each separate component.

Secondly, ICOMOS considers that no comparison has been made for the KCF, whilst for the PWPA and the HPNP the analysis should have examined at least properties already inscribed on the World Heritage List, such as Mount Taishan, China (1987, criteria (i), (ii), (iii), (iv), (v), (vi), (vii)), Mount Emei Scenic Area, China (1996, criteria (iv), (vi), (x)), and Mount Wutai, China (2009, criteria (ii), (iii), (iv), (vi)), Sulaiman-Too Sacred Mountain, Kyrgyzstan (2009, criteria (iii), (vi)), Tasmanian Wilderness, Australia (1982, 1989, criteria (iii), (iv), (vi), (vii), (viii), (ix), (x)), Sacred Sites and Pilgrimage Routes in the Kii Mountain Range, Japan (2004, criteria (ii), (iii), (iv) (vi)), and Kuk Early Agricultural Site, Papua New Guinea (2008, criteria (iii), (iv)), and also sites that are included in the Tentative Lists, such as Hua Shan Scenic Area, the Four Sacred Mountains as an extension of Mount Taishan (China), Mount Kumgang and the Historical Relics in and around the Mountain (Democratic People's Republic of Korea), and Palaeolithic sites and geomorphology of Karatau mountain range (Kazakhstan). Further properties that might have been considered for the comparative analysis are Mount Jiuhua, Anhui Province, Mount Putuo, Zhejiang Province, and Diaotonghuan Cave, all in China, Mehrgarh Neolithic Site in Pakistan, and Göbekli Tepe and Çatalhöyük in Turkey.

ICOMOS considers that the comparative analysis does not adequately clarify the rationale underlying the selection of the three areas, which in fact appear to be somewhat different from one another and to exemplify almost unrelated sets of values – the religious associations of a natural feature with high aesthetic value at Adam's Peak in the PWPA, the evidence found in the HPNP of the beginnings of cereal management dating back to 17,600–16,000 BP, and the traces of human occupation dating back to 30,000 in the KCF.

The State Party claims that the property has values relating to the association with the Lord Buddha, to long-

lasting prehistoric occupation, and to the anticipation of cereal domestication, but the comparative analysis deals only with properties possessing values related to ancient cereal domestication.

ICOMOS considers that the comparative analysis does not justify consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Adam's Peak or *Sri Pada* (the 'Sacred Footprint') is one of the most important religious and cultural sites in Sri Lanka and one of the most sacred places for Buddhists throughout the world. Several reigning kings have visited the site since the 11th–13th centuries CE. Pilgrimage and the associated religious practices date back many centuries.
- Archaeological evidence from Horton Plains shows a remarkable sequence of cultural practices beginning before 18,500 years BP and ending at around 3,600 years BP. At this site the management of oats and barley began to be practised around 17,600–16,000 years BP whilst early rice cultivation dates back to 15,000 years BP.
- Recent findings at the Knuckles Conservation Forest have revealed the presence of caves within the forest that have produced Mesolithic artefacts and animal remains which indicate human occupation in Late Quaternary times (around 30,000 years BP). Much later, around 200–100 BCE, Buddhist monks occupied these caves which had been adapted by the creation of drip ledges in order to divert rainwater away from the entrance.

ICOMOS considers that in this serial nomination the cultural interrelationships and the functional links between the three sites are weak. The *Operational Guidelines for the Implementation of the World Heritage Convention* (2008), para. 137, states that 'Serial properties will include component parts related because they belong to: a) the same historico-cultural group; b) the same type of property which is characteristic of the geographical zone.'

The cultural criteria proposed for each site have different emphases, which means that their values belong to different thematic groups. The PWPA is valued for the presence of Adam's Peak, a sacred mountain. The ancient hydraulic civilization of Sri Lanka is mentioned but the nomination dossier does not describe the physical remains of that civilisation nor does it detail where they are located in the nominated property; it also does not specify the conditions for their conservation.

The HPNP is valued for its sites inhabited by prehistoric man and the origin of agricultural cultivation. Finally, the KCF is valued for the archaeological discovery of sites where prehistoric people lived and for its traditional villages. Traditional communities are mentioned, but their living environments and their cultural practices are not adequately described.

ICOMOS considers that the interrelationships between these properties have not been made explicit in the nomination dossier and as a result the rationale for their nomination remains unexpressed and impossible to understand.

However, ICOMOS considers that the cultural values of the PWPA, as described in the nomination dossier, relate predominantly to *Sri Pada* (Adam's Peak) and its associated tangible and intangible heritage (the pilgrimages, the related deeply held cultural practices, and the Galpothawala Temple). These may have the potential to justify the outstanding universal value of the property once an appropriate comparative analysis has been developed which takes into consideration religious sites within and outside Sri Lanka.

ICOMOS further considers that the cultural values relating to the archaeological evidence found in the HPNP which make it a possible additional early centre of plant domestication may have considerable scientific interest, and may also contain the potential to justify the outstanding universal value of the property. However, further research as well as scientific debate on the results of current research are necessary. Finally, the cultural values of the KCF related to the Mesolithic occupation of caves require further investigation.

Integrity and authenticity

Integrity

The State Party has examined integrity mainly with regard to the natural values. Only for the KCF is it stated that, owing to its status as a Conservation Forest, only state-owned land may be included within the boundaries and so the village communities are located outside the nominated property.

ICOMOS notes that the conditions of integrity of the cultural components of the nominated property have not been assessed by the State Party.

ICOMOS considers that the cultural values for the PWPA are related to *Sri Pada* and its associated tangible and intangible heritage of the pilgrimage to the peak and related cultural practices. Linked to the worship of *Sri Pada* is veneration of the pre-Buddhist deity Sumana Saman, as attested by religious rituals during the pilgrimage season. ICOMOS therefore considers that, although the key tangible elements involved with the pilgrimage rituals are included in the nominated property, it would be important also to include the Galpothawala Temple in Ratnapura from where each

year the statue of Sumana Saman is taken in a procession to Adam's Peak.

ICOMOS further considers that the integrity of the PWPA, and of Adam's Peak in particular, is impacted negatively by environmental damage due to the sheer numbers of pilgrims (c 2,000,000) in six months.

ICOMOS also notes that the elements associated with the cultural values of the HPNP appear to be included in the boundaries of the nominated property.

The cultural values of the KCF relate to the presence of caves with evidence of Mesolithic occupation, and these have been included within the boundaries of the nominated property. However, the three sites that best demonstrate human cultural and morphological evolution from 35,000 years BP (Fa-hien Lena, Beli-Lena, and Batadomba Lena) have not been included in the nominated property, whilst at least two of the three caves are located in the highlands.

ICOMOS finally considers that the State Party has not clarified, nor can it be understood from other sources of information, how the sites have been selected for this serial nomination.

Authenticity

The nomination dossier states that the authenticity of the religious significance of the Peak is established mainly through an almost unbroken tradition dating back to the pre-Christian era and recorded in the chronicle, the *Mahavamsa* (Anon. 545 BCE–1758 CE). Historically, the *Travels in India and Ceylon* (393–414 CE) by the Buddhist monk Fa Hien records his visit to Adam's Peak and his interpretation of the origin of the footprint. Other famous travellers who visited the Peak and left written testimonies are Marco Polo (13th century) and Ibn Battuta (14th century).

The authenticity of occupation and cultivation of sites at Horton Plains by Mesolithic people has been established through a series of linked scientific investigations based on the recovery of microliths and other artefacts, on radiocarbon-dated records, and pollen analyses.

The authenticity of values in the KCF related to Mesolithic occupation is based on the recovery of human remains and tools from a number of caves, which strongly suggests that these caves were used as early as 30,000 years BP.

ICOMOS considers that *Sri Pada* is one of the most important sacred places in Sri Lanka, where devotional acts have been performed for centuries by pilgrims and with which a strong oral tradition is associated, passed down from father to son. The replication of the *Sri Pada* shrine conserved in several Theravada Buddhist temples also bears witness to the strength of this religious tradition.

ICOMOS further considers that the fact that archaeological evidence provided by investigations in Horton Plains has been recovered from a depth of c 6m in a rarely visited and well protected area bears credible witness to the values of the site, although further research would be desirable in order to confirm the recently achieved scientific results.

In the KCF only one of the twenty recorded caves preserves an intact stratigraphy, whereas in all the others the stratified deposits have been largely disturbed. Further investigations are therefore necessary to obtain credible evidence of the values claimed.

With regard to the serial nomination, ICOMOS considers that the integrity and authenticity of the nominated property values need to be reconsidered, which is also important for future heritage management of these areas.

ICOMOS considers that the conditions of integrity and authenticity have not been met for the serial nomination considered in its entirety.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii), (v), and (vi) (and also natural criteria (vii), (viii), (ix), and (x)).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that Adam's Peak has been associated with the evolution of the civilization of Sri Lanka for more than two millennia and has an unbroken link with the Buddhist faith. For this reason, it is one of the most venerated mountains in the world. The uniqueness of the HPNP relates to the way in which Mesolithic man evolved from the hunter-gatherer to the agricultural stage between 24,000 and 8700 years BP. In this period prehistoric human beings passed from hunting-gathering to the early steps in the cultivation of oats and barley and thence to organised agriculture based on rice. Finally, the cultural importance of the KCF relates to archaeological findings that have revealed the existence of caves attesting to Mesolithic occupation. Subsequently, the caves were used during the Early Iron Age by Buddhist monks. The presence of ancient villages in the Knuckles Range also bears witness to an almost unbroken traditional way of life.

ICOMOS considers that the association of Adam's Peak with the veneration of the Lord Buddha, although long-lasting, would better justify criterion (vi).

However, the nomination dossier mentions that in the PWPA traces of hydraulic civilization, represented by 'thousands of reservoirs to store water and provide the people with sustainable living conditions,' are to be

found and that there are eleven peripheral cluster villages in the Adam's Peak Wilderness which demonstrate 'a long history of human settlements' and 'are strongly associated with the belief in the sacredness of the Samanala Adaviya (Peak Wilderness range).'

ICOMOS considers that the heritage values of the nominated properties are not adequately documented so as to make it possible to understand whether they meet this criterion.

ICOMOS considers that this criterion has not been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the HPNP outstandingly exemplifies the sequence of human development from the hunter-gatherer stage through early cereal cultivation to agriculture, under changing climatic condition. Furthermore, the discoveries in the HPNP and subsequent scientific analysis have put plant domestication back from 13,000–14,000 years BP to an earlier period (17,600– 16,000 years BP).

The villages in the KFC illustrate cultural traditions that are based on the uses of local resources for their subsistence and which have evolved over many centuries.

ICOMOS considers that the State Party has included in its proposed justification for inscription under criterion (v) only two of the three components of the serial nomination. The examination of criteria for a serial nomination should include the series as a whole.

ICOMOS considers that this criterion has not been justified for the serial nomination in its entirety.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the cultural-religious traditions relating to the Adam's Peak in the PWPA are strongly linked with the Buddhist faith, and also to belief in the deity Saman, who is said to have invited the Lord Buddha to visit the mountain and mark his footprint on the top of the peak. The inhabitants of remote isolated villages in the Knuckles range still perform ancient rituals and traditional practices to appease the deities and demons of the region and to obtain protection from wild animals as well as a rich harvest.

ICOMOS considers that the State Party has included in its proposed justification for the inscription under criterion (vi) of Adam's Peak and its associated pilgrimage trails and the ancient ways of life of the traditional villages in the KCF. These are parts of two components of the serial nomination, but identification of the criteria for a serial nomination should include the series as a whole. Furthermore, the cultural practices of traditional communities need further documentation.

Nonetheless, ICOMOS considers that, as a well known sacred mountain with a long tradition of religious practices, Adam's Peak's associative value as a holy mountain may have the potential to justify this criterion after an accurate comparative analysis is carried out.

ICOMOS considers that this criterion has not been justified for the serial nomination in its entirety.

ICOMOS considers that the serial approach is not justified and that the selection of sites does not appear appropriate. The chosen components do not reflect the same set of values: each of them bears witness to different cultural phenomena and ranges of values.

ICOMOS does not consider that the conditions of integrity and authenticity have been met and that criteria and Outstanding Universal Value have been justified.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The State Party reports that along the former southern boundary and in the eastern section of the Peak Wilderness Sanctuary development pressures (land settlement, village expansion, cultivation encroachments, etc.) have resulted in the erosion of the protected area. However, the district revenue officers increased their control over the land and were able to regularize encroachments. Nevertheless, large sections of the PWS in its eastern half have been converted into village settlements. Tea estates were also found within this area.

No serious development pressures are envisaged in the Horton Plains National Park.

On the other hand, the nomination dossier states that there is a proposal to construct two reservoirs in the area downstream of the KCF (Kalu Ganga and Moragahakande reservoirs). The KCF is the major catchment that would need to be protected if the reservoirs are to be provided with a steady flow of water.

ICOMOS considers that more information is needed on the proposed projects for the two reservoirs and that an assessment of their impact on the cultural resources in the nominated property as well as on the traditional communities that live in the area should be developed.

Tourism pressures

The State Party reports that Adam's Peak, as one of the holiest shrines for Buddhists, experiences considerable visitor pressure, which, owing to the inadequate measures for coping with attendant problems such as sanitary facilities, exploitation of forest resources, etc., results in considerable environmental pollution and erosion of natural resources.

The number of visitors to the HPNP has also grown in recent years; if this trend continues there will be heavy pressure to deal with the ensuing problems. No estimate of the carrying capacity has been made, but the present numbers are likely to fall within such a capacity. Visitor numbers in the KCF are still well below what would be its carrying capacity.

ICOMOS considers that the measures initiated to counteract the impact of visitors along the trails to Adam's Peak and in the HPNP should also be continued in order to protect the cultural values of the two areas. ICOMOS recommends that an assessment of the carrying capacity of the most visited areas should be developed to serve as the basis for further initiatives addressing visitor issues.

Environmental pressures

The State Party reports that there are major environmental problems concentrated in the PWPA, connected with the presence of pilgrims in the areas along the trails that lead to Adam's Peak. The major issues are waste disposal and lack of sanitary facilities. Much has been done to address the problem of garbage, but this remains a problem owing to the sheer numbers of pilgrims. With regard to the second issue, some action has been taken but more has to be done to mitigate environmental damage.

ICOMOS recommends that systematic action be undertaken as soon as possible to tackle the environmental problems posed by visitor pressure.

Natural disasters

The State Party states that the area is not prone to natural disasters.

ICOMOS considers that the major threat for the area is from flooding.

Impact of climate change

ICOMOS considers that climate change in this region may cause high variability in rainfall patterns and increased temperatures, possibly leading to an intensification of floods.

ICOMOS considers that the main threats to the property are the environmental pressures caused by visitors and pilgrims and encroachments in the boundaries of the property.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The area enclosed by the boundaries of the whole nominated serial property covers 55,010ha. The precise number of inhabitants living within the nominated property is not known, although there are only a few residents inside the three components of the nominated property, which, by law, should not be inhabited. The majority of the residents are concentrated in the buffer zones. The estimated population of the KCF buffer zone is around 40,000 (1994 Management Plan), while there is no estimate for the PWPA buffer zone.

The boundary of the Peak Wilderness Protected Area includes the outer boundaries of the Peak Wilderness Nature Reserve (PWNR), the Peak Wilderness Conservation Forest, the Walawe Basin Conservation Forest, and the Morahela Conservation Forest, and, in its eastern extension, it has a common boundary with Horton Plains National Park (HPNP). The boundary of the PWNR has been defined by notification in the Government Gazette under the provisions of the Fauna and Flora Protection Ordinance (FFPO). The boundaries of the three conservation forests have been defined by notification in the Government Gazette under the provisions of the Forest Ordinance.

The boundary of the HPNP has been defined in the Government Gazette notification declaring this area a national park under the provisions of the FFPO.

The boundary of the KCF has been defined in the Government Gazette notification declaring this area a conservation forest under the provisions of the Forest Ordinance.

The nominated property has been provided with a form of buffer zone based on the legal instruments currently in force. The FFPO provides for protected areas to be buffered by a one-mile wide area where development is prohibited, a provision in force for the PWPA and the HPNP. The Forest Act does not provide the KCF with a buffer zone, but the Knuckles Environment Protection Area under the National Environmental Act affords blanket protection. This area consists of private and public lands outside the KCF and is legally described in the Gazette text (23.7.2007), in which provisions for the allowed uses are also determined.

ICOMOS considers that the boundaries of the Peak Wilderness Sanctuary, which after amendment today comprises the components of the PWPA bearing cultural

values, covers the six trails and the Peak Area, which are clearly delineated on the ground by concrete markers. The boundaries of the HPNP are clearly indicated on the ground by means of concrete markers. The boundaries of the KCF are described in detail in the Official Gazette registering the inclusion of further areas in the KCF and are also marked on the ground.

ICOMOS considers, however, that there is no map at an adequate scale in which the boundaries of the nominated property are delineated and recommends that at least three maps should be produced (1:50,000 scale at least) showing the boundaries of each nominated area and its related buffer zone and the geomorphology of the region as well as identifying the location of the components bearing cultural values (*i.e.* the caves occupied in the Mesolithic period and the areas that have produced evidence of early agricultural practices). ICOMOS further recommends that a map of the Peak Wilderness Sanctuary be developed with a scale no less than 1:10,000 that makes it possible to identify the geomorphological features and the major manmade elements of the Sanctuary associated with its cultural values.

ICOMOS considers that the established buffer zones provide forms of development control over the areas surrounding the nominated property.

ICOMOS considers that the rationale adopted to delineate the boundaries of the components of the nominated property is based mainly on the boundaries of areas that are protected for their natural values and, for this reason, are not adequate to fully represent the cultural values of the nominated property.

Ownership

The Peak Wilderness Protected Area (PWPA) is today a state-owned property in its entirety. The whole of Horton Plains National Park (HPNP) is owned by the state. The land included in the Knuckles Conservation Forest is state-owned. There are still a number of interspersed plots that are privately owned. Action has been taken to acquire them and as soon as they are in state ownership they will be automatically included in the KCF.

Protection

Legal Protection

The most important statutes for the protection of cultural heritage are the Antiquities Act of 1940 (revised in 1956 and 1998) and the Cultural Property Act 1988. The most relevant acts for the protection of natural heritage are the Fauna and Flora Protection Ordinance – FFPO (1937) and the Forest Act (1995).

The *Antiquities Act* (1998) provides for the preservation of antiquities, sites, and buildings of historical or

archaeological importance. It prescribes inventorying archaeological heritage, protecting such heritage, conducting research, enhancing public awareness, levying entrance fees at selected sites, conducting impact assessments, and formulating a national archaeological policy. This policy is intended to provide a framework that enhances the proper management of archaeological heritage comprising sites, monuments and movable antiquities dating to before 1815, sites, and monuments which are more than 100 years old and which have specifically been declared to be 'protected' under the Antiquities Ordinance.

The PWPA comprises several parts that are protected under the legislation for natural heritage. They are: 1) The Peak Wilderness Nature Reserve (PWNR), a highly protected area under the provisions of the FFPO and administered by the Department of Wild Life Conservation (DWLC); 2) the pilgrim trails and the Peak which retain the status of sanctuary (declaration 1940) and are administered by the DWLC; and 3) three conservation forests declared under the provisions of the Forest Ordinance and administered by the Forest Department.

The HPNP was declared a National Park under the provisions of the FFPO in 1988. It is under the charge of the DWLC.

The buffer zone of the nominated property has been established following the legal instruments in force in Sri Lanka. The FFPO provides the PWPA and the HPNP with a one-mile wide buffer zone where development is prohibited. The Forest Act does not provide the KCF with a buffer zone but it is, however, covered by a designated Knuckles Environment Protection Area under the National Environmental Act. This area consists of private and public lands outside the KCF and is legally described in the Gazette text (23.7.2007), in which also provisions for the authorized uses are determined.

The three areas included in the nominated property are owned by the state and are under the responsibility of the DWLC and of the FD. Although these departments act in cooperation with local administrations, there are no local plans that apply to the nominated property.

ICOMOS considers that the areas, sites, and immovable artefacts that bear witness to cultural values and phenomena should also be protected under the relevant legal instruments for cultural property so as to ensure proper protection of the cultural heritage. An inventory of the protected cultural features should be established and regularly updated.

Traditional Protection

The bodies responsible for protection and management of the nominated property have established cooperation programmes with the existing Community Based Organisations (CBO).

ICOMOS notes that the CBOs are very strong in the south and west of the PWPA and the KCF and are actively participating in protection and conservation programmes with the Forest Department.

Effectiveness of protection measures

The conservation forests within the PWPA are in the charge of the Forest Department. The Peak Wilderness Nature Reserve, the pilgrimage trails and the Peak, which also form part of the PWPA, are in the charge of the Department for Wildlife Conservation, both of which are under the Ministry of Environment and Natural Resources. The Ministry of Cultural Affairs and the Department of Archaeology have no administrative control over the property but would be associated with the DWLC and the FD in management in relation to the cultural sites within the property. However, following an amendment to the FFPO (20.4.09), any archaeological investigation in the nominated property requires a permit from the Director General of DWLC on the advice of the Director General of Archaeology Department or of the Director of the National Museum.

The Forest Department is organised through regional offices, headed by the Divisional Forest Officers (FDOs). Their areas of control are well defined. The management of the DWLC areas within the PWPA and the HPNP is the responsibility of the head of DWLC.

ICOMOS considers that protection measures for the natural aspects of the property are in place but that the cultural resources are not adequately protected. It therefore recommends that the protection of the cultural features of the nominated property should be strengthened through the application of the Antiquities Act and related legal instruments as soon as possible.

ICOMOS considers that the protection measures in place for cultural resources are not adequate and recommends that the protection of the cultural features of the nominated property should be strengthened through the application of the Antiquities Act and related legal instruments as soon as possible.

Conservation

Inventories, recording, research

There is no mention of inventories or any recording process in the nomination dossier, although the results of recent research are synthetically described.

ICOMOS considers that it is of crucial importance that cultural resources, including areas of potential archaeological interest, should be properly mapped and inventoried. Related documentation should be duplicated and stored in more than one place.

ICOMOS also encourages the State Party to continue with systematic research campaigns to expand and

deepen the knowledge on the cultural aspects of the nominated property, with special reference to its prehistoric occupation.

Present state of conservation

The State Party considers that, whilst there is no threat to the condition of Adam's Peak or of its cultural values, the conservation status of the pilgrimage trails is affected by the massive scale of use of these tracks during the pilgrimage season each year. The Horton Plains area is well managed and free from the conservation issues that affect many of the other protected areas in the country. Its topographical features give it natural protection and the area is free from encroachment problems. The state of conservation of the sites of cultural relevance within the KCF is considered satisfactory.

ICOMOS considers that there is a need for extra efforts to ensure the better conservation of the forest, especially adjacent to the pilgrim trails in the PWPA, with the objectives both of reducing pollution and of protecting the cultural values of the property, as well as of the walking tracks in the HPNP. In this area the erosion of the trails, as well as seasonal over-use by visitors, may interfere with the preservation of excavated archaeological remains.

ICOMOS further considers that there is a need for a comprehensive assessment of the state of conservation of the cultural resources that are considered to sustain the values of the nominated property.

Active conservation measures

Active measures include not only conservation actions but also maintenance work, ranging from pilgrimage to forest management. These are programmed on an annual basis.

ICOMOS considers that measures have been undertaken in the PWPA to avoid forest and natural heritage erosion due to the heavy use of natural resources made by villagers. The Community Based Organisations (CBOs) have reduced the disastrous level of use of forest resources and have developed self-employment and job programmes in the agricultural and visitor sectors.

In the KCF, CBO activity begun ten years ago has been successful in restoring degraded sites, fire protection, developing domestic gardens, and providing micro-finance.

However, ICOMOS considers that there is a need to develop programmes for the conservation of the cultural heritage, in the implementation of which CBOs should also be involved.

Maintenance

ICOMOS considers that there is regular maintenance carried out by local employees and local communities. The best organized maintenance programmes are carried out at the KCF.

Effectiveness of conservation measures

ICOMOS considers that several actions have been developed and implemented by the State Party to cope with the factors affecting the property. ICOMOS recommends that these efforts should be continued to ensure the adequate environmental protection of the nominated property, especially in the PWPA and the HPNP, where the impact of visitors has caused the most significant damage.

ICOMOS considers that cultural resources, including areas of potential archaeological interest, should be properly mapped and inventoried. ICOMOS further recommends that a comprehensive state of conservation of the cultural resources that sustain the cultural values of the nominated property should be developed and that conservation programmes for the cultural heritage should be developed and implemented with the involvement of the Community Based Organisations.

Management

Management structures and processes, including traditional management processes

Both the DWLC and the FD have hierarchical structures with all the organisational charts set out in the management plans. The Ministry of Cultural Affairs and the Department of Archaeology have no administrative control over the property but would be associated with the DWLC and the FD in aspects of management relating to the cultural sites within the property. In the field there is considerable involvement with local communities through the CBOs.

ICOMOS notes that, although each area included in the nominated property has its own management plan, there is no comprehensive, over-arching management framework for the nominated serial property nor is there any mention of such a framework/plan in the nomination dossier. ICOMOS considers that such a structure should be developed for serial nomination as required by paragraph 114 of the *Operational Guidelines*.

Policy framework: management plans, and arrangements, including visitor management and presentation

Currently, management for the nominated property is covered by the following management plans:

- Peak Wilderness Sanctuary, 1999–2003;

- Management Plan, *Samanala Adaviya* Protected Area Complex, 2005 (Adam's Peak Range);
- Management Plan, Horton Plains National Park, 1999–2003;
- Management Plan, Horton Plains National Park, 2005;
- Management Plan for the Conservation of the Knuckles Forest, 1994.

In view of the fact that the three areas (PWPA, HPNP, and KCF) are nominated as a serial property with both cultural and natural values for inscription on the World Heritage List, cultural sector agencies will now be officially included in the management process and related operational plans as relevant stakeholders.

ICOMOS observes that the existing management plans do not contain any reference to the cultural heritage preserved within these protected areas. It is therefore necessary that all plans in force should be revised and expanded so as to include a chapter on archaeological sites and heritage and means for their protection.

ICOMOS recommends that the planned measures and provisions to fill the gap in the protection and management of the cultural heritage of the nominated property should be implemented as soon as possible. Special attention should be paid to the archaeological heritage, which remains largely unexplored and is likely to yield important information about the prehistoric human occupation and subsistence practices in the region.

Risk preparedness

There is no mention of any risk preparedness measures or plans in any of the components of the nominated property.

ICOMOS recommends that risk preparedness measures be developed in order to cope with possible disastrous events that may occur in the area.

Involvement of the local communities

The cooperation of the authorities responsible for the protection and management of the nominated property with the Community Based Organisations (CBOs) demonstrate that the local communities are engaged in the protection process and are also well aware of the nomination process.

ICOMOS considers that it is very important and beneficial for the property that local communities continue to be involved in the conservation and management of the property.

Resources, including staffing levels, expertise and training

The management of the property is carried out by local staff.

The staff at the sites consists of Range Officers, Extension Officers, Beat Officers, and Field Assistants. Field Guides, outside the department's cadre, are selected from within the local community.

At the PWPA the on-site staff is headed by a Grade 1 Ranger with other rangers, range assistants, and guards under him. The FD professional staff members are recruited from graduates in disciplines relevant for the protection/management of the property. After recruitment they receive forestry training at various foreign educational institutions. There is no systematic scheme for the training of DWLC staff.

ICOMOS notes that there is no mention of staff for cultural resources in the nomination dossier and apparently there is no on-site cultural site management training. Archaeology staff related to the Department of Archaeology is based in Colombo and have no guaranteed funding programmes for their work. There is therefore a need for financial resources to allow research on the prehistoric sites to continue.

ICOMOS recommends that at least one archaeologist and two professionals with cultural resource management backgrounds should be hired to work on site with the permanent staff of the DWLC and the FD responsible at the local level for the nominated property. ICOMOS further recommends that training in cultural heritage management should be established on-site for the DWLC and the FD staff and that an adequate budget should be provided to research, protect, and manage the cultural heritage in the nominated property, with special regard to archaeological findings.

Effectiveness of current management

ICOMOS considers that management is effective at the field level. However, the Ministry of Culture and the Department of Archaeology are based in Colombo and hence remote from the nominated property. This requires a close cooperation between the DWLC and the FD departments and the Ministry of Culture and the Department of Archaeology to be established.

ICOMOS considers that the management system needs to take into consideration the cultural value of the nominated property. ICOMOS further recommends that an adequate budget should be created to research, protect, and manage the cultural heritage in the nominated property, with special regard to archaeological findings. Finally, ICOMOS recommends that professionals with a background in cultural heritage management should be hired to work on site with the permanent staff of the DWLC and the FD at the local level and provided with basic training in cultural heritage management.

6. MONITORING

The State Party reports that monitoring will consist of the regular systematic collection and analysis of data. Several indicators have been identified along with the periodicity of measurements and the location of data records.

ICOMOS considers that monitoring indicators should be selected so as to ensure the relevant monitoring of possible changes and threats that may affect the attributes supporting the proposed outstanding universal value.

ICOMOS recommends that the monitoring system and related indicators should be developed with specific reference to the attributes supporting the value of the nominated property. ICOMOS also considers that the monitoring system should be implemented, its effectiveness assessed and, where necessary, modified in order to ensure its usefulness in observing and controlling changes in the relevant values of the property.

7. CONCLUSIONS

This serial nomination of three sites is proposed as a mixed property. However, the nomination is focussed predominantly on the natural aspects of the nominated property. Moreover, the cultural criteria proposed for each site have different emphases, which means that the values of these three sites belong to different thematic groups and the cultural interrelationships between them appear weak and are not made explicit.

However, the cultural values of Adam's Peak in the Peak Wilderness Protected Areas and Horton Plains National Park may have the potential to justify Outstanding Universal Value, according to a thoroughly revised nomination.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the Central Highlands of Sri Lanka: Its cultural and natural heritage, Sri Lanka, to the World Heritage List be ***deferred*** in order to allow the State Party to reconsider the scope of the nomination.

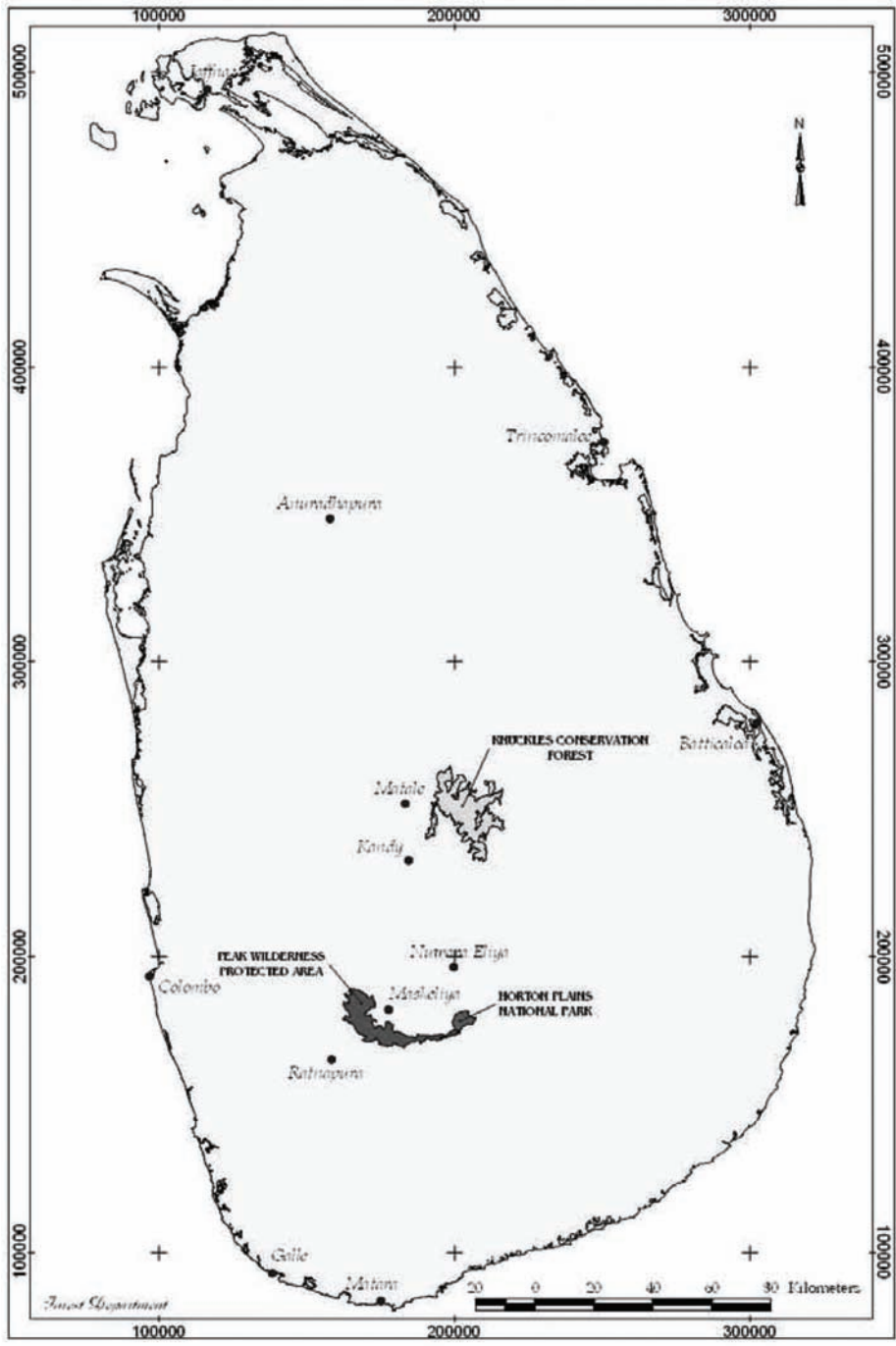
ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

ICOMOS recommends that the State Party give consideration to the following:

- The protection of the cultural features of the nominated property should be strengthened

through the application of the Antiquities Act and related legal instruments;

- Measures and provisions for filling the gaps in the protection and management of the cultural heritage of the nominated property should be implemented without delay;
- Cultural resources, including areas of potential archaeological interest, should be properly mapped and inventoried;
- Comprehensive measures to sustain the cultural values of the nominated property should be developed without delay;
- An assessment of the carrying capacity of the most visited areas should be developed so as to form the basis for further initiatives addressing visitor issues;
- The monitoring system and related indicators should be developed with specific reference to the attributes that support the value of the property, in order to ensure effective observation and control over possible modifications of these attributes.



Map showing the location of the nominated properties



Peak Wilderness Protected Area,
Adam's Peak during the pilgrim season



Horton Plains National Park



Knuckles Conservation Forest,
caves occupied in the Mesolithic period



View of Meemure, a village located within the Knuckles Conservation Forest

B Europe – North America

New Nominations

Papahānaumokuākea (United States of America) No 1326

Official name as proposed by the State Party:

Papahānaumokuākea Marine National Monument

Location:

State of Hawaii
United States of America

Brief description:

Papahānaumokuākea is the new name for a vast and isolated linear cluster of small, low lying islands and atolls, with their surrounding ocean, extending some 1,931 kilometres to the north west of the main Hawaiian Archipelago.

The area has deep cosmological and traditional significance for living Native Hawaiian culture, as an ancestral environment, as an embodiment of the Hawaii an concept of kinship between people and the natural world, and as the place where it is believed that life originates and where the spirits return to after death. On two of the islands, Nihoa and Makumanamana, there are archaeological remains relating to pre-European settlement and use, including a large ensemble of shrines of a type specific to Papahānaumokuākea.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, it is also a *cultural landscape*.

[Note: the property is nominated as a mixed cultural and natural site. IUCN will assess the natural significances, while ICOMOS assesses the cultural significances.]

1. BASIC DATA

Included in the Tentative List: 30 January 2008

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 21 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committees on Cultural Landscapes, on Intangible Cultural Heritage and on Pacific Islands together with several independent experts.

Literature consulted (selection):

DiNardo, G., and F. Parrish (eds), *Northwestern Hawaiian Islands*, Third Scientific Symposium, November 2-4, 2004, (*Atoll Research Bulletin*, 543.), Washington D.C., National Museum of Natural History.

Kirch, P.V., *Feathered gods and fishhooks: an introduction to Hawaiian archaeology and prehistory*, Honolulu, University of Hawaii Press, 1985.

Salvat, B., Haapkyla, J., Shrimm, M., *Coral reef protected areas in international instruments*. World heritage Convention-World network of Biosphere Reserves-Ramsar Convention, CRIOBE-EPHE, Perpignan, 2002.

Smith, A. and Jones, K. L., *Cultural Landscapes of the Pacific Islands*, ICOMOS Thematic Study, December 2007.

Technical Evaluation Mission: A joint ICOMOS/IUCN mission visited the property from 2 to 24 August 2009.

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The vast seascapes and tiny islands of Papahānaumokuākea, were found uninhabited or abandoned at the time of Western contact in the 18th century.

The Hawaiian Archipelago was first settled around 300BC. The settlers used the abundant rural resources of the main islands to create agricultural terraces along the hillsides, extensive water paddies for their staple food, *kalo* (taro), in the valleys, and fishponds over the shallow reefs. They also fished in the shallow seas. The settlements were mainly in what are now the inhabited islands of the east of the Archipelago. Relict field systems are clearly visible in the landscape of Kohala on the Island of Hawaii.

By contrast, the majority of the chain of small islands and atolls that make up Papahānaumokuākea to the north west of the Archipelago, are all dry islands, with minimal fresh water resources, and they were it seems used only sporadically, with only one island exhibiting settlement remains and a second displaying considerable evidence of ceremonial use.

The main islands/atolls are as follows (from east to west):

- Nihoa Moku Manu (Nihoa Island, Bird Island)
- Mokumanamana (Necker Island)
- Mokuapāpapa Lalo (French Frigate Shoals)
- Pūhāhonu Lalo (Gardner Pinnacles)
- Nalukakala Ko‘anako‘a (Maro Reef)
- Kauō Kamole (Laysan Island, Moller Island)
- Papa‘āpoho Kapou (Lisianski Island)
- Holoikauaua Manawai (Pearl and Hermes Atoll)
- Pihemanu Kauihelani (Midway Islands, Brook Island, Middlebrook Islands)
- Kānemiloha‘i Holaniku (Kure Atoll)

The islands are tiny and the main ones have little vegetation; the outer islets are small sand islands.

Papahānaumokuākea is said to be the only place in the Hawaiian Islands with a fully intact pre-contact archaeological landscape, where the full suite of site types are preserved, coupled with a near to pristine natural marine environment.

Papahānaumokuākea is now respected by Hawaiians in the main islands as a sacred place containing the boundary between the world of light and the living, and the world of the gods, spirits and primordial darkness, from which all life comes and to which it returns after death.

A creation chant of Hawaii, the Kumulipo, describes the Hawaiian universe as being comprised of these two worlds: Pō, the world of gods, and Ao, the realm of light, where Native Hawaiians and the rest of Hawaii’s living creatures reside. Native Hawaiians believe that Mokumanamana Island, in southeastern Papahānaumokuākea, represents the boundary between these two worlds.

The name *Ke ala nui polohiwa a Kāne* refers to death, or the westward road of the ancestral spirits. Native Hawaiians believe that when a person’s physical body dies, their spirit travels to *leina*, or portals found on each island. If the individual had lived a *pono* (righteous) life, they would be transported from the *leina* westward to Pō. This spirit realm is represented by the islands and surrounding waters to the northwest of the island of Mokumanamana.

Physical remains of pre-European human occupation have been found only on Nihoa and Mokumanamana islands (the two closest to the main islands), though a basalt artefact of undetermined provenance was reportedly recovered from Lisianski Island in the 1990s.

How long people used the islands is uncertain, as there are only two radiocarbon dates available, the older of which is about 1,000 years before present. Both dates are dubious because of the way the samples were

recovered and stored and because, for a variety of technical reasons, the laboratory at which they were tested produced incorrect determinations during the period in which the samples were submitted. Current research aims to provide better dating.

There are 89 identified archaeological sites on Nihoa and 52 on Mokumanamana, including 45 *heiau* (shrines) between them. These *heiau* are made of well-paved terraces and platforms with single, large, upright stones or, more commonly, rows of uprights. Nihoa Island also features evidence of residential sites, habitation terraces for dryland agriculture and ceremonial complexes.

Mokumanamana Island:

In contrast to Nihoa, Mokumanamana does not appear to have supported a permanent population. Instead it appears to have had some sort of religious function, as attested by its 33 *heiau* (shrines), basalt uprights rising from stone paved rectangular platforms and courts. These follow the crest of the island, tracking the sun. It is believed that the solar solstice hits upright stones of these *heiau* at a significant angle. It is said that this line of massive stones may be a physical manifestation of the celestial and spiritual significance of this island as a representation of a crossing between Pō and Ao. The largest of the ceremonial sites measures 18.6 metres by 8.2 metres, with ‘about’ 11 upright stones of what are believed to be the original 19 still standing.

Native Hawaiians believe that a person’s shadow is the physical manifestation of their spirit, and therefore, that a person has the most *mana* (spiritual power) when they have no shadow, such as at midday, because the spirit is considered to be united with the body. It is believed that Mokumanamana is an important and powerful place to hold ceremonies, because on the summer solstice, a priest’s shadow remains united with his or her body—and the priest’s power remains concentrated—for the longest period at any time of the year, anywhere in the archipelago.

Stone figurines (*ki‘i*) found at Mokumanamana provide an intriguing archaeological link between Hawaiian and Eastern Polynesian cultures. *Ki‘i*, ranging from 20 to 45 centimetres tall, were found with a design and manner of carving that it is believed poses a direct link to similar statues found in the Marquesas Islands.

Nihoa Island:

It is posited that Native Hawaiians lived on Nihoa for a 700-year period, between 1000 and 1700 AD. Around 13% of Nihoa’s landscape is covered by agricultural terraces cut into rock slopes and faced with stone walls. The island’s inhabitants captured rainwater in seeps in the three main valleys. These practices may have sustained a population of up to 100 people.

Nihoa’s residential and agricultural sites are joined by burials, ceremonial terraces, platform foundations, and

many rock shelters, which also may have served as habitation sites, transformed by constructing walls, one as high as three metres, to create shelter from the harsh sea winds and storms. Artefacts recovered from Nihoa include finished and unfinished stone adzes, hammer stones, grindstones, finished and unfinished stone bowls, and bone tools.

It is recorded that until the late 19th century, people from Ni'ihau island (one of the main Hawaiian islands) travelled to Nihoa to fish, collect leaves, wood and grass for cordage.

Underwater wrecks:

There are 60 known shipwrecks in Papahānaumokuākea and 67 known underwater aircraft losses. Twenty-five sites have been surveyed. Midway Atoll was the focus of an important naval battle in World War II and is designated a national memorial. Although described in the nomination dossier, this underwater heritage is not put forward as contributing to outstanding universal value.

History and development

Polynesian voyagers arrived in the isolated Hawaiian Archipelago around 300 AD as part of the great migration around the Pacific that started perhaps around 3,000 years ago from south-east Asia, reached Polynesia by around 200 BC, and then spread across the rest of the Pacific over the next two millennia. The voyagers found the larger islands in what is now Hawaii to have fertile soils, abundant water, and reefs rich with marine life.

The settlers mainly inhabited the main islands to the south-east of the Archipelago, but there is evidence of human use in two within Papahānaumokuākea: Mokumanamana and Nihoa.

The sites in the two islands have been the subject of only limited archaeological investigation and there are still major gaps in knowledge.

The earliest studies, undertaken by the Tanager Expedition in 1923-24, completely excavated a number of small caves/rock shelters, partly-excavated some open-air sites and removed human skeletal material found in small niches in the cliffs on Nihoa, as well as two human femurs and a tibia revealed by excavation of a rock shelter on Mokumanamana. All the human bone as well as all cultural material retrieved from the excavations and from surface sites were returned to the Bishop Museum in Honolulu. The human skeletal remains have recently been repatriated to the islands by Native Hawaiian cultural practitioners. In addition to completely stripping all sediments observed in cave/rock shelter sites, the Tanager excavations contributed to the destabilization of sections of dry-stone walling on the islands. This and several earlier non-scientific

expeditions to the islands also removed a number of small and highly-distinctive carved stone statues and other artefacts from the surface of Mokumanamana. Some of the images are in Bishop Museum but others appear to have been lost.

Recorded human visitation to the two islands has been minimal since the Tanager Expedition, as the islands were part of the Hawaiian Islands Reservation declared in 1909. Access has effectively been limited to short-term biological surveys, intermittent low-impact archaeological studies and occasional visits by Native Hawaiian cultural practitioners.

Two archaeologists, one a Native Hawaiian doctoral candidate and the other the US Fish and Wildlife Service archaeologist responsible for the property, were left on Mokumanamana during the ICOMOS mission to continue the former's PhD project there. It is likely that this research will go a considerable way to filling the remaining major gaps in knowledge of Nihoa and Mokumanamana.

Although little archaeological research has been done elsewhere in Papahānaumokuākea, (the sum total of archaeological work in the whole areas over eighty years apparently only comes to 18 days), the ICOMOS mission confirmed that any obvious signs of pre-European use would have been easily detected by trained professionals. Moreover, palaeoenvironmental investigations conducted on Laysan Atoll by archaeologists amongst other specialists failed to reveal any sign of pre-European human activity in a sediment core dating back some 7,000 years, more than twice as long as people have been anywhere in remote Oceania and more than four times the length of time people are known to have been in the main Hawaiian islands. Polynesian rats (*Rattus exulans*) were present on Kure until recently but have been exterminated to protect ground-nesting birds whose eggs are highly vulnerable to rat predation. These rats are a commensal species introduced to the remote Pacific by the first human colonists millennia ago and are today carried around on ships along with European rats (although not to the Marine National Monument, as all visiting vessels are subject to strict mandatory rat-control measures). It is not known whether *R. exulans* was introduced to Kure in the European or pre-European period, but the species is absent from the rest of the Northwest Hawaiian Islands and is not known to have occurred anywhere in Papahānaumokuākea at the time of European contact. However, the absence of commensal rats does not mean early Polynesians did not visit the more remote north-western islands, as there is no evidence they were ever present on Nihoa or Mokumanamana, where pre-European human occupation is undoubted.

When Europeans arrived in Hawaii in the late 18th century they found a thriving society with distinctive and complex social and religious systems. In 1898 Hawaii was acquired by the United States through the 'Newlands Resolution'.

Starting in the 1960s and 70s a resistance movement began to develop against Western assimilation. This led to a renaissance of Hawaiian culture and the strengthening of bonds with sacred places.

A large body of information on oral history has been published over around a hundred years in local newspapers (e.g., Kaunamano 1862 in *Hōkū o ka Pakipika*; Manu 1899 in *Ka Loea Kalai'āina*; Wise 1924 in *Nūpepa Kuoko'a*). More recent ethnological studies (2003) highlight the continuity of Native Hawaiian traditional practices and histories in the North-western Hawaiian Islands. Only a fraction of these have been recorded, and many more exist in the memories and life histories of kupuna.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

In the nomination dossier the property is compared thoroughly to other cultural landscapes inscribed on the World Heritage List that are strongly related to intangible heritage or which are in the Pacific. The conclusions drawn are that none of the inscribed sites offer both a seascape and a sacred site associated with a living indigenous culture.

In considering sites not inscribed on the List, it is acknowledged that the concept of sacred realms of Pō, the dark place of origin and Ao, the place of light and humans, is a pan-Polynesian tradition found in Tahiti, New Zealand and Tuamotu. Nevertheless the association of these traditions in Papahānaumokuākea, with the sea-faring traditions and the seascapes that weave together the myriad small islands is distinctive.

Comparisons are also made with other 'Mystery Islands' – that is islands that exhibit evidence of Polynesian settlement but were abandoned by the time of Western contact. There are at least 25 of these. Nihoa and Mokumanamana are seen as exceptional within this group for the high density and intactness of ritual sites and their connection to living cultural traditions.

The *heiau* at Nihoa and Mokumanamana share common attributes with very few structures found in the main Hawaiian Islands; only at Mauna Kea on Hawaii Island, and Haleakalā on Maui, were similar shrines found. These *heiau* resemble those of inland Tahiti (called *marae*) and similar structures in the Marquesas.

ICOMOS notes that the comparative analysis has been undertaken with properties bearing similar values to those of Papahānaumokuākea, inscribed or not on the World Heritage List and at national, regional and international level.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Papahānaumokuākea, a vast area in one of the world's most isolated archipelagos, encompasses a significant expanse of low-lying islands and atolls.
- Papahānaumokuākea:
 - Is a unique seascape, rich in cultural heritage;
 - Is a sacred cultural landscape, a region of deep cosmological and traditional significance to the living Native Hawaiian culture;
 - Contains a host of intact and significant archaeological sites;
 - Provides a largely undisturbed ancestral environment, whose preservation both illuminates and embodies the Hawaiian concept of the literal and spiritual kinship of all things in the natural world, including man, and represents the site where life originates and the place where spirits return after death.

ICOMOS considers that this justification needs to be augmented to explain why the property is of wider than local and regional significance and how it might be seen as being of universal significance to those outside Hawaii, in terms of the extraordinary linkages between remote islands as manifest in cultural traditions, and the links between settled islands and those with sacred functions. The significance of the archaeological sites also needs to be drawn out.

Integrity and Authenticity

Integrity

ICOMOS considers that all the attributes that reflect outstanding universal value are within the boundaries. Although none of the attributes are under severe threat, some of the archaeological sites need further conservation and protection against damage from natural sources – see Environmental threats below.

The property can be said to have overall integrity but the archaeological attributes are vulnerable.

Authenticity

The archaeological sites remain relatively undisturbed from cultural factors and in their remote landscape offer a detailed and poignant reflection of the remote societies established by those migrating across the Pacific.

ICOMOS considers however that they are under some threat from natural factors that could disturb their arrangements and ability to display clearly their meaning.

The unique arrangement of the collections of shrines of Mokumanamana and Nihoa islands need to be read in detail for their sacred and religious associations, linked to other similar sites across the Pacific. The strong spiritual religious associations of Mokumanamana island are living and relevant.

ICOMOS considers that the conditions of integrity and authenticity have been met, although the integrity of archaeological attributes is vulnerable and this too impacts on authenticity.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii) and (vi) (and natural criteria (viii), (ix) and (x)).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that Papahānaumokuākea's remarkable archaeology and significant ritual sites (*heiau*) bear exceptional testimony to the shared historical origins of all Polynesian societies, and to the growth and expression of a culture that evolved from the last and most difficult wave of cross-Pacific Polynesian migration. As the only Mystery Islands (once inhabited but now abandoned outposts at the farthest reaches of Polynesian migration) that continue a cultural association with their indigenous people, the islands of Nihoa and Mokumanamana can reveal much about cultural resilience in a changing environment.

ICOMOS considers that many Pacific islands demonstrate testimonies to the shared historical origins of Polynesian societies, particularly through sites associated with legends of migration and with the dispersal of food crops. It does not consider that Papahānaumokuākea is the only group of islands in the Pacific to continue a cultural association with their indigenous people, nor does it consider that the islands bear an exceptional testimony to the general Pacific migration process.

However ICOMOS does consider that the well preserved *heiau* shrines on Nihoa and Mokumanamana that are distinctive to Hawaii, but resemble those of inland Tahiti, and the sites of stone figures that have been recovered that show a strong relationship to similar carvings in the Marquesas, can be said to contribute to an understanding of Hawaiians strong cultural affiliation with Tahiti and the Marquesas, through positioning the Hawaiian *heiau* tradition within a wider 3,000 year old Pacific/Polynesian *marae-ahu* cultural continuum.

Hawaiian examples of *heiau* are beginning to assist in a better understanding of the key roles that ancient *marae-ahu*, such as those found in Raiatea, once fulfilled.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that Papahānaumokuākea, as an associative cultural landscape, represents core elements of Native Hawaiian cosmology and tradition. The islands northwest of the Tropic of Cancer are believed to lie within the region of primordial darkness from which life originates and to which it returns. For a culture that considers nature and civilization to be part of a genealogical whole, Papahānaumokuākea offers a "place of abundance" to reconnect with an ancestral environment and its seas are also a traditional and contemporary testing ground for the revitalized art of Polynesian wayfinding.

ICOMOS considers that the justification for this criterion needs to set out how the beliefs and living traditions of Hawaiians are of outstanding universal significance and then how the property is directly or tangibly associated with these beliefs and traditions.

ICOMOS considers that the belief system of the Hawaiians is clearly of fundamental importance to Hawaiians and can be seen to be embedded within the islands of Papahānaumokuākea and particularly Mokumanamana island. As visits to the islands are strictly limited, this in effect means that beliefs are associated with the known existence of the islands, even if those associated with the beliefs never visit the islands. The islands thus have an existence value for Hawaiians.

For the Hawaii beliefs to be of more than national and regional significance there is a need for this existence value to be understood and to a degree shared by those outside Hawaii.

ICOMOS considers that Papahānaumokuākea and its associated beliefs can be seen as part of a Pacific wide cultural continuum and an element that is critical to interpreting the socio-cultural evolutionary patterns of beliefs across the Pacific, such as *marae-ahu*. Its crucial significance is enhanced by the continuing living traditions of native Hawaiians.

Furthermore ICOMOS considers that the living traditions of Hawaii that celebrate the natural abundance of Papahānaumokuākea and its association with sacred realms of life and death, can be said to be directly and tangibly associated with the shrines of Nihoa and Mokumanamana and the other pristine islands beyond to the north-west.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criteria (iii) and (vi) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

The *heiau* shrines, with their sacred functions, and other archaeological sites on Nihoa and Mokumanamana, including the sites from where stone figures were recovered, the pristine nature of all the islands, and their overall association with sacred realms of life and death.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

ICOMOS considers that there are none.

Military activity

Activities and exercises of the Armed Forces are conducted occasionally within the property. The Monument Management board is working to develop a consultation process in order to ensure the protection of the property. Mokumanamana has also been used for military target practise. Shell craters are evident in a number of places, but no archaeological sites appear to have been hit.

Tourism pressures

The general public do not have access to the islands, apart from Midway Atoll in the far west of Papahānaumokuākea.

Environmental pressures

High-density, long-term seabird nesting, especially by burrowing species, has damaged some sites on Nihoa and Mokumanamana. These birds are protected and are therefore increasing in number. The only mitigating actions taken are to repair damaged walls.

ICOMOS considers that this measure is not adequate to protect the integrity of the archaeological resource.

Natural disasters

Emergency responses are in place in the case of hurricanes or tsunamis and oil spills and vessels grounding.

Impact of climate change

Sea level rises as a result of climate change is a threat to all coral reefs including the nominated property.

ICOMOS considers that the main threats to the property are from burrowing species, for which at the moment there is no deterrent and one urgently needs to be put in place, and military activity which should be precluded from Nihoa and Mokumanamana islands.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the nominated area are comprehensively described and justified in the nomination dossier. The extensive area nominated includes all the islands perceived to be sacred places in Hawaiian beliefs and their surrounding and linking sea, thus including all the attributes related to the proposed outstanding universal value.

The nominated property has no buffer zone, as it is in an extremely remote region and its boundaries have been set at 50 nautical miles (~100km) out over open sea from each of the islands and atolls. Access to/through the property is very strictly controlled and there are six designated 50 nautical miles wide areas to be completely avoided by ship traffic. All vessels must notify the Federal authorities if they come within 10 nautical miles (~20km) of the Property's outer boundaries.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate.

Ownership

The Federal government owns everything except Kure Atoll, which is owned by the State of Hawaii. None of the property is now, or is ever likely to be, in private hands.

Protection

Legal Protection

The nomination dossier provides great detail on the multiple layers of Federal and State legislation and regulation protecting Papahānaumokuākea's cultural heritage, "both monuments and landscape". The property was declared a National Marine Monument under the national *Antiquities Act*, and is further protected by other national legislation including as the *National Historic Protection Act*, *Historic Sites Act*, *Archaeological Resources Protection Act*, *Abandoned Shipwreck Act*, *Native American Graves Protection and Repatriation Act* and *Sunken Military Craft Act* as well as State legal measures including Hawaii Revised Statutes Chapter 6E – Historic Preservation and Hawaii Administrative Rules Chapters 275 – Rules Governing

Procedures for Historic Preservation Review, 277 – Rules Governing Requirements for Archaeological Site Preservation and Development, 280 – Rules Governing General Procedures for Inadvertent Discoveries of Historic Properties, and 300 – Rules of Practice and Procedure Relating to Burial Sites and Human Remains.

The property has been protected under Federal law for a century and its current status as a National Monument rests on its 2006 declaration as such under the Federal *Antiquities Act*. This Act provides criminal penalties for a wide range of unlawful activities. Compliance with this Act and the many others that govern access to and activity in Papahānaumokuākea is ensured by a strict permit system and a dedicated enforcement capacity in the property's administration. Monument enforcement authorities work with the US Coast Guard, which monitors all vessels in the area and physically responds to suspected violations of access regulations.

Traditional Protection

There are strict traditional Native Hawaiian protocols protecting the property's physical and intangible cultural heritage.

Customary sanctions are also in place to ensure appropriate Native Hawaiian behaviour towards the property.

Effectiveness of protection measures

ICOMOS considers that the legal protection of the property is adequate and effectively monitored through a combination of enforcement by the property's administration and by customary sanctions and helped by the limitations on access – see below.

ICOMOS considers that the legal protection in place is adequate.

Conservation

Inventories, recording, research

No clear list is provided of the extent of records for the archaeological resource. There is a need for the State Party to provide this. ICOMOS considers that the current on-ground archaeological research should be able to produce a much clearer documented record of the physical cultural attributes.

Present state of conservation

Although the conservation of the archaeological sites benefits from the very limited access to the sites and the fact that there are few safe landing areas, nevertheless, as stated above, and acknowledged in the nomination dossier, extensive bird burrowing is disrupting many of the archaeological sites in Nihoa, interior surfaces and deposits and perimeter and retaining walls. Uprooted

dead loulou palms have also impacted on surfaces. The uprights of one ceremonial site were removed by an expedition in 1928.

The nomination dossier states that the US Fish and Wildlife Service and the State Historic Preservation Division are considering a coordinated stabilisation project to prevent future damage or loss.

ICOMOS considers that this needs to be carried out as a matter of urgency.

Active Conservation measures

There is currently little active conservation work on the archaeological sites.

Maintenance

There is currently almost no regular maintenance.

Effectiveness of conservation measures

The Monument Management Plan sets out the need to put in place strong protection of the cultural attributes and ICOMOS considers that the management of cultural resources needs to be stepped up to deal with the conflict between nature conservation and archaeology and to achieve a much better balance between the natural and cultural attributes. Some constraints on the natural heritage will be needed to sustain the cultural heritage.

ICOMOS considers that there is concern for the fragility of, and disruption to the archaeological remains from plants and animals and further considers that there is an urgency to determine how to constrain natural attributes in order to protect cultural attributes. ICOMOS considers that there is also a need for clear documentation of the cultural resource.

Management

Management structures and processes, including traditional management processes

The three management Agencies are the US Fish and Wildlife Service, National Oceanic and Atmospheric Administration and the State of Hawaii Department of Land and Natural Resources – all primarily 'natural' agencies. For historical reasons, cultural heritage has only recently been elevated to a similar level of significance and importance as natural heritage in the property. In line with the way cultural heritage is managed in mainland US, cultural heritage expertise is brought in through interaction of the relevant State Historic Preservation Office/Division and the professional cultural heritage arms of Federal environmental protection agencies such as NOAA and FWS, as well as the NPS, which in addition to partly funding State Historic Preservation Divisions/Offices across the nation

under the *NHPA* also co-ordinates US World Heritage activity.

The legal and administrative underpinnings of the property's current Management Plan extend back 100 years, and have been organized on a multi-agency/trans-jurisdictional basis for much of that time, in line with cultural heritage management throughout the US. The Memorandum of Agreement (MoA) and associated documents joining the three lead administrative agencies provide formal mechanisms to ensure the operational effectiveness of the co-operative management model.

The associated information management system that is still under development is encouraging all the agencies involved in the property to adopt tight formal harmonization of their processes and procedures. This appears to be working satisfactorily owing to the fact that they all worked closely together on the management of the property under its previous protective designations (*i.e.* before it was declared a National Monument in 2006).

ICOMOS considers that the information management system will greatly enhance public access to detailed information about the property (see below) as well as improve the capacity to manage its cultural and natural resources.

Policy framework: management plans and arrangements, including visitor management and presentation

Papahānaumokuākea is not accessible to the general public owing to the extreme fragility of its cultural and natural resources and the need to maintain strict quarantine to limit the spread of highly-destructive exotic species of the sorts currently being removed from the islands.

In addition to controlled scientific access for cultural and biological research and management, special tours are and will continue to be permitted for Native Hawaiian cultural practitioners as well as carefully-selected US and international educators who can disseminate information about the property. It is conceivable that the public will one day be permitted to enter Papahānaumokuākea in very limited numbers on highly-controlled no-landing tours akin to tours undertaken in Antarctica. Such tours would enable people to see the monuments on Nihoa and Mokumanamana very clearly without breaking quarantine or endangering the sites or the visitors (physically-hazardous procedures are required to land on and leave the islands and their terrain is very difficult to negotiate, even for fit, well-equipped and experienced fieldworkers).

A Monument Protection Plan has been drawn up by key stakeholders who will act as the guiding document for the property over the next 15 years. This incorporates many of the individual plans of the participating

agencies. The plans set out a Vision, Mission, Guiding principles and goals. Within this plan there is a need to ensure that habitat restoration cannot over-rule cultural constraints – in particular the need to protect the archaeological sites that are fundamental to the property's value.

Outside the property, there is an active school outreach program in place within Hawaii called "Navigating for Change", as well as major visitor centres in Honolulu (at the Waikiki Aquarium) and Hilo on the "Big Island" (the island of Hawaii). Another centre is planned for the island of Kauai, which is the closest "main" Hawaiian island to Papahānaumokuākea. In addition to presenting the property to the public, the visitor centre in Hilo explicitly ties Papahānaumokuākea to the rest of the Hawaiian chain and especially to the "Big Island" and its natural World Heritage site of Hawaii Volcanoes National Park. On top of the information available in the visitor centres, the sophisticated property information management system, currently in an advanced stage of development, will provide global access to vast amounts of annotated current and historical technical information regarding the property.

Risk preparedness

Emergency responses procedures are in place to address the main identified threats: hurricanes, tsunamis, oil spills and the grounding of vessels.

Involvement of the local communities

Local communities have been involved at the highest level in the nomination process.

Resources, including staffing levels, expertise and training

NOAA has two maritime archaeologists directly associated with Papahānaumokuākea, but there are no terrestrial archaeologists or cultural heritage specialists currently on staff in the immediate property administration. A native Hawaiian archaeology PhD candidate was until recently employed as a cultural heritage specialist in the Monument administration but since he resigned, management has been unable to find a suitable replacement with appropriate expertise in both monuments and intangible heritage.

An additional position for an archaeologist/cultural heritage specialist for the property is understood to be the first priority of the Fish and Wildlife Service, the property's principal Federal "land-owner". The FWS is responsible for the terrestrial archaeology of all islands in Papahānaumokuākea except Kure, which is owned by the State of Hawaii. At present the FWS relies on the Regional Archaeologist for the FWS Pacific Region, headquartered in Portland, Oregon. He visits the islands regularly to monitor the sites' condition. Although he is stationed on the US mainland, he is physically closer to – and logistically better able to access – the

archaeological sites on Nihoa and Mokumanamana than FWS staff currently based on Midway Atoll within the property. It is, however, clearly recognized by Papahānaumokuākea management that a dedicated FWS terrestrial archaeologist/cultural heritage specialist for the property is required in Honolulu.

The terrestrial archaeology of Kure – as well as any activity anywhere in the property that is governed by Section 106 of the Federal *National Historic Preservation Act* – is managed by trained archaeologists and cultural heritage specialists in the State Historic Preservation Division (SHPD).

In effect, this means that virtually anything that happens anywhere in Papahānaumokuākea is vetted by the archaeologists and cultural heritage specialists in the SHPD, regardless of whether any such specialists are directly employed in the property administration. Such state divisions or offices are required under the *National Historic Preservation Act (NHPA)* and for this reason receive Federal as well as state funding.

Effectiveness of current management

Although the current administrative strategies entailing the co-operation of multiple State and Federal agencies are complex, they will provide a sound basis for effective management of the property for the foreseeable future.

The only concern ICOMOS has is over how a balance between nature and culture will be put in place that allows full protection of the archaeological attributes – that is prevention of burrowing animals and degradation due to plants. The appointment of an cultural heritage specialist will help with this process.

ICOMOS considers that the management system for the property is adequate, provided that an equitable balance is achieved between the protection of cultural and natural attributes and that a cultural heritage specialist is appointed.

6. MONITORING

Monitoring indicators have been put in place, including of engagement of Hawaiians with the property, fostering research and access, but only one indicator relates to the physical remains on the islands and this is concerned with the impact of access. The monitoring is said to be undertaken on a regular basis by the staff of the local property office.

ICOMOS considers that the negative impact of burrowing animals and plants on the archaeological remains must be monitored on a regular basis - after remedial measures and arrangements to contain natural process have been developed.

ICOMOS considers that the monitoring arrangements need to be augmented to monitor the impact of natural processes on the archaeological resources.

7. CONCLUSIONS

The pristine natural heritage of the north-west Hawaiians island, now given a coherence and identity through their new name, Papahānaumokuākea, is seen to have, through the persistence and vitality of Hawaiians beliefs and the strong physical evidence of shrines, *heiau* on Nihoa and Mokumanamana islands, outstanding cultural value.

ICOMOS considers that this value should be recognised on the World Heritage List but that this recognition needs to be supported by stronger conservation and maintenance of the physical cultural attributes which are currently threatened in place through burrowing animals and uncontrolled plants. These archaeological attributes also need more systematic documentation, which it is presumed will be an outcome of the current archaeological investigation, and more systematic monitoring.

The name Papahānaumokuākea Marine National Monument appears to give precedence to the natural attributes. If the property is inscribed for both natural and cultural attributes as a mixed site, then ICOMOS considers that the name should be changed to Papahānaumokuākea or The Islands and Seascapes of Papahānaumokuākea.

Recommendations with respect to inscription

ICOMOS recommends that Papahānaumokuākea Marine National Monument, United States of America, be inscribed on the World Heritage List on the basis of ***cultural criteria (iii) and (vi)***.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Papahānaumokuākea is the new name for a vast and isolated linear cluster of small, low lying islands and atolls, with their surrounding ocean, extending some 1,931 kilometres to the north west of the main Hawaiian Archipelago.

The pristine natural heritage of the area has deep cosmological and traditional significance for living Native Hawaiian culture, as an ancestral environment, as an embodiment of the Hawaii an concept of kinship between people and the natural world, and as the place where it is believed that life originates and where the spirits return to after death.

On two of the islands, Nihoa and Makumanamana, there are archaeological remains relating to pre-European settlement and use, including a large ensemble of shrines, *heiau*, of a type specific to Papahānaumokuākea, but which resemble those of inland Tahiti. These, together with the sites of stone figures that show a strong relationship to similar carvings in the Marquesas, can be said to contribute to an understanding of Hawaiians strong cultural affiliation with Tahiti and the Marquesas.

Criterion (iii): The well preserved *heiau* shrines on Nihoa and Mokumanamana, and their associated still living traditions are both distinctive to Hawaii but, positioned within a wider 3,000 year old Pacific/Polynesian *marae-ahu* cultural continuum, they can be seen as an exceptional testimony to the strong cultural affiliation between Hawaii, Tahiti and the Marquesas, resulting from long periods of migration.

Criterion (vi): The vibrant and persistent beliefs associated with Papahānaumokuākea are of outstanding significance as a key element in Pacific socio-cultural evolutionary patterns of beliefs and provide a profound understanding of the key roles that ancient *marae-ahu*, such as those found in Raiatea, the ‘centre’ of Polynesia, once fulfilled. These living traditions of the Hawaiians that celebrate the natural abundance of Papahānaumokuākea and its association with sacred realms of life and death, are directly and tangibly associated with the *heiau* shrines of Nihoa and Mokumanamana and the pristine islands beyond to the north-west.

Integrity and Authenticity

All the attributes that reflect outstanding universal value are within the boundaries.

The archaeological sites remain relatively undisturbed from cultural factors. They are however under some threat from natural factors and need further conservation and protection. Damage could disturb their layout and ability to display clearly their meaning. The unique arrangement of the collections of shrines of Mokumanamana and Nihoa islands need to be read in detail for their sacred and religious associations, linked to other similar sites across the Pacific. The strong spiritual religious associations of Mokumanamana island are living and relevant.

Management and protection requirements

Multiple layers of Federal and State legislation and regulation protect Papahānaumokuākea’s cultural heritage, both monuments and landscape. The property was declared a National Marine Monument under the national *Antiquities Act*, and is further protected by other national legislation including as the *National Historic Protection Act*, *Historic Sites Act*, and the *Archaeological Resources Protection Act*. There are also traditional

Native Hawaiian protocols protecting the property’s physical and intangible cultural heritage.

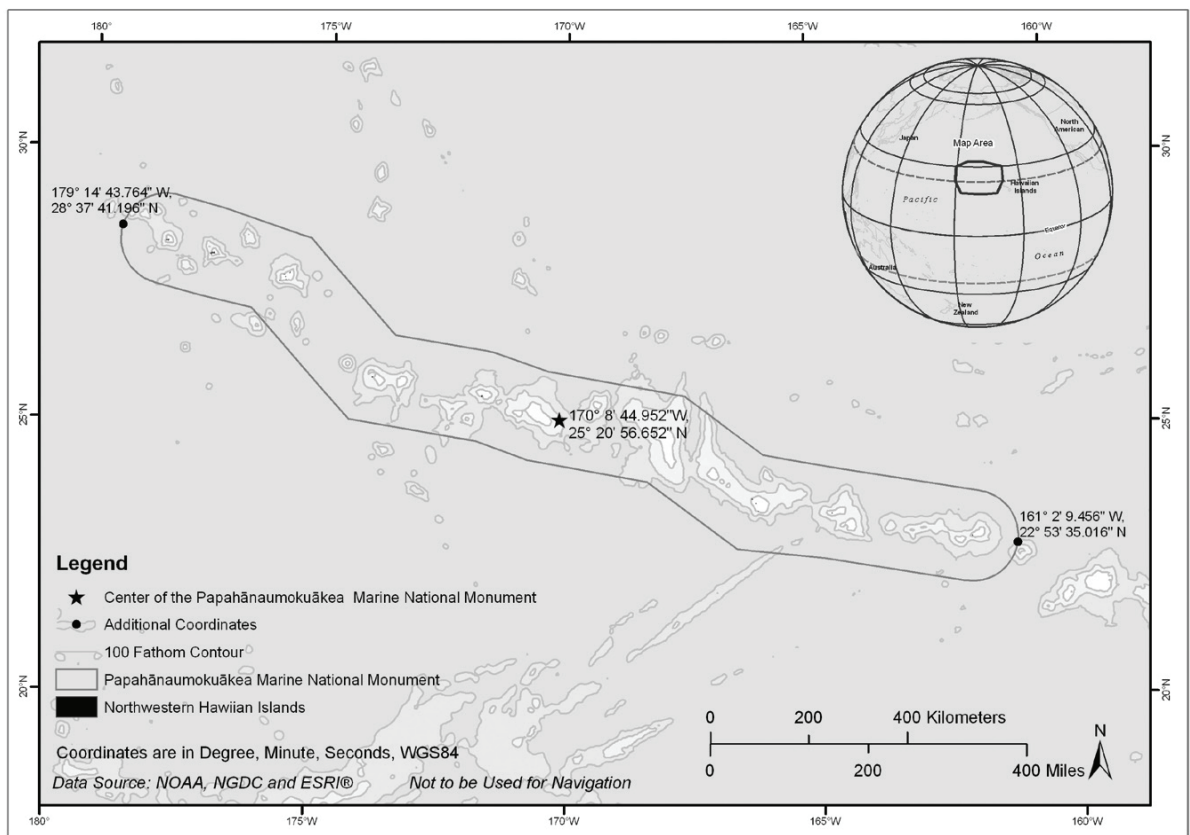
The three management Agencies are the US Fish and Wildlife Service, National Oceanic and Atmospheric Administration and the State of Hawaii Department of Land and Natural Resources – all primarily natural agencies. There is an acknowledged need to appoint an archaeologist/cultural heritage specialist for the property.

A Monument Protection Plan has been drawn up by key stakeholders who will act as the guiding document for the property over the next 15 years. There is a need to ensure that the management system achieves an equitable balance between the protection of cultural and natural attributes that it puts in place a deterrent to ensure archaeological sites are not disturbed by burrowing animals of plants, and that monitoring indicators address the impact of natural processes on the archaeological resources. There is also a need for management to be underpinned by clear documentation of the physical cultural resource, based on the outcomes of the current archaeological investigations.

ICOMOS also recommends that the name of the property be changed to Papahānaumokuākea or to The Islands and Seascapes of Papahānaumokuākea.

ICOMOS further recommends that the State Party give consideration to the following points:

- Ensure the management system achieves an equitable balance between the protection of cultural and natural attributes with the support of a cultural heritage specialist;
- In order to address the fragility of, and disruption to, the archaeological remains from plant and animals, put in place deterrents to ensure archaeological sites are not disturbed by burrowing animals of plants;
- Develop monitoring arrangements to monitor the impact of natural processes on the archaeological resources;
- Provide clear documentation of the physical cultural resource based on the outcomes of the current archaeological investigations;
- Ensure no military training activities take place on Nihoa and Mokumanamana islands.



Map showing the boundaries of the nominated property



Nihoa Island



Religious site at Nihoa Island



Mokumanamana Island



Mokumanamana's upright stones

IV Nominations of cultural properties to the World Heritage List

A Africa

New Nominations

Konso (Ethiopia)

No 1333

Official name as proposed by the State Party:

The Konso Cultural Landscape

Location:

Konso Administrative District, Southern Nations, Nationalities and Peoples Regional State (SNNPRS), Federal Democratic Republic of Ethiopia

Brief description:

At the end of the Ethiopian arm of the Great Rift Valley, lie the intensively terraced, steep, arid Konso highlands, rising to around 2,000 metres and overlooking plains on all sides.

The nominated area extends to 55 sq kilometres. Lying on the eastern slopes, the property encloses the upper reaches of three high level valleys, two draining to the south-east and one to the north.

The stone walled terraces, some rising to five metres in height, support fields of millet and corn, and are part of an intense, communally organised and finely balanced agricultural system which incorporates water-management systems that ensure that water seeps from one terrace to another in order that the greatest number of fields make use of the available water.

Within the terraced landscape, are stone-walled settlements (*paleṭas*) crowing the summit of hills. They are variously encircled by between one and six defensive dry stone walls. Each of the settlements has several large open communal and ceremonial spaces (*moras*), with large round thatch-roofed structures (*paftas*), used for meetings, games etc, and bachelors' dormitory. The mainly thatched roofed domestic and agricultural buildings are arranged around fenced compounds.

The Konso are notable for the erection of *wakas*, memorial statues to a dead man. These stylised wooden carvings are arranged in groups, representing the man, his wives and heroic events such as the killing of an enemy or an animal such as a lion or a leopard.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, it is also a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 30 September 1997

International Assistance from the World Heritage Fund for preparing the Nomination: 1998

Date received by the World Heritage Centre: 27 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Landscapes and several independent experts.

Comments on the assessment of this cultural landscape were received from IUCN on 18 February 2010 and are related to the following issues:

- Boundaries
- Protection and Management

The information was carefully considered by ICOMOS in reaching the final decision and recommendation in March 2010, and IUCN has also reviewed the presentation of its comments as included in this report by ICOMOS.

Literature consulted (selection):

Amborn, H, Agricultural Intensification in the Burji-Konso Cluster of South-Western Ethiopia, *Azania: Journal of the British Institute in Eastern Africa* XXIV, 1989.

Hallpike, C.R., *The Konso of South Western Ethiopia: A Study of the Values of a Cushitic People*, 1972.

Shinohara, T., The Symbolic Meaning of the Pot on the Roof. A case study of the Konso in Southern Ethiopia, in *Nilo-Ethiopian Studies*, Kyoto, 1, 1993.

Watson, E., *Living Terraces*, 2009.

Watson, E. E. 'Agricultural Intensification and Social Stratification: Konso contrasted with Marakwet', in Mats Widgren and John Sutton, eds., *Islands of Intensification*, 2004.

Technical Evaluation Mission: 19 October-1st November 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The dry and rugged Konso range of mountains rise out of the Ethiopian arm of the Great Rift Valley in south-west Ethiopia. The area is home to the Konso speaking people who live in stone walled settlements on the summit of hills, facing high level valleys that drain to the surrounding plains. All slopes of the mountains display steep stone-revetted terraces that make agriculture possible in this area of low and unpredictable rainfall through sophisticated soil and water conservation measures, many carried out communally, and encompassing rain-water harvesting, leaf fodder, intercropping and agro-forestry.

The nominated area extends to 55 sq kilometres about 2.5% of the overall Konso hills. Lying on the eastern slopes, the property encloses the upper reaches of three high level valleys, two draining to the south-east and one to the north. Within the area are 12 fortified settlements, associated sacred forests used for ritual and medicinal purposes plants, and shrines. These are considered separately.

Although a considerable amount of academic research has been carried out in the Konso area in recent years, there appears to have been only limited consultation with the leading academics in the preparation of the nomination dossier.

Terraced Landscape

The Konso area has the highest degree of uncertainty regarding rainfall due to its position at the southern extremity of the highlands. The problem is not an absence of rain but an abundant discharge in a short time, hence the use of terracing to collect maximum water and to discharge the excess.

The terraces prevent soil erosion and maximise water retention. Crops are grown in rotation throughout the year. Coffee, cotton and chat are cash crops. Twenty-four different varieties of millet are grown as well as wheat, barley, sorghum, maize, peas, beans, potatoes, banana, cotton and coffee.

Terraces can be up to 8m high and the width depends upon the steepness of the slope. They are made where the soil is cut away to make a perpendicular face and a stone wall built against it. Foundations are usually small (10 – 25cm). Stone is moved from above and used to level the lower area.

Men and women work together, although stonework is the job of men. Women use *tomas* (long wooden bowls carved from trees) to move earth.

Bends in the wall are reinforced by turrets. Turrets seldom rise more than 2m above the field. They are used as platforms to protect crops from birds and

animals. For further support, flanking walls are built to cross the terraces perpendicularly, approximately 50m apart. These are up to 1.5m high and serve as pathways.

To protect the fields, the Konso maintain their cattle, sheep and goats in stalls and feed them by hand or supervise their grazing.

Fortified Settlements - paletas

The walled towns, or *paletas*, are all on flat or mainly flat land on or near the summits of hills. They are enclosed by between one and six walls reflecting it seems a response to population increase, with the inner walls being the oldest, and in most cases the highest, reaching up to 4 metres high. The outer walls have two or more exit gates leading to water sources, farms or markets.

Each town is governed by an autonomous council of elders and divided into smaller administrative neighbourhoods or wards known as *kantas*. Each member of the community will belong to one of the *kantas*.

Within the towns, the Konso live in individual compounds surrounded by wood and stone fencing. The compound is divided into two halves: the upper part for people and the lower for animals and storage. Usually there are 5 or 6 thatched structures, including the house, stores and granary, a grinding space with a stone mortar, often in the lower part of the granary, and a cattle kraal.

Within each of the towns are several *moras*, large open communal and ceremonial spaces. There can be up to seventeen *moras* in a *paleta*, located at the centre of the main central wall and at different locations within the village. There might be one or two outside of the walls. Paths lead from gates to *moras*. Paths also connect one *mora* to another.

Some *moras* have tall round thatch-roofed structures, known as *paftas*. These are larger and more ornate versions of ordinary houses, with stone slab seating areas and thatched roofs supported by stout juniper posts. They are the practical and ceremonial centres of daily life used for meetings, games etc, and as bachelors' dormitories associated with ceremonies related to the transfer of power to the younger age groups. These *paftas* are a reflection of communal pride and serve as the show-pieces in each village. They may be surrounded by 'generation' trees, dead junipers up to 40 feet high transported from the forests, monolithic stone stele reflecting the success of warriors, oath taking stones and ritual spear sharpening stones.

From the documentation provided it is not clear how many *paftas* exist nor where they are.

The fortified settlements once contained all the houses within their walls which were accessed by two or more main gates. Today these gates no longer need to be

guarded or actively defended (and side entrances through the outer wall may now substitute), and the distinction between the enclosed, densely settled 'town' and the surrounding terraced cultivation has been blurred in several instances, as families are preferring to site their homes outside the enclosing wall or along the road.

There is also a growing tendency for households in the walled *paletas* (and those who have built outside the walls) to reconstruct their dwelling houses in rectangular shape convenient for roofing with corrugated metal sheets. These metal roofs catch the eye from afar.

However, in those compounds where metal roofing has been introduced, it is usually confined to the main house alone, and the layout and function of the other structures and spaces has not been radically affected.

The individual *paletas* are as follows:

Gamole

Gamole walled town has three dry stone walls with the outer wall approximately 1,300 metres long. The inner wall is the oldest and encloses what is believed to be the original settlement. The *dina* woodland around the town is mostly destroyed due to population and development pressures.

Gocha

Gocha has one stone wall around 1,700 metres long with five gates. The walls are, however, mostly destroyed. There are five *moras* within the town and one outside. Outside the line of the walls is a small *dina*, with decaying *wakas* (burials). In recent years the community has failed to maintain this area.

Mechelo

Mechelo is considered with Gamole and Gocha to be one of the oldest walled towns. It has three walls, the external walls covering around 1,700 metres. The average height of the inner wall is nearly two metres but it rises to just over four metres in places. Mechelo is one of the few towns to keep part of its *dina*. Around 2,500 sq metres survive with thirteen grave markers.

Dokatu

Dokatu is the collective name for three walled towns, Lower Dokatu, Burquda and Hulme. The main Konso-Jinka road passes between Burquda and Hulme and all three are near the growing urban area of Karat.

Lower Dokatu has six walls with an outer length of around 1,600 metres. In contrast to other towns, the outermost walls are the highest rising to just over 3.5metres. There are 6 gates and 19 *moras*.

No details are given for Burquda and Hulme.

Dara

Dara has six walls with the outer wall extending to just over a 1,000metres. Some of the walls reach to

4.5metres in height. There are four gates and nine *moras*, one being outside the walls.

Olanta

Olanta has four walls, the outer around 1,000 metres in length. There are three gates and 15 *moras* with nine *paftas*.

Mecheke

Mecheke has one wall running to 1,300 metres. There are five gates and eleven *moras*.

Burjo

Burjo is a small town with a single wall, around 800 metres long. There are four gates and four *moras*.

Gaho

Gaho also has a single wall extending to around 800 metres. There are six gates and nine *moras* with *paftas*.

In Burjo and Gaho there is a tradition of supporting small storage buildings on a single vertical log.

Busso

Busso is not fully encircled by a wall as it is protected by natural terrain and walls were only constructed on the flat areas. There are six gates and sixteen *moras*. There are 31 erected stones outside the main gate. There were formerly many *wakas* but these have been stolen or are decayed.

Forests

There are three main sacred Poqolla forests in the Konso areas, Kala (196,430sqm), Bamale (105,338sqm) and Kufa (45,066sqm). Priests reside near these forests and are buried within them with elaborate *wakas* erected beneath shelters of wood and thatch. The generation trees erected in the *moras* are cut from these forests. Kala is the best preserved and most actively used. Formerly the trees were mainly Juniperus, but the Derg Government (1974 until 1987) cut much of them for timber. Eucalyptus has since been re-planted. Since 1991 there has been some regeneration of indigenous trees.

Near many of the towns there is a dense grove of euphorbia and finger cactus between the towns and the fields. Known as *dina*, these woods provide firewood and were also used as a burial ground for the towns' artisans who did not have their own land. In spite of their social and cultural functions, many of these areas are now neglected and partly deforested.

Burial markers

The Konso are notable for the erection of *wakas*, memorial statues to respected members of the community. These large, stylised anthropomorphic statues, usually made of juniper wood, are arranged in groups, representing the man, his wives and particularly heroic events.

Formerly these were erected near the mora or near the gates. Latterly they have been put up beside major paths. Many are now neglected.

Farmers were buried in their farms and simpler *wakas* erected, while artisans without land were buried in the *dinas*.

Hardas

These are water reservoirs located within or near forests. They collected rain water for cattle. Some *hardas* are as long as 60 metres and their retaining walls can be up to 13 metres in height. The number and location of these are not provided.

History and development

Knowledge of the history of the Konso landscape comes from oral traditions and linguistic analysis and some limited archaeological investigations of a few settlements, but so far no reliable dates have been obtained.

Oral traditions suggest that the Konso migrated to the present area from the east and north around 21 generations ago – approximately 400 years ago. In the management plan more details are provided and it is suggested that the Konso originally came from the east and the west. The eastern group constitutes those who migrated mainly from Liben (Borena) and also those from the Burji areas. People in the western group, reportedly came from the highlands of Dirashe, Mashile, Gewada, and from the Tsema area etc. Almost all of the local informants agree that migrants from the east were the first settlers of the Konso land. They also confirm that people from the west reached the area shortly after the former, but at almost the same time

There appears to be no oral traditions associated with the building of the terraces.

The compact village tradition and the agricultural system, and also the history of the internal developments which must have occurred century by century, deserve testing through surveys and possible archaeological excavations. Abandoned plots within the existing villages, and more particularly villages long deserted, several of which remain recognisable in the farmland, their walls now modified as cultivated terraces, could be investigated. Research along such lines would bring a new understanding to Konso and its culture.

ICOMOS notes that the nomination dossier acknowledges this need.

Until the incorporation of Konso land into the Ethiopian empire by Menelik II towards the end of the 19th century, each Konso traditional town enjoyed an autonomous status and used to be administered by traditional institutions. Councils of elders were placed on top of

these institutions and although some resistances was reported in Jarso, Guyle and Dokatu, this resistance came to an end with the fall and destruction of Dokatu town.

Until the 1970s, Konso was administrated within the Gamo-Gofa Region, and before the end of the 1980s, under Semen (Northern) Omo Administrative Region. Currently, under the country's federal structure, it has become one of the Special Woredas (districts) under the South Nations, Nationalities and Peoples' Regional State (SNNPRS). Its capital is Karat (formerly Bekawile).

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis does not systematically compare the Konso landscape with other inscribed landscapes in order to show whether there is room for it on the World Heritage List. It mentions Sukur Cultural Landscape, Nigeria (1999, criteria (iii), (v) and (vi)) and the Rice Terraces of the Philippine Cordilleras, Philippines (1995, criteria (iii), (iv) and (v)), both of which are said to be comparable to Konso.

Comparisons are also made with other inscribed 'megalithic' sites, such as Stone Circles of Senegambia, Senegal – Gambia (2006, criteria (i) and (iii)), and sites that demonstrate clan structures, such as the Sacred Mijikenda Kaya Forests, Kenya (2008, criteria (iii), (v) and (vi)).

ICOMOS considers that a case could have been made for consideration of the property on the List had any comparison been made between the overall attributes of the Konso landscape – that are considered to give Outstanding Universal Value – and other sites on the List. This would have shown that the combination of extensive terraces and fortified towns is not otherwise represented on the World Heritage list; even though there are terraced landscapes such as the Sukur Cultural Landscape in Nigeria on the List, these do not demonstrate the complexity of settlement patterns.

Furthermore in respect of the second part of the comparative analysis which should show whether there are other similar sites that could be nominated, ICOMOS considers that, although there are examples of intensive and highly specialised agricultural communities, both existing and archaeological, in Ethiopia and elsewhere in eastern Africa, and in part of West Africa, none exhibits the degree of continuity, the visual impact offered by Konso, nor particularly the combination of terraces and fortified towns that reflect a very specific response to environmental and social constructs.

The comparative analysis should be augmented to spell out more clearly why the Konso landscape justifies consideration on the World Heritage List.

ICOMOS considers that the comparative analysis as set out does not justify consideration of this property for inscription on the World Heritage List but if augmented could do so.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Konso landscape shows at least five hundred years of history demonstrated in thousands of kilometres of stone terraces;
- The Konso walled towns with their clan organisation and communal space are unique in their conception and execution;
- The traditional forests are protected by ritual chiefs;
- Columnar stones/stele are still erected as grave markers;
- The strong and cohesive social bonds are still maintained to provide work groups to conserve terraces, towns' walls, common houses and pools.

ICOMOS considers that what makes the Konso area potentially exceptional is the integration of these aspects as well as the particular details of the town walls, and traditional buildings.

Integrity and Authenticity

Integrity

The proposed boundaries set out to contain the key tangible attributes of terraces, walled settlements, sacred groves and shrines, but exclude some areas that appear to share similar attributes. Also as currently drawn, they cut across the landscape (see boundaries below) and do not relate to coherent cultural or social units. As the landscape is sustained by communal farming activities, it is essential that the nominated area is related to those units and to recognised visual features and is a coherent unit in geo-cultural terms.

In terms of threat, the greatest threat to integrity is the dispersal of settlements, with houses being built outside the town walls, thus breaking down the clear, distinctive, landscape patterns of settlements, farmland and forest. Other attributes such as the sacred forests, *dina* woodland, traditional house-building techniques, are also to a degree vulnerable.

Authenticity

Clearly the pattern of the overall landscape and what it reveals of the way it has developed over time, in terms of the arrangement of settlements, terraces, forests and shrines is without doubt authentic. As are the continuing,

agricultural, social and cultural processes that maintain and sustain this landscape.

However ICOMOS considers that some attributes of the landscape are vulnerable from lack of maintenance such as forests, woods and grave markers. Others are vulnerable to the changes in materials, or developmental threats (see below) that interrupt the relationship between the walled towns and their landscape. These vulnerabilities could increase unless further structures are put in place and could impact adversely on the overall authenticity of the property.

ICOMOS considers that for the condition of integrity to be met the boundary needs to be re-assessed to reflect the key attributes; the condition of authenticity has been met but has a degree of vulnerability that needs to be addressed, if the overall landscape is to be sustainable.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii), (v) and (vi).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the Konso landscape demonstrates a megalithic tradition of stele erection which together with the carving and erection of anthropomorphic wooden statues represent an exceptional living testimony to traditions that are on the verge of disappearance.

ICOMOS considers that what is being nominated is the overall Konso cultural landscape, of which the funerary traditions are but a part. In terms of the overall landscape, ICOMOS does not consider that sufficient research has been done to understand how the terraced landscape and fortified towns together reflect a unique cultural tradition. With further research into the formation and structure of the towns and terraces, this criterion could perhaps be demonstrated.

ICOMOS considers that this criterion has not been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the dry stone walls demonstrate an adaptive strategy to the dry environment and that the overall landscape of terraces and towns demonstrate a strong tradition of common values, social cohesion and engineering knowledge.

ICOMOS considers that the overall Konso landscape, particularly its terraces and associated walled towns, can be seen as an outstanding example of a resilient land use, forged by very specific social and cultural systems that were an extraordinary response to the area's aridity and unpredictable rainfall. ICOMOS does however also consider that the attributes (both physical features and processes) of that system need to be better defined and more carefully mapped in order to set out more appropriate boundaries that respect the morphology of the area and its cultural and social units

ICOMOS considers that this criterion could be justified with clearer definition of the attributes and a revision of the boundaries to allow for more coherence in visual, social, cultural and geographical terms.

ICOMOS considers that this criterion has not been justified at this stage.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the Konso belief system, social organisation, rituals and art (*wakas*) are testimony to traditions of megalithic societies.

ICOMOS considers that the justification provided does not demonstrate how these beliefs are of universal significance in relation to megalithic societies in general, or how the overall cultural landscape reflects these beliefs in an outstanding way.

ICOMOS considers that this criterion has not been justified.

ICOMOS does not consider that the criteria and Outstanding Universal Value have been justified at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

One of the main trends identified by the State Party is for new houses to be built outside the enclosing town walls and for old plots to be left abandoned. This trend is not yet undermining the social fabric and functioning of the villages; but if the process of moving out and leaving abandoned plots continues, this could have a detrimental impact on the value of the spatial organisation and overall social structures of the towns. There is also pressure for schools, clinics, flour mills, churches and modern burials. There appear to be no policies or planning currently that can control these processes adequately so that new buildings respect the patterns of the landscape.

In several villages, the positioning of the water tanks, standpipes and latrine blocks in front of the main entrance, or original gate seems to have been chosen without necessary consultation.

Currently electricity is not connected to all the villages. If the lines continue from those in the existing towns, this could lead to a plethora of overhead lines in the landscape. ICOMOS notes that there has not so far been consideration of whether this can be avoided and how consultation might take place.

Dams

To the south-west of Konso there are projects, apparently going ahead, for a series of dams on the Omo river to supply hydroelectricity to the country's grid (and maybe adjacent countries too). It appears that the approved route for the high-voltage power line is not parallel with the tarmac road through the middle of Konso, but to the east of the nominated area.

ICOMOS considers that assurances need to be given on this point.

To the north-east, the boundary skirts right round Karat town, with a linear boundary against the main and fairly rapidly growing urban zone. The population of Karat has doubled in the past ten years and the town is undergoing rapid infrastructural development. To the east and west are the three towns that collectively are called Dokatu. All three are right up against the property boundary with the threat of development in Karat immediately outside.

Changing agricultural practice

Sufficient availability of labour for the myriad of tasks necessary to keep the overall agricultural terrace system functioning is absolutely crucial. Traditionally many of these were apportioned to youths or children, such as promptly repairing damage to walls and drains after storms or scaring birds and monkeys from the ripening grain. Now, with a weakening of the age-grade institutions and communal obligations, strains in maintaining the agricultural cycle are likely to manifest themselves.

Demographic Changes

Only around 20% of Konso people now live in the heart land of Konso country – that is the nominated villages. It appears that many families have moved to lower ground where it is easier to farm and there are less social constraints. Although they keep links with their ancestral villages, there must be a danger that, unless farmers in the nominated areas can in some way add value to their produce, they will become marginalised and the fortified villages the residences of older people.

Tourism pressures

There is clearly a wish to increase tourism but there is also a risk that this could lead to a museumification. The newly inaugurated Konso Museum could play a central role, liaising with other museums and institutions and scholars generally, in providing more sophisticated information (rather than on the traditional terraces and town walls) of the persistent and resilient agricultural and cultural systems and raise awareness within the community, as well as with visitors, of the dynamic social and cultural landscape.

One of the main current adverse impacts of tourism is a rash of lodges, some labelled 'eco-lodges', on prominent sites, directly overlooking villages. The lodges are thatched imitating authentic Konso style – but in entirely unauthentic situations.

It is not clear how permission for these was given but ICOMOS understands that the aim is to provide clearer scrutiny of such proposals in the future.

Theft

There is particular concern for the safety of the carved funerary effigies, *wakas*, commemorating senior clan-heads and heroes, since they are subject to decay (as they always were) but also, having acquired some fame and monetary value in the ethno-art world, and are thus now vulnerable to theft. In some villages action has been taken to move *wakas* from their original grave-marking positions to safer ones inside the walls, and to protect them from the elements by erecting shelters of metal sheeting. Others are said to be hidden away and are expected to reappear soon in the safe refuge of the new Konso Museum where there will be suitable conditions (and treatment facilities) for permanent conservation.

Environmental pressures

Building materials

Customary materials and labour for repairing terraces, town walls and houses, are increasingly being seen as having a price. The nomination dossier mentioned the cost of thatching grass, for the *paftas* as well as for individual homes, indicating the scarcity of grass in this intensively cultivated landscape, as well as the continuing need for fodder for the stalled cattle.

These factors are exacerbated by the pressure of an increasing population upon all natural resources (and perhaps the reluctance of people to fulfil customary obligations without payment).

Where roofs have been changed from thatch to tin, although this change of style requires an outlay of cash, it may prove in the long run cheaper in terms of the labour (and reciprocity obligations thereby incurred) than obtaining thatching grass and regularly maintaining the roof.

Any policy to sustain traditional roofing will have to find a solution to the scarcity (and expense) of thatching grass.

Forestry

IUCN notes that: *'The natural values of the landscape have been heavily degraded and little is left of the original vegetation across much of the area. The sacred forests, which provide some protection to forest remnants, continue to be degraded and cut down. These forests, while small, preserve some natural values, as well as having sacred significance in a number of cases. There has been replacement of some species with exotic Eucalyptus which is reported to exacerbate problems of water management.'*

'The implementation of a reforestation programme, initially for firewood, could be considered priority in the property. Protecting the last remnant natural forests and restoring them is more difficult, but should be attempted in order to retain natural values within the landscape.'

Natural disasters

The property has a degree of vulnerability to earthquakes and to storms which produce flash floods that could inflict considerable damage on the terraces.

Impact of climate change

The landscape is clearly vulnerable to changes in rainfall patterns, although during past famines the areas has managed better than other parts of the region. IUCN notes: *'In an already dry environment, climate change is a threat to the values of the landscape and mitigation and adaptation measures should be important components of site management.'*

ICOMOS considers that the main threats to the property are changes in traditional practices, related to building construction and forestry, community obligations, resources, a potential over-reliance on tourism, and development pressures from Karat.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The area within the boundary covers approximately 55 sq. km, not 140 sq. km as stated in the nomination dossier. The proclamation drafted for SNNPRS parliament and presidential signature also retains the figure of 140 sq km. The larger figure representing, it appears, an earlier extended proposed nomination which would have included a series of palaeoanthropological sites scattered around an ancient lake basin lying to the north of the main hill mass.

The boundaries are somewhat arbitrary with long straight lengths cutting across the landscape and not

coinciding either with recognisable landscape features or cultural or administrative units.

IUCN notes that: *'The nomination document does not clearly explain the criteria that were used to select the area to be defined as the nominated property. The proposed boundaries, in a number of parts of the nominated property follow straight lines. Since the property includes important values related to the management of water, it appears unlikely that straight line boundaries, which will not follow the key natural features of the landscape, would be the most appropriate or effective means to delimit the nominated property. IUCN recommends that the boundaries be reconsidered to follow natural and cultural landscape features and to include the upper watersheds that feed the irrigation systems.'*

ICOMOS has also concerns over what is included and what is excluded from the current nominated area. For instance, certain walled villages lie outside the boundary (and their exclusion is not justified – see comparative analysis), the boundary cuts through small settlements, and in some places the landscape outside the boundary is a visual continuation of what lies within. The boundary is particularly uncomfortable to the north-east where Karat town has been excluded and is effectively 'cut out' of a larger area.

It is undoubtedly true that for an inhabited landscape the borders must remain thoroughly 'permeable'. Although a strong case is made for not defining a buffer zone for this extensive nominated area, ICOMOS considers that there nevertheless remains a need for constraints over visually contiguous areas where unexpected development threats might arise.

ICOMOS considers that the boundary of the nominated property need to be revised to relate it more clearly to topography and cultural and social units; either a buffer zone needs to be put in place or planning policies that protect visual contiguous areas that form the setting of the property.

Ownership

All land is owned by the State as is the case throughout Ethiopia. Terraces are owned by individual members of the community. The forests are 'owned' by the *Poqolla* and members of their family, a status that is defined by traditional law. The walled towns are collectively owned by the community members.

Protection

Legal Protection

The nomination dossier includes a copy of a regional (SNNPRS) proclamation for the Konso Cultural Landscape Heritage which is awaiting approval,

signature and promulgation. The nomination dossier makes barely any direct reference to existing laws governing the protection of archaeological, ethnographic and cultural sites and artefacts. The draft regional proclamation, while providing necessary recognition to the area of Konso designated for cultural heritage conservation, is vague on which federal laws actually apply and how they may be enforced.

ICOMOS notes that it is not clear how under decentralisation, specific enforcement under federal law, and prosecution where necessary, will be initiated.

Traditional Protection

Almost the entire management, maintenance and conservation of the nominated property is carried out by traditional measures.

Effectiveness of protection measures

However effective traditional practice is, it has the capacity to be highly vulnerable to demographic and social pressures.

ICOMOS considers that traditional management needs to be supported through legal protection or planning measures and encouraged through incentives if it is to survive. So far these constraints and incentives have not been put in place in a way that will be robust enough to support the living communities of the Konso area in a sustainable way, allowing them opportunities for improved standards of living based on the economy of the terraces rather than from an over-reliance on tourism.

IUCN also notes that: *'The basis for protection of the area is customary law. IUCN questions whether this will be sufficient to guarantee the protection of the nominated property, especially the natural values, over time. It is also of concern that the management plan for the site does not carry legal weight and may not be entirely consistent with customary law. Ideally, governance set-ups integrate customary and formal protection and management in a complementary and consistent fashion.'*

ICOMOS considers that the legal protection in place is not adequate and that although the traditional protection arrangements currently in operation are admirable, they need active support and constraints to ensure they are resilient in response to social and economic changes. ICOMOS considers that the current protective measures for the property need to be augmented and strengthened to support the communities in their massive conservation responsibilities.

Conservation

Inventories, recording, research

As part of the nomination process, community members have participated in data collection and have led a mapping process within their respective territory, supported in part by external funding.

As a result, town stone walls have been measured, the *moras* have also been measured, their use and related data recorded, and sketch drawings prepared for two representative *moras*. Sample homesteads have been documented; data on the extent of terraces has been collected through car and foot transects; and a sample terrace area measured systematically. Three major traditionally protected forests and associated cultural manifestations have been documented.

The nomination dossier has however not provided details of all the evidence collected. For instance there are no specific details of the town walls, apart from their plan, nor details of numbers and locations of the *moras*.

Several of the villages, with ward boundaries, *moras* and wall configurations plotted, would serve as an excellent base for more revealing surveys – involving student teams, say – undertaken homestead by homestead (both occupied and abandoned), wherever that can be undertaken without undue intrusion.

Present state of conservation

The structures of the landscape that need conservation are extensive: the town walls, wood-and-thatch houses, granaries, stock-stalls within the compounds, the *paftas* in the *mora* spaces, as well as the footpaths, walls, surviving gates etc of every town, and outside, the *dina* woods, graveyards, sacred forests, stone reservoirs, *hardas*, and the vast extent of stone-walled terracing.

Some variation from traditional practice has been noted, in particular the substitution of metal sheets for roofing of houses and the overall positioning of new buildings. Overall the state of conservation of the town walls is fair although some gates are no longer maintained. Some of the *pafta* buildings have been restored with outside funding. There is a problematic lack of maintenance of the *dinas* and *wakas* and thus their state of conservation is poor. There are difficulties with the conservation of the sacred forests where much of the original juniper stands were felled, where there has been replanting with eucalyptus and there is currently little regeneration.

The conservation of the field terraces is good and reflects the need for these terraces as a vital part of the Konso subsistence economy. Features such as the *harda* reservoirs could suffer from neglect if they are rendered redundant by new water supplies.

Active Conservation measures

Conservation is governed, up to a point, by local traditional practices and sanctions; but in view of modernising pressures, there is no guarantee that traditional work will continue.

ICOMOS notes that this is acknowledged in the nomination dossier.

In recent years, partly in tandem with the preparation of the nomination dossier, some financial support for conservation has been forthcoming (in particular from the Christensen Fund in USA) through local NGOs. This has brought some valuable results, in particular for the maintenance of village walls, repairing of *moras* and their *paftas* with necessary re-thatching, protective measures for surviving tracts of forest (with appropriate emphasis on the virtue of biodiversity), and reviving of communal cultural events.

The success of this will depend not only on agreement to certain standards but the viability of the overall economic system.

It is difficult to say whether this conservation work would continue if the moral encouragement of a modicum of funding were to be lacking.

The surviving pockets of traditional forests need active conservation. ICOMOS understood that the team preparing the nomination dossier has made special efforts to strengthen or revive the traditional control and management of these forest relicts, and to raise public awareness of the importance of their conservation in the villages around. But if these efforts are to be effective and lasting, ICOMOS considers that a system of constant vigilance, at district as well as local village level, will be essential.

Maintenance

Maintenance cannot be separated from conservation in terms of the elements of the Konso landscape.

Effectiveness of conservation measures

There is a great reliance on the strengths of the traditional community system with its complex obligations. ICOMOS is concerned that this system is not resilient enough to counter the social and economic forces for change, to the extent that key attributes are conserved, and considers that more proactive engagement is needed at regional and national level.

ICOMOS considers that conservation approaches need to be better supported at regional and national level.

Management

Management structures and processes, including traditional management processes

The management of the property is based on traditional structures. These are set out in detail in the management plan in terms of Clans, Age and Priestly groups, their sub-groups and functions.

A Management Committee has been agreed at the regional level to include concerned governmental administrative offices, community members including traditional leaders, youth and women representatives. Committees have also been formed at the community level. Although no details are provided as to the responsibilities of these committees.

The involvement of regional and national authorities is confined to inspection. The Konso Office of Culture and Administration inspects the property on a quarterly basis. They can then take any necessary enforcement action. The representatives of the regional government conduct two monitoring missions each year. Both of these are reactive rather than pro-active measures. The national Authority for Research and Conservation of Cultural Heritage (ARCCCH) has no officer of its own in the district.

There is also the issue of potential conflicts between conservation and income from new development and tourism projects.

Policy framework: management plans and arrangements, including visitor management and presentation

A management plan was submitted with the Nomination. This, as outlined above, sets out the current structures and explains how the Konso community, through its recognised village committees and the district management committee, will endeavour to ensure the necessary standards of conservation and handle contraventions. It also sets out the activities of the partners but does not suggest any policies or action plans.

There is a need for the plan to address the presentation of the property, generally and through the new museum, and an overall strategy for visitor management.

Risk preparedness

This has not been covered.

Involvement of the local communities

Local communities underpin this nomination and are at the centre of the management of the area.

Resources, including staffing levels, expertise and training

Overall resources are lacking, as noted in the nomination dossier. All the Agencies are trying to provide support but what is available is considered to be insufficient. Some limited funds are available to support tourism projects.

External support from NGOs in recent years has been used to foster community engagement on the repair of features such as walls, *moras* and *paftas*. Whether the level of effort in conservation could be maintained if, for some reason, the external source of these modest funds were to be withdrawn, and if the local organizations dependent on them for core finance and salaries were to suffer as a result it is difficult to ascertain.

There appears to be an unarticulated assumption that revenue from increased tourism will come in after inscription to fill any gaps. This may be related to the setting up of a World Tourism Organization Konso Information office.

Overall there is a need for supportive funds, perhaps through international cooperation with other similar properties.

Effectiveness of current management

The management of this complex cultural landscape needs resources and skilled people to support the commitment and skills provided by local communities. Currently this management support is not in place to a degree that would ensure that the values of the property are sustained over time.

For the property to be sustainable, there will be a need to foster ways for farmers to 'add value' to their produce and for them to benefit from visitors.

ICOMOS considers that a major effort is needed to bring in support for the traditional management of the property to ensure that it is robust and resilient enough to provide long term conservation.

6. MONITORING

Various monitoring mechanisms have been put in place to capture the work that needs undertaking such as terraces and walls that need maintenance, degradation of *wakas*, houses that need conservation. However there is currently little response that can be put in place to these needs. The monitoring is effective in identifying need rather than the effectiveness of conservation measures. The monitoring also needs to be related to more detailed inventories or documentation of the key attributes.

ICOMOS considers that the monitoring is identifying problems but without any real resources to address those problems.

7. CONCLUSIONS

The compact walled towns, with their multi-layered defensive systems, and the maintained terraced fields, extending over virtually the whole landscape of the nominated Konso hills, bear striking visual witness to an intense, resilient land-use forged by very specific communal, social and cultural systems that were an extraordinary response to the area's aridity and unpredictable rainfall.

The nomination is to be commended for the way it has been developed from community level and harnessed the resources of the community to undertake surveys and provide documentation for the dossier.

What has been nominated is a vast area which in essence hangs together as a unit – encompassing the heart of the Konso area within which the terraces are at their the most dense and the traditions of walled towns most prominent. It does however need to have a boundary that relates more satisfactorily to geography and social and cultural units.

Currently the landscape is maintained by traditional processes supported by communal obligations. It is however under considerable pressure and many of these processes are beginning to be stressed through increasing population, young people moving away, the development of infrastructure and a focus on tourism. The interface between the urban development in Karat town and three of the adjoining walled towns are at a critical stage.

As can be demonstrated from other extensive agricultural landscapes on the World Heritage List, the management of such areas needs a strong focus and much support if they are to sustain the attributes (including those associated with processes and structures) that give them outstanding universal value.

ICOMOS considers that the structures in place for the Konso landscape are not currently adequate to meet these challenges, in terms of legal protection, structures, regulations and resources.

It considers that the Konso cultural landscape needs support in order to put in place necessary structures and resources in order to strengthen its resilience so that it may adequately meet the challenges, without which it would quickly come under threat.

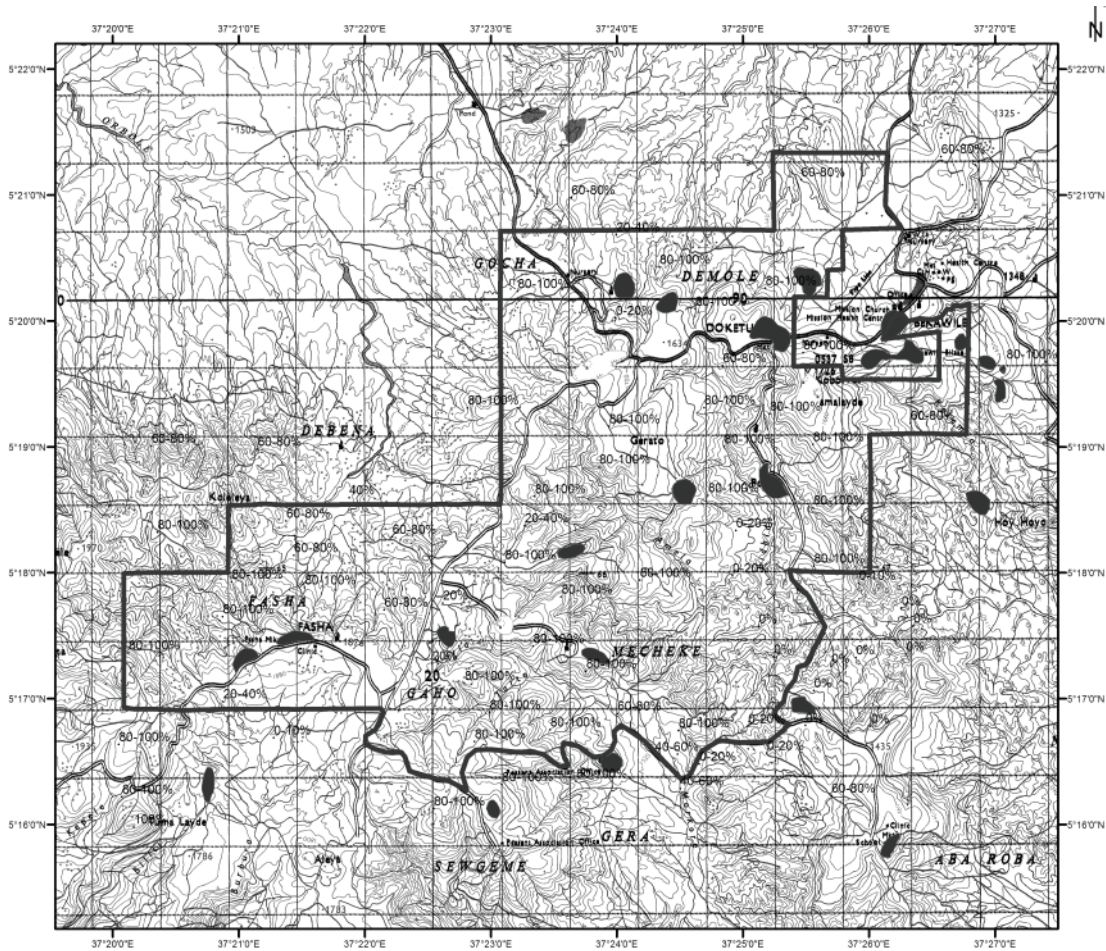
Recommendations with respect to inscription

ICOMOS recommends that the examination of nomination of the Konso Cultural Landscape, Federal Democratic Republic of Ethiopia, to the World Heritage List be **deferred** in order to allow the State Party to:

- Undertake and provide a more detailed inventory of the key attributes such as town walls, *paftas*, shrines;
- Re-define the boundary to reflect the key attributes of the property, the geo-morphology of the area, and social and cultural units, and in particular consider the interface between Dokatu towns and Karat;
- Augment the comparative analysis;
- Define and put in place a buffer zone to protect the property from urban development;
- Strengthen and augment structures and regulations to ensure support for customary systems;
- Strengthen the planning processes to ensure that the spatial planning of the towns is conserved;
- Ensure more active involvement of regional and national authorities in the management and conservation.

ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

Furthermore, ICOMOS considers that the international community should be invited to support this extraordinary landscape to ensure that its communities can meet the challenge of establishing a sustainable future.



Edition 1 EMA 1989
 Sheet 0537 C2
Legend
 [Thick black line] proposed boundary
 [Dotted line] Terrace coverage in %
 [Church icon] Church
 [Scattered forest icon] Scattered forest
 [School icon] School
 [Thin line] Contour
 [Thick line] Major River
 [Thin line] Major Road
 [Stream icon] Stream
 [Dashed line] Trail
 [Black square] Town
 [Tree icon] Forest

Refer this map as Ethiopian Mapping
 Authority 1:50 000 Topographical sheet

ARCCIKCL
 GIS Expert/Shehak Melak

January, 2009

Map showing the boundaries of the nominated property



Aerial view of Gamole town



Terraces near Dokatu



Harda (water reservoir) near Busso town



Mora (communal space) with *pafta* (thatch-roofed structure) at Gamole town

Fort Jesus, Mombasa (Kenya)

No 1295

Official name as proposed by the State Party:

Fort Jesus, Mombasa

Location:

City of Mombasa
Coast Province
Kenya

Brief description:

Fort Jesus, Mombasa, was built by the Portuguese in 1593 as part of a system of coastal forts to exploit African resources and transcontinental trade, at a time of political and economic domination by the West. The refined layout and structure of Fort Jesus, Mombasa, reflect the characteristics of Renaissance military architectural theory, and its basic design and structure have remained intact, despite frequent bombardment and several changes of ownership. Fort Jesus, Mombasa, controlled a larger area than most of the coastal forts - the East African Coast, including the Arabian Peninsula, and the Far East.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *monument*.

1. BASIC DATA

Included in the Tentative List: 25 June 1997

International Assistance from the World Heritage Fund for preparing the Nomination: 2004

Date received by the World Heritage Centre: 28 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committees on Fortifications and Military Heritage and on Shared Built Heritage. ICOMOS consulted also independent experts.

Literature consulted (selection):

Boxer, C.R., and de Azevedo, C., *A fortaleza de Jesus e os Portugueses em Mombaça 1593-1729*, Centro de Estudos Historicos Ultramarino, 1960 Lisbon.

Freeman-Grenville, G.S.P., The Portuguese on the Swahili Coast: buildings and language, in *Studia* N° 49, pp. 235-53, 1989, Lisbon.

Hinawi Mbarak Ali, *Al Akida and Fort Jesus, Mombasa*, East African Literature Bureau, 1950, Nairobi, Kenya.

Kirkman, J., *Fort Jesus: a Portuguese fortress on the East African coast*, Oxford University Press, 1974, London.

Nelson, W.A., *Fort Jesus of Mombasa*, Canongate Press, 1994, Edinburgh.

Pearson, M.N., *Port cities and intruders: the Swahili Coast, India and Portugal in the Early Modern Era*, The Johns Hopkins University Press, 1998, Baltimore and London.

Technical Evaluation Mission: 17-21 August 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Fort Jesus, Mombasa, is situated in the town of Mombasa, a port city on the east coast of Kenya. The nominated property covers 2.36ha. It includes the Fort, the rock on which it stands, the immediate area surrounding it, including the moat, and an area to the south with archaeological material uncovered during recent archaeological research. Mombasa Old Town forms the buffer zone to the Fort, occupying a further 31ha.

Fort Jesus, Mombasa, lies at the southern edge of Mombasa Old Town, close to the coastline.

Because of its strategic location, Mombasa grew in importance over the centuries and soon became a major trading port and a military strongpoint. The town was renowned from the 13th-14th centuries onwards and the beauty of its architecture was described by the Arab traveller Ibn Battuta in 1331.

Fort Jesus, Mombasa, was erected in 1593-96 to the designs of Giovanni Battista Cairati by the Portuguese when they gained control over Mombasa. Cairati was an Italian military architect and engineer who designed several fortresses for the Portuguese colonies in Asia. However, Cairati apparently never went to Mombasa: he only produced the drawings for the fortress and sent them to the master builder in Mombasa.

The Fort was given a form that was roughly human, inspired by the architectural theories of the Renaissance, ranging from those of Filarete to Francesco di Giorgio Martini's anthropomorphic sketches of architectural

elements and buildings. Through the use of human proportions the Renaissance architects aspired to achieve both formal and functional perfection.

In addition to the influence of Renaissance architectural theories, and in the light of the fact that the founders belonged to the Order of Christ, the image of the martyred Christ has also been read in the plan of the fort.

The Fort is organized around a central courtyard with four bastions, one at each corner, while the side towards the sea is interrupted by a rectangular gun platform. The landward bastions (São Filipe and São Alberto) were built with re-entrant angles facing one another in order to provide gun positions, whilst the seaward bastions (São Matias and São Mateus) were square in plan, although today São Matias also has one slightly re-entrant angle for protecting the Main Gate. A wooden bridge (now filled with sand to create a causeway) ran across the ditch to connect the gate with the exterior. Above it is the gatehouse, with upper and lower rooms. Two subsidiary gates, used to receive goods delivered by boat, open out from the projecting structure towards the sea. These were connected to the inner court by a sloping passage and a staircase.

Other features of the Fort are the parapet walks, firesteps, watchtowers and gun ports, barrack rooms on both north and south sides, and guardrooms leading off the main gate. The fortress included facilities such as a chapel, a cistern, a well, and the Captain's house, but among these only the cistern and an L-shaped building survive.

The base of the defences is solid coral cut back to the line of the walls. On the landward side the walls were 4.27m thick with a parapet 2.75m wide and 1m high, backed by a wall walk and firestep. A dry moat encircles the three landward sides of the Fort, to ensure that it could not be attacked from the rising slope beyond the landward bastions. The height of the scarp, including the 5m deep and wide moat, is c 17m. The Fort is well above sea level and the moat provided protection during a retreat.

The original construction materials of the Fort were coral, lime, sand, and clay. The facades are finished with a pigmented yellow ochre plaster.

History and development

The East African coast between Somalia and Mozambique has been inhabited by different peoples over several centuries. The location and geomorphology of this part of the African coast was favourable for independent city states to flourish, trading in gold, silk, ivory, and skins with merchants from as far away as Persia, Arabia, Syria, India, and China. Kilwa, Mombasa, Malindi, Lamu, and Pate were all in competition with one

another to gain supremacy over the area and the trade routes.

Portugal succeeded in opening up a sea route to the East Indies at the end of the 15th century, when Vasco de Gama sailed around the Cape of Good Hope to reach India and visited several prosperous port towns in Mozambique, Tanzania, Kenya, and Somalia. These cities were capable of providing good intermediate bases for ships sailing to and from India, and for this reason Portugal sought to gain control over the area. The Portuguese were obliged to compete with established groups such as the Omani Arabs, and domination over towns such as Mombasa or Malindi was not secured without ruthless clashes. By 1509 the Portuguese controlled tracts of the East African coast between Sofala in Mozambique to the south and Socrata to the north.

Nevertheless, control of the area continued to be contested by other groups, who tried repeatedly to replace the Portuguese in dominating the area. The Turks, for example, succeeded in building a fort in Mombasa by the sea during a brief period of control over the entire coastal region at the end of the 16th century.

The Portuguese reaction was not long in coming and by 1596 a new fortress, more strategically positioned and designed according to the most advanced principles for constructing fortifications, was completed only three years from when work began and was named Fort Jesus, Mombasa.

The Fort became the new Portuguese headquarters on the East African coast, with a permanent garrison of a hundred soldiers. Smaller supporting forts were built on the island, the ruins of some of which are still visible at Mama Ngina Drive Heritage Site, about 1.5km south of the Fort, and at Makupa, 3km to the west.

The building of the fortress attracted Portuguese settlers and traders in numbers that had never been witnessed before in the region. In this way the Fort marks the first successful attempt by western civilization to stamp its authority on an area that had formerly been under eastern influence for several millennia.

Portuguese control of the area was challenged in particular by the Omani Arabs and the Turks, who encouraged the local population to revolt against the occupiers, as well as by other European powers, which had by the end of the 16th century, made their appearance in the competition to obtain their share of the Indian Ocean trade.

This restless history is reflected by the numerous transformations that Fort Jesus, Mombasa, has witnessed over its existence.

The first improvements to the Fort date back to 1634-39 when, following a revolt, curtain walls were built on the

landward side, and new walls were built on top of three of the bastions (São Filipe, São Alberto, and São Matias) and provided with new gun-ports, the curtain wall to the west was strengthened and the gaps were filled in to protect the foundations of the bastions on the coral reef, the main gate was protected by adding an elliptical bastion to the existing one and creating an additional gate connected to the first one by a covered passage. Two gun platforms were built, one to cover São Mateus bastion and the other to protect São Alberto bastion and the south curtain wall. Turrets were built to protect the projection located on the seaward side.

Having become aware of declining Portuguese control, the Omani raided their possessions on the East African coast from 1652 onwards and repeated attacks were launched until 1696 when the Omani Arabs besieged Fort Jesus, Mombasa, and eventually drove out the Portuguese. Further modifications were then made to repair and reinforce the damaged fortress. They filled in the outer rooms to create a larger platform at the level of the Portuguese walls and protected it with musket slits and gun-ports.

Despite repeated attempts, it was not until 1728 that the Portuguese reoccupied the Fort, and then only for 18 months.

The Omani Arabs controlled the coastal settlements until the area was colonized by the British in 1885. Under British rule the Fort was converted to a prison until 1958. In this period additional buildings were built inside, such as the kitchen and a gallows up against the re-entrant angle.

In 1958 Fort Jesus, Mombasa, was declared a National Park, and in 1960 it was restored, a site museum, a conservation laboratory, and an administration block were built on the foundations of the former barracks. The new status of the Fort led to archaeological excavations and research which yielded a great deal of information about the construction phases, as well as a number of artefacts that were housed in the museum.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis made by the State Party focuses mainly on Portuguese fortifications of the 16th century built in Africa and already inscribed on the World Heritage List. However, the analysis begins with an account of the transnational character of Renaissance military architecture.

The rationale of the comparison is based on the reasons underlying the construction of these forts (control of the coast or the hinterland and of trade routes), similarities planning and in the building materials, retention of the

initial design, history, and the present state of conservation.

The properties examined in this comparative study are principally World Heritage Sites: the Forts in Elmina, part of the serial World Heritage property of Forts and Castles, Volta, Greater Accra, Central and Western Regions, Ghana (1979, criterion (vi)), which are among the earliest example of fortified buildings in the tropics. They also influenced the design of later fortifications, such as James Island and Related Sites, Gambia (2003, criteria (iii), (vi)), the Fortaleza de São Sebastião in the World Heritage fortified city of the Island of Mozambique (1991, criteria (iv), (vi)), the Ruins of Kilwa Kisiwani in Tanzania (1981, criterion (iii)), and Fort Aguada, in India.

Fort Jesus, Mombasa, is considered to be different from the Forts in Elmina because it was built to control the sea trade, whereas the Forts in Elmina were created in order to oversee routes in the interior, and also because it has retained its original design over the centuries while the design of the Forts in Elmina has been overlaid by the subsequent Dutch modifications.

The Fort on James Island was only partially stone-built, the utility buildings being of wood and thatch. After a long period of turmoil it was restored in the 18th century, when its initial design was substantially altered.

The Fortaleza de São Sebastião (Mozambique) is similar in a number of ways to Fort Jesus in terms of design, but it is less regular than the nominated property and the construction does not fully follow the principles prescribed for achieving the highest level of defence. The Fort was built not only to defend the trade routes to India but also to secure inland routes to gold mines. The Fortaleza de São Sebastião has been restored several times and has also suffered from heavy cyclone damage. However, it is worth mentioning that both Elmina and São Sebastião forts have been built before Fort Jesus, Mombasa and predated this fort.

Kilwa Kisiwani (Tanzania) was built before Fort Jesus, Mombasa, but they share a similar history, since they both were built by Portuguese power and were subsequently taken over by Omani Arabs. Kilwa Kisiwani, however, was mostly destroyed by the Portuguese when they abandoned the fort only a few years after it was built, and so today only a fraction of the Portuguese fortress survives.

Fort Aguada (India) was built at the beginning of the 17th century in Goa and is one of the best examples of the Portuguese forts in this town. Fort Aguada is located, like Fort Jesus, Mombasa, on a rocky cliff but today it is almost in ruins.

In summary, the comparison shows that Fort Jesus is the only remaining icon of Portuguese architecture that has preserved its original design and structures, despite several changes of control.

ICOMOS observes that, among World Heritage sites, the Fort of Mazagan, Morocco (2004, criteria (ii) and (iv)), which is a Portuguese fortification, should have been included in the comparison. It was also inscribed on the List on the basis of the same criteria as those selected for the nominated property.

ICOMOS further considers that there are other properties that are on the Tentative Lists of other States Parties (e.g. the Fortresses of São Miguel, Kakambe, Muxima, and Massanganu in Angola, which were first built at the end of the 16th century, or the Fortress of São Francisco do Penedo, also in Angola, built by the Spaniards a century later), which would have been relevant examples against which to compare the nominated property. The analysis could also have included the Wise Kings Fortress in Natal (Brasil), the Fort of São Filipe de Setúbal (Portugal), the Fort of the Wise Men in Goa and the Fortress of São Sebastião of Baçaim (India), and the Fortresses of Mannar (Sri Lanka), of Ormuz (Bahrein), and of Muscat (Oman).

Finally, ICOMOS notes that the revolution in the conception and design of military architecture in the 16th century, following advances in weapon technology and in military strategy, was a phenomenon that affected all the European countries and so the comparative analysis should not have been limited only to Portuguese fortresses but should also have examined fortifications from other contexts than the Portuguese.

ICOMOS considers that the comparative analysis does not justify at this stage consideration of this property for the inscription on the World Heritage List. ICOMOS recommends that the comparative analysis should be deepened by the State Party to include other relevant examples from other contexts than the Portuguese.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Fort Jesus, Mombasa, is an outstanding example of a fortification based on the Renaissance theories on military architecture developed in Italy and Europe and brought by the Portuguese to Africa and the East. Fort Jesus, Mombasa, exemplifies this new type of fortification as well as the philosophical debate that underlay the Renaissance architectural theory. Its design was subsequently adopted to improve other African forts;
- Throughout its history, Fort Jesus, Mombasa, was competed for by different powers – the Portuguese, Turkish, Omani Arabs, Dutch, British, African, and others - seeking to assert their economic supremacy and political domination. These struggles can be read in the different material layers exhibited by the

nominated property (which has, however, retained its overall initial layout). Its strategic significance is demonstrated by the fact that those who occupied Fort Jesus automatically controlled the entire East African coast, the Arabian peninsula, and the routes to the East. The nominated property also represents the turbulent past that has shaped the present-day societies in the region.

ICOMOS considers that the importance of Fort Jesus, Mombasa, as one of the finest examples embodying Renaissance fortified architectural theories has not been fully demonstrated, *i.e.*, through the comparative analysis, nor has its proposed value adequately been made explicit. ICOMOS also considers that being at the centre of struggles to gain control over them is the common destiny of most fortifications, as demonstrated by the comparative analysis. This aspect does not therefore contribute in a specific way to the significance of the nominated property if it is not related unambiguously to the later changes made to the Fort.

Integrity and Authenticity

Integrity

ICOMOS notes that the State Party has assessed the conditions of integrity and authenticity together, whereas paras. 85 and 88 of the *Operational Guidelines* require that these aspects be considered independently as one statement each of authenticity and of integrity.

ICOMOS considers that the form of the Fort suggests that the walls might be the appropriate boundaries for the nominated property so as to include all the elements necessary to express its value. Only further work to strengthen the comparative analysis is likely to provide those elements that fully demonstrate the significance of Fort Jesus, Mombasa, and to identify the size and the components that should be included in the nominated property in order to ensure full representation of the physical features necessary to convey its significance. ICOMOS further recommends that the State Party considers the area where the underwater archaeological remains lie for inclusion in the nominated property.

The fabric of the nominated property is in relatively good condition, it is well maintained, and it is not encroached upon by permanent structures.

Minor changes to the building and its uses reflect its turbulent history. These alterations are well explained in the documented history and cannot be said to have damaged its integrity.

The one exception is the use of the moat for parking, and so ICOMOS recommends that the car/bus parking area for visitors to the Fort should be relocated for reasons of visual and functional integrity.

Authenticity

The State Party considers that, on the basis of archival and published records, Fort Jesus, Mombasa, still conforms with its original design. The nominated property retains its initial architectural and aesthetic values. The ramparts, for instance, or the surrounding moat have not been changed and the same materials used by the Portuguese in building the Fort have been used in subsequent developments, which for their part have not altered the overall shape of the initial fortress. The function of the Fort, although it is no longer a military installation, respects its aesthetic form and value and the modifications that have been made necessary by the current use do not diminish its unity, form, and original layout.

ICOMOS considers that Fort Jesus, Mombasa, has retained its form, design, and construction materials, despite a number of modifications, which in fact bear witness to the turbulent history of the nominated property. Changes of use and function over time have not damaged the important elements of its fabric nor have they introduced incompatible materials or techniques. Nevertheless, ICOMOS considers that assessment of the conditions of authenticity for the nominated property depends on a fuller justification of its significance on the base on a more comprehensive comparative analysis.

ICOMOS considers that the property could have the capacity to meet the conditions of authenticity and integrity if further work is done to strengthen the comparative analysis in order to allow a fuller justification of Outstanding Universal Value and the delineation of appropriate boundaries. ICOMOS also recommends that the current car/bus parking area in the moat should be relocated for reasons of visual and functional integrity.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the Fort marked a milestone in 16th century fortress design, as a stronghold safeguarding Portuguese interests not only on the East African coast but also in controlling the trans-Indian Ocean trade. The successful design of Fort Jesus, Mombasa, led to the adoption of some of its strategic aspects to improve other forts in Africa. Fort Jesus, Mombasa, is also said to symbolize the struggle for freedom, as it became a field for resistance against domination by any power. The Fort is also claimed to be a landmark of social cohesion

as it is used by people of diverse cultures while still retaining the characteristics of its previous functions.

ICOMOS considers that the interchange of human values and cultures as well as the struggle over the Fort between local and foreign powers is illustrative not only of the history not only of Fort Jesus but also of all East Africa. This interchange is, however, only sparingly reflected in the spatial expression over time. Although additions and alterations were made to the fort by the Portuguese, the Omani, the Mazrui, and the British, these are modest and are subordinate to the initial concept, which have proved to be so strong that any modification carried out at later stages is not perceptible.

ICOMOS further considers that the fact that Fort Jesus, Mombasa, has been used as a model for improving other existing fortifications is stated but not demonstrated by the comparative analysis, which could have included more examples.

ICOMOS considers that this criterion has not been demonstrated at this stage.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that Fort Jesus, Mombasa, is held to be the best surviving 16th century Portuguese military fortification in the world, which in its layout and form reflected the Renaissance ideal that perfect proportions and geometric harmony are to be found in the proportions of the human body, while at the same time meeting the functional needs of a modern and well defended fortification. No other fortress is said to illustrate better than the nominated property reference to the human body as the model for its layout. This layout, though simple, ensured the complete protection of the Fort and allowed it to survive centuries of continued occupations and reoccupations almost unchanged.

ICOMOS considers that the entire range of meanings and values that the nominated property may possibly embrace, as one of the finest examples of fortifications based on the Renaissance theories of architecture and military structures, has not been fully explored, merely mentioned. The comparative analysis has been limited to Portuguese examples located in Africa or Asia, whereas the clear demonstration of this criterion should also have considered other relevant examples built by other powers in other regions.

ICOMOS considers that this criterion has not been fully justified.

ICOMOS does not consider that the criteria and Outstanding Universal Value have been demonstrated at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The State Party states that no development pressures affect the nominated property, since it is a designated national monument and its buffer zone is a conservation area.

ICOMOS considers that development pressure does not affect the nominated property. However, it does concern the buffer zone, Mombasa Old Town. ICOMOS therefore notes that the consequences of inscription on the List may lead to social tensions and a loss of the qualities of the Old town.

Uncontrolled development may also nullify the additional protection that the buffer zone is meant to give to the nominated property. In Mombasa Old Town land values have increased and this may encourage local inhabitants to sell, leave, or redevelop their properties, despite the protective measures in place.

ICOMOS also recommends that the infrastructure of the town should be upgraded, in order to improve the living conditions in the Old Town.

Tourism pressures

The State Party estimates that 70% of the tourists visiting the coast of Kenya go to Fort Jesus, making it one of the most visited cultural sites in the country. A visitor management system has been put in place.

ICOMOS considers that these pressures are well managed through a visitor-management strategy that takes account of carrying capacity and the distribution of visitors across various trails and sites.

Environmental pressures

In the section of the nomination dossier relating to environmental pressures the State Party discusses the consequences of climate change.

ICOMOS considers that unpredictable weather events and floods might be included among the environmental pressures related to climate change.

Natural disasters

The State Party considers that the Fort site is not at risk from fire or flooding. The staff is well trained and equipped to respond to fire, and recent drainage works have further reduced the risk of flooding. The site is not in an earthquake zone.

ICOMOS considers that the measures in place to counteract the threat from fire are adequate and that the efforts undertaken to improve the drainage system and its maintenance are helpful in addressing the issue of flooding.

Impact of climate change

The State Party is of the opinion that, owing to the global environmental changes that have caused a general rise in sea levels, tidal currents have been damaging the coral rock base of the Fort. This may over time undermine the built fabric of the nominated property.

ICOMOS considers that erosion of the coral rock on which the Fort is built is the principal threat. In 2008 a small section of rock on the northern section of the seashore collapsed. ICOMOS recommends that rigorous monitoring of this phenomenon should be implemented and measures undertaken to address this issue as soon as possible.

ICOMOS considers that the main threats to the property are possible future development pressures on the urban buffer zone and the erosion of the Fort's coral rock foundations.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

Care has been taken in the definition of the boundaries of the nominated property so as to include the Fort, the moat, and an adjacent area for potential archaeological research. The boundaries coincide with distinct physical limits, such as the road to the north, the hill to west and south, and the sea to the east.

The buffer zone includes the Old Town and the old administrative area, designated a Conservation Area in 1990, because of its concentration of high-quality 18th century buildings and its historic and social links to the Fort. It is delimited for the most part by main roads, except on the north, where ICOMOS considers that markers for clarification to the public are needed.

ICOMOS notes that there is a discrepancy in the size of the designated Conservation Area (13ha) compared with the size of the buffer zone (31ha): both are stated in the nomination dossier to be the same. ICOMOS therefore recommends that the designation notice should be amended as soon as possible in order to eliminate this mismatch.

ICOMOS further recommends that consideration should be given to include the underwater archaeological resources in the nominated property.

ICOMOS considers that the boundaries of the nominated property and of the buffer zone are adequate, but it recommends that the designation notice should be amended so as to eliminate the discrepancy between the size of the designated conservation area and that of the buffer zone. ICOMOS also recommends that markers are installed to clearly identify the northern boundaries of the buffer zone.

Ownership

The property is owned by the Government of Kenya through the National Museums of Kenya (NMK).

Protection

Legal Protection

Fort Jesus, Mombasa, was originally designated a National Park in 1958 to protect the Fort and a 100m strip around it. Today it is protected under the National Museums and Heritage Act 2006.

This Act clearly defines the functions and powers of the NMK, along with measures for the protection of designated areas. The NMK keeps collections and individual items of scientific, cultural, technological and human interest, conducts research and disseminates knowledge in these fields, identifies, protects, and conserves the cultural and natural heritage of Kenya, and promotes the cultural resources of the country. To accomplish its objectives, the NMK can acquire and exchange movable and immovable property for purposes connected with those of the NMK, erect or upgrade buildings, obtain revenue through the properties in their ownership, accept donations and bequests, establish and maintain research institutions, conduct environmental impact assessments, and enter into associations with other bodies or organizations in order to achieve its institutional goals and functions.

Areas protected under the National Museums and Heritage Act may be set aside or their use restricted in order to ensure that any monument or property there is not damaged. These areas may be put under the control of the NMK and steps to ensure their maintenance can be taken by the NMK. Monuments are inspected, documented, and repaired by NMK staff or by persons authorized by the NMK.

The proposed buffer zone was declared a Conservation Area in 1990 and confirmed by designation in 1991. Today it is protected by the National Museums and Heritage Act 2006. Mombasa Old Town was protected because of its high concentration of 18th century buildings and the quality of its architecture and urban fabric, and also because it is historically and socially linked to the development of Fort Jesus, Mombasa. A Conservation Plan for Mombasa Old Town has been

developed since 1990 and the Agency responsible for its implementation is the Mombasa Old Town Conservation Office (MOTCO), a department of the NMK.

The Environmental Management and Coordination Act (EMCA) 1999 and the National Museums and Heritage Act 2006 ensure that '*Environmental Impact Assessments are undertaken on sites earmarked for development projects and whose implementation threatens the survival of heritage resources of some kind among other components of the environment.*'

As part of its development strategy, the Government has produced a medium-term Development Plan for Mombasa District for the period 2008-2012.

ICOMOS considers that the existing legal provisions to ensure the protection of the nominated property and its buffer zone are adequate, but recommends that the issue of the size of the conservation area and of the buffer zone should be resolved as soon as possible.

ICOMOS further recommends that the guidelines for the conservation of the Old Town defined in the 1990 Conservation Plan should be included in the Byelaw, so that protection is strengthened and management is facilitated.

Traditional Protection

Traditional material and local craftsmen are used for all repairs.

Effectiveness of protection measures

The nominated property is under the responsibility of the NMK. Any project concerning the Fort is developed by the Site Manager and then reviewed internally, final authorization being given by the Head of the Department responsible for sites and monuments.

In Mombasa Old Town all construction projects need authorization at the municipal council level and are subject to restrictions in terms of size and appearance. Signage must also be in accordance with the character of the town. Furthermore, development projects within Mombasa Old Town must be approved by the NMK, on the basis of the byelaws establishing building regulations.

The Mombasa Old Town Conservation Office (MOTCO) has been set up to monitor and control urban development and thus to protect the Fort from uncontrolled development or neglect.

ICOMOS observes that, although MOTCO cooperates with the Municipal Planning Office, the Mombasa Old Town Planning Commission has ceased functioning since 2007. The lack of consultation between the bodies responsible for the Old Town may result in a loss of coordination in issuing building permits, thereby obliging

the authorities to spend a great deal of time dealing with undesirable situations instead of assisting the community to conserve the Old Town better.

ICOMOS considers that, although the existing administrative structure may ideally ensure effective protection, it would be important to revive the Mombasa Old Town Planning Commission and to give it the means to function properly and ensure better coordination between MOTCO and the municipal planning office. Furthermore, MOTCO should be strengthened in terms of human resources.

ICOMOS considers that the existing legal protection is appropriate. ICOMOS recommends that the Mombasa Old Town Planning Commission should be revived and given the means to allow it to function properly. Furthermore, Mombasa Old Town Conservation Office (MOTCO) should be strengthened in terms of human resources.

Conservation

Fort Jesus, Mombasa, underwent a substantial intervention in 2000-2001. The works included the complete replastering of the external walls, where much plaster had fallen off, and landscaping of the immediate surroundings of the Fort. Conservation for this property therefore relates principally to regular maintenance, with occasional special projects.

ICOMOS considers that the efforts of the NMK in preserving the nominated property have been successful, but that there is a need to ensure ongoing maintenance in order to avoid rapid deterioration of the structures.

ICOMOS observes also that the NMK, together with the general respect and concern of the community for the conservation of the special landscape of Mombasa Old Town, has ensured the retention of the general skyline and form of the historic town. Nevertheless, there is a need to focus the initiatives of local stakeholders, which may be done through the establishment of the holistic management of pilot interventions carried out with the joint technical support of the municipality and MOTCO.

Inventories, recording, research

The most recent records and inventories date back to 2001.

The inventory, records, and archives are held at the National Museums of Kenya in Nairobi, in Fort Jesus Museum in Mombasa, and in the National Archives and Documentation Centre in Nairobi.

Present state of conservation

Fort Jesus, Mombasa, is in a fairly good state of

conservation and is benefiting from recent efforts, starting in 2001, to improve its state of conservation and ensure regular maintenance. Marked improvements were noted on site in 2009 when compared with the state of conservation in 2001 in the management plan attached to the nomination.

On the other hand, the 2003 survey of the Old Town stated that 25% of the urban fabric is in a bad condition. Additionally, there is a tendency to rebuild and renovate rather than to maintain and repair the existing heritage fabric. This is threatening the authenticity of the old town.

ICOMOS recommends that the conservation guidelines should be enforced and that MOTCO should make an additional effort to sensitize and inform the community and the municipal technical officers about the conservation guidelines.

ICOMOS further recommends that waste-management and sanitation should be improved.

Active conservation measures

A project includes the plastering of the curtain wall.

Maintenance

The nominated property is maintained regularly. The foreman inspects daily and reports to the chief curator for action if necessary. Traditional materials and local craftsmen are used for all repairs. There is a team on site (masons, carpenters, electricians, etc) for daily maintenance.

ICOMOS considers that there is a global approach to maintenance. Funds are secured and skills are available, trained, and promoted. However there is a need to include maintenance concerns in the management plan. This would assist as a baseline for future management and conservation of the property and in ensuring its monitoring.

Effectiveness of conservation measures

The existing conservation measures are effective, but there is a need for an overall ongoing maintenance approach that should be included in the management plan within the Action Plan.

ICOMOS considers that the nominated property's state of conservation and current maintenance practices are satisfactory, but notes that the current trends in the buffer zone may in the medium term threaten the authenticity of the Old Town. ICOMOS therefore recommends that the conservation guidelines should be enforced and that MOTCO should make an additional effort to sensitize and inform the community and the municipal technical officers about the conservation

guidelines. ICOMOS also recommends that waste management and sanitation should be improved.

Management

Management structures and processes, including traditional management processes

The Fort is managed by a chief curator, who heads the departments of public programmes, collections, administration, finance, and sites. He also administers the Mombasa Old Town Conservation Office, coastal archaeology, coastal sites and monuments, the Swahili cultural centre, and some additional south coast sites.

The buffer zone is managed by the municipality through its technical offices but, since it is a designated protected area, the NMK has to approve all developments. The Conservation Plan of Mombasa Old Town implements the guidelines for the management and development of the designated conservation area. The Mombasa Old Town Conservation Office is responsible for its implementation.

Policy framework: management plans and arrangements, including visitor management and presentation

The Fort Jesus management plan is based on the plan developed in 2001 on the occasion of the 3rd Africa 2009 regional course on the conservation of immovable cultural heritage. The Plan lays down strategies to improve the conservation and management of the property over a ten-year period and has been revised, including consultations with stakeholders.

The main objectives of the management plan are establishing partnerships and contributions between all the stakeholders, developing a coherent programme of activities carried out at the Fort, ensuring the best use of the available resources, a proper understanding of the factors threatening the site, and continuity of management.

The plan contains a SWOT analysis which identifies a number of fields of action and specific objectives. The key problems to be tackled are the following: overlong decision-making procedures and unclear distribution of responsibilities and tasks; absence of a maintenance plan and need for more preventive conservation and monitoring; insufficient funding and lack of diversification in the sources of funding; inadequate programmes and lack of facilities for the interpretation, the presentation, the promotion, and the awareness of the site.

The 2006-2010 Action Plan identifies a number of key objectives to be achieved in the main problem areas (management framework, funding system, site presentation and interpretation, conservation, visitor promotion).

An interpretation plan for the Fort is being prepared, starting in 2009, to present it as a military landscape and to improve understanding of its significance through better signage, better presentation of movable and immovable heritage, and enhanced surroundings with various trails.

The immediate surroundings of the Fort were refurbished in 2008 with parking, benches, and access to the sea. Parking was moved to free the main entrance to the Fort. Future plans will reorganize the access to Fort Jesus and the Old Town, create new facilities, and transfer the parking lot to a site beside the Swahili cultural centre.

Visitor management in the Old Town began in 2009, with a brochure, maps, and information panels on significant buildings. Guides have been trained - interns in the Fort and twenty guides from the community in workshops - to provide information on Fort Jesus, for customer care, and for internal organization.

To balance visitor and handling capacities, alternative trails are planned within the Fort, in its immediate surroundings, in the Old Town, and in the coastal region. Visitors are redirected to other major heritage coastal sites. Collaboration with the French Embassy has produced brochures on coastal trails and these are distributed to travel agencies, hotels, and tour operators.

ICOMOS considers that the Management Plan has identified in a general way the issues and the weaknesses as well as the opportunities for the nominated property. Nevertheless, considering the number of complex issues that need to be dealt with, it would be beneficial for the nominated property and its buffer zone for a management vision with a time-frame covering a wider span of time to be developed.

ICOMOS also observes that actions contained in the Action Plan should be more clearly detailed in terms both of implementation phases or sub-actions and of a time-frame. ICOMOS further considers that the maintenance of the nominated property should be included in the action plan, with a detailed time-frame.

ICOMOS notes that the location of the car/bus parking in the moat detracts from the visual presentation of the site and recommends that a different solution be found for its final siting, *i.e.* near the Swahili Cultural Centre.

ICOMOS finally recommends that the presentation of the archaeological features illustrating the occupation of the Fort should be improved so as to show how different occupying cultural groups have left indications of their influence on the Fort.

Risk preparedness

The State Party asserts that the Fort is equipped to deal

with any fire disaster and the staff is trained in fire fighting as well as in reactions to possible flooding.

ICOMOS considers that any risk-preparedness plan and training should also take into account the buffer zone, which is densely inhabited (300,000 persons in 31ha).

Involvement of the local communities

The community has a direct impact on the management, conservation, and presentation of the Fort. The National Museums of Kenya (NMK) ensures participation in management, through regular stakeholder meetings at which they present details of planning for the Fort (e.g. during preparation of the nomination and the interpretation plan). The NMK wishes to ensure indirect benefits for the surrounding community. The new presentation plan addresses the training and management of community guides. The NMK, through MOTCO, seeks to improve the presentation of the Old Town to the public and to create opportunities for the community.

Resources, including staffing levels, expertise, and training

The Fort employs a staff of 104, of whom seven are professionals and eleven technicians in the fields of architecture, conservation, archaeology, musicology, and management. The remainder are engaged in maintenance. Four education officers prepare school and community programmes.

Fort Jesus generates funds for maintenance of the Fort through entrance fees. Part of this revenue is for daily maintenance and part for planned major works (e.g. plastering the curtain wall, to be done in 2009). It also receives a small annual government grant.

External funding has made various projects possible in the past, such as the financing of the restoration of the Fort and establishment of the museum in 1960 by the Calouste Gulbenkian Foundation or the 1990s excavation funded by the Omani Government, with restoration of a house in the Fort to house an exhibition of the cultural traditions of the Omani people.

Effectiveness of current management

Fort Jesus, Mombasa is managed by the National Museums of Kenya as a museum site. ICOMOS considers that the management framework, the plan, and actions developed or programmed are all moving in the right direction.

However, ICOMOS considers that effective management of the nominated property cannot ignore the management weaknesses of the buffer zone, Mombasa Old Town, since the negative consequences will affect also Fort Jesus.

ICOMOS therefore, recommends that, in order to ensure the effective management of the property and its buffer zone, the Mombasa Old Town Planning Commission should be revived, that a holistic management structure for the Old Town should be established with the involvement of all stakeholders, in particular the local community and the municipal council, that the managers of the nominated property should establish close and permanent cooperation with all those responsible for the management of the Old Town, and, finally, that the role of MOTCO in the management of the transformations of the Old Town should be clarified and its staff increased.

ICOMOS considers that the management system for the nominated property is at present adequate for the protection, conservation, and presentation of the property, but it recommends that the Mombasa Old Town Planning Commission should be revived, that a holistic management structure for the Old Town should be developed, that close cooperation between MOTCO and the municipal council and technical offices should be established, and that the role of MOTCO should be clarified and its staff increased.

6. MONITORING

The Directorate of Museums, Sites and Monuments is responsible for monitoring the condition of the property and the Department of Coastal Sites and Monuments monitors archaeological material found in its vicinity.

ICOMOS observes that the key indicators identified (lintels, timber frames, wall plaster, and mould on walls) do not include erosion of the coral rock, which has been identified as the most dangerous threat to the property.

ICOMOS considers that there is an urgent need to establish regular monitoring of the coral rock that forms the base of the Fort, so to evaluate the speed of erosion and decide on specific mitigation measures.

ICOMOS further considers that the transformations in Mombasa Old Town should be monitored, since the buffer zone is closely related to the nominated property by virtue of both their related history and their physical relationship.

ICOMOS considers that an overall regular monitoring system should be established within management, with indicators expanded and monitoring programmes specified for Mombasa Old Town.

7. CONCLUSIONS

documenting of the state of conservation of the Fort.

Recommendations with respect to inscription

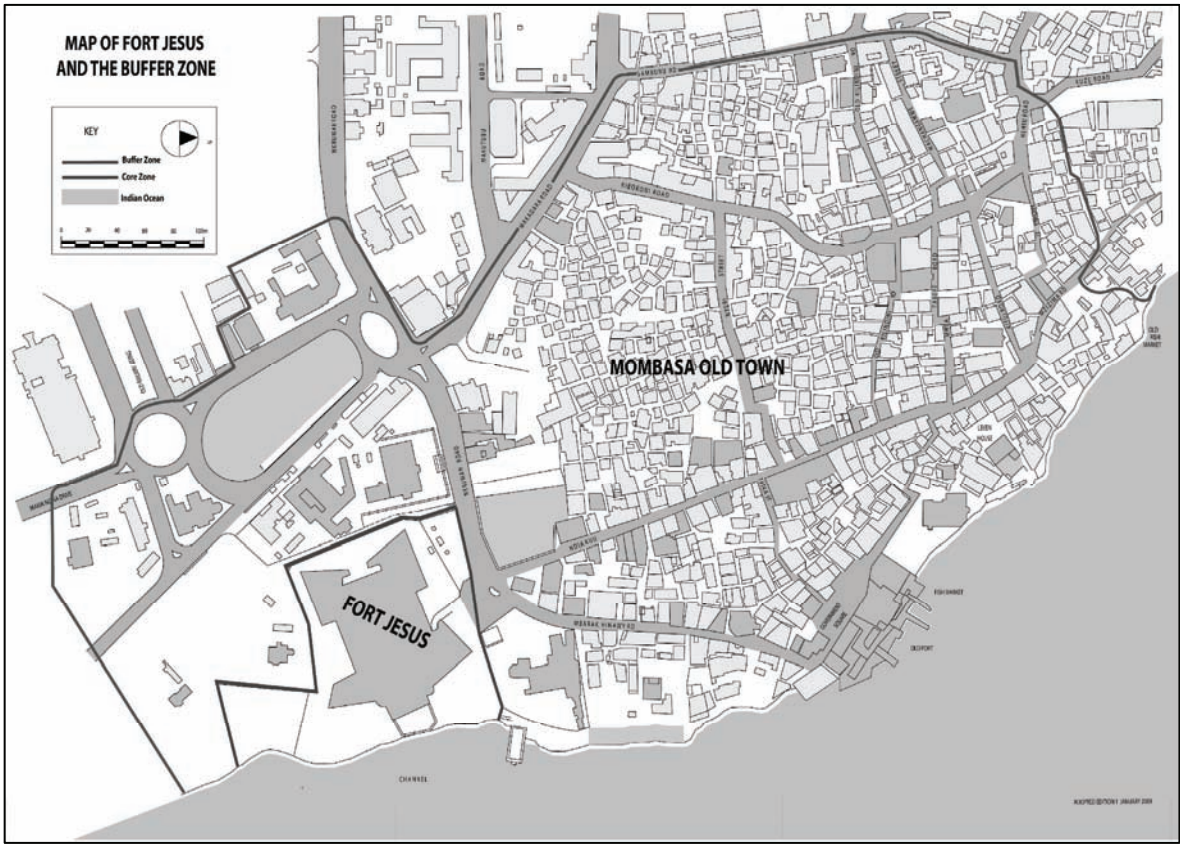
ICOMOS recommends that the examination of the nomination of Fort Jesus, Mombasa, Kenya, to the World Heritage List be **deferred** in order to allow the State Party to:

- Further develop the nomination to demonstrate that the nominated property possess outstanding universal value;
- Expand the comparative analysis to include other relevant fortresses and go beyond the Portuguese context;
- Amend the designation notice so as to eliminate the discrepancy between the sizes of the conservation area and the buffer zone;
- Include the guidelines for the conservation of the Old Town (1990 Conservation Plan) in the Bye-Law so as to strengthen protection and facilitate management;
- Revive the Mombasa Old Town Planning Commission and provide means for its functioning;
- Reinforce the Mombasa Old Town Conservation Office (MOTCO) in terms of human resources and clarify its role;
- Establish a holistic management structure for the Old Town that involves all the stakeholders, and in particular the local community, the municipal council, and the managers of the nominated property;
- Establish rigorous monitoring of the erosion of the coral rock that forms the foundations of the Fort;
- Consider the inclusion of the underwater archaeological remains in the nominated property.

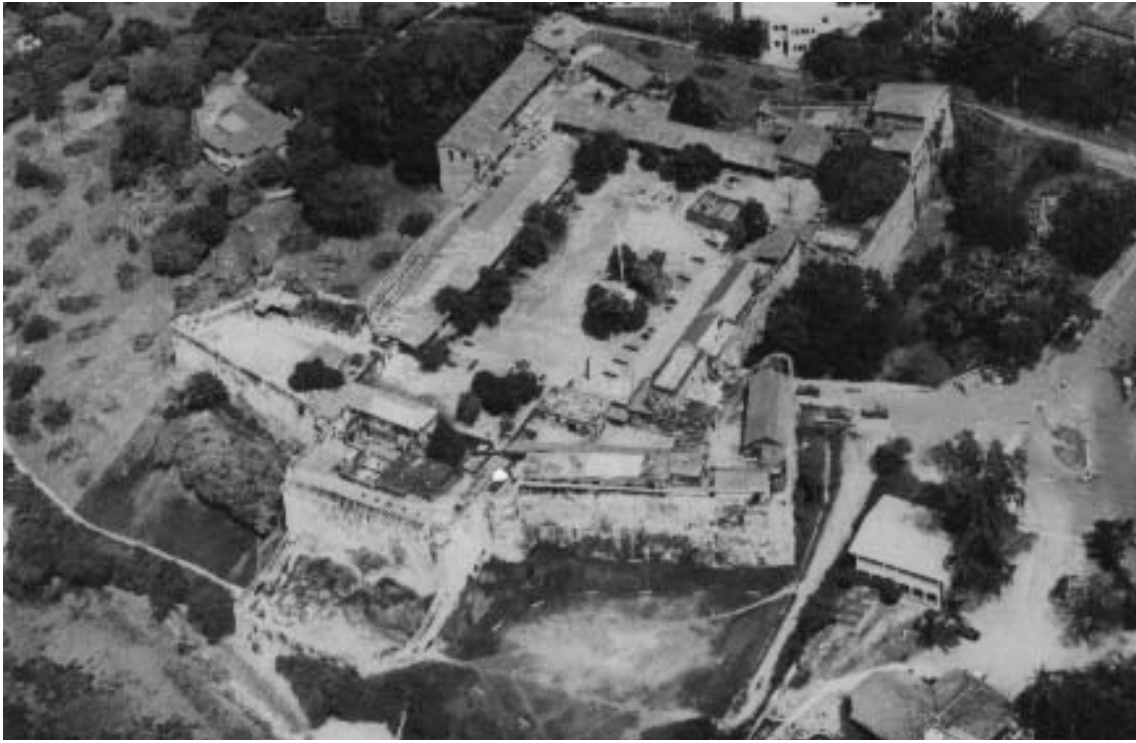
ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

ICOMOS also recommends that the State Party give consideration to the following:

- Relocating the car/bus parking area for visitors outside the moat for reasons of visual and functional integrity and authenticity;
- Adding maintenance concerns to the Management Plan, including regular



Map showing the boundaries of the nominated property



Aerial view of the Fort



The perimeter wall



View of the interior of the Fort



The museum building

Renomination on the basis of cultural criteria

Ngorongoro Conservation Area (Tanzania) No 39bis

Name of property:

Ngorongoro Conservation Area

Location:

Ngorongoro District
Arusha Region

Brief description:

The Ngorongoro Conservation Area spans vast expanses of highland plains, scrub-bush, and forests. Rising from the plains of the Serengeti National Park in the north-west, it extends over the rim of the enormous Ngorongoro Crater to the eastern arm of the Great Rift Valley.

The area has yielded an exceptional record of human paleobiology, behaviour, paleoenvironments and evolution since the Pliocene, covering a span of almost four million years. There are fossilised hominin footprints at Laetoli, a sequence of diverse, evolving hominin species within Olduvai gorge, which range from Australopithecids such as *Zinjanthropus boisei* to the *Homo* lineage that includes *Homo habilis*, *Homo erectus* and *Homo sapiens*; an early form of *Homo sapiens* at Lake Ndutu; and, in the Ngorongoro crater, remains that document the development of stone technology and the transition to the use of iron. Physical evidence of the most important benchmarks in human evolutionary development has thus been found in Ngorongoro.

Within the central part of conservation area live the Maasai people. Originally pastoralists who migrated south from Kenya into the Serengeti in the early 1800s, they were moved into this area in 1959 when the Serengeti Game Reserve was created and now live as agro-pastoralists, mainly in permanent settlements.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, it is also in part a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 28 January 2009

International Assistance from the World Heritage Fund for preparing the Nomination: 2004

Date received by the World Heritage Centre: 27 January 2009

Background: This is a re-nomination under cultural criteria of the Ngorongoro Conservation Area property that was inscribed on the World Heritage List under natural criteria (vii), (viii), (ix) and (x) at the 3rd session of the World Heritage Committee (Luxor, 1979).

Consultations: ICOMOS has consulted its International Scientific Committees on Archaeological Heritage Management and Cultural Landscapes and several anthropologists.

Comments on the assessment of this renomination were received from IUCN on 18 February 2010 and are related to the following issues:

- Existing State of Conservation issues not reflected in the nomination
- Maasai pastoralism
- Governance and Effective Management
- The relationship between nominated cultural value and natural criteria

The information was carefully considered by ICOMOS in reaching the final decision and recommendation in March 2010, and IUCN has also reviewed the presentation of its comments as included in this report by ICOMOS.

Literature consulted (selection):

Braun, D.R., Rogers, M.J., Harris, J.W.K., Walker, S.J., "Landscape-scale variation in hominin tool use: Evidence from the Developed Oldowan" *Journal of Human Evolution* 55, 1053–1063, 2008.

Blumenschine, R.J., Prassack, K.A., Kreger, C.D., Pante, M.C., "Carnivore tooth-marks, microbial bioerosion, and the invalidation of Domínguez-Rodrigo and Barba's (2006) test of Oldowan hominin scavenging behavior." *Journal of Human Evolution* 53, 420-426, 2007.

Domínguez-Rodrigo, M., Barba, R., New estimates of tooth marks and percussion marks from FLK Zinj, Olduvai Gorge (Tanzania): the carnivore-hominid-carnivore hypothesis falsified. *Journal of Human Evolution* 50, 170-194, 2006.

Domínguez-Rodrigo, M., Barba, R., "Five more arguments to invalidate the passive scavenging version of the carnivore-hominid-carnivore model: a reply to Blumenschine et al. (2007a)", *Journal of Human Evolution* 53, 427-433, 2007.

Domínguez-Rodrigo, M., Barba, R., Egeland C., *Deconstructing Olduvai: a taphonomic study of the Bed I sites*, Dordrecht: Springer, 2007.

Egeland, C., Dominguez-Rodrigo, M., "Taphonomic perspectives on hominid site use and foraging strategies during Bed II times at Olduvai Gorge, Tanzania", *Journal of Human Evolution* 55, 1031–1052, 2008.

Wood, B., and Richmond, B.G. 2000. Human evolution: taxonomy and paleobiology. *Journal of Anatomy* 196:19-60.

ICOMOS examined the complete documentation linked to the World Heritage inscription and monitoring of Ngorongoro Conservation Area as a natural property.

Technical Evaluation Mission: A joint ICOMOS/IUCN mission visited the site from 3 to 11 October 2009.

Additional information requested and received from the State Party: On 6 January 2010, ICOMOS wrote to the State Party requesting further information on proposed constructions at Laetoli associated with the opening of the fossil footprints and on a proposed monument on the *Zinjanthropus* site in Olduvai Gorge. Supplementary information was submitted by the State Party on 26 February 2010. The analysis of this information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The Ngorongoro Conservation Area covers an area of 8,292Sq.km. To the north-west, west, north and north-east are game reserves: the property is contiguous with Serengeti National Park, Loliondo Game Controlled Area, Natron Game Controlled Area, Mto Wa Mbo Game Controlled Area, Maswa Kamali Game Reserve, Maswa Mbono Game Reserve, and Maswa North Game Reserve. Together these areas constitute the greater Serengeti ecosystem. On its eastern and southern boundaries are forests at the edge of the Lake Eyasi Rift Valley Escarpment and beyond are the agricultural communities of Karatu and Mbulu districts.

Within the Conservation Area is the spectacular Ngorongoro Crater, the world's largest collapsed volcanic crater, with its mountain rim enclosing grazing areas, and to its north-west Olduvai Gorge, a 14km deep ravine.

The area has been subject to extensive archaeological research for over 80 years and has yielded a long sequence of evidence of human evolution and human-environment dynamics, collectively extending from 4 million years ago to the beginning of this era. Within that unique sequence the two main sites are Laetoli, with evidence of 3.6 million year old footprints, and Olduvai Gorge, with its complete sequence of human fossil and artefactual evidence going back 2 million years. The discovery of *Zinjanthropus* and *Homo habilis* from Olduvai captured huge public imagination world-wide and is arguably the most important scientific discovery

ever made in Tanzania and East Africa, doubling the timespan for the history of human ancestors and pushing much further back the association of hominins with the use of stone tools.

To date, about 95 hominin remains representing various genera have been recovered at the Laetoli and Olduvai Gorge sites (at least 20 specimens from Laetoli site and about 75 from Olduvai Gorge site).

The other sites are Lake Ndutu, Nasera Rock Shelter and the Ngorongoro crater which provides evidence of Later Stone Age technology and the transition to the Iron Age.

Overall the nominated site is seen to have potential to reveal much more evidence concerning the rise of anatomically modern humans, modern behaviour and human ecology.

Within the centre part of the Conservation area are settlements of the previously pastoral Maasai people and their extensive grazing areas.

The five archaeological sites, the wider archaeological landscape and the Maasai pastoral landscape are considered separately.

The descriptions are based on material from the nomination dossier, but augmented as the information provided by the dossier is in places minimal and includes little scholarly archaeological or ethnographical material. No detailed description or plans are provided as to the precise extent of the areas that have been excavated and researched. The academic literature referred to is incomplete, if not one-sided, particularly with regard to Olduvai Gorge. Current debates about the taphonomy and nature of the deposits, whether hominin or carnivore accumulated, are not alluded to. These debates are pertinent, as they go to the essence of the cultural landscape which is the basis of the nomination.

With regard to the Maasai, the cultural descriptions in the nomination dossier are not backed up with reference to any ethnographic study, or to any contemporary or historical socio-cultural anthropology. Neither are the claims that the landscape demonstrates unique or exceptional living traditions supported by evidence.

The key component parts of the property are described under the following headings:

- *Laetoli*
- *Olduvai Gorge*
- *Lake Ndutu*
- *Nasera Rock Shelter*
- *Ngorongoro Crater*
- *Wider Archaeological Landscape*
- *Maasai Pastoral Landscape*

Laetoli

The Laetoli site is isolated within the central portion of the Conservation Area, some 40 kilometres south of Olduvai Gorge. The fossil site includes both paleontological and archaeological resources. Important Pliocene and Pleistocene hominin finds were discovered including twenty hominin specimens of which the earliest is the *Australopithecus afarensis* Type specimen.

The site is best known for the Laetoli footprint locality, which records a fossil record of hominin footprints that stretch about fifty metres along nitrocarbonatite volcanic deposits. The foot trails include tracks of three individuals: one small on the left and one large on the right; the third individual's prints are superimposed on those of the larger individual on the right. All relate to *Australopithecus afarensis* and to a time when bipedalism was at a critical stage in human evolution some 3.59 million years ago. The footprints have been re-buried (see Conservation below).

Olduvai Gorge

The Olduvai Gorge locality includes numerous paleo-anthropological sites both buried and exposed within the gorge which together hold a complete sequence of human fossil and artefactual evidence going back 2 million years. Discovered in 1959, *Zinjanthropus* was the first hominin in the world to be recovered from intact geological sediments securely dated at 1.75 million years ago by the Potassium-Argon technique and at that time the earliest hominin from East Africa. This age was much older than scientists had imagined, essentially doubling the antiquity of human ancestors.

Subsequently a whole series of early hominins have been recovered.

Of utmost importance were discoveries of *Homo* lineage (*Homo habilis*), nick named "handy man" interpreted to have been the maker and user of Oldowan stone tools together with other stone tools (Acheulian). Through the work of the archaeologists Drs. Louis and Mary Leakey, Olduvai was the first site to demonstrate the evolution of human technology from Oldowan to Acheulian to Middle Stone Age to Later Stone Age to Neopastoralithic, showing the order and ages of each technological transition in secure geological contexts.

The earliest deposits at Olduvai contain rich assemblages of stone tools from which are the type series for the Oldowan, the world's earliest known technological tradition. Stone artefacts were found in direct association with butchered large mammalian bones. This observation led the Leakeys to interpret the finds as "living sites", socio-foci where food was brought for sharing. A fossilised hand and a fossilised foot were further crucial in linking hominins with tools and interpreting human biological evolution and cultural development.

A wide variety of fossils belonging to non-hominin species have also been recovered from Olduvai Gorge. They include both extant and extinct organisms.

A museum/ laboratory for storage and analysis of collections accrued from research has been constructed at Olduvai.

Lake Ndutu

Research works at Lake Ndutu, 40 km southwest of Olduvai, has yielded remains of a skull dated to between 400,000 and 200,000 years BP and representing an archaic form of *Homo sapiens*, probably a direct descendant of *Homo erectus* or an off-shoot from a common ancestry with the latter. Thus the Lake Ndutu site has documented the late stages of human biological development, in particular the transition between *Homo erectus* and anatomically modern humans. The site has also yielded stone tools belonging to the Middle Stone Age, something not previously documented elsewhere in this area.

Nasera Rock Shelter

Within the shelter, which lies to the north of the property and within the Maasai grazing lands, were uncovered stone tools belonging to Middle Stone Age and Later Stone Age technological developments.

Ngorongoro Crater

The Ngorongoro burial mounds, within the Ngorongoro Crater, document the last stages of the development of stone technology and the ultimate transition to Iron Age technology in the area. They reveal that area appears to have been settled by humans around 2,000 years BP. The burials discovered were associated with ritual practices.

Wider Archaeological Landscape

The nomination dossier stresses the importance of the wider landscape as being potentially rich in cultural heritage remains that could yield a significant further number of sites that might add knowledge to our understanding of the biological and technological evolution of humans and also the evolution of non hominins. However, no details are provided of surveys of where the potentially richest areas are considered to be.

Maasai Pastoral Landscape

The Maasai are described in the nomination dossier as pastoralists and nomads who move around with their animals in search of grazing grounds and water sources and only consume blood, milk and meat from the animals they domesticate. Although at the time the Ngorongoro Conservation Area was formed, the Maasai were still pastoralists in numbers that were sustainable within the Conservation Area, (see History below), the reality is now that the much larger community of Maasai

(some 64,000 people) presently inhabit a number of densely populated villages and only a small percentage spend part of the year in isolated 'bomas' (traditional houses with enclosures for animals protected by fences of cut thorn branches) scattered in the Conservation Area. Furthermore, they no longer live and move across the whole Conservation Area. Exact details on the number and locations of villages and Maasai bomas are lacking.

The villages are apparently permanent, as evidenced by the types of structures (brick buildings) and the presence of schools and medical clinics. The Maasai livestock includes cattle, sheep, goats, and donkeys. The State Party informed the mission that the Maasai have recently begun keeping camels, although this is not traditional. Agriculture is also playing an increasingly important role for the Maasai people within the area, related to shortfalls in food and revenue derived from the more traditional livestock husbandry. The largely settled communities now rely for food on agricultural produce as well as on resources from their animals.

Parts of the landscape are said to be associated with ritual practices such as the shifting sand dunes (5 km north of Olduvai Gorge), Nasera Rock Shelter and 'many other places'.

It is also acknowledged that the Maasai play a role in the tourism industry through the sale of handicraft products and the performance of traditional dances for tourists.

Traditionally the Maasai organised their young men into a warrior class to defend the livestock and grazing areas from wild animals and also from settled agriculturalists living around their grazing grounds. Maasai *Morani* or warriors were initiated once they had been trained for up to eight years at remote boys' villages where it was ensured they were brave enough to spear a lion and when they returned to their village to get married. The *Morani* wear their hair in long braids dyed with red clay.

No information is provided on the organisation of grazing grounds, on the traditional or more modern grazing arrangements, or on how numbers of livestock are managed.

History and development

Details on history are only provided in the nomination dossier for the archaeological sites – no material is provided for the Maasai pastoral landscape or on the history of the Ngorongoro Conservation Area. As the history of the association between the Maasai and the Conservation Area has relevance for an understanding of the present arrangements, ICOMOS has included brief information on the history of the Maasai in this area and of the designation of the area.

Archaeological sites

The remains of hominin fossils in the Olduvai Gorge were first noted in 1911 by Prof. Kattwinkel, a German entomologist, while making observations on butterflies. Under his recommendations, a scientific expedition was led by Prof. Hans Reck, who in 1913-4 recovered fossil specimens that included extinct forms of large mammals.

In 1931, Louis Leakey, a British scholar, began work at Olduvai. His work led to the discoveries of the oldest stone tools (Oldowan Industrial techno-complex) that made Olduvai Gorge a type site. In 1959, Mary Leakey made the discovery of the then oldest hominin in eastern Africa (*Zinjanthropus boisei*) nick-named, "nut cracker man" - the first species of early hominin (now subsumed under the genus *Paranthropus*) to be found outside of South Africa.

The discovery of the *Zinjanthropus boisei* skull (now subsumed under the genus *Paranthropus*) was seen as a major milestone in the history of paleoanthropology, and reinforced the idea, put forward by Leakey and originally proffered by Charles Darwin in 1871, that Africa could be seen as the 'cradle of humanity' in demonstrating how humans were descended from an ape ancestry.

The finds sparked a surge of paleoanthropological interest in East Africa.

In 1960, further research works in the same horizons yielded the first *Homo habilis*. This species became the Type Specimen (holotype) of the genus *Homo*. Morphologically and morphometrically, this large-brained hominin was the first species described as a direct ancestor of later hominins including modern humans (*Homo sapiens*).

Subsequent research in the late 1980s involved teams of Tanzanian and American scientists under the Institute of Hominid Origins led by Donald Johanson. From 1990 to date, a paleoanthropological research project is ongoing at Olduvai Gorge (Olduvai Landscape Paleoanthropology Project- OLAP) co-led by the University of Rutgers (USA) and the University of Dar es Salaam (Tanzania).

Some of the excavated material is stored at Olduvai, and a considerable amount is housed at the National Museum of Kenya.

Laetoli was first studied by the German entomologist, Kohl Larsen in the 1920s and yielded few fossils. In 1974 a team led by Dr. Mary Leakey made the discoveries of the hominin footprints trails and excavations were carried out in 1978 -1979. Also in 1974 the hominin remains were found which are seen to be associated with the footprints.

Research work at Lake Ndutu, which yielded remains of the Ndutu human skull were carried out in 1973 –

although the archaeologists are not identified they are known to be A. A. Mturi.

Nasera Rock shelter was studied by Michael Mehlman – no date is given.

Ngorongoro Crater floor was first recognized to have burial mounds by a cattle rancher, Siedentopf, and his assistant, Rothe. The resources were later examined by Prof. Hans Reck in 1913 and by Dr. Arning in 1915.

Maasai Pastoral Landscape

None of the following information is included in the dossier. The Maasai migrated south from Northern Africa, probably in the region of the Nile Valley in Sudan, northwest of Lake Turkana, sometime between the 14th and 16th centuries, before establishing themselves in the Eastern region of Africa in the mid 17th century. They quickly spread south through the Rift Valley, whose fertile grasslands were ideal for their cattle, and around the 17th or 18th centuries reached their present-day territories in Kenya and Tanzania, where they were feared and renowned as warriors.

From 1830 onward, Maasai unity disintegrated into a succession of wars between the various clans, largely over cattle and grazing grounds, which led to territorial losses and gains by their neighbours. By the end of the 19th century, their neighbours and British colonists had displaced the Maasai from the rich lands of the central Rift Valley - the area between Lake Victoria and Mount Kenya. The infamous 1904 Maasai Agreement drawn up by the colonial power had effectively reduced their territory by two thirds. A further wave of forcible 'relocation' took place in 1911-13, confining the Maasai to distant reserves in southern Kenya and Tanzania.

The Ngorongoro Conservation Area was created in 1959 as a separate part of the Serengeti National Park. The Maasai were allowed to live in the Ngorongoro Conservation Area but were excluded from the National Park. The Maasai elders who agreed to this deal subsequently said they did not know what they were signing. Previously a combination of wildlife experts and palaeontologists, including Louis Leakey and Bernard Grzimek (author of *Serengeti Shall Not Die*), had campaigned to remove the Maasai from the whole of the Serengeti/Ngorongoro area and make the whole area a national wildlife park.

Post independence, tourism was developed around big game watching from game lodges in the Serengeti and Ngorongoro. In the 1990s, when such tourism begun to yield high revenues, there was pressure to increase the game reserves and Ikorongo and Grameti Games Reserves were added to Serengeti's western border and the local people once again removed. Since then there have been moves to create Wildlife Conservation Areas to the north of the Serengeti: the Maasai complained in a case that went to the Tanzanian Human Rights commission.

Within the Ngorongoro Conservation Area, the Maasai have increased in numbers from around 10,000 in 1960s to just over 60,000 today. There were moves from 1975 to ban agriculture in the area and in 1992 the Government indicated that Ngorongoro should be for wildlife and the Maasai be encouraged to move. In 2003, 200 families were evicted as illegal immigrants. The Maasai are currently only in part of the nominated area (in spite of the fact that the 1959 agreement allowed them to live in the whole).

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis in the nomination dossier fails to discuss the Maasai pastoral landscape. It solely discusses the archaeological and paleoanthropological heritage.

The analysis compares the property with the following inscribed sites: Lower Valley of the Awash, Ethiopia (1980, criteria (ii), (iii) and (iv)), Lower Valley of the Omo, Ethiopia (1980, criteria (iii) and (iv)), Lake Turkana National Parks, Kenya (1997, criteria (viii) and (x)), Fossil Hominin Sites of Sterkfontein, Swartkrans, Kromdraai, and Environs, South Africa (1999, criteria (iii) and (vi)) and concludes that it has many similarities with them – this seems to be a misunderstanding of the purpose of the comparative analysis which is to demonstrate that there are no similar properties already inscribed on the List.

The comparative analysis in the nomination dossier provides comparisons for individual sites within the property. In considering individual sites, the analysis is generally accurate though in places the uniqueness of individual sites is overstated, and presented with a certainty that does not quite reflect the level of academic debate associated with the finds. It is stated that Laetoli is the only site with evidence for habitual bipedalism from 3.59 million BP. Phrased in this way the statement is not correct. Laetoli is unique in having a trail of footprints. There is osteological evidence for bipedalism from other places, such as Afar.

The Lake Ndutu finds have definitely been overstated. Equally old Middle Stone Age materials have, for instance, been recovered from Mwanganda, Malawi, and South Africa. Further, there have been several archaic *Homo sapiens* and *Homo heidelbergensis* specimens found in Africa. The Ndutu skull needs to be put into context.

The comparative analysis emphasizes fossil evidence at the expense of stone tool traditions. For instance the pre-Oldowan tradition is not discussed.

In addition, in isolation, the importance of Nasera Rock Shelter and the Ngorongoro graves have been

overstated. There are numerous Middle Stone Age rock shelters in East and Southern Africa, as well as graves from 2,000BP. Lake Nduu and Nasera Rock Shelter do however complement the human evolution sequence in the Ngorongoro Conservation Area with behavioural and material culture evidence from the late Pleistocene and Holocene. The statement that the Ngorongoro graves give evidence that people 'cared for the dead' and 'undertook ritual practices' 2,000 years ago is an obvious observation, as there is already evidence for such behaviour in Middle Stone Age times. Though interesting on their own, the graves are not especially relevant to human evolution and the rise of modern human behaviour.

ICOMOS considers that comparisons should have been made between the ensemble of sites within the Ngorongoro Conservation Area and other properties inscribed on the List. If that is done, then it becomes clear that although individual sites may be paralleled elsewhere, the group of sites in Ngorongoro, is not paralleled in the List, as the sites represent a milestone in our understanding of human evolution.

The second part of the comparative analysis should relate to comparisons that show that the Conservation area is unmatched by other sites that might be put forward in terms of the overall value of the complete ensemble of sites in a landscape that has the capacity to produce further evidence. ICOMOS considers that although this has not been undertaken, such comparisons would be positive, within our current knowledge, even taking into account the level of debate on how the finds are interpreted.

A section on the Maasai should have been included in the comparative analysis as they are part of the nomination as a 'living civilization'. The Maasai are linguistically classified as an Eastern Nilotic people. Most communities speaking a Nilotic language, whether Eastern Nilotic or Southern Nilotic, have or had a pastoralist subsistence economy. Examples of such communities in Kenya and Tanzania are the Barabaig, Nandi, Suk, Lokop/Samburu and Kipsigi to name but a few. In addition there are numerous pastoralist communities from Tanzania to Sudan from other linguistic backgrounds such as the Turkana, Rendille, Nuer and Somali. Notwithstanding cultural and regional differences, all of these groups share, in various ways and to various extents, a great number of cultural characteristics that in the nomination dossier are implicitly ascribed to the Maasai alone. Many pastoralist societies have a strong sense of cultural identity and conservatism, warrior-like age groups, extensive use of herbalism, dislike for bush meat, etc. The Maasai, although extremely interesting in terms of their cultural traditions, are therefore, in ICOMOS's view, neither a unique nor an exceptional testimony to such pastoralist traditions. Furthermore they are not confined to the Conservation Area and include neighbouring groups in Tanzania and in Kenya.

ICOMOS considers that the comparative analysis presented in the nomination dossier does not adequately justify consideration of this property for the World Heritage List. However, ICOMOS considers that on the basis of the extensive evidence available for the paleo-archaeological sites, it can be stated that a similar ensemble of sites is not represented on the List, nor might a similar ensemble be nominated in the future on the basis of what is currently known from excavations, in terms of the excavations being a milestone in our knowledge of human development.

ICOMOS considers that the comparative analysis completed with the extensive information available for the paleo-archaeological sites justifies consideration of this property for inscription on the World Heritage List on the basis of cultural criteria. ICOMOS does not, however, consider that the evidence available for the Maasai cultural traditions, in terms of their inter-action with the landscape, justifies consideration of their inclusion in the List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Age and quality of cultural materials that have been discovered in the area contribute significantly to knowledge on evolution of early hominins to anatomically modern humans, and associated technological change from about 4 million years ago to the present.
- Diversity and quantity of cultural materials/artefacts is of huge importance both for the study of the human evolution locally but also a means of understanding the larger tradition and environment in the whole of Eastern Rift Valley stretching from Israel to Mozambique.
- The unique co-existence of wild animals, domesticated animals and people in the same environment. The Maasai living culture among the wildlife practically substantiates our understanding on past life ways millions of years ago.
- A natural laboratory where the act of nature has and still is preserving our heritage.

ICOMOS considers that the first part of this justification that relates to the global importance of the hominin remains is appropriate. Indeed, in 1999 ICOMOS "*drew attention to the cultural importance of this site, which contained one of the most famous fossil hominin sites in the world, Olduvai Gorge, as well as the more recently discovered Laetoli site*". More information could have been provided in the nomination dossier to substantiate and make more specific the ideas in the second point, given the wealth of published research.

As for the third point, the idea of the Maasai substantiating knowledge of past ways of life has not been justified in any other than a general way and further the Maasai cannot be directly linked to earlier peoples living in the area as they are believed to have migrated to the area only in the early 19th century (although there is evidence that pastoralists have grazed the area for some two millennia). The sections on co-existence of wild and domesticated animals and people, and the idea of a natural laboratory that preserves cultural artefacts cannot readily be related to cultural criteria. Although the Maasai pastoral landscape is nominated for its pastoral and ceremonial associations in the introduction to the nomination dossier, this is not reflected in the justification. ICOMOS does not consider that the Maasai pastoral landscape can be justified as being of Outstanding Universal Value, nor does it satisfy conditions of integrity or authenticity – for the reasons set out below.

Integrity and Authenticity

Under this heading, the nomination dossier only considers authenticity and does not consider integrity. ICOMOS has nevertheless considered integrity on the basis of the material presented in the nomination dossier. ICOMOS's consideration is focused on the potential cultural value of the property as re-nominated and is without prejudice to existing issues regarding the integrity of the property as recognised by its existing inscription under natural criteria.

Integrity

In terms of whether all the attributes that are needed to reflect Outstanding Universal Value under cultural criteria, (associated with paleo-archaeological sites and landscape), ICOMOS considers that the whole Conservation Area is an appropriate boundary to encompass not only the known remains but also areas of high archaeo-anthropological potential where related finds might be made.

However the integrity of specific attributes is to an extent under threat. In Olduvai Gorge herds of Maasai livestock, which pass through the gorge to access water, promote erosion of the fossil deposits and trampling/destruction of surface finds. The architectural plans shown to the mission for a podium at the fossil locality *FLK-Zinjanthropus*, within the gorge could represent a threat to one of the more important Plio-Pleistocene archaeological sites known to science, as from the drawings it appears that the site would be destroyed by the proposed constructions as would all chances of future research (see Development Pressures below).

At Laetoli, plans underway to open the footprint trackway for public viewing within an exhibition building (see Development pressures below) could represent a threat to the integrity of the locality.

The Nasera Rock Shelter is clearly neglected by the Ngorongoro Conservation Area Authority (NCAA) and the Division of Antiquities. The walls of the rock shelter are covered in graffiti, some of which overlay faded rock art. The shelter itself is currently used as a corral for Maasai livestock. As a result, the archaeological deposits have suffered from substantial trampling and mixing of the uppermost archaeological deposits. These ongoing threats promote deterioration and remain uncontrolled.

In terms of the Maasai pastoral landscape, integrity relates to how far all the attributes needed to display their pastoralism and ceremonial associations with the landscape are within the boundaries. Here the issue is that the Maasai within the Ngorongoro Conservation Area cannot be said to represent the Maasai pastoralists who are spread over a much wider area to the north in Kenya as their distinctive pastoralism within the Conservation area has now been significantly changed into agro-pastoralism through the impact of population growth and other factors and no substantial details or justification has been put forward to show that a robust pastoral system still exists or indeed is fostered. ICOMOS notes the ongoing consideration of Maasai pastoralism in relation to conservation of the natural values of the property.

Authenticity

Authenticity relates to the way the attributes suggested as reflecting Outstanding Universal Value truthfully reflect their value. In terms of the hominin remains, and the Stone and Iron Age remains, it is the precise sites where the remains were found as well as the wider area where further potential associated discoveries may be made that convey the value. In general, ICOMOS considers that the authenticity of the fossil localities is unquestionable, however given the nature of fossil sites, the context for the fossil deposits need to remain undisturbed (except by natural geological processes).

The nomination dossier does not contain sufficient detailed information on most of the sites to delineate their extended areas or the areas of archaeological sensitivity, or sufficient guarantees in terms of management arrangements to ensure that the sites will remain undisturbed and not threatened by visitor access, construction or grazing cattle and thus their authenticity is vulnerable.

For the Maasai pastoral landscape, authenticity relates to how well the overall landscape manifests the traditional pastoral and ceremonial system of the Maasai. ICOMOS considers that here the issue is that their distinctive pastoralism has now been substantially changed into agro-pastoralism through the impact of population growth and other factors.

ICOMOS considers that the conditions of integrity and authenticity have been met for the paleo-archaeological sites and landscape, although the threats to Laetoli and

Olduvai, the lack of adequate delineation for most of the sites and archaeologically sensitive areas and the need for better conservation, management and protection for individual sites means that both integrity and authenticity are extremely vulnerable. ICOMOS does not consider that at the present time the conditions of integrity and authenticity have been met for the Maasai pastoral landscape.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii) and (iv).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the property constitutes paleo-anthropological sites of Outstanding Universal Value which have exhibited layers of facets of combined works of nature and humans over time and still has potential to yield more information on evolution of humans, other animals, and flora, whilst also offering a home to the Maasai people, their livestock and culture.

ICOMOS considers that as the property consists of several archaeological sites and localities which have produced finds falling within a 4 million period of human/hominin history, the recognition of a palimpsest cultural landscape is more appropriate than trying to link the property with a particular cultural tradition or civilization – which has not anyway been identified by the State Party, and thus it is more relevant to consider other criteria.

In terms of the Maasai landscape, the nomination dossier states that the Maasai are “*of an outstanding significance in effective conservation (...) living in harmony with the wildlife*” (p.5, also see p.23). Moreover they are “*rich in their culture which they have preserved over years*” (p.6). However interesting these Maasai traditions are, the nomination dossier fails to explain why they are unique or exceptional or how their exceptionality is reflected in the landscape.

ICOMOS considers that this criterion has not been justified at this stage.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the property illustrates a significant testimony for early hominin technological evolutionary history through time made evident through the discovery of Stone tools belonging to the Early, Middle and Later Stone Age technological developments (including the

earliest Industrial Techno-complex belonging to Oldowan) and the Iron Age. Paleo-environmental and paleo-biogeographic reconstructions of the entire area during Plio-Pleistocene epochs have also been established and contributes to the understanding of the climate and the ecological changes of the area today.

Discoveries of hominin remains associated with mammal fossil fauna and stone tools, which have also led to scientific reconstructions pertaining to early hominin subsistence strategies and patterns, contributes to the understanding of some of the primary values of the nominated property in that it provided habitation to hunter gatherers hundreds of years ago. Socio-cultural ties extended to the dead are pinned back to 2,000 years ago as exemplified by the evidence yielded by the Ngorongoro burial mounds.

ICOMOS considers that the property is exceptional in terms of the long sequence of evidence it has yielded of human evolution and human-environment dynamics, collectively extending from 4 million years ago to the beginning of this era. The discovery of *Zinjanthropus* and *Homo habilis* from Olduvai doubled the timespan for the history of human ancestors and pushed much further back the association of hominins with the use of stone tools. Physical evidence of the most important benchmarks in human evolutionary development has thus been found in Ngorongoro.

Although the interpretation of many of the assemblages of Olduvai Gorge is still debatable (current debates about the taphonomy and nature of the deposits are not alluded to), their extent and density are remarkable. Several of the type fossils in hominin genealogy come from this site.

Furthermore, future research in the property is likely to reveal much more evidence concerning the rise of anatomically modern humans, modern behaviour and human ecology.

What needs to be established, however, is a more precise delineation of the disposition of the attributes of the property (see below) that contribute to this evidence, in order that there is a clear understanding of their scope and extent and precise agreement on what has been recognised on the ground, related to excavations and surveys, and what further areas are sensitive in archaeological terms.

ICOMOS does not consider that this criterion can be said to apply to the Maasai pastoral landscape.

ICOMOS considers that this criterion has been justified for the paleo-archaeological sites and the wider landscape but that more precise delineation of the attributes is needed.

ICOMOS considers that the nominated property meets criterion (iv) and conditions of authenticity and integrity, although they are at the moment extremely vulnerable, and that Outstanding Universal Value has been demonstrated for its paleo-archaeological interest.

Description of the attributes

The attributes that convey Outstanding Universal Value are the ensemble of paleo-archaeological sites of Laetoli, Olduvai Gorge, Lake Ndutu, Naseru Rock Shelter, and Ngorongoro Crater in their context and the wider archaeological landscape.

4. FACTORS AFFECTING THE PROPERTY

As an inscribed natural property with a long history of consideration by the Committee, including a recent joint World Heritage Centre/IUCN mission, information on threats to natural attributes is already included in SOC reports, and will also be considered under SOC at 34COM. ICOMOS comments below are in addition to this discussion and focus on the cultural attributes of the property.

Development pressures

In some of the sites buildings for tourism and services have been constructed or are being planned.

At Laetoli, an exhibition building, ablution block and a guard house as well as a road have been constructed in the vicinity of the Laetoli site in anticipation of increased visitor interest. The buildings could be clearly seen from about 400m standing at the buried footprints. The State Party argued that the newly constructed buildings are temporary and also have no direct impact on the footprints find site and could in the future if necessary be demolished.

During the mission, the State Party reported that a Laetoli Committee had been assembled, composed of representatives from the Division of Antiquities, the NCAA, and external scientists to view other fossil localities around the world as a basis for developing a strategy for opening the footprints to the public. The supplementary information provided by the State Party on 26 February 2010 explains that the genesis of this Committee had been a visit to the footprint site by the President of Tanzania who, not being impressed by the invisibility of the imprints, directed the Ministry of Natural Resources and Tourism (MNRT) to re-excavate the footprints and scientifically preserve them so they may be left open for public viewing. The MNRT has since taken the President's order as a scientific challenge to be pursued. It is being proposed that ICCROM will be co-opted into the National Steering Committee.

Formal plans for the opening of the site are not presently available. However, a concept for an exhibition building to encircle the opened footprint site has apparently been

developed by an architect. The State Party is planning to seek financial support for the scheme and a consultant has been taken on to produce an action plan that is expected in mid March 2010. It is stated that this action plan shall be made available to ICCROM for comments before implementation, and that '*in finalizing the site plan for Laetoli it is envisaged that a site meeting will be convened at Laetoli (the site) in early April 2010 to involve the consultant, experts and representatives from the World Heritage Centre and ICOMOS to discuss*'.

In the supplementary information received on 26 February 2010, the State Party acknowledges that the possible re-opening of the footprints is a highly contentious issue amongst the paleo-archaeological community as there is potential for damage or destruction of the site.

ICOMOS considers that any proposals for intervention at Laetoli need to be considered and agreed in principle before any consideration is given to structures or formal plans to reveal the footprints. It is essential that such an in principle proposal be formally submitted for appraisal by ICOMOS and the World Heritage Committee, in line with the requirements of *Operational Guidelines* paragraph 172, before any commitment is made.

ICOMOS considers that it is highly unlikely that proposals to uncover the footprints can be considered as a sustainable way to treat these exceptional remains.

At Olduvai Gorge, the mission was shown architectural plans for a podium to be constructed at the *FLK-Zinjanthropus* archaeological site. *FLK-Zinjanthropus* is one of the most important sites of its time period, and the podium was designed to commemorate the 50th anniversary of the discovery of the *Zinjanthropus* cranium. The plans include walkways to be constructed directly on top of the fossil deposits, stone walls built directly against the fossil outcrops and trees planted at the base of the site. The supplementary information provided by the State Party on 26 February 2010 explains that the experts who participated in the international conference in the 50th anniversary year did not approve the drawings because they '*could irreversibly damage the site*'. The consultant has been asked to revise the plans. A meeting is planned for the consultants, experts from the archaeology Unit of the University of Dar es Salaam, the National Museums of Tanzania and the Antiquities department to discuss the revised drawings in March 2010.

It is stated that '*As a matter of principle, ICOMOS will get a copy of the details for the envisaged interventions after the experts and other stakeholders are convinced that the concept is understood and the consultant has made drawings that truly represent the concept*'.

ICOMOS remains concerned that the overall concept of a podium on this site is fundamentally inappropriate and could irreversibly damage the site. As with the Laetoli site, ICOMOS considers that approval in principle to the

approach to presenting this site must be reached before any designs are conceived and to this end plans should be submitted to ICOMOS and the World Heritage Committee, in line with the requirements of *Operational Guidelines* paragraph 172, before any commitment is made. ICOMOS considers that it is unlikely that constructions directly on the site where the finds were made could be seen as acceptable.

The supplementary information also stated the MNRT had received a proposal from a local research institution for the establishment of a multifunctional paleo-anthropological Field Station at Olduvai Gorge. This will involve construction of structures and a camp site. The directorate of Antiquities is studying the proposal and it will be discussed at a stakeholders' meeting planned for March 2010. No details are provided as to the location or size of this development. As with other developments in this highly sensitive area, details of the proposals would need to be submitted for scrutiny by ICOMOS and the World Heritage Committee, in line with the requirements of *Operational Guidelines* paragraph 172, before any commitment is made.

Agriculture/pastoralism

Due to increased Maasai populations, declining livestock populations and food scarcity, many of the Maasai pastoralists have converted to an agro-pastoralist lifestyle. Agriculture is technically not permitted within the Ngorongoro Conservation Area, although small-scale agricultural plots are present. Agricultural plots have encroached upon the Laetoli fossil locality (some 300 to 400 metres from the fossil deposits).

Maasai pastoralists bring their livestock into the Olduvai gorge to access water. Large herds of sheep, goats, and cattle, were observed by the mission, despite the fact that livestock are prohibited by the NCAA from entering the site. This promotes unnecessary erosion and trampling/destruction of fossils and artefacts on the surface of the fossil deposits. The negative effects of this are undisputable. For example, the OH-16 cranium of *Homo habilis*, discovered in 1963, was trampled by cattle just prior to its recovery and much of it destroyed. Numerous livestock trails are evident across the fossil deposits, promoting erosion beyond what is typical of natural causes.

ICOMOS considers that the authorities are not taking satisfactory efforts to remedy the situation.

Nasera Rock Shelter is presently serving as a corral for Maasai livestock. The archaeological deposits have suffered from trampling and mixing of the uppermost archaeological deposits. As a result, numerous artefacts and bones are presently exposed subjected to trampling damage. In addition, the rock shelter walls are covered in graffiti, some of which overlays faded rock art. This irreversible damage is destroying the integrity of the archaeological material. Although the site is legally protected under the Antiquities Act, protection of the site

is not enforced and plans are not underway to curb the ongoing damage.

Mining

Mining is prohibited within the NCA. During the technical evaluation mission, however, it was noted that gravel pits had been excavated within the NCA to provide road materials. If these extractions were to take place near archaeological localities, the damage would be severe. The excavations have not been rehabilitated and preventative measures do not appear to be underway.

Tourism pressures

Tourism pressure remains a problem within the Ngorongoro Crater and pose a certain threat to the natural resources of the NCA, although less so with respect to the cultural resources. The NCAA plans to alleviate tourism pressure within the crater by promoting areas outside the crater, particularly the paleoanthropological resources. If these efforts are successful, and increasing numbers of tourists visit the paleoanthropological sites, there is potential for damage to occur (e.g., vandalism, removal of archaeological materials).

There is conflict between the Maasai pastoralists and hotels/campsites, both of which require access to water and land. According to the Maasai Pastoralist Council (MPC), previously constructed tourist lodges have restricted the availability of grazing lands and water sources. There is currently no forum that allows for stakeholders in the tourist industry, particularly those who manage lodges within the NCA, to communicate with the NCAA. This is at odds with one of the stated objectives of the NCAA, which is to promote tourism.

Environmental pressures

The primary environmental threat to the fossil localities is erosion, resulting from natural process. For example, heavy rains can promote high levels of erosion of fossil deposits. This is likely to happen, and it has been happening throughout geologic history. This is not necessarily a problem however, as these natural processes have been operating on the fossil localities since they were formed. Furthermore, erosion plays a critical role in the scientific value of the fossil localities as paleoanthropologists rely on natural erosion to expose fossil material.

Naturally occurring fire is managed by the NCAA (e.g., through prescribed burning and fire breaks). Fires caused by the local people pose a serious threat to the natural resources of the NCA, and possibly to the Maasai people and livestock. The potential damage to the paleoanthropological resources is relatively low, since they remain buried. The mission observed several intentionally set fires associated with the clearing of land for agricultural purposes. Such fires are prohibited within

the NCA, although enforcement of the rules appears to be lax.

Drought remains an ongoing threat to the Maasai people of the NCA. The technical evaluation mission coincided with a severe drought that has had devastating consequences on the Maasai throughout East Africa. Water shortages threaten livestock populations, which in turn threatens the livelihood of the Maasai people. Such droughts are likely to continue in the future, and long-term climatic forecasts suggest their frequency and severity will increase. Obviously preventative measures cannot be taken, but ICOMOS considers that it would be wise for the State Party to develop plans for delivering water to the Maasai people and their livestock in the future.

Natural disasters

Natural disasters identified by the State Party include earthquakes, floods, and wildfire. Earthquakes are likely to happen, although they do not pose a serious threat to cultural resources of the NCA. Flooding is unlikely outside of Ngorongoro crater, and poses a minimal threat to the cultural resources. Wildfire poses minimal threat to the paleoanthropological resources of the area, since the fossil landscapes remain buried. However, severe wildfire could potentially create problems for the Maasai people. The NCAA is responsible for managing wildfire (e.g., through firebreaks and prescribed burns). ICOMOS considers that natural threats have been satisfactorily addressed by the authorities to the extent they can.

Population Pressure

Population pressure remains one of the largest threats to the Maasai culture. The most recent census data places the Maasai population within the NCA at approximately 64,000 people, and the historic trend has been for the population to increase in recent decades. Populations are increasing largely because nearby Maasai people are moving into the NCA, where there is improved access to medical care, veterinary care, schools, etc. The traditional nomadic pastoralist lifestyle is unable to support the growing population. As a result, increasing numbers of Maasai are turning to agriculture and practicing a more sedentary, non-traditional lifestyle. The effects of increasing populations are particularly evident in the large number of non-traditional, permanent structures within the Maasai villages, which are beginning to resemble informal settlements/shantytowns. Preventative measures to curb the population growth do not exist and ICOMOS considers that this threat has not been satisfactorily addressed by the authorities. IUCN concurs with this view and notes that: *"The lifestyle of the Maasai is under pressure of change. Adoption of settled agriculture and difficulties in maintaining a nomadic lifestyle are a clear reality for the Maasai communities living in Ngorongoro. The absolute numbers of people living in the crater is also a key issue."*

Impact of climate change

The drought mentioned above could be related to climate change.

ICOMOS considers that the main threats to the cultural attributes of the property are proposed inappropriate development at Laetoli and Olduvai, which constitute a major danger to the integrity, authenticity and Outstanding Universal Value of the property in relation to cultural criteria, the lack of enforcement of regulations relating to the use of land at and near archaeological sites, over-population, and the lack of a pastoralism/grazing strategy.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the NCA are clearly delineated and the nominated property includes all the attributes required to express the potential Outstanding Universal Value of the property related to the paleoanthropological resources (although these remain to be more clearly defined).

A buffer zone has not been proposed as the State Party considers that the substantial size of the property and the protected areas it adjoins give adequate protection.

ICOMOS considers that this is reasonable as the paleoanthropological and cultural resources are well protected within the boundaries of the NCA. However, there is potential risk in the south-east boundary of the NCA, near the town of Karatu. This area is presently dedicated to agriculture and pastoralism. Any shifts in land-use strategies could pose a potential threat to the NCA.

ICOMOS considers that the boundaries of the nominated property are adequate and protected areas around the edge of the nominated property provide an adequate buffer area apart from in the south-east.

Ownership

The nominated property is owned by the Ngorongoro Conservation Area Authority, a government owned agency.

Protection

Legal Protection

The paleo-anthropological resources are protected under the Antiquities Act of 1964 (amended 1979). The

Act essentially makes it illegal to damage or remove cultural antiquities, which includes those sites within the NCA. The Antiquities Act provides the highest level of legal protection possible within the country and this protection is afforded to known archaeological resources and any sites that might be discovered in the future. Enforcement of the Antiquities Act is the responsibility of the Division of Antiquities.

A revised national policy on the protection of cultural antiquities is presently under development.

Olduvai Gorge is the only site with clearly defined boundaries, given the unique geologic context of the gorge. The boundaries for the Olduvai Gorge sub-zone extend 5km from the gorge in any direction, although they are not clearly delineated on the landscape. The entire sub-zone is protected under the Antiquities Act.

Laetoli and Lake Ndutu fossil localities are buried fossil landscapes, the boundaries of which are not clearly defined. The extent of the fossiliferous deposits is unknown, although geologic maps or a focused survey of the sites could help define boundaries. Distinct boundaries for Nasera Rock Shelter and Ngorongoro Burial Mounds are also lacking.

ICOMOS recommends that the State Party develop specific boundaries for sites at Laetoli, Lake Ndutu, Nasera, and for the Ngorongoro Burial Mounds, and for their surrounding sensitive landscape, to ensure their protection, conservation, management and monitoring. ICOMOS also recommends that further areas that are archaeologically sensitive be clearly defined.

There is no formal protection for sustaining Maasai traditions, such as communal grazing and traditional house construction.

Enforcement of existing legal protection is lacking to some degree. As noted above, the mission observed livestock in Olduvai Gorge, a corral and graffiti in Nasera Rock Shelter, and agricultural plots in the immediate vicinity of Laetoli (and throughout the NCA). The permissive atmosphere within the NCA is also evidenced by the open gravel pits used for road construction, numerous agricultural plots, and fires set to clear land for crops. All these practices are said to be forbidden within the NCA.

Traditional Protection

The Maasai people are said to have preserved their pastoral traditions while living in harmony with the wild game that migrate through the area. The NCAA relies on indigenous knowledge to maintain a healthy grazing regime throughout the NCA. However there is an absence of a pastoralism management strategy. ICOMOS considers that it remains unclear how these pastoral traditions are managed in relation to increasing population, to pressure on grazing resources, and to environmental issues such as shortage of water.

Effectiveness of protection measures

The legal protection in place for the paleo-anthropological resource is limited by the lack of delineation for most of the sites and by an apparent lack of enforcement, which means that many of the resources are under some degree of threat.

It is unclear whether population increase has militated against the viability of traditional protection practices. ICOMOS considers that there is a need for an overall pastoralism strategy.

ICOMOS considers that although the legal protection in place for the paleoanthropological resource is technically adequate its lack of enforcement is a source of concern. ICOMOS recommends that the State Party develop specific boundaries for Laetoli, Lake Ndutu, Nasera, and the Ngorongoro Burial Mounds to ensure their protection. ICOMOS considers that an overall pastoralism strategy is needed to inform whether traditional grazing practices can be sustained by traditional organisational practices and how these relate to the management of archaeological and natural attributes.

Conservation

Inventories, recording, research

The archaeological resources within the NCA have been well documented over decades of research by scientists. Nevertheless the documentation does not appear to be centrally located or readily available and has not been used to define the limits of the key sites or of other sensitive areas.

There is no inventory of Maasai settlements or bomas. ICOMOS recommends that the State Party conduct a detailed survey of the extent of Maasai villages and settlements. Additional details on the structures present within the settlements would be useful. Such information would provide a key baseline for monitoring any changes to their population and settlement strategies in the future.

Present state of conservation

The state of conservation of the various archaeological sites is variable. The sites within the Ngorongoro Crater and Lake Ndutu are in good condition; the Laetoli footprints are now stable after removal of tree roots and re-burial; the Olduvai Gorge site is under pressure from grazing, as is the Nasera Rock Shelter.

Active Conservation measures

Guidelines for the conservation of the archaeological resources are set forth in the Antiquities Act, although a revised national policy is in development. Nevertheless,

there does not appear to be any formal strategy for the conservation and management of individual sites.

ICOMOS considers that conservation plans or strategies are needed for each of the paleo-archaeological sites.

Maintenance

On-site Antiquities staff is present at Olduvai Gorge and Laetoli. These include two resident guards who are responsible for monitoring the fossil deposits at Laetoli and a number of local guides at Olduvai.

Effectiveness of conservation measures

The limited number of staff for the vast area of the nominated property, the remoteness of the main sites, the lack of their adequate delineation, and the lack of enforcement of regulations mean that overall the effectiveness of conservation measures is very limited.

ICOMOS considers that a conservation programme is needed to put in place necessary documentation, to develop conservation plans, to enforce regulations regarding grazing and to increase the number and knowledge of cultural heritage staff.

Management

Management structures and processes, including traditional management processes

The NCA is under the management of the NCAA. Their primary management objectives are to conserve the natural resources, protect the interests of the Maasai pastoralists, and to promote tourism. The Division of Antiquities is responsible for the management and protection of the paleoanthropological resources within the NCA. A memorandum of understanding is presently under development to formally establish the relations between the two entities. The NCAA Board of Directors includes representatives of the Division of Antiquities (as well as the MPC).

At present there is a large number of staff focused on the natural assets of the NCA. The NCAA lacks cultural heritage staff with training in the management of pastoralist communities. However, both the NCA and Division of Antiquities indicated that plans are underway to expand their staff to offset this imbalance.

Outside of setting regulations over which lands the Maasai are permitted to graze their livestock, there is no active strategy for the management of pastoralism within the NCA. The management strategy appears to be reactive, in terms of protecting the natural resources of the NCA. Within the Maasai community, the MPC is responsible for establishing grazing regimes, on the basis of traditional/indigenous knowledge.

One of the concerns identified during the course of the mission was the ever-growing Maasai population. In order to properly monitor and manage this situation, an important first step will be to thoroughly document the number of people inhabiting the NCA and the extent of their settlements. At the moment, there are no formal plans for managing/controlling the number of settlements and Maasai pastoralists are free to come and go as they please.

In recent years the number of Maasai people has increased, resulting in an increase in the ratio of people to livestock. This decline is encouraged by NCAA management, which is promoting a focus on higher quality livestock over higher quantities. To this end, the NCAA is responsible for providing veterinary service to the Maasai pastoralists.

However, the Maasai Pastoralist Council (MPC) is responsible for representing the needs of the Maasai People. A forum does exist for communication between the MPC and the NCAA. In addition, the chair of the MPC is also a member of the NCAA Board of Directors.

The NCAA has established a set carrying capacity for herbivores within the NCA at 250,000. This figure includes both livestock and wild animals. Over-grazing does take place, particularly near the Maasai settlements. The grazing regimes are managed by the MPC, which is responsible for protecting the interests of the Maasai people.

Policy framework: management plans and arrangements, including visitor management and presentation

The nomination dossier includes a Provisional Integrated Management Plan, 2006-2010 (although the text mentions a Plan for 2006-2016). This has five sections: Description of the property; Resources in the property; Goals and Objectives; Management programmes and Actions; and Implementation Strategy.

ICOMOS notes that the management plan tends to be orientated towards the natural environment in terms of the need for more research, managing biological diversity, and promoting conservation of critical habitats. The cultural objectives relate more to social issues and minimising human – wildlife conflicts. There are no objectives relating to documenting more adequately the cultural resources and investigating the potential of the wider landscape in archaeological terms. The management plan includes raising environmental awareness but not cultural awareness. The next review of the Plan needs to focus on cultural heritage and give it equal prominence and resources as natural heritage.

In terms of Implementation, the core strategy is said to be an ecosystem approach to environmental management. ICOMOS notes that there is no mention of integrating this with cultural objectives. The one area that does acknowledge the cultural resource is in the

land management zones into which the property is divided.

Neither the management plan nor the nomination dossier reflects the concerns of 2007 reactive monitoring mission by IUCN and WHC (reiterated by the World Heritage Committee at its 33rd Session (Seville, 2009)). This suggested the need to develop an overall tourism strategy for the property to guide public use and prioritize the quality of the tourism experience, not the quantity of visitors and tourism facilities.

IUCN notes that: *“many recommendations that have resulted from reactive monitoring missions to the property undertaken in 2007 and 2008 have not been implemented. [...] IUCN considers a central focus should be to ensure that the management body has the capacity, skills and resources to fulfil its role effectively. This role would potentially be redefined by the renomination of the property. The renomination, if accepted, would introduce new requirements for management of the property, in relation to the increased consideration of its cultural values. IUCN considers that a fully integrated management system would be required to ensure that there is an effective overall approach to the management of the property. This would need to consider natural and cultural aspects, and the interaction between them. Protection of the natural values of the property should continue to be a central objective in the management system for the property if recognized as a mixed site.”*

Risk preparedness

Risk preparedness has not been formalised.

Involvement of the local communities

There is high involvement of the Maasai communities in the Conservation Area. However how this involvement can be managed in the future to ensure sustainable approaches to natural diversity, cattle grazing and conservation of the archaeological resources has yet to be resolved in any sort of formal way.

Resources, including staffing levels, expertise and training

The Conservation Area has 360 staff on site who are mainly trained in wildlife management, ecology and tourism, but with some having technical expertise. There are no cultural heritage trained staff on site. The Conservators and Assistant Conservator of Antiquities have training in archaeology and/or cultural heritage management.

Effectiveness of current management

The current management is geared to the conservation of natural resources, tourism and to a degree the resolution of conflict with the Maasai people. There needs to be a greater weight given to the active

conservation of cultural resources, both the archaeological sites and the Maasai grazing lands.

ICOMOS considers that special attention is needed to focus attention on proactive management of the cultural heritage resource through the development of strategies for the archaeological sites, for the grazing lands, for the overall pastoral system and for tourism. In conclusion, ICOMOS considers that the management system for the property should be extended to include these strategies, and the staff augmented with more people with cultural heritage backgrounds.

6. MONITORING

Monitoring is undertaken by the NCAA with the Antiquities Division. No indicators are set out for the monitoring process nor is the regularity of the process given.

ICOMOS considers that a monitoring scheme needs to be developed targeted at the cultural attributes of the property.

7. CONCLUSIONS

In terms of the extraordinarily rich paleoanthropological resources in the Conservation Area, the nomination dossier was found to contain insufficient information to document these adequately. Given the wealth of existing literature related to the many years of examination these sites have had, this is disappointing.

Detailed plans and maps are needed of the paleoanthropological resources of the NCA. The location of finds from all paleoanthropological sites also should be set out.

ICOMOS considers that there are serious and specific threats to the authenticity, integrity and Outstanding Universal Value of the property from proposals to open the Laetoli footprints to the public, and to construct a podium on the site of the discovery of the *Zinjanthropus* cranium. The supplementary information provided by the State Party indicates that both of these proposals are still active. ICOMOS considers that the current proposals should not be progressed and that the overall approach to the presentation of both sites needs to be re-considered, in order to ensure that the scientific value of the paleo-archaeological remains in and around both sites are protected in the long term as is their potential for future research. Any plans for their development should be submitted for appraisal by ICOMOS and the World Heritage Committee, in line with the requirements of *Operational Guidelines* paragraph 172, before any commitment is made.

Furthermore, ICOMOS considers that it is highly unlikely that proposals to uncover the footprints, or to construct a

monument on the site of the discovery of the *Zinjanthropus* cranium could be considered as sustainable ways to treat these exceptional remains.

ICOMOS also considers that there is concern over the state of conservation of individual sites, the lack of conservation strategies, the enforcement of regulation relating to land-use, the lack of staff trained in cultural heritage and the lack of an overall pastoralism grazing strategy related to the increasing population.

Overall the management system for the property is currently geared towards the conservation of natural resources and to the management of game tourism. If the cultural resources that are of Outstanding Universal Value are to be recognised as being of equal significance with the natural resources already recognised as being of Outstanding Universal Value, there is a need for a much better balance to be put in place between the needs and management of the natural resources and those of the cultural resources.

Although ICOMOS considers that the pastoral traditions of the Maasai in the property are waning, that they apply to only a comparative small area, and that the grazed landscape cannot be said to represent the more widespread Maasai pastoralist tradition, nor to be of Outstanding Universal Value, nonetheless ICOMOS considers that these areas need to be managed through the development of a pastoralism strategy in order that they are sustainable in relation to the natural and human attributes and that the management particularly respects their palaeo-anthropological cultural resources.

Although ICOMOS considers that the property has the capacity to justify criterion (iv) for its paleo-archaeological interest, its authenticity, and integrity are at the moment extremely vulnerable, protection is not being enforced, detailed conservation strategies are needed, there is lack of adequate delineation for the paleo-archaeological sites and sensitive landscapes, a pastoralism strategy needs to be put in place and most fundamentally two of the sites, Laetoli and the *Zinjanthropus* site in Olduvai are under potential threat from proposed developments that could damage irreversibly their paleo-archaeological record.

As the property is already inscribed on the World Heritage List under natural criteria, and as ICOMOS considers that there is an urgency to address the vulnerabilities of and threats to the cultural attributes, and to put in place a more sustainable management of the overall landscape, it is recommending that the property be inscribed under an additional cultural criterion as a relict cultural landscape, and at the same time be inscribed on the List of World Heritage in Danger. It recalls paragraphs 178 and 179 of the *Operational Guidelines*, which set out that a property can be inscribed on the List of World Heritage in Danger by the Committee when it finds that the property is faced with specific and proven imminent danger, such as

significant loss of historical authenticity and important loss of cultural significance.

ICOMOS considers that a Danger listing should be seen as a way of helping to mobilise resources to address the management, conservation and potential development problems, and particularly to ensure that the current proposals for Laetoli and Olduvai are re-assessed and do not go ahead in their present form or with their present approach. Its proposed inscription as a relict cultural landscape does not mean that the involvement of the Maasai pastoralists in the property is being ignored. Although the landscape cannot be seen to be of Outstanding Universal Value as an evolving pastoral landscape, the pastoral traditions need to be managed to allow them to co-exist with natural and archaeological attributes and to this end the management system needs to give greater respect to cultural aspects of the property.

Recommendations with respect to inscription

ICOMOS recommends that the request to inscribe Ngorongoro Conservation Area, United Republic of Tanzania, under additional cultural criteria on the World Heritage List should be approved on the basis of ***cultural criterion (iv)***.

ICOMOS further recommends, recalling paragraph 179 of the *Operational Guidelines*, that, as the property is potentially threatened by serious and specific dangers arising from proposals to open the Laetoli footprints and to construct a monument on the site of the discovery of the *Zinjanthropus* cranium, the Ngorongoro Conservation Area, United Republic of Tanzania, should immediately be inscribed on the ***List of World Heritage in Danger***.

ICOMOS also recommends that the State Party invite a mission to the property to agree a desired State of Conservation for the removal of the property from the List of World Heritage in Danger, based on the cultural attributes of Outstanding Universal Value and to be reached through a revision of the management system and Plan.

ICOMOS additionally recommends that the State Party give urgent consideration to the following:

- Re-assess proposals for the presentation of the Laetoli footprints and the proposed new museum building so that the footprints are not exposed to public view and no construction takes place near the site;
- Re-assess proposals for a monument at the *Zinjanthropus* site at Olduvai Gorge, so that no construction takes place on or near the archaeological sites, in order to protect their scientific evidence and their potential for future research;

- Keep the World Heritage Committee informed on any proposals for construction at these two sites before any commitments are made, in accordance with paragraph 172 of the *Operational Guidelines*;
- In order to set out a clear basis for the value of the resource, and its conservation and management needs, provide:
 - Details on the specific area and location of the palaeo-anthropological resources, including specific boundaries for Laetoli, Lake Ndutu, Nasera, and the Ngorongoro Burial Mounds, and for their sensitive settings, to ensure their protection;
 - Details of sensitive archaeological landscape throughout the property;
 - Details of the location of finds from all paleoanthropological sites;
 - Conservation plans for all paleo-anthropological localities;
 - A revised management plan that gives a higher profile to the management of cultural resources and sets out how regulations will be enforced; and includes a pastoralism strategy that respects both natural and cultural resources, involves the Maasai communities and defines a sustainable approach to managing the grasslands.

Recommended Statement of Outstanding Universal Value

ICOMOS notes that this proposed Statement will need to be integrated eventually with a retrospective Statement of Outstanding Universal Value for the natural criteria already recognised.

Brief synthesis

The Ngorongoro Conservation area spans vast expanses of highland plains, scrub-bush, and forests, from the plains of the Serengeti National Park in the north-west, to the eastern arm of the Great Rift Valley, It encompasses the spectacular Ngorongoro Crater, the world's largest collapsed volcanic crater, with its enclosed grazing areas, and Olduvai Gorge, a 14km deep ravine.

The area has been subject to extensive archaeological research for over 80 years and has yielded a long sequence of evidence of human evolution and human-environment dynamics, collectively extending over a span of almost four million years to the early modern era. This evidence includes fossilised footprints at Laetoli, associated with the development of human

bipedalism, a sequence of diverse, evolving hominin species within Olduvai gorge, which range from Australopithecids such as *Zinjanthropus boisei* to the *Homo* lineage that includes *Homo habilis*, *Homo erectus* and *Homo sapiens*; an early form of *Homo sapiens* at Lake Ndutu; and, in the Ngorongoro crater, remains that document the development of stone technology and the transition to the use of iron. The overall landscape of the area is seen to have the potential to reveal much more evidence concerning the rise of anatomically modern humans, modern behaviour and human ecology.

Criterion (iv): Ngorongoro Conservation Area has yielded an exceptionally long sequence of crucial evidence related to human evolution and human-environment dynamics, collectively extending from four million years ago to the beginning of this era, including physical evidence of the most important benchmarks in human evolutionary development. Although the interpretation of many of the assemblages of Olduvai Gorge is still debatable, their extent and density are remarkable. Several of the type fossils in the hominin lineage come from this site. Furthermore, future research in the property is likely to reveal much more evidence concerning the rise of anatomically modern humans, modern behaviour and human ecology.

Integrity and authenticity

The property encompasses not only the known remains but also areas of high archaeo-anthropological potential where related finds might be made.

However the integrity of specific paleo-archaeological attributes and the overall sensitive landscape are to an extent under threat and thus vulnerable due to the lack of enforcement of protection arrangements related to grazing regimes, and from proposed access and tourist related developments at Laetoli and Olduvai Gorge.

In general, the authenticity of the fossil localities is unquestionable, however given the nature of fossil sites, the context for the fossil deposits need to remain undisturbed (except by natural geological processes). As the nomination dossier does not contain sufficient detailed information on most of the sites to delineate their extended areas or the areas of archaeological sensitivity, or sufficient guarantees in terms of management arrangements to ensure that the sites will remain undisturbed and not threatened by visitor access, construction or grazing cattle, their authenticity is vulnerable

Management and protection requirements

The property is under the management of the Ngorongoro Conservation Area Authority (NCAA). Their primary management objectives are to conserve the natural resources, protect the interests of the Maasai pastoralists, and to promote tourism. The Division of Antiquities is responsible for the management and protection of the paleoanthropological resources within

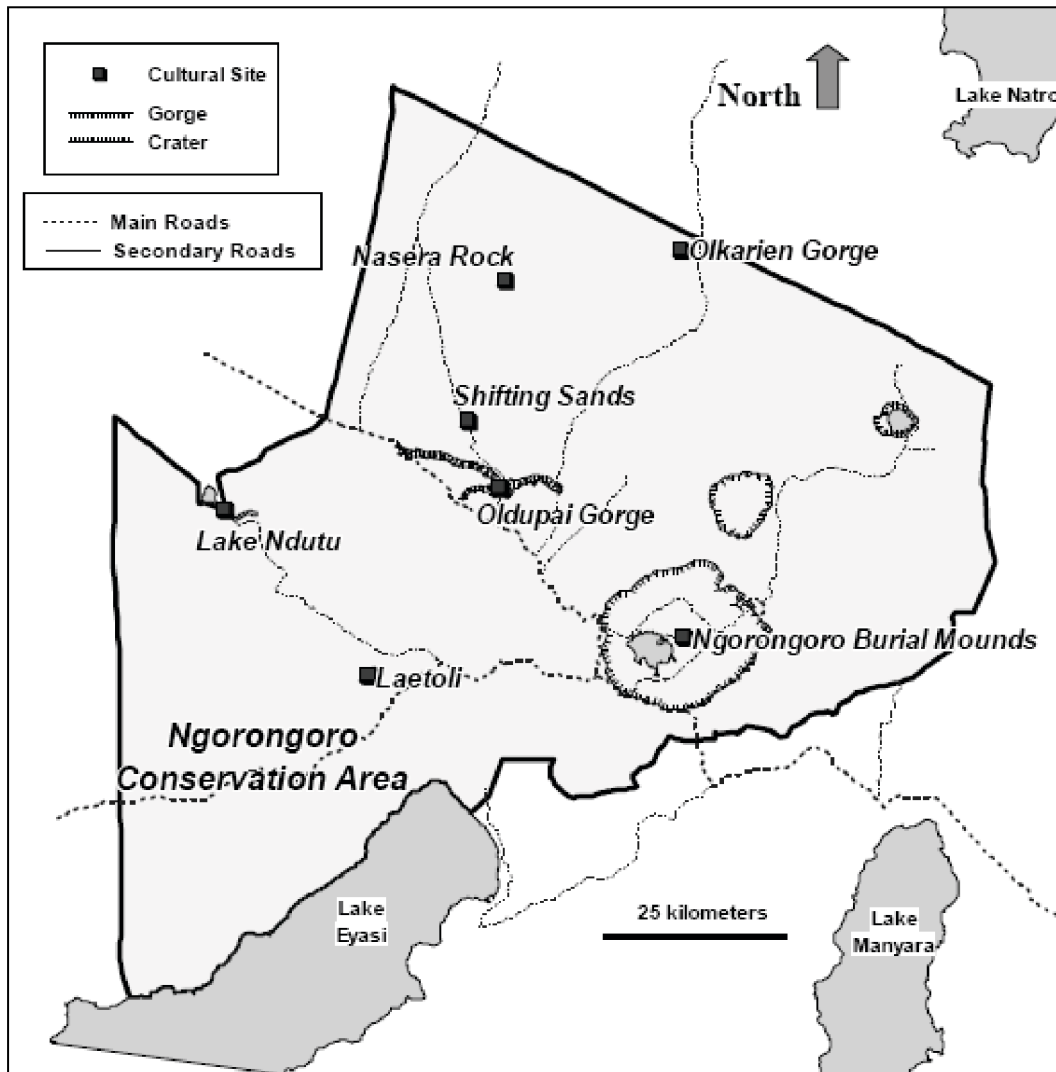
the Ngorongoro Conservation Area. A memorandum of understanding is presently under development to formally establish the relations between the two entities.

The NCAA lacks cultural heritage staff with training in the management of pastoralist communities. However, both the NCA and the Division of Antiquities indicate that plans are underway to expand their staff to offset this imbalance.

The property has an overall provisional Management Plan but this has limited cultural objectives that relate more to social issues and minimising human – wildlife conflicts, than to documenting, conserving and managing the cultural resources and investigating the potential of the wider landscape in archaeological terms. The Plan includes raising environmental awareness but not cultural awareness.

In terms of implementation, the core strategy is said to be an ecosystem approach to environmental management. There is no mention of integrating this with cultural objectives in order for instance to have a sustainable approach to the management of grasslands and the archaeological resource.

There is an urgent need to extend the management system and the Management Plan to encompass an integrated cultural and natural approach in the short, medium and long terms and to strengthen staff to include appropriately qualified cultural officers.



Map showing the boundaries of the nominated property



Olduvai Gorge



Laetoli site,
footprints of three *Australopithecus afarensis*



2

Maasai pastoral landscape



Maasai dwellings

B Arab States

New Nominations

At-Turaif District in ad-Dir'iyah (Saudi Arabia) No 1329

Official name as proposed by the State Party:

At-Turaif District in ad-Dir'iyah

Location:

Ad-Dir'iyah Governorate
Riyadh Region
Kingdom of Saudi Arabia

Brief description:

Ad-Dir'iyah, or Diriyah, was the first capital of the Saudi Dynasty, in the heart of the Arabian peninsula, north-west of Riyadh. Founded in the 15th century, it developed by using adobe as its building material. It bears witness to the Najdi architectural style, which is specific to the centre of the Arabian peninsula. In the 18th and the early 19th century its political and religious role increased, and the citadel of at-Turaif became the centre of the temporal power of the House of Saud and of the spread of the Wahhabi reform inside the Muslim religion. The property includes the remains of many palaces and an urban ensemble built on the edge of the ad-Dir'iyah oasis.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

In the terms of the *Operational Guidelines for the implementation of the World Heritage Convention* (January 2008), Annex 3, it is also an historic town in the category of *towns which are no longer inhabited*.

1. BASIC DATA

Included in the Tentative List: 28 January 2009

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 26 January 2009

Background: This is a new nomination.

Consultations: ICOMOS consulted its International Scientific Committees on Earthen Architectural Heritage and on Archaeological Heritage Management, as well as independent experts.

Literature consulted (selection):

Albini, M., Mud brick buildings: the Masmak fortress in Riyadh-Arabia: general criteria of restoration, *Third International Symposium on Mud Brick Preservation*, Ankara, 1980, ICOM & ICOMOS, pp. 119-38.

Facey, W., *Back to Earth. Adobe Building in Saudi Arabia*. Riyadh, Al-Turath and London Centre of Arab Studies, 1997.

Mutal, S., *Adobe Architecture, past and present*, Madrid & San Marcos, UNESCO, 2003.

[CRATerre], *Manuel de conservation du patrimoine architectural en terre des vallées présahariennes du Maroc*, CERKAS, UNESCO World Heritage Centre, CRATerre-EAG, 2005.

Pini, D., *The inventory of the historic city of Sana'a: A tool for urban conservation*, Paris, UNESCO, 2008.

Technical Evaluation Mission: 27 September - 1 October 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The ancient city of the House of Saud of ad-Dir'iyah, or Diriyah, is located in the Najd region, the highland plateau that forms the heart of the Arabian peninsula. This is a particularly arid desert region (average annual precipitation of 84mm) with extremely large temperature differences. Earlier wetter geological periods carved out a network of valleys which today are dry wadis. Their water-tables survive permanently in the floors of some of the valleys and can be reached by wells. The fertile alluvial areas thus offer the possibility of palm groves and irrigated oasis agriculture.

The oasis of ad-Dir'iyah is one of the main settlements in this region, established along and on the edge of Wadi Hanifah, over a distance of some 8km. The property is located 5km north-west of the centre of Riyadh, the capital of Saudi Arabia; it forms the extremity and limit of the conurbation in this direction.

The oasis of ad-Dir'iyah contains several villages of farmers. The tip of the plateau forms a limestone promontory known as at-Turaif. It is surrounded by the oasis to the north, west, and south-west, consisting of Wadi Hanifah and a tributary. The east of at-Turaif opens out towards the desert plateau.

The site of at-Turaif was occupied from the 16th century by the local Saudi dynasty, becoming the cradle of the dynasty's development (see History). The Saudis made it the centre of their power base, building a settlement, fortifications, and palaces.

At the end of the 18th century a complete system of fortifications, of which at-Turaif formed the citadel, defended both banks of the oasis. The citadel was set up around the Saudis' Salwa Palace, and a group of administrative buildings and Qur'anic schools. The palace and the open space in front of it constituted the centre of social life, dominated by the administration of power and the religious teaching of the Wahhabi Reform of the *sunnah*. The promontory is furthermore not very high, and the historic town remains closely linked with the oasis next to it and the districts inhabited by peasant farmers and craftsmen.

At-Turaif was the central district of a diversified settlement which was adapted to a particular geographical situation and to a specific social, political, and religious context. Today it comprises a fairly wide range of properties which provide tangible testimony to the past; many of these have been conserved as ruins and some of them (such as the Salwa Palace) have been restored, generally using the original building techniques. Closed off by a surrounding wall, at-Turaif was a citadel in the 18th century

The street network was formed in response to the defensive requirements of the site, and was then added to as urban development took place. It has been conserved without major modifications and is clearly visible today. The built structures made use of easily available local materials - limestone for the foundations and lower structures, mud brick (adobe), and palm wood. The buildings reflect an original style that is typical of the Najd region. Amongst the architectural and decorative features of the Najdi style, dominated by the use of adobe, are the use of clay mud rendering, stone columns, triangular openings in the upper parts, and the use of wooden lintels painted with geometric motifs.

The nominated property comprises thirty monuments or monumental ensembles listed by the High Commission for the site. The most remarkable items are as follows.

The ensemble of Salwa Palace was the main residence of the Saud family in the 18th and early 19th centuries, and the centre of their political, military, and religious power base. Its total surface area is roughly 10,000m². It comprises seven separate units, made up of palaces or buildings with rectangular or trapezoid ground plans, with complementary functions and the construction of which took place in stages, depending on the development of the family and its powers. The different units of the palace are separated by a network of alleys and small squares, containing the remains of columns.

- Unit 1 is the oldest building in the ensemble. It formed the initial palace, consisting of two sections close to the oasis, and probably dates from the early 18th century. It is rectangular in ground plan, each part having a single level, with terraces accessible by means of stairs.

- Unit 2 was built in the second half of the 18th century. It is two-storeyed: the ground floor consists of two long rectangular rooms that open out on to a central courtyard. The south-western roof has some vestiges of an original roof system of stone slabs.
- Unit 3 dates from the same period and is built in a similar way but with three storeys. It is connected to the fortified wall, some vestiges of which survive.
- Unit 4 is a compact structure which originally had three storeys, located in the centre of the palatial ensemble. Its dimensions and overall form are similar to the buildings in the units described above.
- Unit 5 was rebuilt in 1982 on the ruins of an earlier building of which little is known. This is the present-day Visitor Centre.
- Unit 6 occupies a large area in the eastern corner of the palatial ensemble. Formerly in ruins, it was rehabilitated in the 20th century as three separate houses.
- Unit 7 covers a large area in the southern part of the Palace. It was abandoned after the sacking of the town, before being restored and reoccupied. Archaeological excavations took place there from 1982 onwards.

Ibrahim Bin Saud Palace is located south-west of the Salwa Palace. It has two storeys and many old walls, as well as the remains of a defensive feature. It underwent a substantial rehabilitation in the 20th century.

The *Fahad Palace* is a small palace adjacent to the Ibrahim Bin Saud Palace.

The *Sabala Moudhi* was a residence for religious dignitaries, later converted into a *sabala* for travellers. It is in very poor condition but contains the only remaining example of galleries in two storeys that surrounded a small courtyard. It is immediately adjacent to the Moudhi Mosque, which was rehabilitated as a mosque by the 20th century inhabitants.

The *Abdullah Palace* is the second largest palace complex after the Salwa Palace. Built in the early 19th century, it was the last seat of the power of the House of Saud in at-Turaif. It consists of three separate units, one of which was extensively altered in the 20th century.

The *Turki Palace* is one of the most recently constructed palaces (early 19th century). The ground plan is asymmetric, and the oral tradition is that the large opening in the south wall was the result of a cannonball fired during the 1818 siege. Its state of conservation is poor and it is currently abandoned.

The *Thunayyan Palace* is located on the edge of the small wadi on the south side of the site. Its ground plan is triangular and stands on deep foundations because of

its situation. It has the only remaining original capital with its plaster decoration intact, and historic beams.

The *Omar Bin Saud Palace* is an imposing structure built on the edge of the Wadi Hanifah. A large part of its high wall has been preserved. The ground plan is trapezoidal with a central courtyard. A still-usable original staircase provides access to the second floor.

The *Mishari Bin Saud Palace* is a 19th century structure in the southern part of the site, south-west of the Abdullah Palace. It has two storeys with a large open courtyard surrounded by rooms. Some of the components of the structure were incorporated in houses built in the 20th century. It retains some of the characteristic features of decorative wall ventilators and windows. Archaeological research is being carried out here.

The *Farhan Palace* is located on the east of the site. The type of construction attests to this being one of the oldest structures in at-Turaifa, contemporary with the first unit of Salwa Palace. It has an open courtyard surrounded by rooms. Although largely in ruins, it still has two towers.

Bayt Al-Mal is the Treasury building. It was designed as an annex to the Salwa Palace at the start of the 19th century, and is now in ruins.

At-Turaif was originally enclosed by a shuttered mud wall, which was largely destroyed during the 1818 siege. It was reconstructed in stone masonry in the 1990s. Other structures have undergone major restorations since the early 1980s (see Authenticity).

History and development

The presence of humans in the Wadi Hanifah area dates back some 80,000 years, as evidenced by Acheulean and Mousterian remains. Conditions were less favourable than in the Fertile Crescent; they initially attracted hunters and later nomads. Stone artefacts and rock carvings have been discovered in western Najd.

The remains of a village site with drystone walls thought to date from the 5th millennium BCE have been discovered just north of Riyadh. Agricultural settlement seems to have developed in the 3rd and 2nd millennia BCE; the domestication of the camel dates from the same period.

In antiquity Arabia played a role as an active caravan trade-route between the Indian Ocean, the Fertile Crescent, and the Mediterranean; the Incense Route passed through Arabia. Settlements developed during the 1st millennium BCE. It seems that there was cultivation at the Wadi Hanifah, but direct archaeological evidence is still limited.

The end of the Roman Empire and the rise of Christianity caused a decline in the centres of trade and settlement in central Arabia. The areas of wells and former oases became places of refuge for the nomads and their flocks and herds. Central Arabia at this time was dominated by the Yemenite Himyarite tribes. In the 5th century CE the Christian Banu Hanifah tribe resumed the agricultural colonization of the heart of the peninsula, in the Tasm region. They submitted to Islam after their defeat in 634 at the hands of the army of the Caliph Ibn al-Walid.

In the 6th and 7th centuries, however, the Banu Hanifah tribe appears to have rebelled against the Umayyad Caliphate. They did not submit to the Abbasid central power there until the mid-9th century. From the 9th to the 10th century there was a slow process of agricultural development of the oases in the central region of Arabia. The Arab traveller Ibn Battuta recorded the presence of the Banu Hanifah tribe in the valley that bore their name in the 14th century. Population levels, however, stagnated or decreased in this period.

The 15th century brought more favourable climatic conditions, lending a new impetus to the oases and settlements with the arrival of newcomers from the coastal regions. Ad-Dir'iyah seems to have been created in this period and its development reached an initial apogee in the 16th century. It was a centre of trade and its power extended throughout the region. However, in the 17th century and at the start of the 18th century the pre-eminent town of the Najd was 'Uyanynah.

At the start of the 16th century the Sharif of Makkah (Mecca) recognized the Ottoman Caliphate, which was seeking to take control of the Arabian peninsula. This was a time of sharp confrontation with the West, as the Portuguese occupied sites in the Indian Ocean. The Sharif attacked the oases and nomads of the Najd for the first time in 1578.

The power of the Banu Hanifah families was gradually challenged by the secular development of the settlement of the oases of Inner Arabia. By the start of the 17th century there were only three oases left under their control, including ad-Dir'iyah. Two rival tribal groups then emerged and a power struggle developed between the Al Muqrin and the Al Watban. The organization of the oases reflected this antagonism, with separation within districts and villages. The Al Watban held control at ad-Dir'iyah initially, but in 1720 Saud Bin Mohammed from the rival Al Muqrin community assumed the chieftainship and drove his rivals out of the town, and in this way became the founder of the House of Saud.

In the 18th century successive imams (heads of the House of Saud) fortified the oasis along the high ground on either side of the Wadi Hanifah. This was a period marked by urban development and the construction of the citadel of at-Turaif.

Sheikh Mohammad Bin Abdul Wahhab, who hailed from the Najd where a form of paganism was maintained in social life, advocated a Reform based on the *Sunnah*, the orthodox Muslim tradition. The oneness of God, the impossibility of comparing God with anything else, and the heresy of any mediation were reasserted. This religious movement was fully recognized by the second imam, Mohammed Bin Saud, who established it in 1745 as the moral and legal basis of his state. Ad-Dir'iyah then became the centre for propagating the Reform. The town was an important educational centre, with many Qur'anic schools drawing students from the whole of the peninsula.

The Saudi dynasty at the same time undertook the conquest of the other towns and oases of the Najd, which it completely controlled by 1785. In the 1790s it dominated the east of the Arabian peninsula, and its influence extended to the west as far as the foothills of the Hijaz mountains.

In the second half of the 18th century and at the start of the 19th century, ad-Dir'iyah was the headquarters of a powerful Islamic administration, which boasted renowned judges and imams. Delegations and interest groups came to petition the Imam. It had some thirty Qur'anic schools, and it was also the political and military centre of the power of the House of Saud. At its apogee the army could assemble up to 100,000 men. The urban ensemble linked with the oasis was developed, particularly the Salwa palaces in the citadel of at-Turaif, the heart of the power base. However, according to Western travellers the population of ad-Dir'iyah did not exceed 13,000 at the start of the 19th century.

The success of the Sunnah Reform and the expanding military power of the House of Saud was inevitably a cause of concern for the Ottoman Caliphate. Tensions and confrontations were frequent over a period of some thirty years. The House of Saud initially emerged triumphant, imposing its influence on Central Hijaz and Mecca (1803) and thus controlling the pilgrimage. This was the apogee of the first dynasty of the House of Saud.

The Ottoman counter-offensive was organized from Egypt. The Ottomans reconquered the Hijaz (1813) and then began a campaign in the heart of the Arabian peninsula. Ibrahim Pasha invaded the Najd at the head of a powerful and cosmopolitan army (1816-18). The campaign culminated in the siege and conquest of ad-Dir'iyah. The town was then sacked on two occasions, in 1818-19 and in 1821. The House of Saud and the Wahhabis were subjected to repression.

The Imam Turki re-established the power of the House of Saud in 1824, forcing the departure of the Ottomans. He founded a second dynasty and chose Riyadh as the new capital. The previous seat of power in the at-Turaif district, largely in ruins following the war, was abandoned. The few western visitors in the mid-19th

century testified to a town in ruins. The local population returned to live in the oasis, where farming activities continued.

At-Turaif remained abandoned until the mid-20th century, when some two hundred families moved back into the eastern quarter near the oasis, building houses of mud brick (adobe) on the remains of the old town.

The Department of Antiquities bought the whole site in 1982 and expropriated its inhabitants. The city of Riyadh has grown considerably and now reaches the gates of the ad-Dir'iyah oasis. The region has also seen the development of road infrastructures. Today there are three main urban sectors in Ad-Dir'iyah. Urban development is taking place almost entirely outside the buffer zone.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

In Saudi Arabia, as in many other regions of the world, the tradition of building with mud makes use of a natural local resource which is relatively easy to access and apply. It represents a fruitful cultural link between the sedentary lifestyle of the oasis farmers, the nomadism of the camel-raising Bedouins, and the urban necessities of a capital city.

The State Party offers two types of comparison: one with other earthen ensembles in Arabia; and the other with complexes built using this technique in other parts of the world, particularly in the Middle East and Africa.

In the Najd region of Arabia, where the nominated property is located, earthen architecture has various characteristics. In addition to the nominated property, the main examples of this Najdi architecture are the villages of Durma and Sadus and the historic fortress and royal palaces of Riyadh, built after the abandonment of at-Turaif.

The region of Asir and Najran on the southern border of Arabia has earthen architecture that is different to that of Najd but similar to that of neighbouring Yemen.

There are several mud-brick towns in the Arab world, such as the Old Town of Ghadamès in Libya (inscribed on the World Heritage List in 1986), the Ksar of Ait-Ben-Haddou in Morocco (1987), the Old Walled City of Shibam (1982), the Old City of Sana'a (1986), and the historic town of Zabid (1993) in Yemen, the Ancient *Ksour* of Ouadane, Chinguetti, Tichitt, and Oualata in Mauritania (1996), the old town of Ghardaia in the M'Zab Valley in Algeria (1982), Bahla Fort in Oman (1987), the Town of Bam in Iran (2004), and the Old Towns of Timbuktu (1988) and Djenné (1988) in Mali. All are inscribed on the World Heritage List. Some of them are no longer inhabited, and others have been abandoned.

A dense urban fabric, narrow streets, rooms opening on to an inner courtyard, massive walls with natural thermal regulation, and regular maintenance of the earthen structures are characteristics shared by all these towns. They represent the basic principles of the use of mud brick (adobe) or shuttered mud, which have been perpetuated for millennia.

The comparisons made demonstrate the similarity of the construction techniques as well as the important earthen architecture conservation issues, which are now satisfactorily understood. At-Turaif constitutes an original and unique stylistic example, in a specific political and social context.

ICOMOS considers that the comparative study has been carried out within the State Party, and then inside the Arabo-Muslim world to which it limits itself. It leads to sober and clearly stated conclusions. However, it does not fully establish a comparison between the examples studied and the nominated property, limiting itself to parallel descriptions. Furthermore, it would be necessary to complete the comparative study with examples of earthen constructions in other cultural zones and at other periods.

ICOMOS considers that the comparative analysis does not at this stage justify consideration of the property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The at-Turaif district, situated in the ad-Dir'iyah oasis, became the centre of the power base of the first dynasty of the House of Saud in the mid-18th century. The House of Saud developed and protected the site, building imposing palaces of a unique style and with an excellent quality of construction.
- At-Turaif constitutes an exceptional example of earthen architecture by virtue of its diversity, its coherence, and its scale. It includes large structures and forms an outstanding example of the Najdi construction style.
- The site is an architectural and urban ensemble that bears witness to the culture and lifestyle of the first Saudi state, the direct ancestor of the modern Kingdom of Saudi Arabia. It is also an historic place that contains evidence of cultural, religious, and military events on an international scale and of major geopolitical importance.

ICOMOS considers that the historic facts presented by the State Party, along with the originality of the Najdi style, are unquestionable. However, the Outstanding

Universal Value of the nominated property has not been established at this stage, either by the comparative analysis or by the state of integrity and authenticity.

Integrity and authenticity

Integrity

The State Party considers the at-Turaif district to be one of the foremost examples of historic urban properties conserved in the Kingdom of Saudi Arabia. Because of its history and the long period of abandonment that preserved it, the site provides a very full account of Najdi town-planning from the mid-18th century until the start of the 19th century.

The landscape surrounding the site has been well protected from the galloping urban development observed elsewhere in the Kingdom, and particularly in Riyadh, the capital, which is very close to the site. The palm plantations and the oasis landscape bear witness to the agricultural origins of ad-Dir'iyah. A large buffer zone protects this landscape integrity dimension.

The great variety of tangible testimony at very different scales (landscapes, colours and textures of materials, urban plan, historic palaces, remains of built structures, architectural and decorative details) means that the property has great integrity.

ICOMOS considers that the nominated property forms a relatively comprehensive urban ensemble, the initial planning of which is well conserved and can be observed in its street network. The structural integrity of the property is thus satisfactory.

The site has not been subject to excessively aggressive modern development. However, to the north and west of the property, at a relatively close distance, the urban development of the modern suburbs of Riyadh is visible. The integrity of the landscape appears to be satisfactory, but it is vulnerable.

ICOMOS considers that the architectural integrity of many buildings has been affected by the history of the property and by its abandonment for more than one and a half centuries. The buildings that have not been rebuilt or restored are in ruins. The integrity of these ruins and remains from the old town is, moreover, subject to erosion and to substantial natural degradation in a manner that is specific to adobe.

ICOMOS considers that the structures on which work has been carried out have been profoundly transformed and that they can no longer be considered to demonstrate integrity. The overall architectural integrity of the nominated property is therefore inadequate.

Authenticity

Since the acquisition of the property by the State and its being placed under State protection in the early 1980s,

several of its structures have undergone major maintenance, rehabilitation, or restoration works; others have been left in ruins or in vestigial form, whilst yet others bear traces of the late reoccupation of the site in the mid-20th century (see Description).

There have been six restoration programmes on various parts of the property, carried out in successive campaigns in the 1980s and 1990s with the help of internationally renowned specialists. The aim was to bring the site back to life and restore its integrity and authenticity by the use of techniques in keeping with the original Najdi style. The programmes focused on Nasir Bin Saud Palace (1981) and Saad Bin Saud Palace (1983), the Visitor Centre in the Salwa Palace, and the reconstruction of the whole of the fortifications and of some associated houses.

The traces of 20th century reoccupation by oasis dwellers are to be found mainly in the Abdullah, Ibrahim Saud, and Mishari Bin Saud palaces. The Moudhi Mosque was rebuilt and the associated Sabala Moudhi was converted to provide accommodation for travellers.

Moreover, the State Party stresses the specificity and relativity of the concept of authenticity for earthen buildings, a degradable material which requires regular maintenance and sometimes substantial interventions in order to conserve structures. It stresses that in such cases the concept of authenticity should be based primarily on the techniques used and the transmission of expertise. From this point of view the site has retained all its authenticity.

ICOMOS considers that the first approach to authenticity should be based on the history of the site before any reappropriation by the State Party. As an urban ensemble and as important testimony to adobe architecture the property has been physically degraded by war and by the passage of time, but it has also been protected, in terms of authenticity, by being abandoned for one and a half centuries. It was finally modified and affected by partial reoccupation in the 20th century.

In the second stage, ICOMOS agrees that actions undertaken during the reappropriation phase should be considered in the context of the specific techniques of the conservation of earthen buildings. However, such actions must be conducted with respect for the architectural and archaeological data of the property, and taking into consideration the many existing studies and approaches concerning such questions. The severely degraded state of the property partially reused at the end of the 20th century did not allow the carrying out of simple repairs in order to make its reuse possible; this led in most cases to reconstructions and interpretations of the past state, or even to mere architectural similarity. For example, the enclosure wall was rebuilt in stone, although it was originally earthen, and Unit 5 of the Salwa Palace was entirely rebuilt using modern techniques.

ICOMOS considers that, as it stands at the present time, the Living Heritage Museum project represents an approach based on adapting a site to suit a reuse and upgrading programme rather than giving priority to the overriding consideration of conserving the attributes of authenticity. More thorough archaeological and historic studies are necessary before works are carried out.

To conclude on this question, ICOMOS considers that the urban and architectural elements of the nominated property that have not been transformed, restored, or rebuilt are authentic. They are generally in the form of ruins or remains. By contrast, the authenticity of the restored or rebuilt monuments is only limited and they constitute at best a contemporary interpretation of the use of adobe. A vigorous effort to put a stop to the degradation of the attributes of authenticity is absolutely essential.

ICOMOS considers that the conditions of integrity are acceptable in terms of the streets and landscapes, but not in architectural terms; the conditions of authenticity have not been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iv), (v), and (vi).

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the property is a unique example of the Najdi architectural and decorative style, which only developed in the heart of the Arabian peninsula. It illustrates the ingenious use of adobe, a universally employed material used here with great originality to cope with the extreme desert climate of central Arabia and to provide acceptable living conditions.

The site of at-Turaif bears witness to great urban coherence, whose social, political, spiritual, and religious functions have developed simultaneously and organically alongside the property.

ICOMOS considers that the citadel district of at-Turaif is evidence of an original architectural and decorative use of adobe, forming a clearly identified regional style, but that its architectural integrity and authenticity are under threat today. It consists of a large and diversified urban and palace ensemble in an oasis setting and bears witness to the combination of a building method that is well adapted to its environment, the use of adobe in major palatial complexes, along with a special sense of geometrical decoration. However, the comparative analysis of these elements must be made more thorough, and urgent action is needed to preserve the attributes which demonstrate this criterion.

ICOMOS considers that this criterion has not been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the site illustrates a significant highpoint of settlement in the central Arabian plateau in a desert environment when in the mid-18th century the town of ad-Dir'iyah became the capital of an independent state whose power spread over most of the peninsula.

Located as it is along an underground water-table associated with a wadi, the property illustrates the long-term adaptation of a human group to a territory with difficult geographical and climatic conditions. It is an outstanding example of traditional settlement in an oasis, as illustrated by its material resources, its form of building, and the flourishing of its culture.

ICOMOS considers that the historical and anthropological arguments concerning a remarkable settlement fully adapted to its geographical and climatic environment that are put forward in support of criterion (v) are valid. However, the comparative analysis and the present state of the attributes of the integrity and authenticity of the nominated property do not fully justify the argument that this is an outstanding example of traditional human settlement.

ICOMOS considers that this criterion has not been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the significance of the at-Turaif district in ad-Dir'iyah is directly connected with the creation and development of the first independent state of the House of Saud in the heart of the Arabian peninsula. This political entity quickly became based on the House of Saud's adoption and support of the religious reform advocated by Sheikh Mohammed Bin Abdul Wahhab. He lived and preached in ad-Dir'iyah, turning it into a major spiritual and political centre of Sunni Islam. The Wahhabi message spread from ad-Dir'iyah all over the Arabian peninsula and then throughout the Muslim world. The growing influence of the first dynasty of the House of Saud and the religious reform brought a vigorous military reaction from the Ottoman Caliphate in the 1810s, which ended with the taking of the oasis of ad-Dir'iyah and the sacking of its political and spiritual centre, the at-Turaif district, in 1818 and again in 1821.

ICOMOS considers that the historical and cultural facts referred to by the State Party in support of criterion (vi), which marked the history of the town, are undisputable. However, the tangible attributes supporting this testimony are not explicit and are undermined by the inadequate state of integrity and authenticity.

ICOMOS considers that this criterion has not been justified.

ICOMOS does not consider that the criteria and Outstanding Universal Value have been demonstrated at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

According to the State Party the nominated site has not faced any pressure from economic development since the Government completed the acquisition of the at-Turaif site in 1982. The buffer zone environment consists mainly of agricultural land in the oasis, the property of the Royal Family, and a cemetery which is a protected site.

The main project affecting the property is the possible construction of a reception centre for visitors at the foot of the Salwa Palace, on the banks of the wadi (see Tourism pressures). Another project planned in the north of the site, and partly inside the buffer zone, is a religious foundation around the mosque of Sheikh Mohammed Bin Abdul Wahhab.

The urban development of the capital reaches the boundaries of the oasis in the east and north of the property. Buildings are planned at a distance of about 600m opposite the site and on the edge of the buffer zone, but the design of the buildings should be in line with the scale and proportions of the traditional urban fabric. This should be a high-quality residential development, with low population density.

ICOMOS considers that economic and social development pressures outside the property seem to be under control. However, it is necessary to have details about the religious foundation projects, the exact location of which must be indicated, and about the residential development on the edge of the buffer zone.

Tourism pressures

According to the State Party the site is not experiencing any particular tourism pressures as the property is fenced and there is only one entrance, which is controlled by guards. At present there are few visitors to the site and a permit is necessary.

However, the Living Heritage Museum project is intended to increase the number of visitors to the

property markedly, with a centre and space for circulation, particularly in the Salwa Palace. For this purpose a reception building just below the Salwa Palace is to be designed by a foreign architect. It will be about 6m high with a terrace at the level of the oasis, affording a clear overall view of the palace. The project also includes the creation (inside the property or just outside) of three areas for traditional culture performances, and ultimately a series of museums and cultural buildings on the edge of the property (Lifestyle Museum, Museum of Architecture and Technology, Arab Horses Museum, Military Museum, etc.).

ICOMOS considers that the many projects referred to in the dossier as intended to turn the property into a Living Heritage Museum raise a series of questions about the impact on the property, particularly with regard to its authenticity and integrity. First of all, a detailed plan should be supplied, showing the locations of all these projects in relation to the boundaries of the property and the buffer zone. A prospective study should then be carried out covering the Living Heritage Museum and the religious foundation project, in terms of their impact on the value of the property, the flow of visitors, and reception. The documentation provided about the Museum project consists of an architectural design project (in the annexes) and administrative details (in the nomination dossier).

Environmental pressures

According to the State Party there is no major source of air pollution in the ad-Dir'iyah district.

An oasis in a desert zone forms an ecosystem which is normally clean and stable. However, the water table of Wadi Hanifah has been affected by the urban development of the city of Riyadh. The level of the water table is sinking because of excessive pumping and the water quality is vulnerable.

ICOMOS considers that the deterioration of earthen structures by natural conditions is inevitable.

ICOMOS considers that it is necessary to check that the water table is being well managed.

Natural disasters

The region is not situated in an area of geological risk. Storms are rare but violent, and can contribute to the deterioration of the earthen built structure. The lower parts of the property could be damaged by flooding caused by high water in the wadi.

ICOMOS considers that storms contribute to the natural degradation of the property.

Impact of climate change

The climate of Central Arabia is one of the driest on Earth; precipitation is rare but when it occurs it is often

violent and erosive. In the past there have been exceptional droughts, causing a decline in food resources and sometimes severe reductions in population. There is, however, no evidence of a significant climate change over the last two centuries.

ICOMOS considers that the oasis of ad-Dir'iyah is, like the other oases in the region, an area that is sensitive to climate change and that this could make water resources even rarer.

ICOMOS considers that the main threat to the property is the continuous action of the natural elements on the earthen remains. Overuse of groundwater is also a concern. ICOMOS considers that the projected Living Heritage Museum is a threat to the conservation of the authenticity and integrity of the property.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The property consists of the at-Turaif district. Its boundary is the outer fence around the old fortified wall at a distance of 20m. Its surface area is 28.78ha. There have been no inhabitants since 1982 when it was acquired by the State.

The buffer zone, which is located in the ad-Dir'iyah district, entirely surrounds the property; it has a surface area of 237.95ha. It extends over the territory of the oasis, which encloses it on three sides, and to the west over a vast space in the desert limestone plateau. This zone has around 400 inhabitants living in the palm tree groves.

ICOMOS notes that the official decree setting the boundaries of the buffer zone has not been adopted, and that the State Party has committed itself to promulgating the decree if the property is inscribed on the World Heritage List.

ICOMOS considers that the boundaries of the nominated property and its buffer zone are adequate.

Ownership

The property is publicly owned by the State. The exercise of ownership rights has been entrusted since 2007 to the SCTA (Saudi Commission for Tourism and Antiquities); they were previously exercised by the Deputy Ministry of Antiquities and Museums.

The buffer zone is largely privately owned (65%), in particular by members of the Royal Family; the remaining 35% consists of public estates belonging to various official bodies at ministerial, governorate, and

municipality level.

Protection

Legal Protection

The property is protected by the Antiquities Law published by Royal Decree No. 26/M in 23/6/1392 Hijra [1972]. The law protects historic movable and immovable properties registered as 'antiquities,' a term which applies to remains that are at least 200 years old. The property was placed under the protection of the Law in 1976. The Ministry of Education and the Higher Council of Antiquities are responsible for applying the law.

However, a new draft law that strengthens protection is currently undergoing the approval process. It will grant responsibility for legal protection to the Saudi Commission for Tourism and Antiquities, which is already responsible for exercising the rights of ownership. The new law will protect the site both as archaeological heritage and as an urban ensemble. It also provides for an updating of property inscription and monitoring methods, in line with international standards.

The new law provides for the systematic application of a 200m protection zone around the boundaries of the property. This will result in very strict control of new buildings, and refusal if they do not have a direct connection with the property and the expression of its value. However, the buffer zone proposed for the property is larger, and corresponds to the actual situation of the property in the oasis and in relation to its immediate environment.

The buffer zone in the oasis is under the protection of the Law for the Regulation of Agricultural Practices. It controls agricultural development and firmly restricts the development of housing, which must be in keeping with the architectural and urban setting of the villages. The buffer zone is also regulated by the Urban Plan of ad-Dir'iyah, which has been drafted (September 2009) but not yet approved.

The application of the law is reinforced by the presence of a police service that is responsible to the Governor.

ICOMOS considers that legal protection will be satisfactory once all the measures have been promulgated, particularly those for the buffer zone.

Traditional Protection

The property itself has been abandoned since the first half of the 19th century. Its partial reuse in the 20th century cannot be considered to constitute traditional protection as the modifications made at that time did not make a real contribution to conservation. Since that time it has been in public ownership.

The buffer zone consists largely of a traditional oasis and a cemetery. Their management and conservation by the inhabitants represent a certain degree of traditional protection of the immediate environment of the property.

Effectiveness of protection measures

ICOMOS considers that the legal provisions in place must all be ratified in order to be fully effective, particularly with regard to the buffer zone (Urban Plan of ad-Dir'iyad, Decree ratifying the creation of the buffer zone).

ICOMOS considers that the legal protection in place will be adequate and effective once the new Antiquities Law and the Urban Plan for ad-Dir'iyah have been ratified.

Conservation

Inventories, recording, research

Since 1982 the State Party has regularly carried out archaeological excavation and topographic survey campaigns using the most modern techniques (3D scanning, Geographic Information Systems, etc.). Inventories have also been made of architectural structures and ornamental typologies.

Excavation, survey, and inventory reports are curated by the Saudi Commission for Tourism and Antiquities. They form a very comprehensive documentation in the form of digitized databases.

The State Party is conducting research initiatives with well known international partners in the field of earthen architecture and its conservation. The objective is to transform the property into a Living Heritage Museum, while at the same time making it into an international centre for earthen architecture. This research effort should lead to the compilation of a guide to the conservation of the ruined elements of the property and to a redevelopment project.

ICOMOS recommends that the existing inventories should be completed by detailed excavations and research, focusing primarily on the earliest remains, carried out systematically and in advance of any conservation or reconstruction interventions, as has been the case in the past.

ICOMOS considers that the research carried out into the conservation of ruined earthen architecture is important. It must, however, be directed primarily towards conserving the integrity and authenticity of the constituent parts of the property, and not towards projects for the reconstruction and architectural reinterpretation of the property or for experimentation. The objectives of research, to find a contemporary use for earthen construction in innovative architectural and urban projects, which are perfectly respectable in their own right, must be kept quite separate from issues relating to the property itself and its conservation.

Present state of conservation

According to the State Party, the site contains archaeological remains, standing monuments, and architectural ensembles that have been restored or reconstructed in a way that complies with traditional earthen construction techniques. The conservation of earthen buildings is difficult, requiring substantial and frequent maintenance, particularly as the site has incurred severe damage from war and the subsequent period of abandonment. A particularly substantial effort has therefore been made and continued for the conservation of the property since 1982.

ICOMOS considers that the conservation effort in the 1980s and 1990s was focused on the reconstruction of several monuments in a style similar to that of the origins of the property, but which resulted in what is sometimes a high degree of architectural interpretation. Furthermore, unsuitable materials have been used in a certain number of cases (the visitor centre of Salwa Palace, Nasir Bin Saud Palace, and Saad Bin Saud Palace, Bath and guesthouse, city wall, and fortifications). Finally, conservation work on the ruined elements that make up the bulk of the property have not been carried out as part of a systematic conservation policy. As a result these elements are under threat from natural degradation (see Factors affecting the property).

Active Conservation measures

Several conservation and restoration campaigns have been carried out on the site by labourers, craftsmen, and master masons, with the help of national and international specialists. At the present time the entire conservation policy is integrated into the ambitious Living Heritage Museum project. This project includes a programme of research into the conservation and reconstruction of earthen structures, a reception centre programme, a programme for circulation inside the property and interpretation, a programme for the reuse of areas inside the property, and ultimately large programme for various museums which are peripheral to the property but have no direct relationship to it.

ICOMOS considers that the Living Heritage Museum project, although highly elaborate in technical terms, is at present more in line with a policy of partial reconstruction and interpretation of the remains that make up the property than with efforts to achieve conservation that is fully in line with the integrity and authenticity of the property. A conservation policy must be clearly defined for the property in its present state and without reconstruction. It must be clearly distinguished and separated from research into earthen structure reuse/reconstruction in general (in the context of which the property becomes no more than a space for experiment and demonstration).

Maintenance

The maintenance of the property is included in the

conservation measures put in place.

There has been a plan for the management and cleansing of Wadi Hanifah over its entire length (120km) since 1994.

ICOMOS considers that the routine maintenance measures should be set out in detail as part of a comprehensive conservation policy for the property.

Effectiveness of conservation measures

ICOMOS considers that the efforts made since 1982 prove the effectiveness of the State Party's interventions for the conservation of the property, or more precisely its determination to succeed in this aim by the significant mobilization of human and financial resources. Many programmes have been undertaken and successfully completed, bringing together international collaborations of high quality with the aim of reusing traditional methods and materials. These have contributed an interesting research and experimentation dimension which backs up the various projects for the conservation of the property. However, the current project is more strongly directed towards partial reconstruction and the showcasing of the property for purposes of museum applications and cultural tourism rather than towards a real policy of conservation of the authenticity of the property. The major Living Heritage Museum project has relegated the systematic programming of the conservation of the ruined parts of the property to a secondary role.

ICOMOS considers that the conservation policy applied by the State Party tends to favour the partial reconstruction of the property for museum and cultural tourism purposes rather than the preservation of its attributes of integrity and authenticity. A systematic programme for the conservation of the property must be set up without delay and the plans for a museum and the development of tourism in the property subordinated to it, and not the reverse.

Management

Management structures and processes, including traditional management processes

The management of the site is entrusted to the public body, the Saudi Commission for Tourism and Antiquities, which is in charge of the Department of Antiquities and Museums, through which it is the manager of the site. The management is also the responsibility of the High Commission for the Development of Riyadh, the capital city. The Ar-Riyadh Development Authority, which is responsible for technical matters relating to the site, reports to the Commission. The operations and programmes planned by the Commission and by the at-Turaif Development Authority must be approved by the Governorate of Riyadh, the Governorate of ad-Dir'iyah, and the Municipality of ad-Dir'iyah.

At the moment there is no management authority for the property in place locally, since the site director still has his office at Riyadh (September 2009). The current Living Heritage Museum project provides for the setting up of a local team based in the reception building; it will be staffed with specialists and technicians. In addition to reception and museum development, the management authority will be in charge of relations with the local authorities (Municipality of ad-Dir'iyah) and with tourism development partners (tour operators, travel agencies).

Three charters guide the introduction of the future management authority and the exercise of its responsibilities in the implementation of the future Management Plan. The first regulates internal relations at the Saudi Commission for Tourism and Antiquities, at grades up to the site director. The second sets out details of the relations between the Saudi Commission for Tourism and Antiquities and the executive committees of the development programmes of the City of Riyadh and of ad-Dir'iyah, and particularly with the Ar-Riyadh Development Authority, which is in charge of technical matters relating to the property. The third sets out the internal organization chart of the Living Heritage Museum project and its relations with the various supervisory authorities.

ICOMOS considers that, in the current project, the property management structure should be the Living Heritage Museum; however, this is not yet in existence and, indeed, has not even been approved. Furthermore, ICOMOS considers that the management structure should be redefined, in order to give priority to the organization and monitoring of the conservation of the various historic components that make up the property. A scientific committee for conservation must be set up with extensive powers, in order to define, supervise, and monitor the works programmes and projects for the property. The Museum project should be subordinate to this committee, and not the reverse.

Policy framework: management plans and arrangements, including visitor management and presentation

The Management Plan set out for the property is based on its becoming the capital of Saudi tourism; it proposes a vision of economic development based on cultural tourism. This type of tourism focuses on the presentation of the historical, cultural, and religious roots of Saudi identity. It will highlight in particular its building and architectural dimensions, its territorial organization, and its regional decorative style.

The Management Plan is the product of collaboration between the two entities that are currently cooperating in the management of the site: the Saudi Commission for Tourism and Antiquities and the Ar-Riyadh Development Authority. The Management Plan, which is mainly focused on the enhancement of the value of the site, is set out in the form of a relatively detailed technical document, the implementation of which will be entrusted

to the Living Heritage Museum. However, the plan had not yet been approved at the time of writing (September 2009).

The Plan provides for the development of tourist reception facilities in appropriate buildings in front of the Salwa Palace and inside the property, together with special itineraries to make possible the interpretation of the property and to ensure safety.

The Management Plan is also related to a number of other plans and programmes:

- the programme for the development of the historic site of ad-Dir'iyah, with special regard to cultural and religious aspects, and for the development of the Al Bujeri district, which is close to the property,
- the Master Plan for the Development of Riyadh, the capital city,
- the Development Plan of ad-Dir'iyah,
- the Tourism Promotion Plans for Riyadh and the surrounding region,
- the Management and Maintenance Plan for Wadi Hanifah.

ICOMOS notes that the study and future implementation of the Living Heritage Museum development programme are directed by the Ar-Riyadh Development Authority (ADA), after consultation with the Saudi Commission for Tourism and Antiquities (SCTA), whose opinion is, however, not binding. Furthermore, it is regrettable that the programme of museum and tourism development is presented as though it constituted a true management plan for the property aimed primarily at conservation.

ICOMOS considers that the Management Plan must be revised. It must include a section ensuring that priority is given to the conservation of the present state of the many ruins that make up the property, in order to conserve the attributes of integrity and authenticity. The museum and tourism development programme must in its turn be no more than a part of this plan, and must be completely subordinated to the conservation of the property's attributes of integrity and authenticity, under the surveillance of a scientific conservation committee.

Risk preparedness

The Management Plan includes a section evaluating present and future risks for the management of the property. There are basically two types of protection. The first consists of offering itineraries that are completely safe for visitors in a property containing many elements that are in ruins and potentially dangerous. There are two levels of accessibility: unrestricted access zones and more extensive zones open to groups making guided visits. Access to the most dangerous and vulnerable parts will be prevented by means of fencing. In addition, access is provided for the emergency services to use in the event of accidents.

The second type of protection consists of protecting the property against archaeological theft and vandalism. As indicated earlier, the property is entirely fenced and under surveillance.

A fire protection plan is in place, even though the risk is limited, and a plan for the evacuation of the site is currently in preparation.

Involvement of the local communities

The local communities are involved in the development of the site through the Municipality and by the employment of local labourers and craftsmen.

The property development project contains a section on information and education for local inhabitants, particularly school children.

Resources, including staffing levels, expertise and training

In connection with the planned Living Heritage Museum, management of the site has been entrusted to an archaeologist, who has already been appointed. The initial team will consist of nine employees, four archaeologists, two assistants, an administrative team, and a tourist guide. There will also be four security guards for the surveillance of the site. The size of the team will then be modified depending on needs and the number of tourists, and also on the development of projected new peripheral activities.

The financial resources are guaranteed by the supervisory authorities for the property: the Saudi Commission for Tourism and Antiquities and the Ar-Riyadh Development Authority.

The conservation, maintenance, restoration, and reconstruction projects are carried out in partnership with the Department of Egyptian Antiquities and the specialist earthen architecture body CRATerre (France).

The property can also call upon the services of the specialized personnel of the Saudi Commission for Tourism and Antiquities, which includes five holders of doctorates and fourteen high-level specialists in various academic fields, together with architects and planners.

Effectiveness of current management

The current management of the property is set out in the programme of reconstruction and restoration of buildings being prepared by the project for the Living Heritage Museum, which will be open to the general public. The project is ambitious in terms of tourism and the highlighting of the cultural value of the property, and more widely of traditional earthen construction techniques specific to the interior of the Arabian peninsula.

ICOMOS considers that management must be rapidly reconsidered along the following lines:

It is necessary to modify the Management Plan in its current form so as to turn it primarily into a tool for conserving the property's attributes of authenticity and integrity. The projects for the reconstruction and architectural interpretation of the remains on the property must be abandoned. Research into the current possibilities of traditional earthen architecture must be more clearly distinguished and kept separate from the values that are specific to the property.

In order to put in place a plan for the management of the conservation of the property, it is necessary to institute a scientific committee to be put in charge of implementing the plan.

In the framework of the Management Plan, the projects for museum, tourism, and cultural development must be subordinated to the conservation programme, and made subject to the discretionary recommendation of the scientific committee for conservation;

ICOMOS considers that it is necessary to revise the current Management Plan project, to give priority to conservation objectives, supervised by a scientific committee for conservation, and to make tourism and cultural development projects compatible with the values of the property.

6. MONITORING

The Saudi Commission for Tourism and Antiquities is in charge of monitoring the property. The key factors taken into consideration for the monitoring of the property in the Management Plan are:

- meteorological data (daily monitoring);
- natural evolution of the Wadi Hanifah (satellite photographs, annual monitoring);
- urban changes to the commune of ad-Dir'iyah (satellite photographs, annual monitoring);
- visitor numbers (daily) and satisfaction index (half-yearly);
- erosion of the ten main monumental remains (photographs, drawings, reports on a half-yearly basis, particularly after rainfall);
- erosion of buildings in use (half-yearly);
- erosion of ruined structures (annual);
- archaeological excavations (annual).

ICOMOS considers that the monitoring of conservation must be reinforced by more systematic campaigns of photographs, observations, and 3D scanner monitoring, particularly in the most vulnerable zones of the property. The monitoring must be directly correlated with property maintenance and conservation operations.

ICOMOS considers that the monitoring of conservation must be strengthened, and that it must lead to the establishment of a database directly linked to the Management Plan conservation programme.

ICOMOS considers that, in respect of urban and agricultural development in the area around the property, work permits and development projects must be monitored in order to support the decisions taken by the authorities.

ICOMOS considers that the monitoring of the property must be strengthened by closer monitoring of conservation and development projects in the buffer zone and in the area surrounding the property.

7. CONCLUSIONS

ICOMOS considers that the property probably bears witness to remarkable values linked to the development of earthen architecture in an oasis in the heart of the Arabian peninsula. These values must, however, be confirmed by a more thorough comparative study. Furthermore, the citadel of at-Turaif, and more generally the oasis of Ad-Dir'iyah, were the setting for important events in the political, social, and religious history of the Middle East and the Islamic world. However, the architectural integrity and the authenticity of the property are insufficient to give full expression to these architectural and historic values. The attributes of integrity and authenticity are currently being undermined by the building, restoration, and earthen architecture experimentation projects linked to the future Museum. The safeguarding of the attributes of authenticity and integrity must be placed at the centre of the Management Plan by the introduction of a thorough conservation programme. Future actions to enhance the value of the property must be guided by this programme, rather than the reverse.

At this stage, the Outstanding Universal Value of the property has not been demonstrated.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the at-Turaif district in ad-Dir'iyah, Kingdom of Saudi Arabia, to the World Heritage List be ***deferred*** in order to allow the State Party to:

- Make the comparative study more thorough and extend it to include monumental and urban ensembles where earthen construction techniques are used outside the Arabo-Muslim world;
- Ratify the new Antiquities Law and the Urban Plan of ad-Dir'iyah;

- Abandon the current policy of reconstruction and cultural interpretation of the remains on the property and adopt instead a conservation policy the priority of which is the safeguarding of the property's attributes of architectural integrity and authenticity. It is necessary to separate the conservation of the property from the research under way into the contemporary reuse of traditional earthen architecture;
- Place the safeguarding of the attributes of authenticity and integrity at the centre of the Management Plan by means of a thorough conservation programme. This programme must guide future actions aimed at enhancing the value of the property, and the Living Heritage Museum project must be revised accordingly;
- Put in place, under the auspices of the overarching management authority for the property, a scientific committee in charge of defining the conservation policy for the property, verifying that it is implemented, and monitoring the conservation process. This committee must, moreover, constitute a higher echelon of scientific evaluation for tourism and cultural development projects and for the management of the property;
- Confirm the presence of the overarching property management authority at local level;
- Strengthen the monitoring of development in the buffer zone and in its immediate vicinity.

ICOMOS considers that any revised nomination, with a new property conservation and Management Plan, would need to be considered by a mission to the site.

ICOMOS also recommends that the State Party give consideration to the following:

- Carrying out preventive excavations when any major conservation works are undertaken, in order to document the remains of the earliest structures, which in some cases have served as the foundations for later buildings;
- Ensure that the groundwater of Wadi Hanifah is well managed.



Map showing the boundaries of the nominated property



General view of the nominated property



Aerial view



Surrounding wall of at-Turaif



Archaeological excavations

C Asia - Pacific

New Nominations

Australian Convict Sites (Australia) No 1306

Official name as proposed by the State Party:

Australian Convict Sites

Location:

Norfolk Island (1), New South Wales (4),
Tasmania (5), Western Australia (1)

Brief description:

The property includes a selection of eleven penal sites, among the thousands established by the British Empire on Australian soil in the 18th and 19th centuries. They are located on the fertile coastal strip, from which the Aboriginal peoples were then forced back, mainly around Sydney and in Tasmania, as well as on Norfolk Island and in Fremantle. They housed tens of thousands of men, women, and children condemned by British justice to transportation to the convict colonies. This vast system of transportation, for penal and political reasons, supported the British colonization effort to conquer and settle the vast Australian continent. Each of the sites had a specific purpose, in terms both of punitive imprisonment and of rehabilitation through forced labour to help build the colony. After being set free, the convicts generally settled in the country as colonists and they form one of the main backgrounds of the European population in contemporary Australia.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of eleven *groups of buildings*.

1. IDENTIFICATION

Included in the Tentative List: 16 June 2000

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 25 January 2008

Background: This is a new nomination. In 2007 the importance of the Australian convict memory to all humankind was recognized when 'The convict Records of Australia' were included in UNESCO's Memory of the World Register.

Consultations: ICOMOS consulted independent experts.

Literature consulted (selection):

Dikötter, F., and Brown, I. (eds), *Cultures of Confinement: a history of prison in Africa, Asia and Latin America*, Cornell UP; Ithaca, NY, 2007.

Donley, R.J.R., *Victims of justice, the Australian convicts*, Adelaide, Rigby, 1977.

Egloff, B., Mackay, R., *et al.*, *Islands of Vanishment... Historic Environment*, 16,2 and 16-3, ICOMOS Australia, Burwood, 2002.

Pierre, M., *Le dernier exil: histoire des bagnes et des forçats*, Paris, Gallimard, 1989.

De la Torre, M., Mason, R., Myers, D., *Port Arthur Historic Site: a case study*, The Getty Conservation Institute, Los Angeles, 2003.

Voldman, D., and Moreau, J.-M., *Les équipements du bagne de Guyane, construire pour punir*, in *Monuments historiques*, CNMHS, Paris, 1981.

Technical Evaluation Missions: Two missions took place, from 24 to 31 August 2009 and from 27 August to 5 September 2009.

Additional information requested and received from the State Party: On 30 October 2009, the State Party provided additional information regarding the comparative study.

A letter was sent to the State Party on 17 December 2009, asking it to strengthen the argument in favour of the serial approach to the property, in particular to explain the selection criteria and how the sites were chosen, to complete and make more thorough the comparative analysis of the property in order better to reflect similar experiences (notably France), to clarify the boundaries of the Old Great North Road site, and to extend the buffer zone of Hyde Park Barracks.

The State Party replied on 26 February 2010. The analysis of this documentation is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The serial property comprises a group of eleven convict sites dating from 18th and 19th century colonial Australia, which had a total of some 3,000 such sites. They housed male, female, and child convicts transported from the United Kingdom and, at certain times, from Ireland. Each of the sites had a specific purpose, both for punitive imprisonment and for rehabilitation through forced labour to help build the colony.

The convict sites are located on Australia's fertile coastal strip. Many of the sites that make up the nominated property are concentrated in two regions of south-eastern Australia: in and around Sydney (sites 2, 3, 4, and 10) and in Tasmania (sites 5, 6, 7, 8, and 9). To these sites are added one on Norfolk Island, off the east coast of Australia (1), and another in Fremantle (11) on Australia's south-western coast. These various regions correspond to very different climates, ranging from Mediterranean to sub-tropical, and from temperate to Nordic. They are all located close to ports on the main sea routes of the British Empire, then at its peak. The choice of the nominated sites is deemed to demonstrate the main principles that characterize this penal transportation system, as well as its role in establishing the population of European origin in contemporary Australia.

1. *Kingston and Arthur's Vale Historic Area* is located on Norfolk Island. The site was occupied in three successive waves: first, immediately after the start of colonization, then at the end of the 1820s as a place of punishment for re-offending convicts aimed at deterring crime in Britain, and lastly at the end of the 19th century where the mixed-race descendants of the Bounty mutineers were deported and whose descendants are the current inhabitants of the island.

The nominated site is a vast area on the sea-coast, in the south of the island, mainly bordered by the surrounding hillcrests. It includes the foreshore with its protective breakwater and wharf, port facilities, the convicts' quarters, and the prison. Behind and parallel with the foreshore, the property includes the main street of Kingston which initially provided access to the barracks and the administrative buildings. The site extends eastwards to Point Hunter. In the hinterland, it includes Creek Valley in its centre and Arthur's Vale in the west.

The site has around forty structures erected by the convicts; these include buildings, religious places of worship, underground grain silos, a cemetery, etc. They are sometimes in ruins or even no more than archaeological remains. The site also includes roads, bridges, and residual hydraulic systems in the form of a dyke, canals, and a dam. All the structures were built using local materials. These elements included by the State Party mainly derive from the second wave of convict settlement.

Significant changes have occurred from the start of the third phase of occupation through to the present day.

Today, it is an historic site with several museums and an administrative centre. It also has private residents. The site does not have a buffer zone, but it is surrounded by a national park.

2. *Old Government House and Domain, Parramatta*, was the residence of the Governor of the colony of New South Wales from 1790 to 1856, inland from Sydney. It is located on the left bank of a meander in the Parramatta River.

The site is arranged around Government House and its gardens. It is a Georgian-style mansion with a central section and two asymmetrical wings erected some years later. The southern wing is extended by the house of the female convicts, who were used as the household servants. The main built ensemble was extended in 1822 with the L-shaped garrison building.

The park includes some houses and landscaped gardens in late 18th century English style and the remains of an observatory. It also includes archaeological remains of the huts that housed the convicts who looked after the maintenance of the property.

The main built ensemble underwent significant restoration, particularly in 1906.

Today, this ensemble is used as a museum and a public park.

3. *Hyde Park Barracks* is located in the city of Sydney, at the corner of Prince Albert Road and Macquarie Street, opposite the end of the park from which it draws its name and on the edge of the present-day city centre with its tall buildings. It originally formed part of an urban ensemble designed by the architect Francis Greenway, in the early 19th century, which included a hospital, a church, and a law court.

The nominated property was originally designed to house male convicts on arrival and before dispatch; it was also Sydney's gaol. It was designed to accommodate up to 1,400 prisoners at any one time.

The site mainly comprises the rectangular gaol sitting behind high walls; its main entrance is flanked by two square buildings. The space in front of the entrance is included in the property. The convict enclosure included in its centre the vast rectangular prisoners' building, with its three levels and an attic storey. An ensemble of ancillary buildings lies along the northern wall. Additional elements that were part of the convict site in the 19th century (church, kitchen garden, etc.) are not included within the boundary of the nominated property.

The old gaol building today houses a museum of convict artefacts, archives, administrative offices, and a café.

4. *The Brickendon and Woolmers Estates* were two neighbouring farm colonies on the Macquarie River, in the Tasmanian hinterland. Both were owned by the Archer family, colonials who were provided with young convict labour under contract to the Government. Farming started here in 1820; masters and convicts lived together.

The Brickendon Estate includes farmland and some twenty farm buildings and outhouses, in timber or stone, sometimes only in the form of vestiges. The Woolmers Estate has eighteen buildings.

Both are still farmed, and Brickendon is still owned by descendants of the Archer family.

5. *Darlington Probation Station* is at the northern point of Maria Island off the coast of Tasmania, which was originally peopled by the Aboriginal peoples. It was a harsh settlement with rehabilitation through hard labour outdoors including timber yards and limestone quarries.

The site includes a group of barracks that form a U-shape around a large courtyard with a number of technical or social buildings, some of which are now in ruins. The social organization of the penal settlement was comprised of three classes of convicts, the worst behaved of whom were kept in solitary confinement cells. There was also an area for political prisoners which operated from 1825 to 1850.

The site was thereafter used for a variety of purposes, unrelated to the penal settlement, first as a farm and then as a lime works. Located in an exceptional coastal site, it is now a historical and recreational park.

6. *Old Great North Road* is a penal colony in New South Wales established to construct the Great North Road, in rocky and rugged terrain, between 1828 and 1835. The system used was that of itinerant convict gangs, sometimes including teenagers. They were housed in huts built along the road. Since they were far from a prison, the convicts were generally chained together.

The site is located on the slopes overlooking the left bank of the Hawkesbury River and includes a 2.5km section of the Old Great North Road. This is in a good state of conservation with numerous testimonies of civil engineering: sections cut through the rock, retaining walls, drains, etc. In one particularly difficult section, the property also includes an initial 5km section that was abandoned before completion.

The site is now located in Dharug National Park.

7. *Cascades Female Factory* is a female prison in south-east Tasmania, today on the western outskirts of Hobart. The site includes three of the five original yards of the Cascades prison. These are a series of detention centres surrounded by high walls which operated as a convict factory, exclusively employing females, between 1828 and 1856. Some 25,000 convicts passed through Cascades, which was seen as a model site by Great Britain, aimed at deterring crime in that country by demonstrating the Government's determination to implement both its penal policies and its social and colonial programme. At the time, the factory was in an isolated location, separated and hidden from the main colony at the bottom of a cold valley, and it operated more or less self-sufficiently, with a hospital, nursery, etc. A classification system, involving different living conditions for the inmates, showed the path to be travelled to attain freedom.

The remaining three of the original five yards are adjoining rectangles measuring 42m by 60m. They

mainly correspond to the factory's living quarters, a nursery, and a workshop. The site's archaeological collection includes over 2,000 artefacts. Cascades is an historical site with a small museum and a gallery.

8. *Port Arthur Historic Site* is located on Carnarvon Bay, on the Tasman Peninsula in the south of Tasmania. It operated from 1830 to 1877 as a penal station, combining dangerous forced labour, continuous surveillance, and corporal punishment. It comprised a port and a town with numerous places of work for the convicts: dockyards, limekilns, quarries, sawpits, and a mill driven by physical labour as a punishment.

On the other side of the bay, Point Puer also includes workshops, barracks, and a prison. The site was created to house 3,500 boys aged 9 to 18, to rehabilitate them through religious and moral instruction, work, and discipline. They were given limited education and a trade. It closed in 1849.

Historically, the entire Tasman Peninsula was an enormous convict station, with many barracks, building sites, and activities to help with the growth of the colony.

The nominated site includes the Port Arthur and Point Puer zones, together with the coastal road. Port Arthur has some thirty buildings and prison remains, along with civilian and military infrastructures. The complex includes a hospital and a lunatic asylum.

Port Arthur became a civilian township at the end of the 19th century, reoccupying and converting the many buildings originally used for the convict settlement. The town was later destroyed by fire.

Tourism at the old Port Arthur convict settlement began in the 1950s. With its surrounding area, it is one of the most visited tourist sites in Australia. Private activities are located outside the site itself in its buffer zone.

9. *Coal Mines Historic Site* is also located on the Tasman Peninsula in Tasmania, on Norfolk Bay. This punishment station operated from 1833 to 1848, for the operation of a coal-mine. Coal extraction continued until the 1880s, under private control but still using prison labour. The site was then abandoned and left to be reclaimed by the surrounding bush.

The site includes facilities for the prisoners, military, and administration, the four pitheads, coastal installations, a quarry, and transport infrastructure. Many of the elements are no more than ruins.

10. *Cockatoo Island Convict Site* is a small island in the upper reaches of Sydney Harbour. It was chosen very early on as the site for port facilities and then as the Royal Navy's arsenal in Australia. The convict station was established in 1839 as a penal settlement; it was in use for more than a century. The island's facilities were largely cut directly out of the sandstone. The convicts' work involved quarrying and dressing stone, erecting the buildings and

wharves, digging the dry dock, and hard labour in the naval dockyards. Recalcitrant convicts were locked in cells cut into the cliff face.

The nominated site comprises the entire island. At its centre is a rocky plateau, surrounded by cliffs. It includes the convict buildings within a more complex residential ensemble. This area overlooks the lower shipyards, dock, and workshops, including Fitzroy Dock, an excavated sandstone dry dock measuring 114m. Almost 80 elements or remains of the former naval activity survive, including some thirty directly linked to the convict station. The island is today an historic site.

11. *Fremantle Prison* is located in Western Australia. Fremantle was established as a free colony, on the coastal mouth of the Swan River; but the slowness of its growth and the shortage of labour led to the creation of a convict station there in 1850. It became a high-security prison in 1867, a purpose that it continued to serve for the state of Western Australia until 1991. It was able to accommodate some 600 prisoners. The site is in the old city centre, close to the fishing harbour.

The site mainly consists of the prison itself, on a rectangular parcel of land surrounded by high walls. It also includes the land in front of the entrance, on the western side. Along the enclosure wall on this side there is a series of buildings used as dwellings for the prison warders and officers. The entrance includes a gabled gatehouse framed by two flat-roofed towers; it leads into a large internal courtyard surrounded on the inside by the guardhouses. The general layout of the prison is based on that of Pentonville in the United Kingdom. Inside, opposite the entrance, stands the main cellblock, 150m in length, with at its centre the Church of England chapel housed in a projecting wing. Two wings are built out from either end towards the rear; the north wing houses the Roman Catholic chapel. A series of separate enclosed courtyards are arranged at the rear of the main building, including the solitary confinement cells. The kitchens, hospital, and workshop are located in three of the angles.

Fremantle Prison is today a museum and historic site, where numerous artefacts and artistic works by the prisoners are on display.

History and development

The transportation of people for forced labour is a system shared by many human societies, at various periods of history and in many civilizations. Most often, it involved slavery or the deportation of people following war. However, in the modern and contemporary eras, convict colonies were used as a place for prisoners to serve their sentences in a distant land, where they were generally used for forced labour.

Penal colonies were initially for the imprisonment of criminals, coupled with forced labour. In Europe they

were concentrated in military ports, for example, to provide labour to work on galleys or for hard labour in arsenals, building infrastructure, etc. In times of war, forced-labour prison camps are similar in terms of their organization and objectives.

A new form of penitentiary combined with a colonial project appeared in the early 17th century in European countries, involving the permanent transportation of prisoners to new territories. Under the Transportation Act of 1718, England organized just such a system for its criminals in its North American colonies. France did the same after closing its galleys in 1748. Being condemned to a convict colony is in theory a severe prison sentence, for a serious crime. In reality, however, because of the colonies' need for labour, all sorts of crimes, often relatively minor, led to transportation for more or less lengthy terms. The expression of certain opinions or membership of a banned political group were also punishable in this way.

In 1775 England stopped transporting its criminals to America, because of the upheaval that eventually led to these colonies gaining their independence. Australia became the replacement destination starting in 1778 with the gradual organization of many convict colonies. Port Jackson (Sydney Harbour) was the first place where convicts were landed.

Transportation to Australia reached its maximum between 1787 and 1868, with 166,000 prisoners sent to its many convict stations. Australia was at the time a vast area, inhabited only by Aboriginal peoples, who were rapidly forced away from the most sheltered and most fertile coastal areas. From the point of view of the colonists, everything had to be built, starting with ports, houses, roads, colonial farms, etc. The convicts were often from the lower classes; women accounted for 16% of the total, and there were also quite a few children, who could be punished with transportation from the age of nine.

The Australian convict system took different forms in order to meet its many objectives. It evolved out of a great debate in Europe at the turn of the 19th century about how to punish crime and the social role to be given to the transportation of prisoners. The discussion included on the one hand the notion of punishment and on the other the desire to discourage crime through the idea of rehabilitation of personal behaviour by means of work and discipline. Transportation of a labour force to serve colonial development, especially in the more distant lands, was seen as a useful and effective response to these various social issues in England, as well in other European countries such as France and Russia.

In the Australian case, the convict system was in practice also designed to make the prisoners fully fledged colonists once they had served out their sentences. The considerable distance between Europe and Australia meant that that the convicts almost always

remained after their release.

The Australian convict system included a variety of prison systems, ranging from outdoor to indoor work, from probationary transportation to simple imprisonment; it included convict stations for women or children (Cascades Female Factory and Point Puer). In some convict stations, the prisoners lived alongside free settlers (Brickendon and Woolmers Estates). Living conditions were naturally very strict, but they were variable in terms of their harshness, depending on the site and function.

Overseeing and transporting the convicts also required the presence of a sizeable prison administration, the organization of a specialized fleet, the presence of numerous guards, etc.

The most harsh stations, for those prisoners considered to be the most dangerous, included a prison, hard and often dangerous labour, corporal punishment, such as lashes or deprivation, and solitary confinement. Most sites had a prison and a solitary confinement area; but others were punishment stations, such as Norfolk Island, Port Arthur, and the Tasman Peninsula Coal Mines. These stations were renowned throughout the entire British Empire for their harshness, in order to maintain the fear of transportation among the population and so reduce crime in Great Britain and its colonies.

The convict gang system was used for public works, especially for roads and port facilities. They were generally very strict and the work was hard. Examples include Old Great North Road, Hyde Park Barracks, Port Arthur, Coal Mines, Kingston and Arthur's Vale Historic Area, and Fremantle Prison.

There were also labour convict stations for those prisoners considered to pose less of a threat, where the convicts were made available for private projects, often farming. The entrepreneurs used them at their own risk. Examples include Brickendon and Woolmers Estates and Old Government House. Female labour was more of a manufacturing nature, such as Cascades Female Factory, a textile mill. These were, of course, still prisons with a system of punishment and rewards. Some convict stations used women as servants - for example, on farms and Old Government House.

Those convicts who behaved themselves could earn a lighter sentence, gradually leading to their early release. In the very vivid minds of the social reformists of prisoners, the aim was to establish a probationary path that would gradually lead to social rehabilitation through labour and, finally, to the status of fully fledged colonial settler.

The creation of convict stations in Australia, at the heart of the programme of creating colonies, had particularly negative effects on the Aboriginal peoples. This led to social unrest, forced migration, and the loss of fertile land, as well as devastating epidemics because of their

lack of immunity. Conflict and resistance were frequent occurrences as settlers and convicts arrived, often resulting in death.

The penal settlements continued for quite a long time after the transportation system was abolished, up until the eve of World War II, driven by their own dynamic of prisoner management and similar practices, though applied on a far lesser scale, such as exile.

The last of the sites to remain in active use was Fremantle Prison, which closed in the early 1990s.

Today, most of these sites are entirely or in part places of remembrance, museums, or parks.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party takes as its starting point the fact that the phenomenon of transportation to colonial convict stations by the European powers in the 18th and 19th centuries is illustrated in an exceptional manner by the case of Australia. It had the largest number of convicts transported and was the furthest from Europe, along with French New Caledonia.

The comparison is first drawn following the three main driving forces behind the expansion of remote convict colonies by various countries, mainly England, France, and Russia: first, the extension of the "geopolitical sphere of influence" sought by governments and to which penal colonies contributed; secondly, penal punishment policies and deterrence specific to each national society; and, finally, the existence of an ambition to rehabilitate convicts through labour and discipline. The latter two points were the subject of a debate that arose in the 18th century between the issue of severity of punishment to deter crime and the reinsertion of prisoners into society. This debate forms a common thread in the State Party's comparative analysis, making it a specific aspect of the Age of Enlightenment.

The second aspect of the comparison focuses on identifying the current remains that testify to the moral, legal, and material objectives of forced labour in penal colonies (infrastructure, buildings, landscape, and other material evidence). The final guideline to the study is to consider the percentage of the local population of European origin provided by the convicts and their effective involvement in the colonial expansion of the governing power.

The State Party examines the phenomenon of the penal colony in terms of its historical, penal, social, political, and military dimensions. It compares the systems implemented by Great Britain in its other colonies at the same time (Singapore, Malaysia, Bermuda, and the

Andaman Islands in the Gulf of Bengal), and then the mass transportation of prisoners by other European powers. This is the case in particular of the Siberian territories and the Far East of Russia (construction of the Trans-Siberian Railway, Kara Valley gold mines, and Sakhalin Island), and by France (French Guyana in South America and New Caledonia in the Pacific Ocean).

The British Empire's convict stations provide a certain number of similarities, but the cases presented are far smaller in scope than Australia, and they sometimes had a regional purpose, such as the colonization of India by the transportation of opponents. The French penal colonies in New Caledonia are both close geographically and the most similar in terms of the territorial objectives and residual material remains. It was, however, an experiment of far lesser magnitude and did not give rise to any notable settlement of a European population.

In a last section, the State Party examines other forms of forced migration, notably the slave trade through sites already recognized on the World Heritage List: Island of Gorée (Senegal, 1978), Forts and Castles, Volta, Greater Accra, Central and Western Regions (Ghana, 1979), Robben Island (South Africa, 1999), Stone Town of Zanzibar (Tanzania, 2000), and Aapravasi Ghat (Mauritius, 2006). Penal colonies are clearly one of the forms of mass deportation of people, but with its specific characteristics, all well evidenced by the value of the nominated property.

The State Party also considers a certain number of penal properties in Great Britain, France, the United States, The Netherlands, and Russia, but without any colonial intent. It examines them from the angle of the evolution in ideas surrounding the punishment of crime since the Enlightenment, and prisons for women and adolescents in particular.

For the State Party, the comparative analysis shows that the group of seven carefully selected nominated convict sites is the most important, the most complete, and the most representative of this type of migration and forced labour.

ICOMOS considers that the arguments presented in the comparative study could be acceptable in terms of the comparison criteria; but that their definition would be improved by being more clearly expressed. The deportation of prisoners does not seem to be a characteristic idea of the Enlightenment, but rather a practice derived from colonial slavery. The study would gain from further exploration in a series of directions: more detailed comparison with the French case, undoubtedly the most similar and of which numerous vestiges still remain; consideration of a history of penal colonies with forced labour in the country itself, and more generally a history of the control of dangerous population groups; extension of the consideration of forced labour and deportation to Spanish, Portuguese, and Dutch colonies, which preceded or were

contemporary with the British and French cases; and observation of the behaviour with regard to these issues of large centralized non-European states, such as China and Japan.

In its letter of 17 December 2009 ICOMOS requested the State Party to expand on this point. The State Party provided an additional detailed study in its reply of 26 February 2010. International experts were brought in to assist with the comparative study process. An initial distinction needs to be made with regard to comparisons between sites, in terms of the buildings and the organization of the territory, broader meanings and the values associated with a national ensemble, such as that in Australia. The convict transportation system applied to Australia is clearly original and unique in character, especially when compared with the French penal colony system developed at the same time. In the case of the nominated property, the aim was a policy of geographical expansion and colonization through transportation that was unique in terms of its objectives, the diversity in its application of sentences, and its territorial scope.

Justification of the selection of the serial components through the comparative analysis

In its letter of 17 December 2009 ICOMOS requested the State Party to clarify this question, which had not been extensively dealt with in the initial nomination.

The State Party reiterated in its reply of 26 February 2010 the procedure and methodology adopted. In terms of individual sites within the State Party, a very lengthy study procedure that involved the examination of several hundred sites, followed by comparison and selection, that had been undertaken in the mid-1990s. It took into account the integrity and authenticity criteria for each, as well as its representative nature within the group. It was, moreover, a global colonization system based on the principle of transportation and the penal colony, that is to say, a complex and diversified system, the main values and historic and social meanings of which were gradually revealed through the study. The eleven sites selected at the end of this process and international comparative study helped to reinforce the coherency of the choice, as clearly illustrating all the main attributes of the penal colony and forced labour within the context of Britain's colonization of Australia.

ICOMOS considers that the comparative analysis has been significantly improved by the additional documentation provided by the State Party.

ICOMOS considers that the comparative analysis, supported by the additional documentation, justifies consideration of this property for the World Heritage List and that the justification of the serial nomination is satisfactory.

Justification of the Outstanding Universal Value

All the sites nominated for inscription are considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The property is a selection of eleven convict stations which provide an exceptional and large-scale example of prisoner transportation to penal settlements in the distant lands of the British Empire; this was a practice shared by other colonial powers.
- The sites illustrate the various types of convict station that managed a variety of forms of forced labour in order to serve the colonial development project. They were designed and adapted for all types of prisoners - men, women, and children from the age of nine.
- Transportation and forced labour were implemented on a massive scale, for both criminals and those sentenced for relatively minor offences, as well as for expressing certain opinions or political opponents. Colonial convict stations are testimony of a model of legal punishment that was dominant in 18th and 19th century England.
- The property illustrates the various forms adopted by convict colonies, which were closely linked to the ideas and beliefs about punishment for crimes in 18th and 19th century Europe, in terms both of its exemplary nature and the harshness of the sentence to act as a deterrent, and of the programme for social rehabilitation through labour and discipline.
- The property presents the best surviving examples of large-scale convict transportation and the colonial expansion of European powers through the presence and labour of convicts.
- Alongside other forms of forced human migration for forced labour, such as slavery, the remote penal colony is evidence of the brutality of the coercion and the violence developed by colonial policies.

ICOMOS considers that the arguments put forward by the State Party to justify the value of the property are appropriate. The impact of the convict colonies on the Aboriginal peoples, together with their being an important source of the European population, after the convicts were freed at the end of the sentences and their integration as settlers in Australia should also be taken into account.

ICOMOS considers that the justification put forward for the serial approach is appropriate in terms of the principle of the selection of the best preserved sites and the concern to illustrate all the material and social dimensions adopted by convict settlements.

Integrity and authenticity

Integrity

Integrity raises the general issue of the completeness of the various nominated sites as convict settlements. They have sometimes been affected by subsequent use, leading to modifications or the addition of anachronistic buildings when compared with their testimony as convict sites. However, the interpenetration of specific convict buildings has often been combined with non-penal buildings or land as a result of the convict settlements' role in construction (sites 1, 6, 8, 9 and 10 in the description), or its productive role (sites 1, 4, 5, 7 and 9), or even the exercise of power (site 2).

In addition to the initial functional complexity of several of the sites or their reuse, what has most affected their structural integrity is without doubt their abandonment, sometimes for lengthy periods and sometimes accompanied by deliberate demolition. There is therefore a large number of buildings or structures in a ruinous state and others reduced to the condition of archaeological remains. It should be pointed out that the State Party has, as a general rule, refrained from misplaced restoration, preferring to preserve the ruinous state handed down by the history of each of the component sites.

The eleven sites selected are precisely those that have suffered the least from these factors that undermine their integrity, especially as the convicts had a bad reputation in the eyes of the population for much of the 20th century.

The sites that have been the most affected by large-scale change throughout their history are: Kingston (1), modified by its inhabitants after it was last used as a prison and forced-labour station; Darlington (5), where part of the convict structures has been destroyed or modified; Cascades (7), where the remains of only three of the initial five yards have survived; Port Arthur (8), which was converted to a harbour town after its convict period; and Coal Mines (9), now largely in a ruined state after a lengthy period of abandonment.

Other sites have been less affected by destruction or reuse, such as Hyde Park Barracks (3), Brickendon Estate (4), Great North Road (6), and Cockatoo Island (10) in spite of the last-named having been used as an arsenal and military port, with the convict settlement being just one of its components.

Other sites have a high level of integrity, generally in relation with their long-term use as a prison, such as Hyde Park Barracks (3) and Fremantle (11), or having a specific function, such as Old Government House (2).

In terms of the landscape, the integrity is generally fairly satisfactory within each of the sites and its buffer zone, notwithstanding the remarks above about later reuse of the premises, such as at Cockatoo Island (10). Looking at the landscape perspectives and horizon lines, the

urban environment significantly alters the property's integrity at several sites, notably the tall buildings near Hyde Park Barracks (3). Old Government House (2), Cascades (7), and Cockatoo Island (10) are also affected in this respect.

ICOMOS considers that the structural and landscape integrity of the property varies depending on the site, the type of evidence considered, and the local history, at times marked by reuse or lengthy periods of abandonment. The integrity varies between well preserved groups and others where it might be described as fragmentary. Apart from certain visual perspectives in urban settings, the level of the property's integrity is well controlled by the site management plans.

The choices made for the serial approach have been explained by the State Party and ICOMOS considers that they are appropriate.

Authenticity

The authenticity of the 200 or so built, urban, archaeological, and territorial elements put forward to support the attributes of the property's value is undeniable. Conservation of the sites is implemented in accordance with best practices, respecting the traditional materials and techniques. Apart from a certain number of internal refits for purposes that have no relationship with the convict activity or which are for the purpose of tourism, there have been few abusive or interpretive restorations. One exception can be raised with regard to the restorations at Kingston (1). The general policy has been to conserve the sites in their existing state, even if this is as ruins or archaeological remains. This has contributed significantly to preserving the authenticity of the sites and has helped with the expression of their values.

The eleven sites form a significant and comprehensible testimony to the customs and practices in the convict era, as well as the symbols they represented at the time. The main alterations to the authenticity concern later redevelopment of certain buildings or areas that correspond with the complex local history, of which the convict era is, after all, just one component. This is notably the case for Norfolk Island (1) and Port Arthur (8).

Two comments need to be made in order to improve the authenticity in certain cases. Consideration should be given to removing the anachronistic structures or constructions at Old Government House (2), Cascades (7), and Fremantle (11), and it would be useful to provide better differentiation between the structural components by period and use at Darlington (5) and Cockatoo Island (10).

ICOMOS considers that, despite the inevitable complexity of a nomination made up of a series of eleven separate sites with more than 200 elements that convey the value of the property, the authenticity of the

vast majority of them is good.

ICOMOS considers that the integrity of the property varies depending on the site considered, but that it is adequate overall, and that the conditions of authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iv) and (vi).

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that, collectively, the Australian Convict Sites represent an outstanding example of the creation of architectural ensembles that illustrate an important and difficult period of human history, namely, the transportation of prisoners to colonial convict settlements and the use of forced labour.

This example illustrates a deliberate policy that was applied on a massive scale for using convicts to extend Britain's geostrategic influence. It is testimony to a social policy of harsh punishment to deter crime in Great Britain and its colonies. Finally, it reflects the will to rehabilitate convicts through labour and discipline, the practical consequence of which was their insertion in Australian colonial society.

The property is an outstanding example of the various forms adopted by convict settlements in order to serve the British Empire's colonial and prison policies from the Enlightenment to the end of the 19th century: quarries and the construction of buildings, development of ports, shipyards and roads, farming, forestry and mining, etc.

ICOMOS considers that the nominated property provides an outstanding example of the transformation of the conventional penal colony and national prison systems of the major European states in the 18th and 19th centuries into a system of transportation and forced labour within the vast colonial project of the British Empire. It illustrates the variety of convict settlements created to meet the various material requirements for developing a new territory. It is testimony to a prison system aimed at achieving various objectives, ranging from harsh and deterrent punishment to forced labour for men, women, and children, along with the rehabilitation of convicts through labour and discipline.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the group of sites that make up the property is directly associated with the development of the ideas and debates in Enlightenment Europe about the punishment and rehabilitation of criminals and guilty people in human society.

The consolidation of the colonial expansion of the great European states coincided with the expansion of the convict transportation system as one of the dominant models of punishment for a crime or misdeed against society, adopted by European political and judicial powers, especially the British, in the 18th and 19th centuries.

The emergence of new forms of punishment included the psychological dimension of fear of punishment in a distant land where living conditions were particularly harsh. It also included the idea of redemption through labour and discipline, forming a probationary path leading to personal rehabilitation and integration in the European Australian society of the time as settlers.

The terms of this debate led to a high level of experimentation with different forms of convict settlements, with regard not only to material objectives, but also to social organization: convict stations for women, the presence of nurseries, centres for children and adolescents, mixing convicts and civilians, etc. The influence of transportation on the growth of national prison systems in Europe and the world was substantial.

ICOMOS considers that the transportation of criminals, delinquents, and political prisoners to colonial lands by the great nation states between the 18th and 20th centuries is an important aspect of human history, especially with regard to its penal, political, and colonial dimensions. The Australian convict settlements provide a particularly complete example of this history and the associated symbolic values derived from the discussions in modern and contemporary European society. They illustrate an active phase in the occupation of colonial lands to the detriment of the Aboriginal peoples, and the process of creating a colonial population of European origin through the dialectic of punishment and transportation followed by forced labour and social rehabilitation to the eventual social integration of convicts as settlers.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the serial approach is justified.

ICOMOS considers that the ensemble of nominated sites meets criteria (iv) and (vi) and the conditions of authenticity and integrity, and that Outstanding Universal Value has been demonstrated.

Description of the attributes

The property formed of eleven complementary sites provides an outstanding and large-scale example of the transportation of prisoners to convict settlements in the remote colonies of the British Empire, a practice that was shared by other colonial States.

- The sites illustrate the different types of convict settlement organized to serve the colonial development project by means of buildings, ports, infrastructure, the extraction of resources, etc. They illustrate the living conditions of these convicts, prisoners transported far from their homes, deprived of freedom, and subjected to forced labour.
- This transportation and associated forced labour was implemented on a large scale, both for criminals and for people convicted for relatively minor offences, as well as for expressing certain opinions or being political opponents. The penalty of transportation to Australia also applied to women and children from the age of nine. The convict stations are testimony to a legal form of punishment that dominated in the 18th and 19th centuries in the large European colonial states, at the same time as and after the abolition of slavery.
- The property shows the various forms that the convict settlements took, closely reflecting the discussions and beliefs about the punishment of crime in 18th and 19th century Europe, both in terms of its exemplarity and the harshness of the punishment used as a deterrent, and of the aim of social rehabilitation through labour and discipline. They influenced the emergence of a penal model in Europe and America.
- Within the colonial system established in Australia, the convict settlements simultaneously led to the Aboriginal population being forced back into the less fertile hinterland and to the creation of a significant source of population of European origin.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The State Party submits that the various sites do not suffer from any real threat from development pressure, owing principally to the protection measures and the management plans implemented at each site.

Few of the sites directly reflect any problems related to significant development concerning the property itself. It is, however, necessary to mention the complex situation of Kingston and Arthur's Vale (1), which is an operating village, port, and rural entity, for a site of relatively vast dimensions. There appears to be some tension between the private owners and the local managers in charge of running and protecting the site.

Port Arthur (8) is also a large ensemble, with the characteristics of a village and port site. With Point Puer, on the opposite side of the bay, these two sectors experience heavy tourist traffic, which implies the need for certain precautions. Tension is also noticeable with the private owners living in this case in the buffer zone.

The tourism development plan for Old Government House and Domain (2) includes several development issues that require better regulation in order to ensure improved respect for the integrity of the site. There is a somewhat similar situation relating to tourist trade at the entrance to Fremantle Prison (11) and a metal annex at Cascades (7).

The rural development of Brickendon and Woolmers Estates (4) must remain compatible with the expression of the value of the property.

More broadly, some of the sites within the property may be threatened by the development of the property's peripheral area and in its buffer zone, notably in terms of the landscape impact of growing urban environments (see Integrity). This refers in particular to the City of Sydney for Hyde Park Barracks (3) and Cockatoo Island (10), to Parramatta city for Old Government House (2), to the suburbs of Hobart in respect of urban development near Cascades (7), and to Fremantle for Fremantle Prison (11).

ICOMOS considers that the main threats due to development concern the two port villages that are part of the property (1 and 8). A policy of consultation with the local population and a mutual charter of good conduct are needed. Several issues relating to tourist infrastructures should also be reviewed (2, 7, and 11).

Tourism pressures

All the sites have the necessary capacity and management structures to handle current visitor levels and to cope with any future increase in numbers.

Nonetheless, at sites like Kingston (1) and Port Arthur (8) villages (the latter having to cope with large numbers), there is a need to improve the agreed and planned management for the development of tourism between private and public stakeholders, between the interests for well appreciated development and the need to preserve and conserve a property with Outstanding Universal Value.

The project for a tourist and cultural complex at Fremantle Prison (11) must also be implemented with regard for protecting and preserving the quality of the property.

In more general terms, visitor infrastructures and the projects for their development do not always seem to have been thought out with respect for the integrity of the property's landscape in mind, as, for example, at Old Government House (2) and Cascades (7).

ICOMOS considers that the main threats to the properties are pressure from the economic development of tourism, notably in the port villages of Kingston (Norfolk Island, 1) and Port Arthur (Tasmania, 8). Consultation between the stakeholders and the creation of a shared charter of good conduct should be sought. Control of the urban landscape also deserves closer attention, especially for the sites in the Sydney region.

Environmental pressures

According to the State Party, none of the sites is currently under any major threat from pollution or desertification.

There are, however, occasional threats that may eventually affect the property if appropriate measures are not taken, such as soil degradation by domestic animals (1) or water runoff (6 and 7), control of invasive natural vegetation (4, 5, 6, 7, 8, and 9), rain damage to the brick used for construction of the buildings (8), and infiltration of saline water (8).

ICOMOS considers that, whilst there are no major environmental threats, attention should nonetheless be paid to the long-term effects of natural elements.

Natural disasters

The great distances between the various sites that form the property mean that each of them is a specific case. The two coastal sites, Kingston (1) and Port Arthur (8), may be affected by storms. In the event of a very violent storm, Old Great North Road (6) could be affected by landslips. Flooding could occasionally affect riverside sites, such as Old Government House (2) or Brickendon and Woolmers Estates (4).

The threat of seismic events is very low for all the sites that make up the property.

ICOMOS considers the threat of natural disasters to be relatively limited.

Impact of climate change

This is beginning to be noticeable in terms of the direct or indirect consequences affecting the property.

For example, a rise in water levels requires monitoring in Kingston (1), a port village protected by a convict-built breakwater. In Port Arthur (8) and Coal Mines (9), the coastal fringe is directly threatened by rising water levels and is being eroded. A hotel building is directly under threat.

Climate change increases the risk of drought and bush fires that could threaten the property domains in New South Wales (2 and 6). It is also contributing to soil deterioration.

ICOMOS considers that the effects of climate change

are beginning to affect the property, without posing a serious threat. Long-term effects should be taken into consideration, which the State Party is doing.

ICOMOS considers that there is no major direct threat to the property. However, a series of indicators should be monitored: tourism development including infrastructure that respects the integrity of the sites, improved consultation between the stakeholders in the development of tourism, and the impact of urban projects outside the buffer zones which may affect the visual integrity of the sites.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

According to the State Party, the boundaries of the eleven sites that make up the serial property correspond with their original land boundaries in the convict era. They sometimes include functional extensions linked to the current protection boundaries.

Of the eleven sites, ten are surrounded by a buffer zone. Kingston and Arthur's Vale (1) does not have a buffer zone, as the site boundary corresponds with the entire zone protected at the Federal level; the boundaries are the crest line; and beyond that is a vast protected natural area that forms a *de facto* buffer zone. The most significant elements are concentrated at the centre of the site, on or in close proximity to the foreshore.

ICOMOS considers that the approach is different for the environment of the Kingston and Arthur's Vale site on Norfolk Island, which forms a community with a significant degree of autonomy, compared with that adopted for the other sites in New South Wales and Tasmania. A more unified approach would have been preferable, but it is not essential in this particular case as a protected natural area surrounds the property.

The number of permanent residents in the property is boosted by temporary residents who work on the property without living in it.

ICOMOS considers that the boundary of the buffer zone for Hyde Park Barracks (3) should be extended to include the property's spatial relations and its adjacent urban environment.

ICOMOS considers that the boundaries of the Old Great North Road (6) site should be extended towards the west to include the historic Devine's Hill road ascent.

These questions were put to the State Party in the ICOMOS letter of 17 December 2009. In its reply of 26 February 2010 the State Party provided the following detailed responses:

- The buffer zone of the Hyde Park Barracks (3) has been significantly extended. It now completely surrounds the site and takes into account its immediate urban environment. Its surface area still needs to be stipulated, however, along with the number of residents. The management plan for Hyde Park Barracks has been revised accordingly and a new version published (February 2010).
- The definition of the Old Great North Road (6) site and its map have been clarified, especially in its western section where an essential component element, Devine's Hill Ascent, is very close to the site's western boundary. All the material elements that make up the value of this site have been effectively taken into account. The State Party has proposed an extension of the buffer zone along an approximately 300m strip in this western part of the property.

ICOMOS considers that in the light of these new proposals by the State Party, the boundaries of the nominated property are adequate, for Hyde Park Barracks and Great North Road in particular.

Ownership

The majority of the sites that form the property are in public ownership. Two of the properties are privately owned: part of the Kingston (1) site and the Brickendon and Woolmers Estates (4), one of which belongs to a private owner and the other to a public non-profit trust.

The public owners of the sites forming the property are:

- Commonwealth of Australia: Cockatoo Island (10) and a large part of Kingston and Arthur's Vale (1);
- New South Wales Government: Old Government House (2), Hyde Park Barracks (3), and Old Great North Road (6);
- Tasmanian Government: Darlington (5), Cascades (7), Port Arthur (8), and Coal Mines (9).
- Western Australian Government owns Fremantle Prison (11).

Protection

Legal protection

At the Federal level: All the sites forming the property are inscribed on the National Heritage List. The inscription of Brickendon and Woolmers Estates is pending (2008). Cockatoo Island is also included on the Commonwealth Heritage List. These inscriptions imply protection at the State Party's federal level.

They are also protected by the Environment Protection

and Biodiversity Conservation Act 1999.

At the state level: The three States and the autonomous region each have an Act for the protection of cultural heritage including a regularly updated inventory. All the sites of the nominated property are inscribed on these State inventories:

- Norfolk Island, Planning Act 2002: site 1;
- New South Wales, Heritage Act 1977: sites 2, 3, 6, and 10;
- Tasmania, Historical Cultural Heritage Act 1995: sites 4, 5, 7, 8, and 9;
- Western Australia, Heritage of Western Australia Act 1990: site 11.

Certain sites are directly covered by specific State legislation, such as the acts governing the four sites in New South Wales and those in Tasmania.

Other legislation passed by the States are also involved in the protection of the sites, especially for the protection of the environment and land use planning.

At the local level: There is a series of municipal plans that provide additional protection to that afforded at the Federal and State levels for the property's component sites. These are planning documents that harmonize and if necessary extend protection for the property within its municipality, especially for the buffer zones. These instruments are specific to each site and they provide a degree of articulation between the buffer zone and other planning, land use, and development schemes within the urban areas or districts.

Effectiveness of protection measures

ICOMOS considers that the protective measures for the eleven sites forming the property appear to be adequate. The completed inscription of the Brickendon and Woolmers Estates (4) site on the National Heritage List must be confirmed.

ICOMOS considers that the legal protection of the buffer zones seems adequate and effective, with the two reservations mentioned above: revision of the buffer zones for Hyde Park Barracks and Old Great North Road and consideration being given to the potential changes in the landscape perspectives resulting from pressures from urban development.

ICOMOS considers that the legal protection for the property is adequate, subject to the inscription of Brickendon and Woolmers Estates (4) on the National Heritage List.

Conservation

Inventories, recording, research

The Australian convict settlements in general and the sites included in the nominated property in particular have been thoroughly studied, both from the point of view of their history and from the factual and conservation angles for each site.

Extensive documentary, iconographic, and artistic archives have been collected in the country's various museums, archival centres, and libraries, at the national, state, and local levels. The Australian convict era is a major topic of university research and in the past two decades has resulted in numerous academic, cultural, and tourism publications.

Inventory procedures have resulted in the collation of extensive documentation dealing with building plans, construction, and historic use for the various sites. These have also led to numerous architectural and archaeological studies, and site surveys prior to or in parallel with the preparation of conservation guide documents. These studies also include detailed inventories of the properties and museum and archaeological collections. They have also made possible a discussion about the materials used and the ways of conserving them, the components of integrity and authenticity, along with landscaping approaches.

The complex Port Arthur (8) site has been used for around fifty years as the basis for developing a conservation policy for Australian convict sites. It is a reference site that employs leading specialists and may be quoted as an example.

Present state of conservation

The overall level of conservation of the property's eleven sites is generally good. Conservation usually respects the actual state of the property, without resorting to any abusive restoration. The conservation policy applied in recent years has therefore made it possible to maintain the authenticity of the property, closely related to its function as a convict settlement, whereas its integrity is fragmentary as a result of reuse, buildings without any direct link to convict activities, and the visual impact of the urban environment in several cases (see Integrity). The components of the property are therefore in a good overall state of conservation.

Nonetheless, ICOMOS notes an exception in the buildings in poor condition on the Brickendon and Woolmers Estates (4). ICOMOS also recommends that the perimeter walls at Darlington (5) should be consolidated.

A certain number of issues are raised by the presence of built elements or old anachronistic restorations that should be taken into account. The conservation plans generally deal with these issues as a priority and should

be encouraged to do so. Similar issues surround the threat to conservation from natural elements (see Environmental pressures).

Current or planned visitor infrastructure should also be viewed from the angle of conserving the property's visual integrity, notably at Old Government House (2), Cascades (7), and Fremantle (11).

Active conservation measures

In conformity with the regulations protecting each of the sites within their respective municipality, each has an active conservation plan. These plans underwent a correlated update in 2007, as part of the preparations for the nomination and the management plan. Several of the sites also have a specific archaeological programme: their progress differs between sites and several are still at the compilation stage.

However, one point needs to be raised regarding the resources and expertise applied for conservation depending on the site. While some have permanent teams with a high scientific attainment seen as a reference, such as Port Arthur (8), others seem to fare less favourably for want of human and material resources, such as Brickendon and Woolmers Estates (4) or Coal Mines (9). The latter has no permanent curator and its conservation seems to be essentially in the hands of volunteers, a contribution that is often found at the other sites alongside the professional staff.

ICOMOS considers that, where volunteers are used, their work must necessarily be defined and supervised by experienced professionals as part of the property's conservation and archaeological plans.

Maintenance

The maintenance of each of the property's sites is adequately provided by local management committees.

Effectiveness of conservation measures

The conservation measures for the property's sites are in place and they operate effectively, with the reservation expressed above in respect of Brickendon and Woolmers Estates (4).

ICOMOS considers that the general conservation of the property is satisfactory and that it is articulated around a positive dynamic driven by the application of the conservation plans at each of the sites. The Brickendon and Woolmers Estate domains are an exception and rapid action is needed in this case. There is also the issue of the visitor reception infrastructure and its development in accord with the landscape conservation of the property's sites. Finally, volunteer conservation work should be placed under the strict supervision of experienced professionals in the context of conservation and/or archaeological plans.

Management

Management structures and processes, including traditional management processes

At the federal and state levels, a committee to steer and apply the general management plan was created in 2008 (the Australian Convict Sites Steering Committee). It reports to the Department of the Environment, Water, Heritage and the Arts, of which it is an agency. It includes internal and external professional experts whose scientific and professional standing is recognized nationally, and sometimes internationally.

Given the large distances between the sites that make up the property and the decentralized structure of Australia, control of the application of the management plans by site committees has sometimes been entrusted to a state steering committee, responsible for the sites in the state. This is notably the case for the five sites in Tasmania.

At the local level, each of the sites in the property has a specific management plan and a site committee responsible for its implementation. This committee is established by the site's relevant municipality; in most cases it has permanent staff appointed to manage the site. The Coal Mines (9) site plan is an extension of the Port Arthur (8) plan and it does not have a specific site committee. This local situation can be attributed to the proximity of the two sites and the isolation of Coal Mines.

The site committee is responsible for coordinating the day-to-day management of tourism and maintenance; it oversees conservation activities, manages the public funds allocated to each of the sites under the relevant federal, state, and municipal programmes which are summarized in the site management plans; it coordinates relations with associations and private stakeholders, the former in the areas of conservation and infrastructure, and the latter in tourism and commercial activities at each of the sites, generally in the buffer zone, and sometimes within the site itself.

ICOMOS considers that, within the framework applicable at those sites where private stakeholders are involved, Kingston (1) and the Port Arthur (8) buffer zone, consultation between the site committee and these stakeholders should be strengthened and developed. Consideration could be given in both these cases to creating a joint good-conduct charter for the conservation and management of the sites.

ICOMOS considers that the Steering Committee provides an overarching framework for the management of the serial property in so far as all the site committees are effective and regular participants.

Policy framework: management plans and arrangements, including visitor management and presentation

Each of the site's management plans includes an extensive conservation programme; additionally, some also include a tourism development project and/or archaeological programme.

The property management plans were all finalized, updated, and harmonized in 2007-2008, in order to be included in a general management plan (*Australian Convict Sites Strategic Management Framework*, 2008). This general plan has been approved by the Australian Federal Government and by the State Governments of New South Wales, Western Australia, and Tasmania, and by Norfolk Island. It includes and lists all the legal and administrative instruments and the harmonized management and conservation plans for the various sites. It also defines the general directions and future strategies for the management and conservation of the property.

ICOMOS considers that the management plans and arrangements are adequate.

Risk preparedness

An analysis of risks and threats has been carried out for each of the sites based on experts' reports, environmental profiles, and studies carried out by the various site committees.

Each management plan takes into account the identified risks and defines the appropriate measures for dealing with them.

There are few accidental risks at the sites given the passive safety measures implemented.

In the visitor reception buildings, mandatory smoke alarms are fitted and evacuation and emergency service (fire brigade and first-aid) procedures are in place.

ICOMOS considers that the analysis and risk preparedness are adequate.

Involvement of the local communities

The State Party indicates that the local communities at the eleven sites were consulted when compiling the site management plans.

As already indicated, ICOMOS considers that the process for involving the local population directly concerned by a site and its history, such as at Kingston (1) and Port Arthur (8), should be strengthened and improved in order to solve the various conflicts or tensions arising from the potential inscription of the property on the World Heritage List.

Resources, including staffing levels, expertise and training

The Australian Convict Sites are mainly financed by the Australian Federal and State Governments, apart from the privately owned and funded Brickendon and Woolmers Estates.

Each site is managed by a local committee of administrative, tourism, maintenance, and management staff. All have been given appropriate introductory training, along with additional professional training in many cases. Their number depends on the importance and size of each site: it ranges from four employees for Old Great North Road (6) to 131 for Port Arthur (8), some of whom may also be involved in Coal Mines (9) which has no staff specifically allocated to it. Many of the site employees are conservation, architecture, and archaeology professionals. The Convict Site Committee of Tasmania provides technical support for the heritage conservation and management of the privately owned Brickendon and Woolmers Estates (4).

Australia has a large pool of heritage professionals, in both federal and state government departments, together with a varied selection of private agencies. Many academics are also specialists in the history of the convict settlements and their interpretation. The site committees are therefore able to call on the expertise of renowned specialists.

Effectiveness of current management

Each site has a specific management plan implemented by a local committee under the control of specialized state and federal commissions. The various local committees generally have access to sufficient human and material resources to implement effective management and conservation of the sites. The management policies are also discussed and harmonized at a national level under the responsibility of the Australian Convict Sites Steering Committee.

ICOMOS considers that the management systems for the sites that make up the property are adequate and that they are suitably coordinated under the Strategic Management Framework of the Australian Convict Sites Steering Committee. For those sites where private operators are involved in visitor activities, improved consultation is nonetheless necessary; common objectives and a joint charter of good conduct would be beneficial.

6. MONITORING

The provisions for the protection of the property and the management plans at each site require regular local monitoring and supervision by the state and federal authorities. Each site has a monitoring manager, identified by name in the nomination dossier. Regular reports, generally annual, are submitted by these

managers to the state and federal authorities.

The monitoring provisions are, however, presented very succinctly by the State Party in the nomination dossier, emphasizing for each site the critical points monitored: buildings, state of archaeological remains, water infiltration, damage by animals and invasive plants, landscape integrity, etc. No general indicators or monitoring plans with visit frequency or methods are detailed. Within the framework of a property maintained for several years in a good overall state of conservation and including numerous sites spread across a very vast area, it is clear that the monitoring is effective, even though it is not described exhaustively, and that each site is treated as a specific case under the responsibility of a local committee and its monitoring manager. Moreover, monitoring reports are taken into account into the management of conservation operations.

ICOMOS would like to see a summary table of the monitoring indicators applied at each of the sites, including their frequency of application.

ICOMOS considers that the monitoring of the sites that form the property is adequate, but wishes to see the table of monitoring indicators for each and their frequency of application.

7. CONCLUSIONS

ICOMOS recognizes the Outstanding Universal Value of the eleven sites that constitute the serial property of the Australian Convict Sites (Australia). They are a homogeneous selection that illustrates in an exceptional manner the diversity of the human and historical values associated with these places which bear witness to mass transportation to remote lands coupled with forced labour and imprisonment.

Recommendations with respect to inscription

ICOMOS recommends that the nomination of the Australian Convict Sites, Australia, be ***referred back*** to the State Party to allow it to:

- Inscribe Brickendon and Woolmers Estates (site No 4) on the National Heritage List and rapidly schedule the necessary work for the conservation of the buildings at this site that are in a poor condition.

ICOMOS also recommends that the State Party give consideration to the following:

- Specify the surface area of the new buffer zone for Hyde Park Barracks and Great North Road, along with the number of inhabitants;

- Ensure the regular and effective participation of all the site committees in the functioning of the Steering Committee for the ensemble of the serial property;
- At those sites where private partners are involved, notably Kingston and Arthur's Vale (site No 1) and in the buffer zone of Port Arthur (site No 8), to strengthen and develop consultation between the site committee and these private stakeholders. The establishment of a shared charter of good conduct for the conservation and management of these two sites would be useful;
- Give consideration to removing the anachronistic structures or constructions at Old Government House (site No 2), Cascades (7), and Fremantle (11);
- Distinguish between the structural components by period and use at Darlington (5) and Cockatoo Island (10);
- Give consideration to consolidating the perimeter walls at Darlington (5);
- Make sure that the development or rehabilitation of visitor facilities at the various sites respects the visual integrity and the landscape values of the sites;
- Pay attention to managing the landscape values of the sites in or close to urban areas by studying the visual impact of their current environment and any projects liable to affect those values;
- Make sure that volunteer conservation work is performed in strict accordance with the conservation and/or archaeology plans, under the supervision of experienced professionals;
- Publish the table of monitoring indicators and their frequency of application at each of the sites.



Map showing the location of the nominated properties



View of the Kingston and Arthur's Vale Historic Area, Norfolk Island



Entrance to Hyde Park Barracks, Sydney



Aerial view of the Darlington Probation Station, Tasmania



Yard 1 of the Cascades Female Factory, Tasmania



View of the Port Arthur Historic Site, Tasmania



Interior view of the Fremantle Prison, Western Australia

Jantar Mantar (India)

No 1338

Official name as proposed by the State Party:

The Jantar Mantar, Jaipur

Location:

Rajasthan
India

Brief description:

The Jantar Mantar, Jaipur, is an astronomical observation site built in the early 18th century. It includes a set of some twenty main fixed instruments. They are monumental examples in masonry of known instruments but which in many cases have specific characteristics of their own. Designed for the observation of astronomical positions with the naked eye, they embody several architectural and instrumental innovations. This is the most significant, most comprehensive, and best preserved of India's historic observatories. It is an expression of the astronomical skills and cosmological concepts of the court of a scholarly prince at the end of the Mughal period.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *group of buildings*.

1. BASIC DATA

Included in the Tentative List: 28 January 2009

International Assistance from World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 28 January 2009

Background: This is a new nomination.

Consultations: ICOMOS consulted the International Astronomical Union and independent experts.

Literature consulted (selection):

Perlus, B., *Jantar Mantar: architecture in the service of science, the astronomical observatories of Jai Singh II*, Cornell's CyberTower Website, 2003.

Bouchard, A. E., Le célèbre gnomoniste de l'Inde, le Raja Jai Singh II (1686-1743), *Le Gnomoniste*, vol. IX, 4, December

2002.

MacDougall, B.G., Jantar Mantar: architecture, astronomy and solar kingship in Princely India, *The Cornell Journal of Architecture*, 5, Ithaca, 1996.

Technical Evaluation Mission: 29 September-4 October 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 14 December 2009 concerning the following points:

- Confirmation of whether the Disha Yantra and the Astronomers' House are in fact inside the boundaries of the nominated property.
- Considering the extension of the buffer zone to the south of the property (zones 8 and 12 on the layout plan).
- Strengthening the comparative study to take into account the scientific and cultural concepts that led to the construction of the Jantar Mantar.
- Indicating when the Management Plan was promulgated, or when it will be promulgated; stating the timetable for its implementation and operation; stating which bodies are in charge of coordinating the management of the property by the various partners.
- Justifying the serial nomination that has been announced and setting out the objectives and limits, as well as the process by which a nomination for inscription on the World Heritage List could be made.

The State Party replied on 26 February 2010. An analysis of the documentation provided is included in this evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The property is the Jantar Mantar observatory in Jaipur. It includes a monumental ensemble of eighteen main instruments (nineteen in the table on page 12 of the nomination dossier), containing a total of 35 instruments. They are arranged inside an enclosure, and are for the most part monumental in form. Their highest point is 19m above ground level. The masonry structures are clad in lime mortar, usually red with white elements. The surface and alignment finishes used for scientific purposes are in very fine lime plaster and marble. In some cases the instruments have metal parts, such as graduated scales in cast lead. Four instruments have a mainly metallic structure (Unnathamsa Yantra, Chakra Yantra, Krantivritta II, and Yantra Raj). The fixed instruments are interconnected by paved pathways.

The orientation of the astronomical instruments is

primarily in the cardinal directions. However, the boundaries of the astronomical enclosure are aligned with the axes of the city plan, forming an angle of 15° with the instruments.

The main instruments can be classified as follows in terms of their siting:

- instruments sited relative to the horizon and the zenith of the site, i.e. horizontal coordinate instruments (Ram Yantra and Digamsa Yantra);
- instruments sited relative to the equatorial plane and to the axis of the Earth, i.e. equatorial coordinate instruments (Samrat Yantra);
- instruments sited relative to the ecliptic plane, i.e. ecliptic coordinate instruments (Rasivalaya Yantras).

The State Party has defined the levels of precision of thirteen of the eighteen fixed instruments. Four are said to be high-precision (Brihat Samrat Yantra, Laghu Samrat Yantra, Sasthamsa Yantra, and Dakshinottara Bhatti Yantra); the others are said to be medium- or low-precision.

The eighteen monumental sites that make up the nominated property are as follows:

Brihat Samrat Yantra is a horizontal sundial with a gnomon in the form of a very large triangular meridian wall (height 22.6m, including 3.5m below ground, hypotenuse 50.1m.). It is completed by two quadrant scales with a 15.15m radius. This is probably the largest instrument of its type in the world. It enables local astronomical time to be measured with a precision of 2 seconds, and also the declination of the stars at night. The summit of the gnomon is the highest point of the property; it is accessible by a staircase leading to a small cupola at the summit. The Brihat Samrat Yantra is traditionally associated with forecasting the monsoon and harvests.

Sasthamsa Yantra is formed of four independent units of a meridian dial for measuring angles from 0 to 60 degrees, with two instruments in each of two chambers accessible through doors on the northern and southern sides. They provide a measurement of the declination and zenith of the sun or stars.

Jai Prakash Yantra is a huge hemispherical sundial, which produces an inverted image of the sky with a coordinate system. It is a multi-functional instrument. It has two complementary concave hemispherical bowls, each with a diameter of 5.4 m. The shadow of a suspended disc indicates the trajectory of the sun through the signs of the zodiac and its azimuth and equatorial coordinates. A hole in the disc also makes nocturnal observations possible. The instrument constitutes a complex architectural ensemble with pathways inside the representation of the skies. The hemispheres function alternately. The Jai Prakash Yantra is a significant structural innovation.

The *Great Ram Yantra* is a set of two cylindrical structures (4.5m high, with an inside diameter of 6.95m) with a central gnomon. Its primary function is to measure the altitude and azimuth of celestial objects.

The *Small Ram Yantra* has the same design as the Great Ram Yantra, but on a smaller scale.

Dhruva Darsaka Yantra is a small trapezoidal structure, the upper surface of which points to the Pole Star.

Nadivalaya Yantra is an equal-hour sundial used to ascertain the arrival of the sun at the equinox. It consists of two parallel vertical discs with diameters of 3.7m.

Nadivalaya II is a horizontal sundial.

Krantivritta Yantra is a large incomplete instrument for the direct measurement of celestial latitudes and longitudes. It has a circular plate with a diameter of 3.4m oriented in a plane parallel to the equator, but the superstructure is missing.

Krantivritta II is similar to the previous instrument, smaller but complete. It has a graduated ecliptic scale inclined at 23,27° to the plane of the equator.

Dakshinottara Bhatti Yantra comprises two instruments for measuring the zenith distances and meridian altitudes of celestial objects.

Yantra Raj is a monument mounted on three pillars supporting two beams that carry metal disc instruments, in a plane aligned at an angle of 23° to the plane of the meridian. The first is an astrolabe and the second a circular plate. The dimensions of these metal instruments are very large. With a vertical height of 2.43m, the astrolabe is probably the largest instrument of its type in the world. The circular plate is 2.1m in diameter. The engravings enable the planets in the zodiac to be observed, their speed of rotation to be determined, and the dates of eclipses to be predicted.

Chakra Yantra comprises two large moulded brass rings. The rings are vertical and can move around the vertical axis. They measure the hour that a celestial object reaches the meridian and its declination. An axial hole is provided for the use of a sighting tube.

Digamsa Yantra comprises a vertical pillar about 1m high, surrounded by two coaxial walls. It is used to measure angular distances in a vertical plane in relation to the north point.

Unnathamsa Yantra is a large circular brass ring with a diameter of 5.35m, supported by pillars and axial beams. It is used to measure the height of celestial bodies. A sighting tube may be added to the instrument.

Rasivalaya Yantra is a set of twelve independent instruments, each of which measures the latitude and longitude of a celestial object in one of the constellations

of the zodiac. They are built on the same principle as the Samrat Yantra. The vertical gnomons range from 4.2m to 6.2m and the radius of the quadrants varies from 1.24m to 1.68m.

Kapala Yantra is a set of two complementary instruments with two hemispherical concave bowls laid out on an east-west axis. The western bowl is designed to measure the coordinates of the sun in the horizon and the eastern bowl to transform graphically the horizon system of coordinates into the equatorial system. The hemispherical surfaces are made of marble.

Laghu Samrat Yantra is an equatorial dial similar to Brihat Samrat but of smaller dimensions.

An associated enclosure contains two complementary structures: the Astronomers' House and a square platform (Disha Yantra), the historic functions of which have not been clearly identified. These two elements are located inside the property, and are marked 19 and 20 on the map provided by the State Party in its reply of 26 February 2010, in response to the ICOMOS request of 14 December 2009.

The southern and eastern boundaries of the property are enclosed by a high wall with arched mouldings. The historic portal at the south-eastern end is currently not in use.

History and development

In the early part of the 18th century, the Maharajah Sawai Jai Singh II ruled a largely autonomous princely state that formed part of a Mughal Empire which was by then weakened and in decline. His states were situated in the present-day province of Rajasthan. Locked in a struggle with the Maratha Empire, he asserted his power by creating a capital, Jaipur, of royal stature. Jai Singh II was an enlightened prince, fascinated by architecture, town planning, astronomy, and mathematics. He embraced the great traditions of observational astronomy, particularly of Islamic and Central Asian origin, while remaining open to European influences.

The creation of the Jantar Mantar observatory was closely linked to the plan for the new capital in the late 1720s. In 1734 two French Jesuit scholars precisely determined the latitude and longitude of Jaipur. The construction followed a highly rational plan, close to the royal palace and in the heart of the capital, on a perfectly flat site inside an enclosure. Construction work seems to have culminated in 1734-35, when no fewer than 23 astronomers were participating, alongside masons and engravers. Scientific activity began at the same time. The construction work continued until 1738.

The set of monumental constructions at Jantar Mantar in Jaipur reproduces many instruments which already existed in Arabo-Muslim, Persian, and Western cultures: large sundials, discs or sections of discs, astrolabes,

etc., which were given very large dimensions in order to maximize their observational performance. Several innovations, which at the least reflected instrumental and architectural originality, were introduced by Jai Singh II and his astronomers: the combined architecture of the giant sundial of Brihat Samrat Yantra and of the chambers of Sasthamsa Yantra, the huge sundial of the Jai Prakash Yantra consisting of two complementary hemispherical bowls, the set of twelve instruments of the Rasivalaya Yantra for the twelve signs of the zodiac, and the ingenious system of two hemispheres in the Kapala Yantra.

The Maharajah employed a permanent team of around twenty astronomers to observe the heavens systematically and make the corresponding calculations. From a scientific viewpoint, this is a programme of positional astronomy, based on Ptolemaic cosmology, involving the observation of the stars and the updating of tables, the forecasting of eclipses and celestial events, and the establishment and control of local time (Rajasthan time) and the calendar.

Local time and the custom of making it known to Jaipur's inhabitants from the observatory (by drum rolls or the firing of cannon) were maintained over a long period. These local and political rituals were made possible by the central position of the observatory inside the town, close to the royal palace.

Thanks to the results it provided, the observatory also played a part in the prediction of winds, rains, and the announcement of the monsoon. It played a role in astrological predictions both for society as a whole and for individuals. Its results were used in drawing up almanacs until recent times. The observatory constituted an active symbol and a daily demonstration of the exercise of the royal power of Maharajah Jai Singh II, who died in 1743.

In a more general sense, the Jaipur observatory made a major contribution to the completion of the astronomical tables of *Zij*, which originated in Islamic science. The results had an important role in the development of astronomy in India and its dissemination in Hindu society. They were, moreover, expressions of both of the rational practice of astronomy and of the social importance of astrology.

Maintenance of the observatory was carried out in 1771, when various instruments were repaired. This seems to have been the second maintenance intervention. However, around 1800, astronomical activity came to an end and the property was then adjacent to a cannon foundry, which used the property as an annex. A pit was dug and a metallurgical furnace was installed immediately adjacent to the Great Samrat Yantra. In the western part two monumental instruments were dismantled to make room for a temple.

The first substantial restoration of the observatory, which took place during the reign of Maharajah Ram Singh II,

was completed in 1876. Many instruments were restored. The Laghu Samrat Yantra assumed its present-day appearance; the Dakshinottara Bhatti Yantra was moved because of the building of a road. Various minor changes were made to the monuments: the stucco used in some of them was replaced by marble, and lead graduated scales were removed and replaced by other markings. On the Maharajah's death in 1880, however, the observatory was once again abandoned.

During the British period Lieutenant A.H. Garrett, the resident engineer stationed at Jaipur, headed a major restoration in 1901-02. The instruments were completely restored, and some that had fallen into disrepair were rebuilt. There were small changes in the linear or angular dimensions in some cases, such as the positioning of some elements of the Rasivalaya Yantra. There was a growing tendency to replace graduated surfaces made of lime mortar with marble, and this continued in later restorations (1945). Staircases were added or extended; underground accesses were walled up at the Jai Prakash Yantra.

Following the independence of India in 1947, the observatory came under the jurisdiction of the State Government of Rajasthan, becoming a protected monument under the Ancient Monuments and Antiquities Act. Interventions in the post-independence period have consisted mainly of the restoration of the red plaster and paving around the monuments. The boundaries of the site were redefined and protected, and the areas nearby were upgraded. The site was opened for tourist visits.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party begins with a rapid overview of astronomical observatories from prehistoric times, beginning with sites such as Stonehenge (1986, criteria (i), (ii), (iii)), up to the Islamic civilization. It notes those that are visually the most monumental, such as the medieval observatory of Baghdad with its large quadrant and very large sextant.

The observatories that are most similar to the Jantar Mantar in Jaipur, and which may have had an influence on it, are then presented:

- The observatory of Maragheh in northern Iran was built in the mid-13th century by Sultan Bulagu at the request of the astronomer Nasir al-Tusi. It contained large monumental instruments and a library. It was abandoned in the 14th century and fell into ruins.
- Gaocheng astronomical observatory in China was built at roughly the same period, at the end of the 13th century, on an ancient observational site. It belongs to the same Mongol culture. Today it is well preserved.
- Ulugh-Beg's observatory at Samarkand dates from the early 15th century. It is inscribed on the World Heritage List as part of Samarkand – Crossroads of Cultures (2001, criteria (i), (ii), (iv)). This observatory had a direct influence on Mughal and Jaipur observatories in India. A large proportion of the original observatory of Samarkand has today disappeared or is in ruins.
- The ancient observatory of Beijing was completed in 1442 during the Ming Dynasty. It includes a number of large bronze instruments and was in operation until 1929.
- Tycho Brahe's observatory at Uraniborg in Denmark was constructed from 1576 onwards. At the end of the 16th century it was the largest in Europe. Its architecture is entirely dedicated to astronomy, but its instruments remain modest in size compared with those of the observatories mentioned above. It foreshadows modern observatories with its domes and instruments that are entirely metallic. It was soon abandoned and its upper structures have now disappeared.
- The observatory of Istanbul was built under the Ottoman Empire, in the second half of the 16th century, to rival the contemporary observatory of Tycho Brahe in Europe.
- The Royal Greenwich Observatory forms part of the Maritime Greenwich property inscribed in 1997 (criteria (i), (ii), (iv), (vi)) and was founded in 1675. The meridian passing through the observatory has been accepted as the Prime Meridian - the centre of world time and space. It is essentially an observatory that uses metal instruments, and in that it is very different from the Jantar Mantar in Jaipur.

In India itself, although many instruments are described in the Hindu school of astronomy, there is no trace of any early Hindu observatory prior to those in the 18th century of Jaipur, Varanasi, Delhi, and Ujjain. The Jantar Mantar in Jaipur forms part of a set of similar monuments which express the same scientific and cosmological culture in the 18th century: the Jantar Mantar in New Delhi, the Man Singh Observatory in Varanasi, and the Jantar Mantar in Ujjain. In its Tentative List India has expressed its intention of presenting them as a serial nomination.

The State Party concludes that the Jantar Mantar in Jaipur is an extensive, diversified, and highly comprehensive example of a 'pre-telescopic' observatory, composed of fixed instruments, most of which are in masonry. It is furthermore the best preserved of all such observatories and is still in a functional condition.

ICOMOS considers that the comparative study of similar but earlier observatories is satisfactory. It rightly highlights the fact that the Jantar Mantar belongs to a long line of observatories with fixed monumental instruments, which were prevalent in Islamic countries, Central Asia, Persia, and China, and to a lesser extent in Europe. They represent the culmination and final

monumental expression of a long cosmological tradition.

ICOMOS considers, however, that the comparative study does not sufficiently take into consideration the scientific and cultural conceptions which led to the construction of the Jantar Mantar. The epithet 'pre-telescopic' is particularly ambiguous for an 18th century observatory that was built more than one century after Galileo's observations with the telescope or spyglass. The Jantar Mantars of India are the last monumental witnesses to a long Ptolemaic tradition of observation with the naked eye; they are a continuation of the legacy of Islamic, Persian, and Central Asian cosmology.

In its letter to the State Party dated 14 December 2009, ICOMOS asked the State Party to strengthen this point. In its reply dated 26 February 2010, the State Party indicated in scientific and technical terms the reasons for the installation of the large fixed instruments of the Jantar Mantar. It marked the final stage in the long process of developing this type of masonry instrument, inspired by those installed at Maragheh and Samarkand in the 13th and 15th centuries. This represented the culmination of this type of precision astronomy in India, involving the compilation of the tables and astronomy of *Zij*, derived from the medieval Arab world, and the raising of this type of astronomy to its apogee. In observations of this kind large fixed instruments in the open air proved to be both more robust and more precise than bronze instruments for observation with the naked eye. Furthermore, the State Party went further by providing tables that compared the Jantar Mantar observatory with around ten astronomical properties currently on the Tentative Lists of various State Parties.

ICOMOS also asked the State Party to consider indicating its overall strategy for the presentation of the announced serial nomination of the four similar Jantar Mantar observatories. A thorough study comparing these properties with one another is clearly essential, it being understood that the Jantar Mantar in Jaipur is the most important and the best preserved.

In its response dated 26 February 2010, the State Party referred to the significance of the group of four observatories built in India by Sawai Jai Singh II, at Jaipur, Delhi, Varanasi, and Ujjain, with similar types of instruments and observation programmes. It confirms its intention first to make a national serial nomination, in accordance with paragraph 139 of the *Operational Guidelines*, followed later by a broader international serial nomination.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List. The strategy of a possible subsequent serial nomination, chosen by the State Party, is not a matter to be considered by ICOMOS at this stage of the nomination procedure.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Jantar Mantar, Jaipur, contains a particularly diversified and representative set of fixed instruments for astronomical observations with the naked eye. The dimensions of several of the instruments are exceptionally large and others incorporate significant innovations.
- Forming part of a line of observatories with large fixed instruments which developed in the Islamic world, Central Asia, Persia, and China in earlier centuries, it very comprehensively represents the culmination of this approach. Amongst similar Indian observatories dating from the same period (Delhi, Ujjain, and Varanasi), the Jantar Mantar in Jaipur is the most significant and the best preserved.
- The Jaipur observatory made a major contribution to the *Zij* mathematical tables. These tables derived from Islamic science played an essential role in the development of astronomy in India, particularly for the Hindu almanacs and calendar.
- Through the efforts of its creator, Sawai Jai Singh II, the observatory opened up intellectual awareness of the astronomical knowledge available in India at the time; it was a meeting place between the Islamic and Hindu cultures, and between astronomers and astrologers.
- In the way in which the observatory functions it expresses a collective concept of astronomy and its participation in the social realities of the period. It marked the passage of time in the urban environment, and it made possible the prediction of stellar and geoclimatic events, transcending astrological practices. It was a symbol of the exercise of royal power and it was a popular icon of large scientific instruments.
- The observatory is a specific architectural achievement which reflects an encounter between scientific, political, and religious needs. Its architecture is closely linked with the rational planning of the city of Jaipur, the first of this type in India.

ICOMOS considers that this justification is adequate overall. It takes on its full significance in the general historical framework of the long tradition of Ptolemaic cosmology, and of positional observation with the naked eye, of which it constitutes both an architectural culmination and the final programme.

Integrity and Authenticity

Integrity

The integrity of the current set of monuments was affected in the 19th century by the demolition of one fixed instrument, the moving of another, and a small reduction in the perimeter of the observatory. However, the existing set of monuments is sufficiently large and comprehensive to ensure that the expression of the site's value has been conserved, in respect of its various attributes.

Some of the monumental instruments have been altered and changed during the many repairs and restorations of the site, particularly in the early 20th century (see History). However, the integrity of their initial scientific functions has been retained for the great majority of the large instruments. Architectural integrity has been significantly affected in the case of three of them, and less significantly in the case of a fourth. All the other instruments satisfactorily meet the conditions of architectural integrity.

The integration of the observatory in its urban setting seems to have conserved the main features of the 18th century town-planning scheme. However, major alterations took place in its environment in the 18th and 19th centuries: metallurgical plant, creation of streets nearby, construction of an electricity sub-station, etc.

ICOMOS considers that the condition of integrity has been met with respect to the set of monuments and the scientific functions of the instruments.

ICOMOS considers, however, that particular consideration should be given to the condition of integrity of the observatory's environment, and that a report should be drawn up on the environmental and landscape aspects of the property, including historic documents and a systematic photographic record of the surrounding area as viewed from the Jantar Mantar.

Authenticity

Several of the monumental instruments required substantial restorations or rebuilds between the end of the 18th century and the beginning of the 20th century (in particular the Rasivalaya, Nadivalaya, Dakshinottara Bhatti, Laghu Samrat, and Ram Yantras).

Ashlar together with red and white lime plaster were used in this work, even though these materials were not used for the initial construction. Furthermore, most of the instruments whose original graduated scales were inscribed in lime plaster (to which lead was added in some cases) were rebuilt in engraved marble as early as the 19th century. Moreover, the 1901 restoration changed the initial graduations to the western time scales of hours, minutes, and seconds. Nothing is known for certain today of the original graduations.

The repairs also reflect a general long-term tendency to embellish the instruments, so as to enhance their architectural appearance and their aesthetic value.

ICOMOS considers that the authenticity of the property has been affected on several occasions during the many restorations carried out in the course of its history. The alteration in the conditions of authenticity is essentially architectural; with regard to the graduation systems, their initial form is no longer known. The conditions of authenticity of the monumental instruments in scientific and cultural terms are satisfactory, as is their overall significance (see Integrity).

ICOMOS considers that the State Party should:

- Make every effort to evaluate any scientific alterations that may have been made during past restorations to the graduated scales of the instruments;
- Take care to ensure that future maintenance policy is focused on maintaining the conditions of authenticity of the instruments in not only scientific but also architectural terms.

ICOMOS considers that the Jantar Mantar observatory in Jaipur meets the conditions of integrity and authenticity. ICOMOS recommends, however, that a report should be drawn up concerning the environmental and landscape aspects of the property, that any scientific alterations made to graduated scales during restorations should be evaluated, and that attention should be paid to maintaining the authenticity of the instruments in architectural terms.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iv), and (vi).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the monumental composition of the Jantar Mantar, Jaipur, expresses the cosmological order of the world of Sawai Jai Singh II, in his desire to understand and control space, time, and all other conditions of human existence. It expresses continuity with similar observatories constructed from the 13th to the 15th century in the Islamic world, Central Asia, Persia, and China. It uses instruments which for the most part were designed by earlier civilizations, to which it gives exceptional monumental expression.

ICOMOS considers that this criterion has not been fully justified, and that the arguments presented are more

relevant to criterion (iii), which is concerned with cultural traditions. The Jantar Mantar seems to be a late and ultimate culmination of a very long tradition of Ptolemaic cosmology and observation with the naked eye, rather than exhibiting important significant cultural interchanges in the history of astronomy, the international development of which subsequently took different directions, with the use of other methods.

ICOMOS considers that this criterion has not been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) of human history;

This criterion is justified by the State Party on the grounds that the Jantar Mantar is a remarkable example of an amalgamation of science and religion, through the architectural creation of a very comprehensive and unique set of astronomical instruments. Several of the instruments are exceptional in size and are the largest in the world. The Jantar Mantar represents the culmination of 'pre-telescopic' concepts of the large observatory devised in the medieval world, while contributing important scientific, architectural, and urban innovations.

ICOMOS considers that this criterion has been demonstrated, provided that the term "pre-telescopic" (which is extremely ambiguous in this period) is replaced by a more explicit reference to instrumental observation with the naked eye, during the final flourishing of Ptolemaic cosmology.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the observations made at the Jantar Mantar were based on and led to the culmination of the *Zij* astronomical tables, which were first produced as early as the 15th century by Ulugh-Beg. They are a concrete assimilation of the astronomical concepts of Ptolemy and Euclid into the Islamic civilization. Greek, European, and Arabic astronomical treatises were translated into Sanskrit at the time of Sawai Jai Singh II. The results of the body of work conducted at the Jantar Mantar are of very great scientific value.

ICOMOS considers that the observational information and scientific knowledge contributed during the 18th century by the astronomers and astrologers of Jaipur were of great local, regional, and national importance. They bear testimony to the dissemination, and a final flourishing, of Ptolemaic cosmology in India. These contributions do not, however, fully justify an

Outstanding Universal Value.

ICOMOS considers that this criterion has not been justified.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion was not proposed by the State Party, but ICOMOS considers that it applies to the Jantar Mantar, Jaipur.

The Jantar Mantar in Jaipur is one of the final testimonies, both grandiose and exceptional, of Ptolemaic cosmology and practices based on observing the sky with the naked eye. It is a monumental and popular illustration of the cosmological, astronomical, and scientific traditions that are attached to this very ancient culture. It was a dominant concept and a knowledge of the celestial world which was shared by a major set of European, Middle Eastern, Asian, and African civilizations and religions for more than fifteen centuries.

ICOMOS considers that criterion (iii) is fully demonstrated by the arguments presented and by the attributes of the property's value.

ICOMOS considers that the nominated property meets criteria (iii) and (iv) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- The Jantar Mantar observatory in Jaipur constitutes the most comprehensive and best conserved set of fixed monumental instruments built in India during the first half of the 18th century; some are amongst the largest ever built.
- The observatory forms part of the tradition of Ptolemaic astronomy which was shared by many civilizations. It contributed to a final culmination in the improvement of astronomical tables through this type of observation. It forms a late and ultimate monumental expression of this tradition, in the context of India at the end of the Mughal Empire.
- Through the impetus of its creator, the prince Jai Singh II, the observatory was a meeting point for different scientific cultures, and gave rise to widespread social practices linked to cosmology. It was also a symbol of royal authority, through its urban dimensions, its control of time, and its rational and astrological forecasting capacities. The observatory is the monumental embodiment of the coming together of needs which were at the same time political, scientific, and religious.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The property faces no direct development pressure because of its status as public property; it is also publicly managed.

External pressure arises mainly from noise pollution and air pollution caused by intense traffic on the major roads close to the buffer zone.

ICOMOS considers that present and potential pressure from urban development and traffic in the environment of the property and beyond the current buffer zone should be given greater consideration by the State Party. The property could also be affected by changes to the skyline caused by high-rise urban buildings in the environment of the property.

Tourism pressures

In the view of the State Party, the growth of tourism is the main threat currently facing the site. Visitor numbers amount on average to 3,500 people a day, with peaks of 10,000 people. In the past tourists were allowed access to the instruments, which resulted in wear and damage. The policy today is to regulate the flow of tourists, and access to the most fragile instruments is sometimes denied. However, one of the aims of the management programme is to continue to enable visitors to gain a good understanding of how the instruments work.

Over recent years some small buildings have been added to provide facilities for tourists, which are inappropriate for the site. These facilities have now been moved inside the museum (toilets) or integrated into the architectural ensemble (entrance building) as part of the 2007-2008 programme of works.

Private activities, often linked to tourism, have developed in the vicinity of the property. The intention is to control them more effectively as part of the buffer zone management process.

ICOMOS considers that tourist facility issues are one of the major challenges to be faced by the property, in order to ensure that its Outstanding Universal Value is satisfactorily preserved in a long-term perspective.

Environmental pressures

The intensive watering of the lawns of the property has caused infiltration which could damage some foundations. ICOMOS considers that this issue must be addressed in the future management of the site.

The property is also subjected to general urban air pollution. However, no specific impact from this cause has been detected on the monuments.

Natural disasters

Jaipur is in a Level 2 seismic zone, on a scale ranging from 1 to 5. A moderate potential threat therefore exists. A slight earthquake took place in 2006. A masonry building such as the Brihat Samrat Yantra (27m) could be affected by a horizontal seismic thrust of an average level. The technical evaluation of this possibility is being considered by the State Party.

Impact of climate change

ICOMOS considers that the general impact of climate change does not at present appear to constitute a threat to the property.

ICOMOS considers that the main threats to the property are control of tourism development and the insufficient consideration given to urban development in the immediate environment of the property.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The surface area of the nominated property is 1.87ha.

The area of the buffer zone is 3.24ha.

As currently defined, it consists of public circulation space and public buildings:

- the police headquarters, which is to be moved, resulting in an upgrading of the eastern approach to the site, placing the emphasis on tourism development;
- the historic palace of Hawa Mahal, the conservation plan for which is closely linked to that of the Jantar Mantar.

There are no inhabitants inside the property boundaries. There are fifty inhabitants in the buffer zone (2007-2008).

In its letter dated 14 December 2009, ICOMOS asked the State Party to give consideration to extending the buffer zone to the south of the property (zones 8 and 12 of the layout plan) and if possible extending it as far as the City Palace (zone 1) to the north-east of the property. In its reply of 26 February 2010, the State Party proposed a greatly enlarged buffer zone, demonstrating its concern to reinforce protection of the environment and urban setting. The extensions correspond in most cases to public buildings and spaces (City Palace, Jaleb Chowk space, police headquarters, school, temples and monument of Hawa Mahal, etc.). The southern part corresponds with the electricity substation and private properties.

ICOMOS considers that the boundaries of the property are adequate and that the enlarged buffer area proposed by the State Party is satisfactory.

Ownership

The nominated property is owned by the Government of Rajasthan. Ownership rights are exercised by the Department of Archaeology and Museums, on behalf of the Department of Art, Literature and Culture of Rajasthan.

Protection

Legal Protection

The Jantar Mantar is protected under the Rajasthan Monuments Archaeological Site and Antiquities Act, 1961, under Sections 3 and 4.

It was designated a monument of state level importance in 1968, and is thus protected by the Department of Archaeology and Museums. This protection takes the form of administrative and scientific monitoring of the conservation of the property and the provision of financial and human resources carrying out works.

The extension of the buffer zone modifies its protection, and particularly the legal texts applying to the various forms of ownership and the conditions of their application. The Rajasthan Monuments Act (1961) applies to the historic parts of the buffer zone. The land-use framework law of the municipal authority (1970) results in the application of a series of existing urban regulation texts:

- the municipal street plan,
- the joint conservation plan for the Jantar Mantar and the Hawa Mahal,
- the future management plan for the district, which provides for an upgrading of the eastern part of the buffer zone.
- the new Master Plan for Jaipur, which is in preparation and should be promulgated for the period 2010-2025.

ICOMOS requests the State Party to provide information, when available, about the decisions to be taken in the next Master Plan for Jaipur concerning the property and its buffer zone, and the upgrading projects for the eastern district of the buffer zone.

Effectiveness of protection measures

The protection measures appear to be effective, in respect of the conservation of the property and the control of an enlarged buffer zone, provided that details are given about the measures taken to protect the buffer zone.

ICOMOS considers that the legal protection in place is adequate, provided that details are given about the measures taken to protect the buffer zone.

Conservation

Inventories, recording, research

The inventories and public documents concerning the site are deposited with, and managed by, the Department of Art, Literature and Culture, Government of Rajasthan, Jaipur.

The Department of Archaeology and Museums has a library and an archive unit which compiles documents about all the works carried out since 1968.

The City Palace National Library contains archive documents about the property, including maps and photographs.

The most recent study campaign (2007) consisted of an update of the inventory of the property by means of a set of comparative photographs.

Present state of conservation

In the view of the State Party, the property is in a good general state of conservation. In line with the Integrated Conservation Master Plan (2005), a large programme of repairs and restoration was carried out in 2007-2008. It respected the integrity and authenticity of the instruments by using traditional materials. The landscaping was improved and the visitor circulation plan was modified. None of the instruments is today incomplete or shows any notable deterioration.

Some problems of water infiltrating into the foundations should be mentioned, and the poor condition of some bronze and iron elements. Some wooden elements are also in poor condition.

Finishing and weatherproofing works are currently in progress.

Active conservation measures

The Integrated Conservation Master Plan was drawn up in 2005 and led to active conservation measures in 2006-2008. It ensured that basic work was carried out to maintain or restore the conditions of integrity and authenticity of the architectural and scientific components of the instruments.

The 2009-2013 Management Plan continued the process, and is particularly aimed at:

- upgrading the landscaping of the site in its historic context;

- the monitoring of architectural conservation;
- maintaining the instruments in a functional condition.

The Management Plan has not yet been promulgated and so is not yet being applied in the field of conservation. In principle the plan makes the following provisions for conservation (pp. 36-38):

- The restoration of the landscape around the property, including preliminary studies to permit an understanding of the historic elements;
- Greater thoroughness in conservation work with regard to the authenticity of materials such as wood, and special consideration for foundation problems;
- A programme to show the instruments actually working in order to fully express their value.

Maintenance

Routine maintenance of the property is carried out by a technical team of seven people, which belongs to the property management company. Its actions are based on the monitoring reports and the property conservation plan, under the control of an engineer. The cleaning and upkeep of the premises are carried out by a private company on the basis of annual contracts.

Effectiveness of conservation measures

Overall, the property conservation plan has been actively implemented over recent years. It inherited a complex and long-standing legacy of repairs and restorations which led to the raising of some questions relating to authenticity (widespread use of marble, renewal of graduated scales, rendering); these repairs and restorations did, however, ensure that the bulk of the instruments were maintained in what corresponds to their original scientific state.

ICOMOS considers that the state of conservation of the property is satisfactory.

Management

Management structures and processes, including traditional management processes

The Department of Archaeology and Museums is the manager of the site. It is subject to the authority of the Department of Art, Literature and Culture of Rajasthan, which must approve its main decisions.

A management society registered under the Rajasthan Societies Registration Act 1958, the Rajasthan State Museum and Monuments Management & Development Society (RSMMMDS), has been set up within this Department. The RSMMMDS commissioned the Jantar Mantar management plan in 2005 and subsequently

coordinated its implementation.

The Department subcontracts certain auxiliary functions by granting annual contracts to private companies for cleaning, gardening, the bookshop, the snack bar, and the security service.

The very large number of visitors (over 700,000 in the last two years) generates substantial revenue. This revenue, however, is paid to the Public Treasury. Financing for conservation and management comes entirely from the Department's annual budget.

Policy framework: management plans and arrangements, including visitor management and presentation

The management system currently in force for the property consists of:

- The Integrated Conservation Master Plan for the Jantar Mantar and Hawa Mahal, a monument located in the buffer zone of the property (2005);
- The everyday management of the property;
- The tourism policy of the Department.

A series of plans and programmes of the State of Rajasthan, the region of Jaipur, and the town also apply to the property, directly or indirectly, in conjunction with the property management system:

- The Rajasthan Tourism Unit Policy of 2007, concerning directives for hotel development and tourist facilities. The Master Plan of the region of Jaipur, drawn up in 1991 and currently undergoing revision.
- The Urban Development Plan, 2006.
- The Management and Heritage Plan of the City of Jaipur, 2007, under the responsibility of the Jaipur Heritage Committee.
- The municipal programme for the renovation of the fortifications of Jaipur, 2008.

A new Management Plan is currently being introduced for 2009-13. It has been drawn up in the context of the nomination of the property for inclusion on the World Heritage List and of the guarantees that must be provided concerning long-term conservation. It also reflects the Department's approach of strengthening participation and the exchange of information with the other stakeholders (the municipal authority, the tourism department, education and tourism professionals etc.). The aim is also to achieve a harmonious and integrated tourism policy. The Plan has not, however, yet been promulgated and is therefore non-existent from a legal viewpoint.

The sites of several buildings inside the buffer zone (Anand Bihari Krishna Temple, Police HQ) are being transferred (or their transfer is planned) to the public site-management authority, with a view to facilitating visitor reception. This will also make it easier to improve

control of landscapes close to the site. A thorough restructuring of the functions of the approaches to the current buffer zone should follow.

In its letter dated 14 December 2009 ICOMOS asked the State Party to give details of the management bodies, and their coordinated operation in relation to the various stakeholders, in the context of the 2009-13 Management Plan. ICOMOS also asked the State Party to indicate when the management plan would be promulgated.

The State Party provided in its reply dated 26 February 2010 details of the institutional relations between the central departments of the two ministries of the regional State of Rajasthan in charge of the property and its buffer zone: the Ministry of Culture and the Ministry of Urban Development. The organization chart suggests that the Jaipur municipal authority has direct relations with the second of the two ministries, but not with the first. Furthermore, the Department in charge of the management of the property has institutional relations only with its supervisory ministry, and it does not appear to be an overarching authority coordinating all the stakeholders in the management and conservation of the property. Furthermore, the Management Plan has not been promulgated to date. Promulgation has, however, been announced for May 2010.

ICOMOS recommends that greater attention should be focused on the landscape impact of the restructuring being considered in the immediate vicinity of the property.

ICOMOS considers that it is important to ensure an integrated policy for visitor reception, both inside the property and in its vicinity. The tourism policy must show respect for the property, particularly for its integrity and authenticity, and must focus on the pedagogical presentation of its values.

Risk preparedness

The Management Plan includes a section on risks, with an intervention plan that can be applied on the site in the event of a serious incident.

Involvement of the local communities

The municipal authority of Jaipur is directly involved in the management and future development of the environment of the property.

Resources, including staffing levels, expertise and training

There is a permanent team of eleven staff on the site who handle daily management tasks and supervise visitor reception. A specialist engineer makes regular visits for monitoring the property. The personnel of the contractor companies working on the site and at the entrance total some thirty people.

The Department of Archaeology and Museums has technical services (Engineering, Electricity, Telecommunications, etc.).

The management society RSMMMDS has twenty conservation architects at its disposal in the State of Rajasthan. Specific tasks such as the preparation of the Conservation Plan and the Management Plan require the hiring of professional consultants.

The conservation work programmes are entrusted to specialist companies.

The professionals of the Department and of the management society and those who directly manage the property take part in activities to ensure that their skills and competencies are kept up to date. The Rajasthan Heritage Conservation Institute provides the training.

ICOMOS considers that the Department of Archaeology and Museums of Rajasthan, the main scientific organization involved in the management of the property, must reinforce its capacities and skills with a view to managing a property inscribed on the World Heritage List.

Effectiveness of current management

The current management of the property is satisfactory and effective. It must, however, set up a genuinely overarching management body and promulgate the Management Plan.

ICOMOS considers that the property management system is appropriate, provided that a genuinely overarching management body is set up, and provided that the Management Plan is promulgated. In addition, ICOMOS recommends the strengthening of the scientific competencies of the organizations in charge of the management of the property.

6. MONITORING

The monitoring of the property has been defined in the Integrated Conservation Master Plan (2005) and the Department of Archaeology and Museums is responsible for its implementation. The same monitoring approach is embodied in the Management Plan (2009). The plans define the human and material resources for work on the site, in order to set up a policy of regular recording and checking. This consists in particular of a daily visual inspection, checking the scientific functioning of the instruments, and comparative photographic campaigns.

In addition to the permanent monitoring of the monuments that form the property and its territory, monitoring is carried out for visitor access and signage, projects in the buffer zone, risk evaluation, and urban traffic and its consequences for the property.

ICOMOS considers that the monitoring of the property is satisfactory.

7. CONCLUSIONS

ICOMOS recognizes the Outstanding Universal Value of the Jantar Mantar astronomical observatory in Jaipur.

Recommendations with respect to inscription

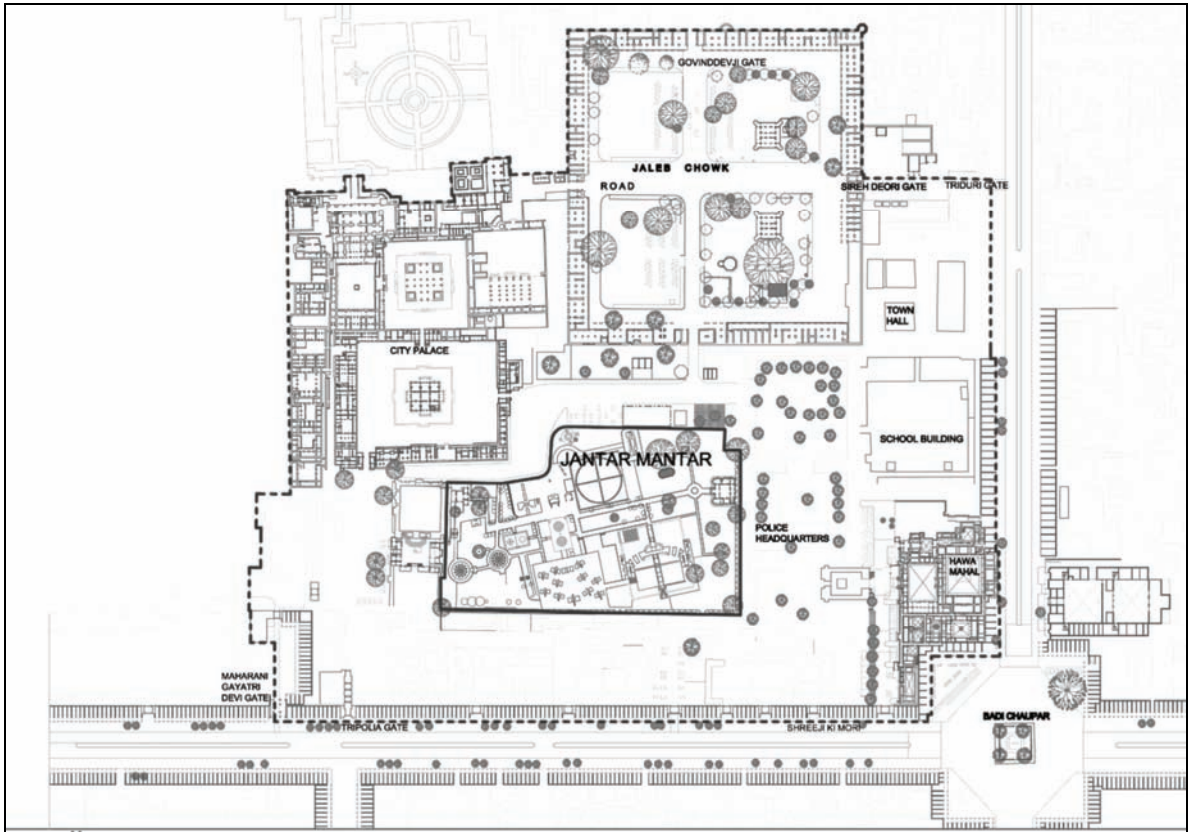
ICOMOS recommends that the nomination of the Jantar Mantar, Jaipur, India, be **referred back** to the State Party in order to allow it to:

- Promulgate the management plan without delay and apply it, and implement a programme of conservation works in this context;
- Set up, as part of the management plan, an overarching authority for the property in order to facilitate coordinated management of the property and its buffer zone;
- Provide information about the decisions to be taken in the upcoming Master Plan of the city of Jaipur, with regard to the property and its buffer zone, and about the plans for the upgrading of the eastern district of the buffer zone.

ICOMOS further recommends that the State Party give consideration to the following:

- Draw up an environmental and landscape report on the nominated property, based on existing early documentation (maps, photographs of site showing its environment) and on systematic contemporary photographs of the environs seen from the Jantar Mantar;
- Carefully evaluate any scientific alterations made during past restorations to the graduated scales of the instruments;
- Take care to ensure that future maintenance policy pays close attention to maintaining the conditions of authenticity of the instruments not only in scientific terms, but also in architectural terms;
- Give greater consideration to present and potential constraints arising from urban development and traffic in the environment of the property, outside the current buffer zone;
- Ensure that an integrated policy of visitor reception is applied in the property and its environs, while ensuring that its values are respected and taking care to present them in a pedagogical way;

- Give greater attention to the landscape impact of the restructuring being considered in the immediate vicinity of the property;
- Reinforce the management capacities and competencies of the Department of Archaeology and Museums of Rajasthan.



Map showing the revised boundaries of the nominated property



General view of the Jantar Mantar



Brihat Samrat Yantra



The Great Ram Yantra



Rasivalaya Yantra

Sheikh Safi al-Din Ensemble in Ardabil (Iran) No 1345

Official name as proposed by the State Party:

Sheikh Safi al-Din Khānegāh and Shrine Ensemble in Ardabil

Location:

Province of Ardabil
Islamic Republic of Iran

Brief description:

The Sheikh Safi al-Din Khānegāh and Shrine Ensemble in Ardabil was built as a microcosmic city of bazaars, public baths and squares, religious facilities, houses, and offices. It was the largest *khānegāh* (Sufic place for spiritual retreat) in Iran. During the reigns of the Safavid rulers, this ensemble was of special political and national significance as the most prominent shrine of the founder of the dynasty. It evolved into a display of exceptional sacred works of architecture and art from the 14th to 18th centuries and a centre for Sufi religious pilgrimage and ritual.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *group of buildings*.

1. BASIC DATA

Included in the Tentative List: 9 August 2007

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 29 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted several independent experts.

Literature consulted (selection):

Husseini Kāzerooni, Seyed Ahmad, *Sufism and mysticism*, Tehran, Armaghan, 2007.

Petroshevski, I., *Islam in Iran*. Translated by Kerim Keshavarz, Tehran, Peyam Seven, 1984.

Weaver, M.E., *Preliminary study on the conservation problems of five Iranian monuments*, UNESCO, Paris, 1970.

Weaver, M.E., *Iran. The conservation of the Shrine of Sheik Safi at Ardabil: second preliminary study July-August 1971*, UNESCO, Paris, 1971.

Technical Evaluation Mission: 18-22 October 2009

Additional information requested and received from the State Party: A letter was sent to the State Party on 15 December 2009, requesting the following:

- Information about the timeframe for the approval and implementation of the Ardabil Master Plan;
- Description of how the provisions for the core, buffer, and landscape zones relate to the Master Plan;
- Further information on the structure and implementation of the Management Plan for the nominated property;
- Progress on the implementation without delay of ICHHTO's plans to relocate the brick workshop;
- Detailed information about the underground multi-level parking which is being built to the west of the museum and related measures to mitigate impact on the nominated property;
- Steps being taken to develop a Landscape Plan for the entire nominated property;
- Possibilities of restoring the original access to the nominated property.

The State Party responded on 28 February 2010 providing additional information. The analysis of this information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property, Sheikh Safi al-Din Khānegāh and Shrine Ensemble, consists of a rare assemblage of medieval Islamic architecture from the early 16th century to the late 18th century.

The Khānegāh and Shrine of Sheikh Safi al-Din embody all the principles of *Safavi Tariqat* in its architectural design. By using the Iranian traditional architectural forms, skilled builders were able to maximize the use of the available space to accommodate a variety of functions (the ensemble comprises a library, a mosque, a school, mausolea, a cistern, a hospital, kitchens, a bakery, and some offices) and to create a route articulated in seven steps to reach the shrine of the Sheikh, which mirror the seven stages of Sufi mysticism, separated by eight gates, which represent the eight 'attitudes' of Sufism.

Decoration was also a fundamental means for

expressing and imparting the symbolism of Sufi mysticism. The ensemble incorporates well preserved and richly ornamented facades and interiors, with a remarkable collection of antique artefacts, some of which form elements of the architecture, such as inscribed silver doors and intricately carved wooden grave markers.

In detail, the Sheikh Safi al-Din Ardabili shrine consists of the following components and buildings, all of which are marked on the nomination dossier map:

- Sheikh Safi al-Din tomb (Allāh Allāh dome)
- Shāh Ismāil I tomb
- Muhiyy al-Din Muhammad tomb (Haram-khānā)
- Shāhnishin (alcove)
- Dār al-Huffāz (Qandil-khānā)
- Chini-khānā (khānegāh)
- Jannat-sarā
- Sāhat or Sahn (area)
- Shāh Abbāsi Gate
- Middle Courtyard (passageway)
- New Chilla Khānā
- Dār al-Hadīth (Dār al-Mutawalli)
- Arsa (The garden court)
- Meydān (square)
- The Second Gate
- Darvāzeh (The Main gate)
- Shahidgāh (cemetery of shrine)
- Maqāber courtyard (sepulchres)
- Shāh Ismāil's mother's tomb
- Southern chambers of garden courtyard
- Northern chambers of spring-like Kauther
- Sayyed Sheikh Shāh ebn-e Khwāja Hasan
- Beyg Safawi house
- Unit of Sharbat-Khānā
- Remains of spring-like Kauther, discovered 1995
- Remains of shrine bath, discovered 2006
- Remains of Āsh-Khānā, discovered 2006

The following description of the most important elements within the shrine starts from the holiest place, Sheikh Safi al-Din's shrine, and proceeds outwards along the path used for visits to the shrine, with short accounts of the most significant features of the ensemble.

Sheikh Safi al-Din's Shrine (c 1334-49), also known as *Allāh Allāh Dome* because of the repetition of the word *Allāh* in the inscriptions, is a cylindrical brick structure, built on a polygonal stone plinth after the death of Sheikh Safi al-Din by his son and successor. The plan of the tower is circular on the exterior and octagonal inside. It has a crescent-shaped double-shelled dome decorated with elaborate Koranic inscriptions in Kufic calligraphy. Internally are to be found colourful plasterwork, paintings, calligraphic inscriptions, and wooden works with lacquer paintings, possibly inserted in the 19th century.

Shah Ismail's Shrine (c 1524-29) is a square room covered by a double-shelled brick dome, decorated externally with coloured tiles and internally with

temperas, illuminated inscriptions, and an ornate wooden chest with delicate inlay work and plasterwork inscriptions.

The plan of *Muhiyy Alal-Din Muhammad's Shrine or Haram Khānā* (c 1323) is more elaborate than the two preceding tombs. It includes a vestibule, a corridor and two spaces, one rectangular and one square-shaped, where the funerary chests were located. This room is covered by a semicircular dome, the shell of which was reconstructed in 1915.

Dār al-Huffāz Hall or Qandil-khānā (c 1339-49) is a rectangular covered space where verses from the Koran were memorized by the faithful. Externally the facade is subdivided in five vertical panels, with two windows in each panel, surrounded by delicate frames in coloured faience. The entrance is on the left side and consists of a richly decorated Timurid portal covered by a semi-dome with stalactites. The facade culminates in a frieze with Koranic inscriptions and a *cymatium* (cornice) with large stalactites. The gate leads to a corridor from which access is gained via a staircase to the Hall, a rectangular space of double height. There is a double series of window niches on the long sides to give light to the Hall. At the southern end the Hall ends in a semi-domed alcove (*shahnishin*). The interior wall surfaces of the hall are profusely decorated with floral paintings, inscriptions, and stalactites.

The *Chini-khānā* (c 1605-11) is square in plan at the floor level and becomes octagonal, through the use of diagonal arches, at the level of the dome impost. It is covered with a double-shelled dome, to which a third internal shell was added to give tranquillity and balance to the structure. Its interior is highly decorated with stalactites and *rasmi-bandi*. The building materials to be found throughout the ensemble include timber elements, a variety of bricks, stone for foundations and plinths, multi-coloured tiles, faience, gilded tiles, marble in decorations and paving, various woods in funerary chests and grave-posts, chinaware, gold plating, vermilion, cobalt, cotton, gold plate, copper, silver, plaster, lime, and clay mortar.

The *Jannat-sarā* (c 1524-76) is the largest structure in the shrine and representative of the Safavid architecture in Ardabil. Its facade on the courtyard side is formed by a large arched porch closed by a wooden decorated grille (which is, however, likely to be the result of 19th century modification to the building).

The *Sāhat* (c 1349) or courtyard is a rectangular open area with a rounded poly-lobed pool (the twelve lobes represent the twelve divinely ordained imams of Shi'ite belief) in the centre. The courtyard gives access to several of the buildings mentioned above, as well as to the New Chilla Khānā, today in ruins, the Dār al-Hadīth, and the Middle Courtyard through the Shāh Abbāsi Gate.

The *Dār al-Hadīth* (built between 1502 and 1541) was

originally a place for religious instruction and for the reception of guests. It is formed by a large central vaulted hall, closed by a wooden decorated grille and flanked by smaller walled and vaulted chambers. The facade is highly decorated with floral motifs and inscriptions on faience coloured tiles.

The *Arsa* (c 1448) or Garden Courtyard is an elongated trapezoidal open space. In the middle there was a fountain for the ablutions of the faithful. Two portals in the shorter sides connect the garden with the Middle Courtyard or passageway and with the Meydān. The gates were flanked by houses and service buildings.

The *Meydān* was a tetragonal space, the first that visitors entered after passing through the Main Gate. It has now assumed a rectangular shape as a result of the urban development that has changed the plan of the site. The Main Gate to the ensemble, the *Darvāzeh*, no longer exists

The *Shahidgāh* (c 1502) or cemetery occupies the east and south sides of the Shrine. It was the burial place of the disciples of Sheikh Safi al-Din and of religious and political personalities after the foundation of the Safavid dynasty.

A number of the structures are today archaeological remains that have been only partly excavated, such as the baths, the kitchens, the cistern, and the bakery.

Movable artefacts include medieval pottery, illuminated manuscripts, and other offerings made at the Shrine over centuries by pilgrims from far and wide.

History and development

Sufism (*tasawwuf*, from *sūf* 'wool' in Arabic or *safā* 'purity') is generally considered to be the inner mystical dimension of Islam rather than a distinct sect. It began to develop into a spiritual movement in the 9th and 10th centuries. Sufism is claimed to have been a definitive factor in the spread of Islam and in the creation of an integrated Islamic culture in Africa and Asia. Sufism flourished between the 13th and 16th centuries throughout the Islamic world as a vigorous religious and intellectual culture with specific directions given by the different *tariqats* or orders founded by Sufi teachers. Sufism has left a number of physical artistic manifestations, particularly in central Asia.

When Iran underwent the Islamic conquest, Ardabil was the largest city in north-western Iran, and it remained so until the Mongol invasions, which left the town shattered for three centuries until the advent of the Safavid Dynasty, of which Sheikh Safi al-Din (1252-1334) is the eponym.

Sheikh Safi al-Din followed Sheikh Zāhed e-Gilāni's teachings and after his master's death took his place and developed his own *tariqat*, which acquired its name

and from which Safavi Sufism originated. He founded a *khānegāh* in Ardabil, which was later to become his shrine.

The ensemble functioned initially as a small, self-contained city with bazaars, public baths and *meydāns*, religious facilities, houses, and offices.

During the reign of the Safavi rulers, the role and function of the nominated property changed to one of political and national importance as the important shrine of the founder of the Safavid Dynasty. Shah Ismail, Sheikh Safi al-Din's successor as Sufi leader of the *khānegah*, became the first shah of the Safavid Dynasty and declared Shi'ism the state religion.

The Safavids spared no expense in enriching and decorating the structure of the shrine of their ancestor with many works of art. The shrine became a focus for pilgrims from around the world and a religious ensemble containing outstanding works of art, ornamentation, and archaeology from the 14th to the 18th centuries.

Four main building phases have been identified by researchers in which the most important structures were built or substantially modified:

- **1300-1349:** In this period the layout of the shrine was laid down: Sheikh Safi al-Din Ardabili Khānegāh, Haram-khānā, Allāh Allāh Dome, Sāhat, Dār al-Huffāz Hall, Shāhnishin, the Middle Courtyard, and the New Chilla Khānā were built.
- **1349-1544:** In this period Shah Ismail and Shah Ismail's mother's sepulchres, Dār al-Hadith, Jannat-sarā, Shahidgāh, and the sepulchre yard south of Sheikh Safi al-Din tomb were built. Most of the building activity has been dated to the 16th century.
- **1544-1752:** The Chini-khānā in its present form, the Shāh Abbāsi Gate, and the Garden Courtyard were created.
- **1752 to the 20th century:** The school, the toilets, the engine room, and the greenhouse were built, most of them in the 20th century.

The nominated property has maintained its role as a place of worship and pilgrimage.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party has based the comparative analysis on the level of completeness of the complexes considered for comparison and on their influence as sources of inspiration for establishing other similar religious centres.

The comparative analysis includes properties from Iran, Kazakhstan, and Afghanistan that have either already been inscribed on the World Heritage List, such as Soltaniyeh, Iran (2005, criteria (ii), (iii) (iv)) and the

Mausoleum of Khoja Ahmed Yasawi, Kazakhstan (2003, criteria (i), (iii), (iv)), or on the Tentative Lists of States Parties, such as Bastam and Kharghan (Iran), and other similar properties from within Iran such as Sheikh Ahmad-e Jām Khānegāh, the Shah Nematollah-e Valy Khānegāh, the Sheikh Abdolsamad Khānegāh, the Sheikh Shāh Abdeldin Mahmud-e Ahari Khānegāh and their associated mausoleum complexes, or from other countries within the same geocultural region, such as Molānā Jalāleddin Mohammad-e-Balkhi Khānegāh, Khoja Abdullah Ansari Complex in Afghanistan, or the Pir Husein Khānegāh in Lankaran, Azerbaijan.

ICOMOS considers that the comparison with the selected properties in the nomination dossier is convincing and demonstrates that the nominated property reflects the best of Sufic philosophy in its architectural forms and decorations, has influenced the design of structures that are included in the properties selected for comparison, has retained a greater variety of buildings and spaces, and in this way made manifest in a higher and clearer manner the logical relationship between the ceremonial, service, and worship spaces and the religious path of Safavi Sufism.

ICOMOS considers that other examples, from both the World Heritage List and the Tentative Lists, could have been selected for a relevant comparison with the nominated property. These include Samarkand – Crossroads of Cultures, Uzbekistan (2001, criteria (i), (ii), (iv)), which is on the World Heritage List, and from the Tentative Lists the Tomb of Bibi Jawindi, Baha'al-Halim and Ustead and the Tomb and Mosque of Jalaluddin Bukhari in Pakistan, and Ak Astana-baba Mausoleum, Bahoutdin Architectural Complex, and Chor-Bakr in Uzbekistan which could have contributed to deepening the comparative analysis.

ICOMOS notes that the comparative analysis has identified relevant examples comparable with the nominated property and has selected properties that may or may not be inscribed on the World Heritage List and at the national and regional level, which, in this specific case, is the only relevant one.

ICOMOS considers that the comparative analysis, despite certain weaknesses, justifies consideration of this property for inscription on the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Sheikh Safi al-Din Khānegāh and Shrine Ensemble in Ardabil is of outstanding universal value as an artistic and architectural masterpiece and an outstanding manifestation of the fundamental principles of Sufism.

- The spatial layout of the architectural complex symbolically defines and invokes the path of Sufism, the *Dhekr* (invocation) and the *Safavi Tariqat* (credo). The decorative elements of the ensemble, including inscriptions, wood inlay, wood engravings, murals and wall decorations, carpets, and prayer mats, are all designed to serve the mystical philosophy of *Safavi Tariqat*. Floral motifs symbolizing paradise appear in innumerable inscriptions in the ensemble.
- The design of the Khānegāh and Shrine Ensemble of Sheikh Safi al-Din Ardabili reflects influences from Ilkhānid and Timurid architecture which, when integrated with the philosophy of Sufism, created new spatial and architectural forms.
- The spatial layout of the nominated property became a prototype for innovative architectural expression and a reference for subsequent *khānegāhs* and shrines in other countries, establishing the world-famous Safavi style in art and architecture.
- As the base of the Safavid Dynasty, Ardabil acquired greater significance than Mashhad and Qom and became the leading holy city of Iran. Even in the 16th and 17th centuries, when the capital was in Tabriz, Qazvin, and Isfahan, Ardabil remained the only national religious capital for the rulers of Iran.
- Sheikh Safi al-Din's credo developed from the local level to the national and international, and extended beyond the boundaries of Iran and Azerbaijan to Anatolia, Sham [Syria], Ceylon, and China in the east and Yemen in the west, a vast area of the world of that time.

ICOMOS considers that this justification is appropriate in linking the tangible (architecture and artistic collections) and intangible (Sufism and religious practices) values of the nominated property. ICOMOS further considers that the art of design, construction, and decoration of Iranian builders and artists has been imbued with the refined symbolism of Sufi thinking, thus reaching an exquisite elegance, equilibrium, and spiritual character in the sequence of spaces within the complex.

Integrity and Authenticity

Integrity

The State Party has analysed different aspects of integrity - visual, structural, functional - for each structure within the nominated property. Most of the structures that make up the ensemble are deemed to have retained their integrity, although in some cases the nomination dossier acknowledges that inappropriate installations or localized damage have had an adverse impact on

integrity; however, alternative and corrective measures have been planned. In some cases the modification or loss of the original use as well as the loss of certain elements are said to have affected integrity.

ICOMOS considers that all the elements that are necessary to convey the value of the nominated property have been included within the boundaries.

ICOMOS also considers that it is remarkable how, despite its many phases of construction, the site continues to present an image of harmonious composition.

However, ICOMOS observes that the original access to the Shrine through the 'Seven Gateways' was an element of great significance in the original design and a major component of its intangible heritage. With the principal entrance for visitors now moved to the south-west corner, the original entrance through the Garden Courtyard has been lost. ICOMOS asked the State Party in its letter of 15 December 2009 to explore pros and cons as well as possible solutions for restoring the original access to the Shrine.

The State Party replied that the original access to the Shrine will be re-established and a special plan has been discussed. The access in use until recently has already been closed. The State Party considers that re-establishing the original access is the best option for practical reasons as well.

Most of the buildings within the nominated property are in a rather good state of conservation. The dome of the Jannat-sarā, however, was reconstructed in the 1970s. This followed a period with flat roofing, due to the collapse of the original dome.

The ornamentation, including the inscribed silver doors and the exquisitely carved wooden grave markers, are still in pristine condition, centuries after they were created. Conservation work on the ornamentation has been restrained and restoration carried out only when there was a risk of acceleration of decay.

Within the nominated property, there was, when the technical evaluation mission was carried out, a large building workshop to the east of the Garden Court owned by the Iranian Cultural Heritage, Handicrafts and Tourism Organization (ICHHTO), which has supplied the bricks required for the new museums being built within the buffer zone. ICOMOS considers that this workshop intrudes upon the integrity of the site. A letter was sent to the State Party on 15 December 2009 raising the issue of the removal of this structure.

The State Party replied that the brick structure had already been removed and relocated in an empty space near the Friday Mosque. The new workshop will start operation in April 2010.

The cemetery has been covered with stone aggregate.

Although this ensures easy drainage and ease of walking and maintenance, ICOMOS considers that it detracts from the original character of the landscape and may cause damage to the gravestones that are still *in situ*. ICOMOS recommends that a different solution for the paving be envisioned and applied.

Authenticity

The State Party has assessed authenticity of the nominated property in detail, considering four aspects (design, workmanship, setting, and material), each in its turn being further subdivided for each component of the ensemble. In summary, despite certain losses and subsequent repair, replacement, and restoration interventions the authenticity of the ensemble is claimed to have been retained for all four of the aspects of authenticity considered relevant in relation to the value of the nominated property.

ICOMOS observes that the buildings within the ensemble were built over a period of seven centuries. During that time, some were altered to accommodate new functions or aesthetic purposes. However, apart from the Jannat-sarā brick dome, which was reconstructed in the 1970s, all the standing structures retain their original architectural form.

ICOMOS further observes that, although several centuries have passed and repairs have been necessary, in no case has the authenticity of the material been compromised at the shrine ensemble, thanks to the availability of skilled craftsmen.

The design and architecture for new buildings in the buffer zone, including the museums, have generally followed traditional forms, with only minor exceptions, although reinforced concrete has been used for certain structural elements.

ICOMOS considers that the ensemble has maintained its original religious functions for almost all the spaces within it. Some have been adapted to accommodate modern uses, such as the Dār al-Hadith, which is now appropriately used as a library and a resource room for the conservation staff, and this has been done with care *vis-à-vis* the character of the space.

However, ICOMOS notes that there is a tendency to plan the reconstruction of the collapsed elements, such as the Darvāzeh Main Gate or the New Chilla Khānā. ICOMOS recommends that maximum consideration should be given to all the alternatives that may ensure the correct interpretation and communication of the value of the nominated property, while keeping reconstruction as a last option, so as to avoid threats to the authenticity of the property.

ICOMOS considers that the architectural spirit of the place has in general been retained. Travellers over the centuries have described a sense of awe and spirituality on entering the Khānegāh, and this continues. It has

been achieved by a high level of maintenance coupled with a restrained approach to conservation.

ICOMOS considers that the nominated property shows a high level of integrity and authenticity and recommends the State Party to proceed with its plans to re-establish the original access to the Shrine, as stated in the reply to ICOMOS.

On the basis of the additional information provided by the State Party, ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), (iv), and (vi).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that the Sheikh Safi al-Din ensemble represents the highest peak of the artistic and architectural language that characterized the Safavid period from the 16th to the 18th centuries.

The Khānegāh and shrine ensemble of Sheikh Safi al-Din Ardabili is a masterpiece of human genius. The ensemble is composed of spaces within which all movable and immovable elements, including the architectural plan, patterns and motifs, decorative elements of inscriptions and non-inscription, and the styles and meanings serve the requirements of the *Dhekr* (invocation) and the rituals of the *Safavi Tariqat* (credo).

The most significant feature is the expression through art and architecture of the seven spiritual stages of Sufism, which were experienced along the path (*Suluk*) in the ensemble. It begins at the main entrance and ends at the tomb [*Rowza* = heaven] of the Sheikh.

The Chini Khānā is the most astonishing masterpiece of art and architecture in the entire ensemble. The close interconnection of architectural forms and decoration has created a wonderful work of human genius. The over one thousand glass vessels and containers in the four alcoves of the building and the inscriptions with the words *Allāh*, *Mohammad*, and *Ali* in the east and west alcoves portray the echo of the invocations of the Sufis in the *khānegāh* at its best.

The diversity of artistic styles in decorative elements other than inscriptions, the use of mystical symbols in the buildings of the ensemble, and the great harmony between decoration and function in the structures depict the idea of purification and elevation of the human soul.

ICOMOS considers that the conception of the entire ensemble layout, the proportions of internal and external spaces and of the buildings, their design and refined

decorations, together with the climax created by the sequenced path to the Sheikh Safi al-Din shrine, all combine to create a unique complex in which aesthetics and spirituality are in a harmonious dialogue.

ICOMOS considers that this criterion has been justified.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the Sheikh Safi al-Din ensemble represents an important interchange in the evolution of Islamic architecture of the 16th century. The design of the nominated property was based on Sufic philosophy in its Safavid interpretation, and is deemed to have been the main reference for the development of the Safavid artistic and architectural style, of which Isfahan became the pinnacle. With the construction of the Sheikh Safi al-Din Ardabili Khānegāh ensemble a new style for mystically sensitive spaces was created. It still constitutes the best model for *khānegāh* and shrines.

The nominated property, while having been influenced by contemporaneous and earlier Islamic architecture in the Azerbaijan region, was also a pioneering case in the field of architecture, technology, urban development, monumental artwork, and architectural decoration that has influenced subsequent structures throughout Iran.

The nominated property links the architecture of the Ilkhānid and Timurid periods to the Safavid period. Tall structures and wide openings are some of the central features of the Ilkhānid and Timurid epochs. These have been integrated with the Safavid taste for exquisite decorations and interior forms. The art employed inside this ensemble in inscriptions and other decorative elements promotes exalted human values by the instruction of *Safavi Tariqat*.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Sheikh Safi al-Din ensemble is a prototype and outstanding example of a 16th century religious complex, which contains all the significant elements which from that time on came to characterize Safavid architecture.

The Khānegāh and shrine ensemble of Sheikh Safi al-Din is a well developed prototype of an institution with social, religious, charitable, cultural, and educational functions. With its versatile spaces, it has met the

physical and spiritual needs of its residents and pilgrims. It includes places to meet the needs of the various fields of education and training (the school, the mosque, Dār-al Hadith, Dār-al Huffāz, Khānegāh), livelihood (the kitchen, bakery, civilian houses, windmill, shops), and health care (the hospital Sharbat Khānā or Shafā Khānā, and four baths). There are more than 67 spaces and courtyards attached to the Khānegāh, all of which have played a significant role in the training and educational philosophy of *Safavi Tariqat*. The ensemble has proved to be the most perfect religious complex over nearly four hundred years, from 1301 to 1723, under the leadership of Sheikh Safi al-Din and his descendants.

ICOMOS considers that, among the most special qualities of the nominated property, the wealth of well maintained civil buildings should be cited as a remarkable feature. These were designed to provide for residence, services (kitchens, and storage-rooms), health care (hammams, thermal baths, etc.) as well as maintenance and crafts workshops, a library, and a museum of local pottery. Their existence reflects the fact that Sufi teaching focused on the care of human beings in their integral physical and spiritual dimensions.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the Sheikh Safi al-Din ensemble has become the symbol of the introduction of the Shi'ite religion under the Safavid Dynasty as a state religion. Since that time this has become one of the two principal schools of faith in Islam, alongside Sunni, and under the leadership of Sheikh Safi al-Din Ardabili the *tariqat* developed from local to national and international levels.

To underline the spiritual significance and the sacred nature of the ensemble, any conflict was forbidden within the Shrine, and even animals and plants were to be safe and secure, in anticipation of paradise.

With the expansion of the activities of the Safavi School by the descendants of Sheikh Safi al-Din, particularly Sadr al-Din Musa and his grandson, Khwajeh Ali Siāh Poush, the Khānegāh ensemble became a centre for spiritual elevation, the propagation of religious messages, and the revival of values.

ICOMOS considers that the nominated property is closely associated with the establishment of the Persian Safavid Dynasty since it was founded by the eponym of the dynasty as well as the founder of the religious creed that assumed the name of *Safavi Tariqat*. The first Shah of the Safavid Dynasty, Ismail I, after being proclaimed sovereign of Persia, established the Shi'ism of the Twelve Imams as the state religion.

ICOMOS considers that the justification provided by the State Party is founded mainly on reasons of national importance, i.e. the establishment of the Safavid Dynasty. The Safavids made Iran flourish again from the political, economic, and cultural points of view, and religious unification under Shi'ism also played a fundamental role.

However, ICOMOS considers that these reasons, while certainly important at the national level, cannot be considered alone to be of such universal relevance as to justify this criterion. The demonstration of the spreading of the *Safavi Tariqat* from the local to the national and international contexts, extending beyond Iran and Azerbaijan to Anatolia, Syria, Ceylon, China, and Yemen, has not been substantiated in the nomination dossier.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the nominated property meets criteria (i), (ii), and (iv) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- The spatial layout of the Sheikh Safi al-Din ensemble architectural complex, which symbolically defines and evokes the path of Sufism.
- The entire range of structures included and mentioned in the nomination dossier as part of the ensemble.
- The decorative elements of the ensemble, including inscriptions, wood inlay, wood engravings, murals and wall decorations, carpets, and prayer mats, all designed to serve the mystical philosophy of *Safavi Tariqat*.
- The path through the seven gates to the shrine, which is a materialization of the spiritual path made by Sufi pilgrims and followers when they visited the Shrine.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The Sheikh Safi Shrine ensemble was originally larger than it is today, in that portions of the open areas and of the cemetery have over the years been encroached upon to build streets and private structures. The shrine ensemble is located in the centre of Ardabil, which is still experiencing a significant rate of growth. However, the present 13ha buffer zone has a population of less than 1,000 people. Height restrictions on new buildings within the buffer zone and regulation of building design by ICHHTO protect the historical character of the setting. New infrastructure requirements for modern living, such as mobile phone towers or gas pipelines, will require

sensitive planning in order to ensure that there is no loss of historical character or archaeological damage.

However, ICOMOS considered that the multi-level building with an underground car-park now being built on the western side of the buffer zone is of considerable concern. Since vehicular traffic may generate conflicts with the protection of the nominated property, ICOMOS asked the State Party to provide more detailed information on this parking in its letter dated 15 December 2009.

The State Party replied that the structure being built is a cultural/commercial complex of four storeys, two of which will be below the ground level. The maximum height of the construction is 7.5m and it has been designed in consultation with ICHHTO, respecting the forms and materials of traditional architecture. The entire capacity of the parking, which is located at the lowest level of the complex, is 35 vehicles.

With main roads surrounding the site now being put to commercial use, most shopfronts are almost completely of glass. ICHHTO has a project for rebuilding shops in vernacular style.

ICOMOS considers that architectural control is needed to limit the area of glazing.

Tourism pressures

The State Party maintains that the nominated property possesses adequate capacity to accommodate visitors, thanks to the existence of a number of open spaces. However, the State Party acknowledges the need to control the number of visits inside the buildings, especially in Sheikh Safi's Shrine and Shah Ismail's Tomb, owing to the limited space and the negative impact caused by the modification of hygrometric and thermal parameters.

ICOMOS has considered that there is an urgent need for a comprehensive visitor plan to be put into place and has raised this issue in its letter sent to the State Party on 15 December 2009.

The State Party responded that measures have been established to manage visitors in the peak seasons, which, according to the monitoring exercise carried out by the management authorities, are spring and summer. These include allocating visitors to groups with scheduled entrance to the ensemble. Short-, medium-, and long-term objectives for visitor management have been developed and are to be incorporated in the Master Plan for Ardabil, the revision process of which is planned to be finalised by September 2010.

ICOMOS recommends that the efforts undertaken to finalise a comprehensive visitor strategy be continued and a visitor plan elaborated as soon as possible and included in the revised Ardabil Master Plan.

Environmental pressures

The State Party states that long cold winters, coupled with a high level of humidity in the ground, cause problems of frost stress and rising damp that make the conservation of the decorated external surface difficult, especially the tile-work. A comprehensive monitoring plan is planned to study the influence of climatic cycle on the elements of the nominated property.

ICOMOS observes that exposed archaeological remains are prone to deterioration, even when covered by a roof. ICOMOS considers that it is necessary to protect excavated foundations by backfilling rather than exposing them for exhibition.

ICOMOS recommends that the envisioned comprehensive monitoring system be implemented and systematic applied research developed to address the aforementioned issues.

An additional source of pressure derives from urban pollution.

Natural disasters

The most probable threats to the nominated property are earthquakes. ICHHTO has taken steps to mitigate damage that may be caused by a seismic event.

Impact of climate change

The State Party has not identified pressures that may be related to climate change other than those included in the environmental pressure section.

ICOMOS considers that unexpected and extreme weather events may be consequences of climate change in the area.

ICOMOS considers that the main threats to the property are thermal cycle stress, frost, modification of hygrometric and thermal indoor parameters, and earthquakes. ICOMOS recommends that the planned comprehensive monitoring system should be implemented and systematic applied research developed to address these issues. ICOMOS further considers that the efforts undertaken to finalize a comprehensive visitor strategy should be continued and finalized as soon as possible and included in the revised Ardabil Master Plan.

5. PROTECTION, CONSERVATION, AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The nominated property comprises several structures, an area of archaeological excavations to the south-west, a garden court, the central-eastern edge, where a

building workshop presently stands, and the Meydān on the northern edge.

The buffer zone for the site consists of 13ha around the nominated property, the boundaries of which have been clearly identified and appropriately selected.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate.

Ownership

The Iranian Cultural Heritage Handicrafts and Tourism Organization (ICHHTO) is the owner of the entire nominated property.

Within the buffer zone, the ownership profile is varied and includes publicly owned property by state and municipal governments, privately owned properties and properties owned by religious organisations.

Protection

Legal Protection

In Iran the legal provisions for the protection of cultural heritage are to be found in general or specific laws.

The *Law for the protection of national heritage* (1930) defines the procedures for the identification of cultural heritage and establishes the National Heritage List, along with the criteria for inclusion in this list. The law also includes provisions for archaeological excavations, further detailed by the *Bye-law concerning unauthorized excavations* (1980). Further provisions relating to the acquisition of property having cultural significance are created by the *Law concerning acquisition of land, buildings and premises* (1969).

The Iranian Cultural Heritage Organization (later renamed the Iranian Cultural Heritage, Handicraft and Tourism Organization - ICHHTO), which was established in 1979, is responsible for ensuring the protection and management of cultural heritage. ICHHTO is in charge of studying, investigating, surveying, and registering movable and immovable cultural property. It is also responsible for providing and enforcing plans for repairing and revitalizing monuments, buildings, and valuable cultural-historical complexes.

The Sheikh Safi Al-Din ensemble was registered on the List of National Heritage Monuments of Iran in 1932 and, by virtue of this registration, the complex enjoys special protection and conservation legislation. The ICHHTO base at the site was established in 2002.

Local regulations ensure that the nominated property and the buffer zone are further protected, i.e. in the immediate surroundings of the nominated property (level 1 of the buffer zone according to Iranian legislation) the height of the new buildings does not exceed 5.5m, while

in the buffer zone (level 2 buffer zone according to Iranian legislation) buildings may not be higher than 7.5m. Other regulations prohibit posters and advertising billboards.

The Ardabil Master Plan was first prepared in 1983, revised in 1993 and 2004, and is currently under reconsideration. The master plan is said to have been prepared in consultation with ICHHTO and to include observations on height restrictions in different areas of the town, and to define historic neighbourhoods, permitted land use and other rules concerning building construction. However it has not been possible to examine the Plan since no English translation or summary has been provided.

ICOMOS raised this issue in its letter sent to the State Party on 15 December 2009, and in its reply the State Party explained the general structure of master plans in Iran. They comprise six chapters: the first and the second provide information on the features of the area from the natural, historical, cultural, social, and economic point of view. The third chapter details the features of the town, including urban planning parameters and existing regulations concerning buildings or areas of cultural importance, which are also mapped in the plan. The fourth chapter contains the analysis of this information, on the basis of which the structure of the plan and its related regulations are set out, with special regard to historical areas. The fifth chapter defines long-, mid-, and short-term objectives and projects, and the sixth chapter discusses the zoning and expansion of the town, taking account of issues such as population density, land use, and communication networks.

ICOMOS observes that the area selected to surround the nominated property as the buffer zone is well thought-out and is large enough to ensure the adequate indirect protection of the nominated property.

The provisions concerning the nominated area, buffer and landscape zones, established according to the national legislation for heritage protection, have been incorporated in the revised Ardabil City Master Plan. This has been issued by the provincial working group. It is currently being referred to the Council for Provincial Programming and Development, while final approval by the Higher City Council of Iranian City Planning and Architecture is scheduled for September 2010.

ICOMOS recommends that the programmed schedule to finalise the approval of the revised Ardabil Master Plan be respected and that updated information about the progress made be provided to the World Heritage Committee and ICOMOS at the end of 2010.

Effectiveness of protection measures

The legal framework is effective and strictly implemented.

Security from vandalism is ensured by monitoring on

CCTV. Access to the main shrine requires completion of a security check.

ICOMOS considers that the legal protection in place and the protective measures for the property are adequate.

Conservation

Inventories, recording, research

An exhaustive record of archival photographs and the writings of travellers has been collected and exhibited in the Jannat-sarā. Excellent reports are available on movable objects, tilework decorations, and archaeological excavations. The Chinese porcelains and the grave stones still await systematic inventarization.

ICOMOS notes that documentation related to the structures of the buildings is lacking. Furthermore, no record has been provided of the ongoing maintenance of tile and brick architecture that is under way.

A high-definition survey using 3D laser scanning technology has been carried out. It is unclear whether the interior spaces have been scanned or not.

ICOMOS considers that it would be useful for the State Party to undertake systematic technical documentation of the buildings and keep a record of the renewal of old parts and removed sections. Similarly, it would be helpful for the 3D laser scanning survey of the entire complex to be completed as soon as possible.

Present state of conservation

The conservation philosophy for the site is to ensure that the spirit of the place and the dignity of all its elements are respected. All the historic buildings in the nominated property are in a good state of conservation with a systematic process for reviewing and condition assessment on a regular basis.

ICOMOS considers that, although structures revealed during archaeological excavations are at present covered with steel-truss roofing, they need continuous monitoring to ensure that deterioration does not set in. The State Party should give consideration to not excavating archaeological areas so as not triggering accelerated degradation of these fragile items. It should also consider reburying exposed archaeological remains once the documentation is completed.

ICOMOS further observes that some unexplained damp patches are visible on the underlying surface of the dome of the Chini-khānā. This was clad in the 1970s with copper sheets to prevent water penetration, but this cover seems to have altered the behaviour pattern of the brick dome.

ICOMOS suggests the State Party to give consideration to rebuild the masonry wall and roof over Shah Ismail's

mother's grave, which collapsed in the 1980s, so to restore the sense of quiet seclusion to the courtyard, and should avoid reconstruction of the Darvāzeh, destroyed in the 20th century.

ICOMOS also considers that the display of fragile antiquities in the Chini-khānā requires modern display cases and other security installations that break up the space and do not hide ornamental wall surfaces.

Finally, ICOMOS notes that at the present time the internal and external electric fittings for the illumination of the buildings and artefacts detract from the historic character and integrity of the complex. They seem to be obsolete and to generate heat. However, a new illumination system is being professionally designed to replace them.

ICOMOS recommends that the State Party provide information on any progress with the modernisation of the illumination system.

Active conservation measures

In view of the high number of extremely significant artefacts (ceramics, silver, pottery, wood, paper) in the collection of the ensemble, there is a conservation laboratory on the site, with trained art conservators.

ICOMOS notes that the Governor-General of Ardabil and the City Council have recognized that development controls must be strongly adhered to, with limited vehicular traffic around the site. In recent years ICHHTO has checked encroachments by acquiring land surrounding the nominated property.

ICOMOS asked the State Party to undertake steps to prepare a landscape plan for the entire nominated property in order to ensure appropriate conservation of its gardens.

In its reply the State Party reported that a programme of research activities instrumental for the development of a comprehensive Landscape Plan has been prepared and included in the short- and medium-term objectives of the management plan. Research will focus on archaeological, botanical, and hydrological aspects of the garden in order to acquire sufficient information to restore it to its original layout.

Maintenance

Maintenance is regularly carried out at the property by the ICHHTO Base.

Effectiveness of conservation measures

The conservation measures undertaken by the ICHHTO Base are generally effective. Specific concerns are set out above and incorporated into the recommendations.

ICOMOS considers that the conservation programme is

in general thorough and effective.

ICOMOS considers that there are conservation measures in place but that there is a need to address a number of issues, such as paying specific attention to exposed archaeological remains and adopting adequate conservation measures for Chini-khānā and Shah Ismail's mother's grave. Finally, ICOMOS recommends that maximum consideration should be given to all alternatives that may ensure the correct interpretation and communication of the value of the nominated property, while keeping reconstruction as a last option.

Management

Management structures and processes, including traditional management processes

At its centre ICHHTO has a High Technical Council that meets periodically on various significant sites. The Council approves budgets and all major conservation proposals. Minor and day-to-day works are handled by a multi-disciplinary steering committee appointed at each of Iran's significant sites. The Sheikh Safi ICHHTO Base has a set of goals administered by its Director, who heads three branches - conservation and restoration, finance and administration, and research. At Ardabil the steering committee is headed by an urban planner and includes engineers, architects, conservation architects, and archaeologists.

The ICHHTO steering committee and staff have ensured that professional systems are in place for carrying out conservation work, documentation, and periodic monitoring.

Policy framework: management plans and arrangements, including visitor management and presentation

The nomination dossier explains that the management plan integrates the measures included in Ardabil Master Plan, the regulations for Sheikh Safi al-Din Khānegāh and Shrine Ensemble protected monument, its buffer and landscape zones, the outcomes of the SWOT analysis, and related short-, medium-, and long-term goals.

The general strategy for the management of the site includes among its priorities the establishment of a research centre and a documentation centre, undertaking regular monitoring and data analysis, developing interpretation and presentation programmes and facilities, and organizing periodic meetings of management staff.

ICOMOS asked the State Party to clarify whether the management plan mentioned in the nomination dossier has come into force or is under development in its letter of 15 December 2009.

The State Party replied that the management framework and related actions are the result of eighty years of continuous conservation operations which were carried out in conformity with the previous master plan. These will be incorporated in the revised Master Plan, which is scheduled for final approval in September 2010.

In 2006, 151,000 visitors came to the Sheikh Safi Al-Din shrine (30% higher than 2005), of whom only 1% were foreign visitors. There are several publications available for local visitors. Most street signs are bilingual; each building within the ensemble has well designed bilingual signage explaining its key features. Outdoor areas such as the Garden Courtyard and cemetery have appropriate signage.

ICHHTO has printed bilingual fliers in Persian and English on key structures. These are available free of cost at the site and at hotels in Ardabil and surrounding towns.

Visitor facilities are available on site, and heritage walks linking other museums and sites in the vicinity are being planned.

ICOMOS recommends that details of any further visitor facilities and/or activities should be incorporated into a comprehensive visitor strategy and a plan finalised and included in the revised Master Plan for Ardabil.

Risk preparedness

There is no specific information on this topic in the nomination dossier.

ICOMOS recommends that a risk-preparedness plan should be developed for the property, with special regard to seismic threat.

Involvement of the local communities

The local community and residents have free access to the open portions of the site such as the Garden Courtyard and remain deeply interested in the welfare of the site, but they are not actively involved in day-to-day management issues.

ICHHTO is initiating links with local government, private universities, and NGOs to enable academics, researchers, and civil society organizations to become stakeholders in the preservation of Sheikh Safi Al-Din shrine.

Resources, including staffing levels, expertise and training

Over forty staff members have been allocated to conservation projects at the nominated property. These include conservation professionals and craftsmen in specialized crafts, some of who are hired on a need basis.

Funding for conservation is not a concern at the Sheikh Safi shrine since there are multiple sources of funds available - from the Iranian Government, money generated by ticket sales, money from properties owned by the Shrine in other provinces and rented out, money from offerings to the shrine, and rents from adjoining shops.

Effectiveness of current management

The current management of the nominated property by ICHHTO is active, professional, and effective.

ICOMOS considers that the management system for the property is adequate.

ICOMOS considers that the management system in place for the property is adequate. ICOMOS recommends, however, that a detailed timeframe for short-, medium-, and long-term objectives should be established. ICOMOS further recommends that a risk-preparedness plan should be developed for the property, with special regard to seismic threat and that the efforts undertaken to finalise a comprehensive visitor strategy be continued and a plan elaborated and included in the revised Ardabil Master Plan.

6. MONITORING

The State Party has set up a monitoring system based on a range of indicators, which are grouped under six headings (conservation, maintenance and security, urban development, research and education, visitors, geology). Selected indicators are linked with the features that illustrate Outstanding Universal Value and with major threats to the nominated property. The timeframe for monitoring varies according to each indicator. The body in charge of monitoring activity is the ICHHTO Base at the site.

ICOMOS considers that the overall monitoring system in place is adequate, the indicators being linked to aspects relevant to Outstanding Universal Value and major threats. However, ICOMOS recommends that records of maintenance works should be kept regularly.

7. CONCLUSIONS

ICOMOS considers that the Sheikh Safi al-din Khānegāh and Shrine Ensemble in Ardabil exhibits an exceptional architectural and artistic quality and originality in responding to both spiritual and functional needs. The Outstanding Universal Value of the property has been recognized.

Recommendations with respect to inscription

ICOMOS recommends that Sheikh Safi al-din Khānegāh and Shrine Ensemble in Ardabil, Islamic Republic of Iran, be inscribed on the World Heritage List on the basis of **criteria (i), (ii), and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Sheikh Safi al-Din Khānegāh and Shrine Ensemble was built as a small microcosmic city with bazaars, public baths, squares, religious buildings, houses, and offices. It was the largest and most complete *khānegāh* and the most prominent Sufi shrine since it also hosts the tomb of the founder of the Safavid Dynasty. For these reasons, it has evolved into a display of sacred works of art and architecture from the 14th to the 18th century and a centre of Sufic religious pilgrimage.

The Sheikh Safi al-Din Khānegāh and Shrine Ensemble in Ardabil is of Outstanding Universal Value as an artistic and architectural masterpiece and an outstanding representation of the fundamental principles of Sufism. Ilkhanid and Timurid architectural languages, influenced by Sufic philosophy, have created new spatial forms and decorative patterns. The layout of the ensemble became a prototype for innovative architectural expressions and a reference for other *khānegāhs*. As the shrine of a prominent Sufi master, who also was the founder of the Safavid Dynasty, the property has remained sacred in Iran up to the present day.

Criterion (i): The conception of the entire ensemble layout, the proportions of the internal and external spaces and of the buildings, their design and refined decoration, together with the climax created by the sequenced path to Sheikh Safi al-Din's shrine, all combined, have concurred to create a unique complex in which aesthetics and spirituality are in a harmonious dialogue.

Criterion (ii): The architectural spaces and features of the nominated property have integrated influences of the Ilkhānid and Timurid periods with the religious message of Sufism and the taste for exquisite ornamentation and interior spaciousness, thus giving rise to fresh architectural and artistic forms.

Criterion (iv): The Sheikh Safi al-Din ensemble is a prototype and an outstanding example of a 16th century religious complex, combined with social, charitable, cultural, and educational functions, which contains all the significant elements that from then on came to characterize Safavid architecture and became a prototype for other *khānegāh* and shrines.

Integrity and Authenticity

The property contains all the elements that convey its Outstanding Universal Value. Most of the elements of the property are in good condition and, despite several transformations, the site continues to present an image of harmonious composition, in which the material realization of the spiritual path through the architectural design is still clearly legible. The State Party has taken steps to restore the original access to the ensemble, which will strengthen the connection between the architecture and the Sufic spiritual messages.

The design form of the entire complex and of individual buildings has been retained and their religious functions have been in most cases maintained. Where they have changed, the new uses are appropriate to the architectural structure in general, and the material and technical authenticity has been retained, as well as the spiritual character of the place. It is, however, important to reduce the tendency to go too far in conservation work.

Management and protection requirements

The nominated property has been protected under the Iranian legislation since 1932. According to the law currently in force, special protection provisions are in place for the property, the buffer zone and for a wider area called the 'landscape zone.' These provisions, already in place, are being also incorporated into the revised Master Plan for Ardabil, final approval of which is scheduled for September 2010.

Any project concerning protected monuments in Iran must be in accordance with the provisions of the law and must be approved by ICHHTO, the authority in charge of the protection of Iranian monuments. The management framework established for the nominated property integrates the regulations for Sheikh Safi al-Din Khānegāh and Shrine Ensemble and the provisions of the Ardabil Master Plan.

Management of protected monuments is the responsibility of the High Technical Council of ICHHTO, which approves budgets and all major conservation works. Minor works and day-to-day maintenance is ensured by a steering committee which can avail itself of a multidisciplinary team (the ICHHTO Sheikh Safi al-Din Ensemble Base), which is headed by a urban planner and includes on its staff engineers, architects, conservation architects, and archaeologists.

ICOMOS recommends that the State Party should give consideration to the following:

- Respect the programmed schedule to finalise the approval of the revised Ardabil Master Plan and provide the World Heritage Committee and ICOMOS with updated and detailed information with maps, zoning and regulations of the revised Ardabil City Master Plan when it will receive final

approval in September 2010;

- Establish a detailed time frame for short, medium and long terms objectives for the management system;
- Pay specific attention to exposed archaeological remains;
- Adopt adequate conservation measures for Chini Khana and Shah Ismail's mother's grave as soon as possible;
- Give maximum consideration to all alternatives that may ensure the correct interpretation and communication of the value of the nominated property, while keeping reconstruction as a last option;
- Continue the efforts undertaken to finalise a comprehensive visitor strategy and plan as soon as possible and incorporate them into the revised Ardabil Master Plan;
- Develop a risk preparedness plan with specific regard to seismic threat;
- Implement the envisioned comprehensive monitoring system as soon as possible and develop systematic applied technical research on the nominated property for monitoring purposes;
- Proceed with the plans to re-establish the original access to the Shrine and provide the World Heritage Committee and ICOMOS with detailed information on any progress made.



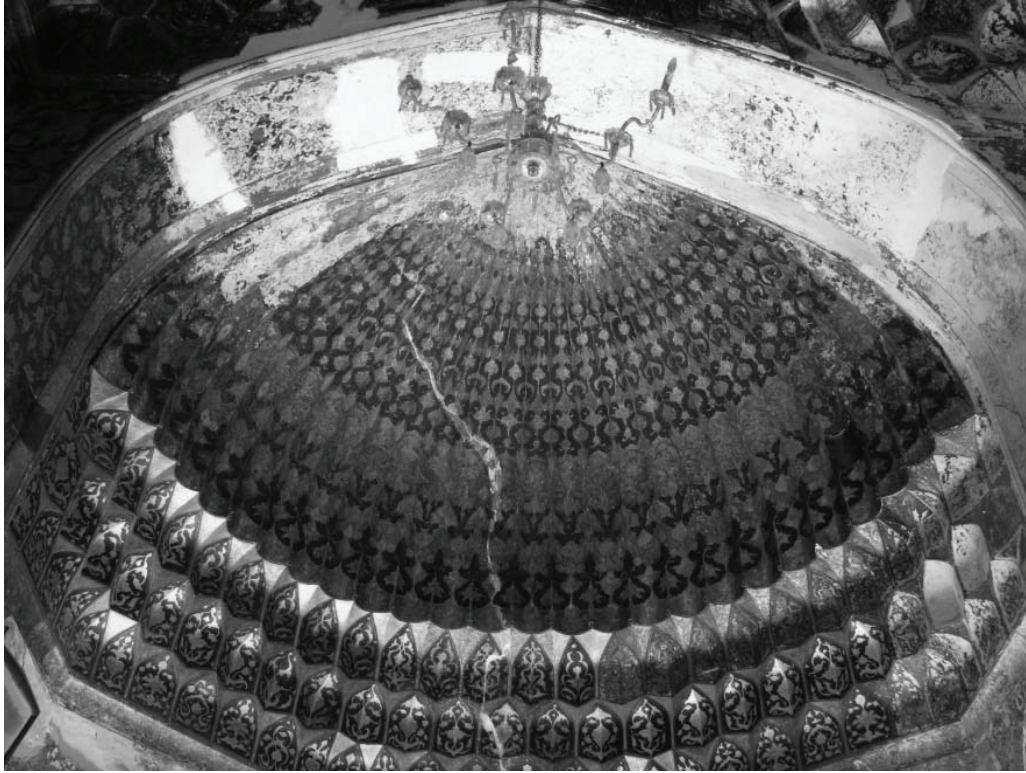
Map showing the boundaries of the nominated property



General view of the nominated property



Dār al-Huffāz (Qandil-khānā)



Dome of Shāhnishin (alcove)



Sāhat

Tabriz Historic Bazaar (Iran) No 1346

Official name as proposed by the State Party:

Tabriz Historic Bazaar Complex

Location:

Province of East Azerbaijan

Brief description:

Tabriz Historic Bazaar Complex consists of a series of interconnected, covered brick structures, buildings, and enclosed spaces for different functions. Tabriz and its Bazaar were already prosperous and famous in the 13th century, when the town became the capital city of the country. The importance of Tabriz as a commercial hub continued until the end of the 18th century, with the expansion of Ottoman power. Closely interwoven with the architectural fabric is the social and professional organization of the Bazaar, which allows its functioning and makes it into a single, integrated entity.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of three *groups of buildings*.

1. BASIC DATA

Included in the Tentative List: 9 August 2007

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 29 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Historic Towns and Villages (CIVVIH) and several independent experts.

Literature consulted (selection):

Meshkati, N. (compiled by); Behnam, I.; Pessyan, H.A.S.; Sepahbodi, I. Monuments et sites historiques de l'Iran, Organisation Nationale de la Protection des Monuments Historiques de l'Iran, Tehran.

Moradi Asghar, M., Nassabi, F., Bazaar of Tabriz; a sustainable architecture and urban area in Iran, in Proceedings of ENHR 2007 International Conference 'Sustainable Urban Areas',

Rotterdam, 25–28 June 2007.

Weiss, W. M., and Westermann, K. M., The Bazaar: Markets and Merchants of the Islamic World, Thames and Hudson Publications, London, 1998.

Technical Evaluation Mission: 13–16 August 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 19 October 2009 on the following issues:

- Further justification of the serial approach to the nomination.
- Further explanation of how the three chosen sites relate to the overall outstanding value of the property and of how they are functionally linked, with reference to the *Goi Machid* and the *Sorkhāb Bazārchā* areas, in relation to the wider Bazaar area.
- Expansion of the description of the legal protection measures.
- Expansion of the description of the objectives and the measures of the planning instruments in force in relation to the factors threatening the property.
- Further explanation of the overall framework of the management system and of the state of advancement of the management plan in force, or under preparation – in this case, when it is expected to be implemented.

On 20 November 2009 ICOMOS received additional information provided by the State Party on these subjects. The specific information is discussed in the relevant sections.

ICOMOS sent an additional letter to the State Party on 16 December 2009 concerning the following issues:

- Description of how the provisions for the nominated area, buffer and landscape zones defined for the nominated property relate to the Master Plan and other planning instruments in force for Tabriz.
- Further clarification of whether the management plan mentioned at pp. 507 and 515 of the nomination dossier has been implemented or, should it be under development, when it will be approved and implemented.
- Assurance that steps were being taken to develop and implement a visitor management strategy and that information about the schedule of their drafting and implementation had been forwarded to ICOMOS.

The State Party sent a reply on 27 February 2010. The analysis of this information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property consists of three sites: the extant continuous core of the Grand Bazaar; the *Goi Machid* and the surviving parts of three small bazaars once connecting the Mosque with the main bazaar area; and the *Sorkhāb Bāzārchāsi*, one of the oldest in Tabriz. The whole property covers 28.973ha.

The nomination dossier provides a thorough description of the various types of building and their related functions that may be found in the nominated property.

The *sārās* (or *khāns*) are large complexes with a spacious central courtyard surrounded by one- or two-storey rows of rooms where goods could be stored and people lodged. Owing to the complexity of the activities carried out in the *sārās*, they are the most elaborately designed spaces in the Bazaar. In Tabriz, 26 *sārās* are still active, among which the most interesting from an architectural point of view are the *Mirzā-Jalil*, *Jafariya*, and *Amir Sarāyi*.

The *timchas* are structures with functions similar to those of the *sārās* but without accommodation facilities. *Timchas* are covered, often with complicated vaulted roofs, and have been used for the storage and trading of expensive goods. They may also act as entrance spaces for the *sārās*. In the Tabriz Bazaar twenty *timchas* have been identified, the most relevant of which are the *Muzaffariyya* and *Amir Timchasi*.

The *rasta* is the basic element of a bazaar: it consists of a double row of shops aligned along an often roofed linear path. In Tabriz, *rastas* are organized in parallel rows orientated north–south (e.g. *Taza Rasta* and *Gadim Rasta*) connected by perpendicular *rastas* (e.g. *Bāshmākh-chilar* and *Misgar* bazaars).

The *chārsug* is the vaulted intersection of two perpendicular *rastas*. In the Tabriz Bazaar there are four important *chārsugs*, among which two are worthy of mention: the *Sādiqiyya* and *Butchular Chārsugs*.

The *dālān* is a covered alley that connects two *rastas* or the interior and the exterior of the buildings. *Dālāns* also contain shops that sell goods of different kinds. In the Tabriz Bazaar 21 *dālāns* have been inventoried; among them the two most important are the *Gāni* and *Khān Dālāns*.

The *bāzārchā* is a small bazaar that usually serves a quarter. *Bāzārchās* have been always considered part of the Tabriz Grand Bazaar, in that they are built beside the entrance gates and connect peripheral spaces with the main Bazaar. Eight *bāzārchās* have been identified in Tabriz, the most important of which are the *Sorkhab Bazarchasi*, one of the oldest in the town, and the *Karaney-khāna*, *Rahli*, and *Kohna Bāzārchāsi*, once connecting the area of the *Goi Machid* with the core of

the Bazaar.

Other important components of the Bazaar area are the mosques (28), the schools (5), the libraries (3), the *hammams* (5), the icehouse (1), and the gymnasium (1).

The two most important mosques are the *Jumā-Machidi* and the *Goi Machid*. The former is of ancient origin but it was destroyed by an earthquake in 1814 and it was subsequently reconstructed in a new, simpler form. It retains a Kufi inscription from the Ilkhanate. The *Goi Machid* (Blue Mosque) owes its name to the colour of its mosaic tiles. It was damaged by the 1814 earthquake and has recently been restored.

The nominated property has a buffer zone formed by the urban fabric and more or less corresponding with the walled city of Tabriz, covering 75.408ha. It includes areas of dense historic fabric, more modern, less dense areas, and high-traffic roads.

The property is further protected by a Landscape Zone covering 492.823ha, established as a precaution against the construction of high-rise buildings in the vicinity of the Bazaar.

The functioning of the Bazaar was (and in part still is) based on a highly structured socio-professional system, related primarily to four spheres: security, internal transport, administration, and commerce. Within the commercial sphere, for instance, a diversity of activities are essential for the functioning of the Bazaar: selling (wholesale and retail); an administrative–economic organization serving commerce (e.g. commercial companies and banks); private occupation (e.g. brokerage); workshops (production, repair, packing and distribution, storage). The totality of these functions, tasks, and professional figures has made the Tabriz Historic Bazaar Complex into a very special form of ‘environment.’

History and development

Archaeological evidence bears witness to human occupation of the area corresponding to Tabriz since the Bronze Age. However, this occupation did not assume a continuous nature until the Iron Age.

In the 9th century Tabriz was an important military base. In this period Tabriz began to develop as an economic and business centre, and in the 12th and 13th centuries it was the capital of the country, although not uninterruptedly. The destruction of Baghdad by the Mongols in 1258 increased the importance of Tabriz as a trading centre.

Between 1316 and 1331 Tabriz experienced the high point of its economic and social life. Travellers such as Marco Polo and Ibn Battuta described it as one of the richest trading centres in the world.

During the 14th and 15th centuries the town's prosperity increased thanks to its strategic location, where much used west–east and south–east routes crossed, to the development of highly regarded manufactured products (e.g. cotton and silk textiles, arms, pottery), and to a wise policy of tax exemption. The first vast official and ceremonial space, the *Sahib-abad*, was created in 1258, around which the most important public buildings were built and where the army could be paraded, but which could also be used as a meeting place.

In the early 16th century the Safavid dynasty chose Tabriz as the capital city of their kingdom and the town became a powerful government centre, even though the capital was moved, first to Qazvin in 1548 and then to Isfahan, which were considered safer from Ottoman threat. In the 16th and 17th centuries manufacturing grew and diversified (weaving, copper metallurgy, weapon and tile production, leatherworks, tanning, soap making) and the volume of trade expanded.

In the last quarter of the 17th century Tabriz entered into a period of economic depression. Nonetheless, accounts by travellers from this period of decline still depicted Tabriz as an important trading centre.

The 18th century brought a period of political instability owing to Ottoman attempts at expansion. In 1780, at the beginning of the Qajar dynasty, the most destructive earthquake in the dense seismic history of Tabriz completely destroyed the town; it was, however, rapidly rebuilt.

Another earthquake in 1817 caused a great deal of damage to the mosques and to the town. In 1826 Tabriz was occupied by the Russians, but it was regained by the Qajar rulers two years later. During the 19th century several changes were made in the town. The governmental centre moved from the *Sahib-abad*, where public buildings were arranged around a vast square north of the Mehranroud River, to its present location, south of the river, close to the Aala Gate. *Sahib-ul-Amr* square was built in the historical area of *Sahib-abad*, and the Jami Mosque was restored, which helped restore its central role to the Bazaar. In 1871 a flood caused extensive damage to the bazaars, which were mapped and evaluated by means of a field survey. These records provide information about the condition of the Bazaar at that time. Repair works were undertaken in the years that followed to various structures: for example, the *Mozaffarieh Timcha* was completed in 1905.

In 1906 Tabriz became the centre of the Iranian Constitutional Revolution: the Bazaar was closed and the people demonstrated against the government since the Constitution was signed by the king and the first Parliament was established.

During the 20th century several wide roads were opened, leading to certain parts of the Bazaar becoming separated from its core.

Over the last thirty years a number of restoration projects have been carried out on the Jami and Goh Machids as well as on several commercial structures, whilst the Pol-bazaar has recently been completely reconstructed.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis in the nomination dossier considers bazaars in Iran and elsewhere. The criteria selected to compare the bazaars are age, extension, variety of architectural structures, completeness of functions (past and present), and integrity. The Iranian bazaars identified for the comparison are those of Arak, Ardabil, Esfahan, Tehran, Zanjan, Ghazvin, Ghom, Shiraz, the Kerman Historical-Cultural Structure (Tentative List), the Bazaar of Qaisariye in Laar (Tentative List), and the Historical Structure of Yazd (Tentative List).

The major difference that distinguishes the Tabriz Bazaar from those of other capital cities such as Isfahan, Tehran, and Ghazvin is the fact that their development was government-driven, whereas Tabriz grew because of the town's location and the wise economic policies of its rulers. These bazaars have, moreover, partially lost their role within the town and today are almost exclusively dedicated to retail sales rather than production or wholesale operations. This reduced role has been accompanied by a loss of integrity as a result of urban development. Among the examples that have been evaluated, some have histories as ancient as that of Tabriz and acted as models for planning other famous bazaars – for example, Qaisariye Bazaar in Laar was the model for the Shiraz and Isfahan Bazaars, just as Tabriz was for the Teheran and Arak Bazaars – but these are generally much smaller than the Tabriz Bazaar and have to a very considerable extent lost their integrity as a result of urban development.

ICOMOS considers that the comparative analysis with Iranian bazaars has been carried out in a thorough and systematic manner, although the comparison might have been limited to Isfahan, Tehran, and Ghazvin, which are more comparable in terms of size. Nevertheless, the comparison is convincing in demonstrating that Tabriz Bazaar (29ha) is larger, older, more lively, and more varied in its architectural structures and it has retained a higher level of integrity. The Tabriz Bazaar was also adopted as a model for planning more recent bazaars, such as those in Teheran or Arak, whilst the Sahib-abad Square in Tabriz formed the basis of the conception of Meidan Emam in Esfahan, which is on the World Heritage List.

ICOMOS notes, however, that a number of properties included in the Tentative List of Iran are or contain bazaar complexes, and that almost all of these are

proposed on the basis of more criteria than Tabriz Historic Bazaar Complex. These are Kerman Historical-Cultural Structure under criteria (i), (ii), (iii), (iv), and (vi), the Bazaar of Qaisariye in Laar under criteria (i), (ii), (iii) and (vi), and the Historical Structure of Yazd under all six cultural criteria. On the other hand, the comparative analysis for Tabriz set out in the nomination dossier convincingly demonstrates its superiority to the other properties selected for comparison, including those mentioned above.

The comparison with non-Iranian bazaars is less systematic and indirectly demonstrate the specificities of Tabriz Bazaar in respect of other historic bazaars included in World Heritage Sites, such as Kapalıçarsi Bazaar in the Historic Areas of Istanbul (1985, criteria (i), (ii), (iii), (iv)); the souks of the Ancient City of Damascus (1979, criteria (i), (ii), (iii), (iv), (vi)); Khan el-Khalili in Historic Cairo (1979, criteria (i), (v), (vi)); Historic Centre of Bukhara (1993, criteria (ii), (iv), (vi)); Chhatta Chowk and Meena Bazaar in the Red Fort Complex (2007, criteria (ii), (iii), (vi)); the Medina of Marrakesh (1985, criteria (i), (ii), (iv), (v)); and the Medina of Tunis (1979, criteria (ii), (iii), (v)).

Generally speaking, Arab *souks* are less often covered, are usually narrower, and provide less typological diversity. In Syria, the bazaar of Aleppo would have been a better choice for comparison than the Damascus bazaar in that the former has several masonry-roofed spaces whereas in Damascus the covering of the Souk al-Hamidiyya was added after its construction had been completed and is, furthermore, built in metal. The comparison with Istanbul, the capital city of a powerful rival empire, has not been completely developed.

ICOMOS notes that the comparative analysis has been extensive, dealing with properties that demonstrate similar values to those of the Tabriz Bazaar, whether or not they are inscribed on the World Heritage List or at national, regional, or international level.

The selection of the three components of the serial nomination is based on the fact that the Tabriz Historic Bazaar Complex was formed by the Grand Bazaar and eight bazaars built alongside the eight gates of the town. Only two of the eight bazaars have survived in a state of integrity, authenticity, continuity, and vitality that would justify their inclusion in the nominated property in order to illustrate the system of a central bazaar with radial gate-bazaars that was established after 1780.

ICOMOS considers that the sites selected for the serial nomination include the most relevant elements that illustrate the 16th–17th century fabric of the Tabriz Bazaar as well as its functioning. The inclusion of these components is fully justified.

ICOMOS considers that, despite certain minor weaknesses, the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Tabriz Historic Bazaar Complex is one of the most complete examples of a commercial-cultural system that is traditional of Iran;
- The Tabriz Historic Bazaar Complex is the largest, integrated covered architectural body and includes the most varied architectural spaces and buildings for commercial functions;
- The Tabriz Historic Bazaar Complex is one of the most important trading centres along the Silk Road and has been a place of cultural exchange since antiquity.

The serial approach to the nomination is justified by the State Party on the grounds that the historic city of Tabriz included the Grand Bazaar and eight gates, beside which eight additional bazaars were built after the 1780 earthquake. The additional information received on 20 November 2009 explained that, although these bazaars were not physically linked to the central core, they functionally acted as a unified complex from an economic, cultural, and social point of view.

ICOMOS considers that the serial approach is justified because in this way all the relevant components of the Bazaar complex have been included as a single nominated property. At the same time, the entire walled city of Tabriz, the background against which the historic Bazaar flourished, has been included in the buffer zone, thus ensuring the understanding and the protection of the values of the nominated area.

Integrity and Authenticity

Integrity

The Bazaar is an integrated architectural complex in which each building, structure, and open space contributes to the stability of the others and the functionality of the whole. The nominated property contains all the elements that are necessary to convey its significance.

The architectural integrity of the bazaar has been retained, although two large roads have resulted in some peripheral parts of the Bazaar being separated from its core. The multifunctional mixture of the Tabriz Bazaar is still alive despite the fact that certain activities, such as manufacturing, have been transferred to other areas. The visual integrity of the Bazaar has been maintained and the sequence of open and covered spaces can still be made out, despite some unsympathetic interventions.

In the opinion of ICOMOS the architecture of the Tabriz Bazaar conserves a rich repertoire of commercial buildings and the connection between the physical structure and its functioning is still clearly legible, and in

many cases alive. It is worth remembering, however, that the medieval Bazaar of Tabriz was destroyed by successive earthquakes and that the present one dates from after the 1780 earthquake. The ruins of earlier structures were levelled and new buildings were erected on top of them which exhibit good-quality design and workmanship. The integrity of the 18th century Bazaar is quite well preserved.

ICOMOS also considers that the components of the series have been selected to reflect the entirety of the Historic Bazaar.

Authenticity

The conditions of authenticity of the nominated property have been assessed for all the different types of buildings, in general taking four aspects into account: design, workmanship, setting, and material. The nomination dossier states that, generally speaking, the authenticity of the property has been retained, but it also acknowledges that some interventions have to a limited extent affected the overall authenticity. The nomination dossier also maintains that the authenticity of the Goharshad and Jami Machid, which have been recently undergone considerable restoration works, has been preserved.

ICOMOS considers that the rich documentary and iconographic historical sources bear credible witness to the importance of the Tabriz Bazaar over history and to the permanence of its layout, whilst its materials and design date back to the end of the 18th century, after it was destroyed by the 1780 earthquake. The fabric of the Bazaar still exhibits the design, workmanship, and materials of the period when it was constructed, despite the repairs that were made necessary by subsequent shocks and floods.

The Bazaar is still a lively and economically active place, attesting to its rich and long-lasting economic, social, and cultural exchanges.

However, ICOMOS notes that there is a tendency to reconstruct missing elements, which might pose problems concerning authenticity in case this trend is not readdressed.

ICOMOS considers that the conditions of integrity and authenticity have been met.

ICOMOS recommends, however, that sound conservation principles and criteria should be adopted and implemented in any work in the nominated property.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), and (iv).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that Tabriz Historic Bazaar Complex has been one of the most important international trading and cultural centres, thanks to the centuries-old east–west exchanges along the itineraries of the Silk Route. It is claimed that the nominated property exhibits one of the most varied and integrated assemblages of architectural buildings and spaces, as well as one of the most sustainable socio- economic structures, attesting to the wealth in trade and cultural interaction of Tabriz.

ICOMOS considers that the long history of the Tabriz Historic Bazaar complex and the fact that it has been completely rebuilt several times, most recently and comprehensively in 1780, at a time when its decline was already under way because of the role assumed in the region by the Ottoman Empire, demonstrates that Tabriz was a place of intensive commercial and cultural exchanges made possible by the town's commitment to trade and its strategic location along highly used trade routes.

ICOMOS also notes that the relation of Tabriz with the Silk Route itineraries, especially for the earliest periods of the Route's long history, has been based mainly on the study of artefacts from single archaeological excavations and the establishment of their provenance, but this is not mentioned in the description provided for the 'Silk Road' proposal in the Tentative List of Iran.

On the other hand, the literature survey attached to the nomination dossier clearly demonstrates that Tabriz has been a major commercial centre and an exceptional place for interchange of human values since the 12th – 13th centuries, where merchants and traders from as far as the Mediterranean region, Russia, Central Asia, and India came together to supply and acquire goods.

ICOMOS also observes that the Tabriz Bazaar was a model for planning more recent bazaars, such as those of Tehran or Arak. Additionally, although this is mentioned only under criterion (iv), Sahib-abad Square, the first conceptualization of which may be found in Ghazvin Aalighapoo Square, had an influence on the subsequent construction of Meidan Emam in Esfahan which is included on the World Heritage List.

ICOMOS considers that this criterion has been justified.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the Tabriz Historic Bazaar bears witness to its having been one of the most complete socio-cultural

and commercial complexes among bazaars. It developed from the early centuries of the Islamic era into a system where different guilds and crafts assume the responsibility of fulfilling functional and management tasks according to a tradition that still survives at the present day. The Tabriz Bazaar has also played a central role in spreading cultural trends, thanks to its long-lasting vitality as a trade centre. The complex interactions among people from different cultures and social levels have created a unique culture.

ICOMOS considers that the Tabriz Historic Bazaar is an exceptional physical, economical, social, political, and religious complex that bears exceptional testimony to a civilization which is living. Over the centuries it has developed into a socio-economic and cultural system in which specialized architectural structures, functions, and professions, along with people from different cultures, are integrated in a unique living environment. Thanks to its location and to wise policies of endowments and tax exemptions, the Tabriz Bazaar was given a long-lasting economic role, becoming an exceptional example of a multi-functional commercial-cultural complex.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Tabriz Historic Bazaar Complex is an outstanding example of an integrated multi-functional urban complex in which interconnected architectural structures and spaces have been shaped by commercial activities and their related needs. A large number of specialized buildings and structures are concentrated and connected with one another in a relatively compact area so as to form what is an almost single integrated structure, designed so as to be seismic-safe. Masses and open spaces are properly interrelated and interspaced in order to regulate the access of air and light. Open spaces and squares also provide places of escape and rescue when earthquakes strike. Among the relevant structures in the Tabriz Bazaar the Pol-Bazaar (bazaar on the bridge) is considered to be a prototype in its own right.

ICOMOS considers that the comparative study is particularly convincing in showing the Tabriz Bazaar to be an outstanding example of an architectural-urban ensemble which illustrates the long-lasting role in the world trade network through Central Asia played by Tabriz over several centuries. The interconnected system of buildings, structures, and spaces set up to respond to functional demands has given rise to an exceptional entity in which the architectural-urban structure cannot be disentangled from its socio-cultural and commercial functions.

ICOMOS considers that demonstration of the seismic safety of the complex would require more extensive research from both an historical and a structural perspective, taking into account also the fact that the physical fabric of the Bazaar dates back to after 1780, when a disastrous earthquake razed almost the whole of Tabriz to the ground. Similarly, consideration of the Pol-Bazaar as a prototype would have required a specific comparative analysis with similar structures such as the Rialto Bridge in Venice and the Ponte Vecchio in Florence. Additionally, today's Pol-Bazaar is a complete recent reconstruction, a fact that contradicts the idea of it being a prototype.

ICOMOS considers that this criterion has been justified, with the exclusion of the considerations about the Pol-Bazaar.

ICOMOS considers that the serial approach is justified and that the selection of groups of buildings is appropriate to illustrate the values of the nominated property.

ICOMOS considers that the nominated property meets criteria (ii), (iii), and (iv) and the conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- The layout of the Bazaar, with its network of *rāstās*, *dālāns*, *timchas*, *sārās*, *bāzārchās*, and the rhythmic alternation of covered and unroofed spaces;
- The religious, educational, and cultural buildings that are integrated into the Bazaar;
- The social and professional organization that still ensures that the Bazaar functions in a sustainable manner;
- The brick structures of the buildings, with their intricate lines.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The city is still growing (for example, in the areas south of the Bazaar the population has increased) and so it is likely that demands for new constructions will arise. However, at the present time the major factors affecting the property are the adaptation of buildings to new, incompatible functions, the installation of modern technical equipment in an unsympathetic manner, and the replacement of building components with others that are not compatible in either materials or technology.

ICOMOS recommends that principles for conservation, restoration, renovation processes, and good design for new buildings in the areas close to the Bazaar should be laid down. Control over the building permits in the

nominated property and buffer zone is vital in order to avoid threats from inappropriate building development.

Tourism pressures

At the present time there is no pressure from tourism. Nevertheless, ICOMOS recommends that training programmes on sustainable tourism should be developed for property owners and managers in order to ensure that they are prepared to tackle tourism issues.

Environmental pressures

There are environmental pressures caused by pollution (traffic, sewage, garbage) and by the climatic conditions (seasonal and daily thermal variation).

Natural disasters

Floods and earthquakes are major natural catastrophes that have repeatedly occurred in the region. Several studies have been conducted in collaboration with universities and external experts in order to understand how the vaulted complex behaves under the impact of an earthquake, in order to identify the weak points of the whole structure and develop ideas for possible reinforcement.

ICOMOS suggests that this research should be continued in order to identify the structural behaviour of the Bazaar and to make it possible for planning policies as well as flood-effect control systems to be implemented in order to reduce the flood threats.

Impact of climate change

ICOMOS considers that climate change may result in an increased frequency of natural disasters (floods). Higher temperatures and humidity may result in the development of fungi, moulds and other pests that affect building materials, especially wood.

Other factors

The lack of maintenance of the Bazaar structures has caused leakage and damp penetration. Rising damp has been counteracted by the creation of drainage channels.

ICOMOS considers that the low level of awareness of the Bazaar users towards sensitive interventions in historic areas is a major factor affecting the property. Several incompatible replacements and repairs have been carried out. There is a need for guidelines, combined with incentives to address this issue again.

ICOMOS considers that the main threats to the property are earthquakes, as demonstrated by the active seismic history of the region, and insensitive maintenance and upgrading interventions.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of all the zones have been identified and described in a clear and unambiguous manner.

The nominated property corresponds with the monument protected in 1975 as the Tabriz Historic Bazaar Complex, which includes all the buildings and open spaces of the Bazaar. Two additional nominated areas have been defined and included in the nominated property – the Sorkhab Bazarchasi, one of the oldest in Tabriz, and the 15th century Goi Machid (Blue Mosque), which merits inclusion in the nominated property by virtue of its relation to the Karaney-khāna, Rahli, and Kohna Bāzārchāsi and its importance as a monument on its own right.

The nominated property has two additional levels of indirect protection. The first is a buffer zone which coincides with the walled city of Tabriz, and the second is a much larger landscape zone which makes it possible to control permits for new constructions in the surrounding area and acts as a precaution against the construction of high-rise buildings around the historic centre.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate to express the values of the nominated property and to ensure its protection.

Ownership

The ownership profile is rather complex, including public property (passages, yards, arcades) 16%; private property (66%), and property owned by the *Wqaf* Endowment and Charity Affairs Organisation, i.e. mosques, schools, shrines, etc. (16%); and state property, i.e. banks or state-owned shops (2%).

Protection

Legal Protection

In Iran the legal provisions for the protection of cultural heritage are to be found in general (e.g. the 1920 *Constitution Law* and the 1996 *Penal Law*) or specific law, such as the 1930 *Law for the protection of national heritage*.

The 1930 Law defines the procedures for the identification of cultural heritage and establishes the National Heritage List, together with the criteria for inclusion on this list. It also defines provisions for archaeological excavations, further detailed by the 1980 *Bylaw concerning unauthorized excavations*. Further

provisions concerning the acquisition of property of cultural significance are to be found in the 1969 *Law concerning acquisition of Land, Buildings and Premises*, which regulates the modes of acquisition on the State's part of immovable property for the purpose of protecting or improving the presentation of cultural property.

In 1979 the Iranian Cultural Heritage Organisation (later renamed the Iranian Cultural Heritage, Handicraft and Tourism Organisation – ICHHTO) was established to ensure the management of cultural heritage. The Organisation is responsible for studying, investigating, surveying, identifying, and registering movable and immovable property of historical, archaeological, and cultural value. The ICHHTO is also responsible for preparing and implementing plans aimed at repairing and revitalizing monuments, buildings, and valuable cultural-historical complexes.

In 2001 it was decided that all public organizations must conduct studies to assess the cultural/historic impacts of major development projects at the earliest stage of the scheme.

The Tabriz Historic Bazaar Complex was added to the List of Iran's National Monuments in 1975, since when it has been covered by special protection and conservation measures.

Three different protection areas have been established: a core, a buffer zone, and a landscape zone. In the nominated area all activities involving repair, restoration, rehabilitation works, or changes of function require authorization by the ICHHTO. In the buffer zone no building may be higher than 7.5m high and all constructions and urban development plans must be approved by ICHHTO. In the landscape zone all large-scale plans (high-rise buildings, highways, subways, and infrastructures) must be approved by ICHHTO at the feasibility study stage.

ICOMOS sent a letter to the State Party on 16 December 2009 asking how these provisions relate to the planning instruments in force for Tabriz.

The State Party has replied that, under the provisions of the law for urban planning passed on 2004, all works to be carried out in historic areas must be supervised by ICHHTO. The regulations concerning protected monuments are inserted in the comprehensive master plan and in the detailed plans for Tabriz historic city, which further includes specific and detailed provisions to ensure the safeguarding of heritage features of the urban historic fabric.

The aforementioned regulations were ratified in 1977 and came into force immediately. Since then all public and private urban development projects concerning the above mentioned areas have taken into account the zoning described above. One of the results of the zoning has been the diversion of the underground railway system route to outside the Bazaar area. Mosques and

other monuments in the vicinity of the Bazaar have been registered separately at different dates: Goh Masjed was registered in 1932 and the registration process continued until 2005, when Sorkhab Bazarcha, the Kalkatechi Library, and Seyyed Golabi Bath were added to the List of National Monuments.

Traditional Protection

In the past the Bazaar was managed by the bazaar guilds and proprietors. This form of management has become less stringent, although recently a mixed management formula has been established which includes the guilds, the charity organizations, and the owners in the management process.

Effectiveness of protection measures

ICOMOS considers that a considerable effort has been made to ensure the protection and conservation of the Bazaar.

Nevertheless, ICOMOS notes that control over building permits in the nominated property and its buffer zone is vital in order to avoid the threats of inappropriate building development or adaptation and it therefore recommends that mechanisms should be put in place to ensure that such a control be effective.

ICOMOS considers that the legal protection in place for the nominated property is adequate, but it recommends that strict control over building permits should be ensured so as to avoid the threat of inappropriate building development or adaptation.

Conservation

Inventories, recording, research

ICOMOS acknowledges that much research, survey, and documentation concerning the Bazaar and the adjoining buildings have been carried out.

However, ICOMOS notes that technical inventories (i.e. detailed and systematically recorded information about each monument) are not mentioned in the nomination dossier. The descriptions in the dossier lack basic information, such as dates of construction, repairs, styles of buildings, and their state of conservation. Most of the surveys reported in the dossier have been prepared recently and should be regarded as the first stage of analytical studies.

ICOMOS recommends that the efforts undertaken to document the built structures of the nominated property should be continued on a systematic basis, and that inventories should contain baseline data for the future monitoring of the property.

Present state of conservation

The nominated property has undergone extensive conservation efforts since 1979. Problems of rising damp have been dealt with and structural cracks are monitored, whilst leakage has been temporarily arrested through the use of provisional waterproof sheets over the roofs.

ICOMOS considers that these efforts should be continued in order to improve the state of conservation of the property, which has suffered from lack of maintenance. Considerable care should also be exercised in applying sound conservation principles and avoiding over-restoration.

Active conservation measures

Several conservation and maintenance projects are being carried out in the nominated property by craftsmen under ICHHTO supervision, which identifies the need, sets the priorities, and develops schedules for interventions. Along with repair activities, the removal of inappropriate elements is also being undertaken.

Maintenance

Maintenance is included in the conservation measures, since it has not been carried out for many years.

Effectiveness of conservation measures

ICOMOS observes that the efforts undertaken since 1979 have proved to be effective. Several conservation works have been carried out and some interventions (e.g. in the *Goi Machid*) demonstrate careful treatment. However, there is a tendency to overdo and to reconstruct missing elements or even parts of the Bazaar, a practice which may threaten the authenticity of the nominated property.

ICOMOS considers that the conservation efforts undertaken by the State Party have resulted in a general improvement of the conditions of the built fabric of the Bazaar. However, ICOMOS considers that the tendency to be over-elaborated requires to be readdressed, to avoid threatening the authenticity of the fabric.

ICOMOS therefore recommends that sound conservation principles should be laid down and guidelines developed to orientate interventions and combined with financial incentives. ICOMOS also suggests that priorities in conservation and maintenance works should be drafted and followed. Finally, ICOMOS recommends that the efforts undertaken to document the built structures of the nominated property should be continued on a systematic basis, and that inventories should contain baseline data for the future monitoring of the property

Management

Management structures and processes, including traditional management processes

The management framework for the property is based on the integration of existing planning instruments (the Master Plan and the detailed Plan for Tabriz), administrative and technical bodies (the steering committee for Tabriz Bazaar and the ICHHTO Tabriz Bazaar Base), conservation objectives, SWOT analysis, implementation strategies, and operational programmes.

The ICHHTO has the responsibility of preserving all registered and non-registered cultural property. It fulfils its task through the High Technical Council and provincial Bases. Each Base refers to an advisory steering committee of distinguished experts. In the case of the Tabriz Bazaar, since the ownership and stakeholder pattern is complex, the committee also includes representatives of the stakeholders. This committee determines and explains the general adopted protection and management policies to all stakeholders involved in the Bazaar through the mediation of reliable market persons. Finally, the office of the conservation staff is very close to the Bazaar Complex which ensures a permanent staff presence.

Policy framework: management plans and arrangements, including visitor management and presentation

According to the nomination dossier, the duration of the Management Plan for the property is ten years. The major objectives of the Management Plan mentioned in the dossier are: preparing a master plan for conservation works, developing educational programmes, carrying out surveys, and ensuring the follow-up of legal matters. On the basis of the goals identified, subdivided into short-, medium-, and long- term objectives, several detailed operational plans have been developed, including programmes for the presentation and promotion of the property. For each plan the financial needs have been identified.

ICOMOS has requested the State Party to explain further the overall framework of the management system and of the instruments on which management will be implemented (point 6, letter of 19 October 2009). The information provided in the State Party's letter of 20 November 2009 gives no information about the state of development and enforcement of the Management Plan, although this had been explicitly requested. ICOMOS raised this issue in a second letter, sent to the State Party on 16 December 2009.

The State Party replied that the management plan was being carried out and that a number of project mentioned in the nomination dossier had already been completed, including restoration plans, some pilot projects within the nominated area, educational and training plans (i.e. in the security sector), compiling regulations for the use of

traditional materials, establishing a database to inventory archaeological ceramic finds, holding training courses for university students, printing information brochures on the Bazaar, improving tourism facilities (information desk, tourist signage, restrooms, etc.), training of the ICHHTO base staff in the monitoring sector, monitoring the property, establishing cooperation programmes with the universities for research purposes.

In the same letter, ICOMOS requested that steps should be taken to develop and implement a visitor management strategy and that information about the timetable for completion and implementation should be forwarded to ICOMOS.

The State Party replied that a comprehensive tourism plan for Tabriz had been prepared by the Art University of Tabriz in conjunction with the organization of national and international tourism during 2001-2006 which includes a 20-year perspective for the development of tourism in Tabriz. A group of NGO and freelance consultants had drafted a Tourism Plan for the nominated property which will be examined by an expert committee at the end of 2010. This plan includes actions in the research, training, and presentation sectors.

ICOMOS considers that the management system in place is adequate.

ICOMOS appreciates the additional efforts undertaken by the State Party in this field and recommends that updated information on any progress in the finalization and implementation of the management and visitor plans that are under development should be transmitted to the World Heritage Committee and ICOMOS.

Risk preparedness

The nomination dossier does not contain any reference to risk preparedness, even though the State Party is aware of the threats that are posed to the nominated property, especially by earthquakes, and has carried out applied research to prevent damage to the nominated property.

ICOMOS considers that a risk-preparedness plan should be prepared that specifically addresses the threats posed by earthquakes and floods, which are the most likely menaces to the nominated property.

Involvement of the local communities

The involvement in the Tabriz Steering Committee of the head of the Guilds and Board of Trustees of the Bazaar, as well as the mediation of reliable Bazaar businessmen identified by authorities among the Bazaar stakeholders, makes it possible to reckon that the local community has been involved in the process, to a certain extent.

Resources, including staffing levels, expertise and training

The nomination dossier contains a table detailing past investments and indirectly also provides information on future financial needs. The Tabriz Bazaar ICHHTO Base has an administrative and technical organization which includes two architects, three restorers, 24 craftsmen, and ten students. In the research branch two posts for GIS and computer operators are vacant.

ICOMOS considers that, owing to the importance of the structures and the structural stability of the buildings of the Bazaar, it would be important for at least one structural engineer with expertise in historic masonry structural behaviour to be hired to work with the staff of the ICHHTO Base.

Effectiveness of current management

The framework envisaged for the management of the property has taken account of its specificity and complexity, and also of stakeholder issues. The relationships between the authorities, the technical staff, and the Bazaar inhabitants seem to be solidly grounded. The results of conservation works carried up to the present suggest that the system that has been put in place is an effective one.

ICOMOS considers that the management system for the property is adequate. The State Party, however, should consider including in the management plan under elaboration observations about the long-term vision for the nominated property. ICOMOS recommends that a structural engineer trained in historic masonry structural behaviour be hired to cooperate with the staff of the ICHHTO Base. Furthermore, the State Party should develop training programmes for the technical staff so as to increase the understanding of shared conservation principles and standards among the Bazaar community, professionals, and workers.

6. MONITORING

The nomination dossier states that monitoring exercises are implemented with the aid of the authorities responsible for the Bazaar, the ICHHTO Base, and research and scientific centres. The nomination dossier also identifies a number of indicators for monitoring purposes, grouped according to the aspect to be monitored: traffic, respect for regulations, economic and social issues, conservation, tourism, and development. For each indicator the periodicity of measurement and the place of data storage are provided.

ICOMOS considers that monitoring has been organized in a reasonable and sound manner.

ICOMOS recommends the State Party to implement the monitoring programme as soon as possible in order to confirm its applicability in the long term.

7. CONCLUSIONS

The nomination dossier illustrates in an extensive and detailed way the physical structure of the nominated property, its functioning, and its significance over the centuries with useful and well grounded references to the socio-architectural phenomenon of bazaars and the role played by Tabriz as a trading centre along one of the several itineraries of the Silk Road. It has been demonstrated that the property conforms with the proposed criteria and the conditions of authenticity and integrity have been met.

Recommendations with respect to inscription

ICOMOS recommends that the Tabriz Historic Bazaar Complex, Iran, be inscribed on the World Heritage List on the basis of *criteria (ii), (iii), and (iv)*.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Tabriz Historic Bazaar Complex, located along one of the most frequented east-west trade routes, consists of a series of interconnected, covered brick structures, buildings, and enclosed spaces for a variety of functions - commercial and trade-related activities, social gatherings, and educational and religious practices. Closely interwoven with the architectural fabric is the social and professional organization of the Bazaar, which has allowed it to function over the centuries and has made it into a single integrated entity.

Tabriz Historic Bazaar Complex has been one of the most important international places for commercial and cultural interchange, thanks to the centuries-old east-west trading connections and routes and to a wise policy of endowments and tax exemptions.

Tabriz Historic Bazaar bears witness to one of the most complete socio-cultural and commercial complexes among bazaars. It has developed over the centuries into an exceptional physical, economic, social, political, and religious complex, in which specialized architectural structures, functions, professions, and people from different cultures are integrated in a unique living environment. The lasting role of the Tabriz Bazaar is reflected in the layout of its fabric and in the highly diversified and reciprocally integrated architectural buildings and spaces, which have been a prototype for Persian urban planning.

Criterion (ii): Tabriz Historic Bazaar Complex was one of the most important international trade and cultural centres in Asia and the world between the 12th and the 18th centuries, thanks to the centuries-old east-west trade routes. Tabriz bazaar is an exceptional example of an architectural-urban commercial area, which is reflected in its highly varied and integrated architectural buildings and spaces. The Bazaar is one of the most sustainable socio-economic structures, and its great complexity and articulation attests to the wealth in trade and cultural interaction of Tabriz.

Criterion (iii): Tabriz Historic Bazaar bears witness to one of the most complete socio-cultural and commercial complexes among bazaars. It is an exceptional physical, economic, social, political, and religious complex that bears an exceptional testimony to a civilization that is still living. Over the centuries, thanks to its strategic location and to wise policies of endowments and tax exemptions, Tabriz Bazaar has developed into a socio-economic and cultural system in which specialized architectural structures, functions, professions, and people from different cultures are integrated into a unique living environment.

Criterion (iv): Tabriz Historic Bazaar is an outstanding example of an integrated multi-functional urban complex in which interconnected architectural structures and spaces have been shaped by commercial activities and related necessities. A large number of specialized buildings and structures are concentrated and reciprocally connected in a relatively compact area to form what is almost a single integrated structure.

Integrity and Authenticity

The nominated property contains all the elements that are necessary to convey its significance. The integrity of the 18th century Tabriz Bazaar is well preserved and its architecture conserves a rich repertoire of commercial buildings; the connection between the physical structure and its functioning is still clearly legible, and in many cases alive.

The rich historical sources bear credible witness to the importance of the Tabriz Bazaar over history and to the permanence of its layout. The fabric of the Bazaar still exhibits the design, workmanship, and materials of the period when it was constructed, after the 1780 earthquake. The Bazaar is still a lively and economically active place, attesting to its rich and long-lasting economic, social, and cultural exchanges.

Management and protection requirements

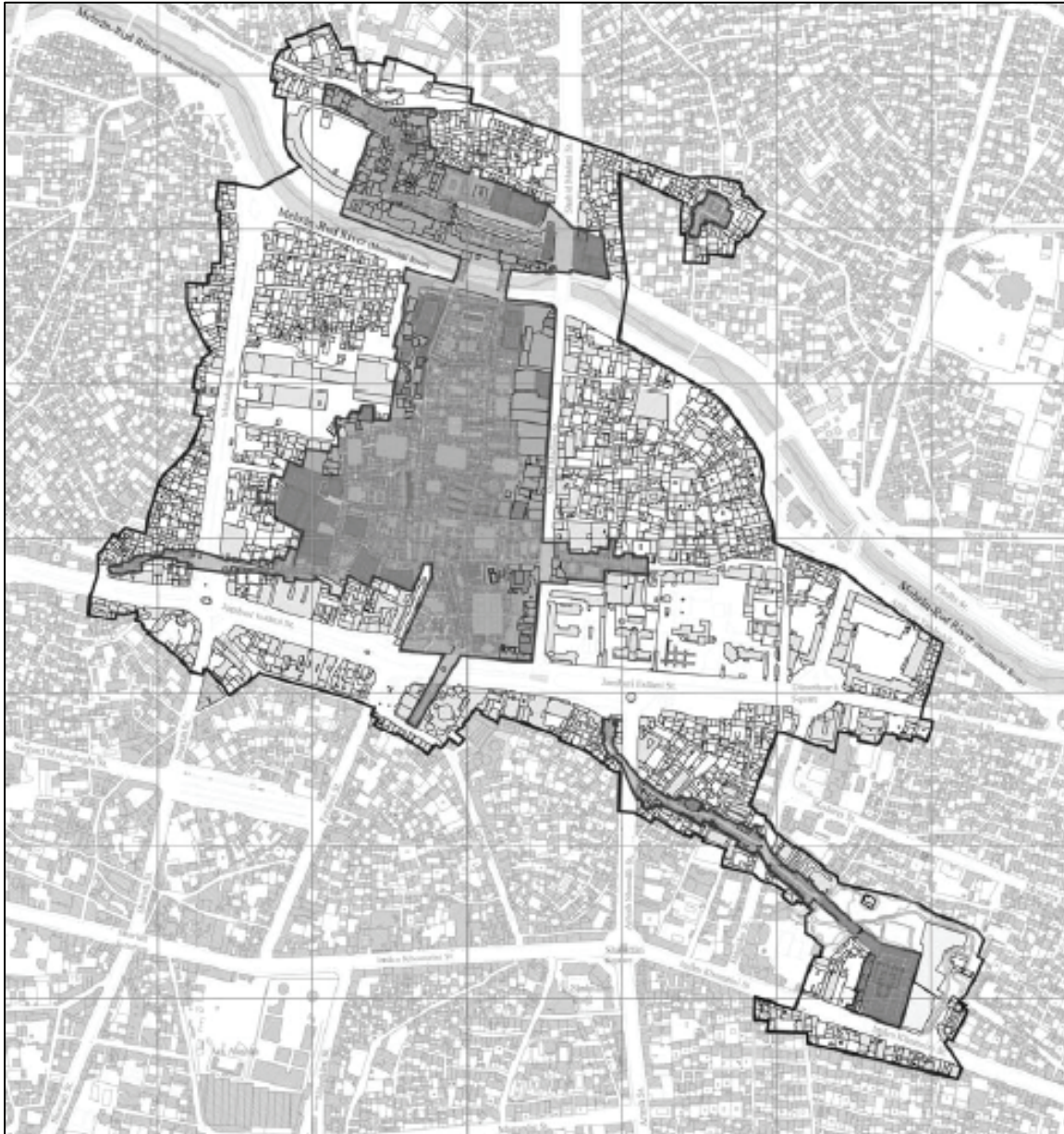
The Tabriz Historic Bazaar Complex was officially protected in 1975 and since then has been covered by special stewardship measures. Three different protection areas have been established (a nominated area, a buffer zone, and a landscape zone), which are subject to special regulations, incorporated into the planning instruments. Within these areas any kind of activity

needs authorization by the Iranian Cultural Heritage, Handicraft and Tourism Organization (ICHHTO), which is the institutional body in charge of the protection of protected monuments.

The management framework for the property is based on the integration of existing planning instruments (the Master Plan and the detailed Plan for Tabriz), administrative and technical bodies (the steering committee for Tabriz Bazaar and the ICHHTO Tabriz Bazaar Base), conservation objectives, SWOT analysis, implementation strategies, and operational programmes that are included in the management plan.

ICOMOS recommends that the State Party give consideration to the following:

- Transmitting to the World Heritage Committee and ICOMOS updated information on any progress in the finalization and implementation of the management and visitor plans that are under development;
- Formulating and implementing principles for conservation, restoration, renovation, and good design for new buildings in the areas close to the Bazaar. Guidelines for conservation might be linked to financial incentives;
- Ensuring strict control over the building permits in the nominated property and buffer zone so as to reduce threats from inappropriate building development;
- Including observations on the long-term vision for the nominated property in the management plan;
- Continuing on a systematic basis the efforts undertaken to document and inventory the built heritage containing baseline data for the future monitoring of the property;
- Developing and implementing a risk-preparedness plan which specifically addresses earthquake and flood-related risks;
- Developing and implementing training programmes on sustainable tourism for the property managers, to ensure that the property is prepared to deal with tourism issues;
- Preparing and implementing training programmes for the technical staff in order to increase understanding of shared conservation principles and standards among the Bazaar community, professionals, and workers.



Map showing the boundaries of the nominated property



General view of the nominated property



Amir Sarāyi



Interior view of Dar- Dallazan Rastasi



Interior view of Sadiqiyya Charsugu

Bikini Atoll (Marshall Islands)

No 1339

Official name as proposed by the State Party:

Bikini Atoll

Location:

Bikini Atoll,
Republic of the Marshall Islands

Brief description:

In the wake of World War II, in a move closely related to the beginnings of the Cold War, the United States of America decided to resume nuclear testing in the Pacific Ocean, on Bikini Atoll in the Marshall archipelago. After the displacement of the local inhabitants, 67 nuclear tests were carried out from 1946 to 1958, including the explosion of the first H-bomb (1952). Equivalent to 7,000 times the force of the Hiroshima bomb, the tests had major consequences on the geology and natural environment of Bikini Atoll and on the health of those who were exposed to radiation. These tests generated a set of symbolic values of international significance, leaving a lasting imprint on the history of the 20th century.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

1. BASIC DATA

Included in the Tentative List: 24 October 2005

International Assistance from the World Heritage Fund for preparing the Nomination: 2006

Date received by World Heritage Centre: 28 January 2009

Background: This is a new nomination.

Consultations: ICOMOS consulted its International Scientific Committees on the Pacific Islands, on Underwater Cultural Heritage, and on Intangible Cultural Heritage.

Literature consulted (selection):

Delgado, J.P., Lenihan, D.J., and Murphy, L., *The Archeology of the Atomic Bomb: A Submerged Cultural Resources Assessment of the Sunken Fleet of Operation Crossroads at*

Bikini and Kwajalein Atoll Lagoons. Submerged Resources Center Professional Report No. 11, National Park Service, Santa Fe, New Mexico, 1991.

Fontaine, A., *Histoire de la guerre froide*, Paris, Fayard, 1967.

Lips-Dumas, F., "7000 Hiroshima, les îles Marshall ont été sacrifiées 'pour le bien de l'humanité,'" *XXI-Vingt et un*, n° 7, 2009, pp. 34-45.

Lokan, K., et al., *Radiological Conditions at Bikini Atoll: Prospects for Resettlement, Report of an Advisory Group of the International Atomic Energy Agency*, Vienna, Austria: IAEA, 1998.

Niedenthal, J., *For the Good of Mankind: A History of the People of Bikini and their Islands*, Majuro: Bravo Publishers, 2002.

Smith, A., and Jones, K. L., *Cultural Landscapes of the Pacific Islands*, ICOMOS Thematic Study, December 2007.

Technical Evaluation Mission: 7-17 September 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 17 December 2009 about the following points:

- The involvement of the Historic Preservation Office in the conservation and management of the property;
- The projected conservation and management plan and the setting up of the Bikini Atoll Conservation and Management Office;
- A study to evaluate the risks arising from the presence of conventional bombs and fuel in the sunken vessels and wrecks;
- The awareness of the community of Bikini of the implications of inscription on the World Heritage List, which include the necessity of preserving remains linked with the nuclear tests;
- Changing the name of the property to link it to the theme of the nomination, for example to 'Bikini Atoll nuclear test site.'

The State Party replied on 2 February 2010. The analysis of this documentation is included in this evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Bikini Atoll is located in the north-west of the Marshall Islands archipelago, which forms part of the western Micronesian group of islands in the Pacific Ocean. It consists of a long annular coral reef, linking together 23 main islets whose total surface area is less than 720ha. The main islet of Bikini has given its name to the whole atoll.

The central lagoon, which is basically elliptical in form,

opens widely to the ocean in its southern part. Its largest diameter is about 40km and its smallest some 22km. The lagoon is easily accessible by large-tonnage ships, opening up a possibility which was exploited for the nuclear tests.

Today the atoll at first sight offers the idyllic image of a natural island and lagoon landscape in the heart of the Pacific, with its vegetation, its coral reefs, the waters of the lagoon, and its pleasant climate. Bikini is also striking for the diversity of its fauna and flora, both on land and in the sea.

However, a number of specific tangible and landscape features of Bikini Atoll are linked to the various American nuclear test campaigns carried out from 1946 until 1958. Various types of evidence have been left behind: excavations and disappearances of islets, vessels sunk in the lagoon, bunkers and land installations, and radioactive residues in the soil.

Explosion craters and disappearances of islets:

The Bravo explosion (1954), in the Castle series, was to test the second hydrogen bomb, the strongest ever carried out by the Americans, equivalent to 15,000 kilotonnes (kt) of TNT. The crater opened up by the Bravo surface explosion destroyed two of the 25 islets in the atoll at the time and partially destroyed a third. The crater is over 2km wide and 80m deep. This is the largest and most visible crater on Bikini, clearly to be seen on aerial photographs and by satellite observation. More generally, the nuclear tests affected the islands and the coral reef in several places, in a way that is more widespread and less immediately visible today than the Bravo crater. It has affected the atoll's morphological structure, the underwater geography, and the plant and underwater environment.

The sunken vessels:

In Operation Crossroads (July 1946) ten major warships, nine secondary vessels, and five aircraft were subjected twice to nuclear blasts, in the same location, once by aerial bombing and once by a submarine blast. The remains of this fleet lie at the bottom of the lagoon, at a depth of around 60m, in the underwater blast crater or nearby. Amongst them were the aircraft carrier *Saratoga*, the battleship *Arkansas*, the Japanese battleship *Nagato*, two submarines, and an Avenger bomber. As the test was intended to simulate a war situation, some of the vessels and aircraft still contain their fuel reserves, and in some cases their stocks of unexploded munitions as well. Together they form a unique series of battleships and military materiel, built in both the United States and Japan, from 1912 until the end of World War II. The shapes and the general structures of the vessels have been conserved or can be easily identified, although the superstructures were largely destroyed by the explosions.

Remains of bunkers and buildings:

Eneu Island in the south-east of Bikini Atoll was the site of two main structures that are still there today: the Communications Station Bunker and the Monitoring Bunker. The less substantial Bomb Assembly Building was demolished in the 1980s because of its very poor condition. There are more observation and monitoring bunkers on seven other islands in the atoll, including Bikini itself. All the bunkers are made of reinforced concrete. There are other tangible remains, in particular technical equipment that was abandoned on the site.

Radiation:

According to a report by the International Atomic Energy Agency in 1998, the scientific community recognizes that access to the islands of the Bikini Atoll and its lagoon is today considered not to represent a health hazard, provided that certain conditions relating to food are complied with (see below).

Most of the radionuclides produced in nuclear weapons testing are short-lived. They are therefore no longer present today in the form of radionuclides, but in transmuted forms that are stable and hence non-radioactive. However, there are still radioactive nuclides, such as those with half-lives of a few decades (cesium-137 and strontium-90 in particular) on the atoll in substantial quantities. To a lesser extent there are also radionuclides with a long half-life (plutonium-239, plutonium-240, americium-241).

Cesium-137 is the most dangerous of these radionuclides because of its current concentrations, which are on average 160 times greater than its natural occurrence, and this can rise to 1,000 times in certain locations, combined with its biochemical assimilation by plants. Coral atoll soils are potassium-poor. Potassium is an essential nutrient for plants, and it tends to be replaced by cesium. The regular consumption of vegetables grown on the atoll may be hazardous for human health.

Environmental and human impact:

The natural environment, the landscape, and the seascape form an important part of the value of Bikini. They have been powerfully impacted by the nuclear testing. However, the wealth and biodiversity of the marine flora and fauna, which derive naturally from the ocean, have recovered in a remarkable and original way. This is particularly visible in the Bravo crater, where coral activity and the geological reconstitution of the reef have been taking place for a number of years. The waters and the site of Bikini in fact provide a unique living laboratory for the study of ecosystem regeneration after a major destructive event and following extreme exposure to radioactivity. Similar observations have been made of the regeneration of vegetation and fauna on the atoll, birds in particular.

In the moments following nuclear explosions, enormous clouds of radioactive dust were formed, rapidly reaching up to the highest layers of the atmosphere. The dust was then swept up by the prevailing winds, and a large proportion of the radioactive material fell into the ocean and into the territories over which the winds blew. Twenty-three Japanese fishermen aboard the *Daigo Fukuryu Maru* were irradiated in March 1954 as a result of the Castle Bravo test, even though they were outside the prohibited zone. All the fishermen developed serious radiation sickness, which had a considerable impact on public opinion in Japan and worldwide.

During the Castle Bravo blast, which was exceptionally powerful and badly managed in technical and scientific terms, the population of the neighbouring atoll of Rongelap (130km east of Bikini), where some of Bikini's inhabitants had been relocated, was irradiated. The consequences for the health of an abnormally high proportion of these people were considerable: thyroid disorders and growth anomalies in children, high cancer rates, abnormal second- and third-generation embryos, etc.

The experimental relocation of people on Bikini Atoll in the 1970s also led to unacceptable results in terms of public health. The atoll was again evacuated.

More generally, the life of the inhabitants of Bikini and nearby atolls was totally disrupted by the introduction of American military and nuclear facilities and by the test firings and their consequences. In this respect, the State Party has used the term 'nuclear colonialism.'

History and development

The emergence of the atolls forming the Marshall archipelago is relatively recent. The arrival and settlement of the Micronesian populations in the islands goes back to the 4th and 3rd millennia BCE. Their lifestyle, which remained largely traditional over a long period, was based on fishing, and the gathering of fruit, coconut in particular.

The traditional Micronesian way of life was little affected by the visits in the 16th-18th centuries of the first European explorers such as Captain Marshall, after whom the islands were named. The same was true of the first colonial episode, as a German protectorate at the end of the 19th century. Coconut plantations were developed. After World War I the islands were made a Japanese mandate by the League of Nations.

In the inter-war period the Japanese considered the Marshall Islands to have strategic importance and turned them into a strong military site. During the Pacific War a substantial American naval force of 40,000 men captured the outpost at Kwajalein and the archipelago in February 1944, following a hard-fought battle which resulted in the deaths of the entire 8,000-strong Japanese garrison. The Americans then counted the

Marshall Islands as territory conquered in battle against the enemy.

The use of atomic bombs by the US Army on the Japanese cities of Hiroshima (6 August 1945) and Nagasaki (9 August 1945) led to the unconditional surrender of Japan and the end of World War II. However, these military actions took place just after a number of major agreements between the Allies: the territorial divisions made at Yalta (February 1945), the end of the war in Europe (May 1945) and the Potsdam Conference, and finally the San Francisco Conference that created the United Nations (June 1945). The use of nuclear weapons had suddenly changed the balance of power between the Allies. Nuclear disarmament and/or nuclear non-proliferation under the control of the United Nations immediately became an issue and a major source of disagreement: the USSR pressed for disarmament as a priority whilst the USA, the only nation to possess atomic weapons, wanted non-proliferation at any cost. The issue was increasingly keenly debated at several international meetings during the winter of 1945-46, particularly at the 1st General Assembly of the United Nations (January 1946). The principle of the United Nations having a controlling power over nuclear weapons was recognized, but the Americans and the Soviets were unable to reach an agreement on how to implement the decision.

Suspicion became the keynote of relations between the former allies over a long period. The Cold War had just begun between the West and the Soviet Union. The Soviets, excluded from the occupation of Japan (February 1946), shortly afterwards announced the formation of a Communist government in North Korea. In the spring, military tensions between the two blocs that were beginning to emerge developed in various regions of the world.

This was the context in which President Truman gave his approval to a plan proposed by the US Army to resume nuclear tests on an isolated Pacific island. The Bikini Atoll at the north-eastern tip of the Marshall archipelago, which shortly before had been the core of the Battle of the Pacific and was still occupied by American troops, was chosen. The inhabitants of Bikini Atoll, who numbered just over one thousand, were evacuated in March 1946 to the neighbouring atoll of Rongelap. Extensive preparations then took place on the main islands of the atoll to create the necessary military base, including command and firing control bunkers and logistical installations. Tens of thousands of military personnel were involved in the operations.

The first two tests at Bikini took place on 1 and 25 July 1946, under the codename Crossroads. They consisted of an air strike (Able) followed by a underwater strike (Baker), on the same position in the east of the lagoon. There were two objectives: on the one hand to stage an impressive display of American nuclear power, and on the other to carry out a military study of the direct impact of a nuclear explosion on a naval fleet.

The Russians' development of a nuclear weapon capability (1949), followed by the Korean War (1950), led to the intensification of the Cold War. The Americans then developed thermonuclear weapons, in the form of the massively powerful hydrogen bomb. In October 1952 the H-bomb was tested for the first time at Bikini, in a 10,400kt explosion (Ivy Mike), 800 times more powerful than the bomb dropped on Hiroshima. This was the first man-made nuclear fusion, and was carried out using cores of deuterium, a heavy isotope of hydrogen (resulting in the name 'hydrogen bomb'). An operational version, the most powerful ever made by the Americans, was tested in March 1954 (Castle Bravo, 15,000kt), and this was followed by three other firings of similar power in 1954, all of them at Bikini.

Twenty-three tests were carried out at Bikini between July 1946 and August 1958, including the most powerful explosions ever conducted by the US Army. The neighbouring site of Enewetak Atoll, a little over 300km to the west, was also used from 1948 to 1958 (44 explosions). The Bikini inhabitants were relocated several times from one atoll to another. Those on Rongelap were authorized to return to their island in 1957, but the return proved a failure as the high degree of cesium-137 pollution made food grown on the islet hazardous.

Following the dropping of the two bombs on Japan and the spectacular Operation Crossroads tests at Bikini, a series of symbols and images began to impinge upon international public opinion, and this awareness was bolstered by the many nuclear tests carried out in the 1950s by the Americans, the Russians, and the British (from 1952). They acquired a considerable value and have played a major role in post-World War II history right up to the present day. The huge nuclear mushroom cloud emerging in a few seconds above the ocean is an image universally associated with such explosions. Initially created in Japan, the monster Godzilla emerging from the sea has become a popular icon of nuclear terror and its infinite power of devastation. Reflecting the international diffusion of American culture in the post-war period, the fashion of the two-piece bathing suit was launched in Paris under the name 'bikini.' The theme of nuclear explosions in the Pacific was taken up by various artists, including the painter Salvador Dalí and the film director John Huston.

From a political viewpoint, the balance of terror born out of the Cold War was perfectly illustrated by the parallel development of nuclear weapon testing by the two blocs. Soviet efforts to catch up with and overtake the Americans culminated in the 50 megaton Big Ivan thermonuclear bomb (tested in 1961).

These events marked the course of a new nuclear age which was suddenly opening up for mankind. After beginning at Hiroshima in 1945, it was followed up less than one year later at Bikini, at a time when the warring nations of World War II were officially at peace. It was thus inevitable that a powerful anti-nuclear feeling should

develop. The Japanese fishing boat irradiated in 1954 by the Castle Bravo test was to become a symbol; the irradiation of the populations of the Marshall Islands also raised concerns in international opinion. Several conferences then took place. Bertrand Russell and Albert Einstein published a celebrated manifesto protesting against the Bikini tests. The years 1954-55 marked a turning point as the fears inspired by military nuclear capabilities, which until then had been shared only by limited circles of specialists, spread to international public opinion. A powerful popular movement calling for an end to tests and for nuclear disarmament was launched, a movement which had failed to take hold at the time of the creation of the United Nations Organization at the end of World War II.

Pressure of public opinion, together with the advances made in the digital simulation of nuclear tests, a new field of technological and military progress, led the US Government to take a unilateral decision to end nuclear tests (1958). This gave the USA the opportunity to revive its diplomatic efforts to ratify a non-proliferation treaty, at a time when new players were preparing to join the nuclear club, including France (whose first test was conducted in 1960).

From 1967 onwards the US authorities considered the possibility of the Bikini people returning to their atoll, and this led to work to clean up radioisotope contamination. This was carried out from 1970 onwards, backed up by an agricultural production programme. Medical follow-up of inhabitants showed, however, high levels of human contamination as a result of consuming food produced on the atoll and water from its wells. The atoll had therefore to be evacuated once again in 1978.

Long after the ending of nuclear tests, the Marshall Islands remained subject to an exceptional legal status from the viewpoint of international law. They were still the site of a large-scale American conventional military presence in the Western Pacific. The legal situation was only gradually normalized during the 1980s, leading ultimately to the independence of the archipelago in 1990.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party compares the nuclear test site of Bikini with a selection of other locations in the world where such weapons have been detonated, in order to highlight its originality and significance:

- The site of the first use of the atom bomb in Japan, in August 1945, inscribed on the World Heritage List as the Hiroshima Peace Memorial (Genbaku Dome) (1996, criterion (vi)).
- The first nuclear explosion at Trinity, in July 1945, in the State of New Mexico in the USA.
- The site of Enewetak Atoll in the Marshall

Islands, used alongside Bikini from 1948 onwards.

- The underground nuclear test site in Nevada in the USA.
- The Soviet Union's first test site at Semipalatinsk in Kazakhstan, used from 1949 onwards.
- The British test sites of Maralinga and Emu in the Australian desert, from 1952 onwards, and the island of Kiritimati in the Indian Ocean (H-bomb, 1957).
- The sites of Mururoa and Fangataufa in French Polynesia, used from 1966 onwards.

Five main criteria are indicated by the State Party for a comparison of the sites: a monument and memorial to the dawn of the nuclear age, the events that occurred and their general impact, testimony to a type of colonialism which is specific to nuclear weapons, the associated symbolic values, and the impact on nuclear disarmament policies.

Although it is not easy to document a comparative analysis of this sort, since many nuclear test sites are today still covered by military secrecy restrictions (Russia, France), a panorama emerges which points to the specific characteristics of Bikini. The atoll forms part of a direct historic sequence beginning with the first nuclear test at Trinity and the military use made of the resulting weapon at Hiroshima and Nagasaki. It marked the symbolic start of the Cold War and the development of the arms race which characterizes this period. It is in particular the location of the testing of the first H-bomb. It is also a place in which a specific form of violence was exercised on local populations, initially by their relocation and then by the irradiation to which they were subjected, resulting in serious public-health consequences. Finally, particularly in the wake of the extremely powerful but inadequately controlled Castle Bravo test, the Bikini tests were the cause of the international nuclear disarmament movement of the 1950s and 1960s.

ICOMOS wishes to pay tribute to the comparative study effort made by the State Party to situate its property in relation to its historic, symbolic, and geopolitical significance. These are clearly major events which were seminal in world history in the second part of the 20th century. The remarks to be made are therefore of only minor importance:

- Reference should have been made to the important Soviet site of Novaya Zemlya, where the most powerful H-bomb test ever was carried out (1961) and which is thus closely involved in Cold War events.
- The American nuclear bomb was the result of a remarkable military-industrial effort from 1942 onwards, known as the Manhattan Project, which also involved locations that form an integral part of this story.
- The French tests in the Pacific were carried out on sites that are geographically very similar to Bikini Atoll, but they are chronologically separate,

relate to weapons of substantially lesser power, and may be considered to form part of a second phase of the nuclear era, that of dissemination.

ICOMOS notes that the comparative analysis provided by the State Party is based on properties of similar value, some inscribed and some not inscribed on the World Heritage List and on national, regional, and international lists. ICOMOS considers that the comparative analysis is appropriate.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The nuclear bomb tests at Bikini completely changed the history not only of Bikini and the Marshall Islands, but also of the world, with the dawning of the nuclear age and of the Cold War. The atoll constitutes a form of monument in the context of a paradoxical image of peace and of earthly paradise.
- Bikini Atoll has conserved direct tangible evidence that is highly significant in conveying the power of the nuclear tests, *i.e.* the sunken ships sent to the bottom of the lagoon by the tests in 1946 and the gigantic Bravo crater. These attributes are complementary to the testimony provided by the Hiroshima memorial.
- Bikini was considered to be a territory captured by warfare and isolated from the rest of the world, where it was possible to release nuclear firepower at will. The displacement of the Bikini inhabitants, followed by their exposure to radiation, has given rise to a sense of 'nuclear colonialism.'
- The Bikini tests gave rise to a series of images and symbols of the nuclear era, characterized by deterrence through terror, which human civilization had just entered. From the Bravo test onwards, these images and symbols formed the basis for the development of international disarmament movements.

ICOMOS considers that this justification of the value of the nominated property is appropriate.

ICOMOS considers it necessary to consider changing the name of the property to bring it into line with the theme of the nomination, for example, by adopting the name 'Bikini nuclear tests site.' This request was made to the State Party in the letter of 17 December 2009. In its reply of 2 February 2010, the State Party proposed as the new name: 'Bikini Atoll, nuclear tests site.'

Integrity and Authenticity

Integrity

In material terms, the property represents the interweaving of a clearly identified natural setting, an atoll in the heart of the Pacific, with a series of violent aggressions against this natural environment by the process of nuclear blasts. The violence of the blasts was immense in its scale, representing 7,000 times the power of the Hiroshima bomb, over a period of twelve years, which is relatively limited in terms of human history. The property as a whole thus forms a landscape that bears witness to the extreme material violence that man is capable of inflicting upon nature and, indeed, upon mankind itself.

Integrity therefore needs to be seen in terms of this testimony in two parts that are closely intertwined.

The first consists of the remains of human artefacts associated with the tests, in the condition in which they were left after the nuclear blasts: sunken ships, craters, bunkers, and remains of technical facilities. These items are substantial and easily identifiable. They are, however, slowly deteriorating as a result of natural processes.

How does nature react then in the long term to these human aggressions and what are the dynamic patterns in the long run? This is expressed in terms of geology (regeneration of the coral reef), geophysics (changes in the radionuclide rates), and ecosystems (alteration and restoration of marine and terrestrial biodiversity, both in animals and plants, analysis of variations in species and their health, state of health of human populations). In this sense the landscapes at Bikini can be interpreted as cultural landscapes because part of their geophysical structure and ecological composition is the result of human intervention.

The significance of the site is the testimony it bears to the advent of a climactic relationship between man and nature, from the use of intra-atomic nuclear forces to the design of weapons of hitherto inconceivable power, followed by their actual use. The integrity of this testimony is clearly present at Bikini today.

The physical condition of the terrestrial and underwater military remains is gradually being eroded and damaged by natural elements (see Conservation). In the perspective of an active relationship between human artefacts and nature, it would seem to be in the order of things that nature should now intervene in a way that corresponds with its own time frame.

Furthermore, a considerable mass of documents exists to provide information and testimony about the history of Bikini Atoll as a nuclear test site: films, photographs, articles, interviews, scientific studies, etc. The same is true with regard to past changes in the natural environment and changes that are now under way. In

the present case the value of these documentary and scientific records is essential for an understanding of the site, its values, and its historic and human significance in a long-term perspective. This documentation forms a third component of the property, and has not yet really been associated with it.

ICOMOS considers that the integrity of the property today is of an acceptable level, in view of the simultaneous presence of the remains of human artefacts and the process of natural recomposition which follows their use.

ICOMOS considers that the degradation of the human artefacts by natural elements forms part of the cultural process in a very exceptional way, as illustrated by the property. The integrity of the testimony of the property must be strengthened by the appropriate use of the considerable mass of documentary material associated with the site and its history.

Authenticity

The site has not undergone any substantial reconstruction; human presence there has remained very limited because of the presence of radionuclides.

The authenticity of the material elements constituting the property is unquestionable.

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iv) and (vi).

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that Bikini Atoll is an outstanding example of a nuclear test site. It has many technical remains and characteristic terrestrial and underwater landscape elements. It is tangible testimony of the birth of the Cold War and it bears witness to its development into a race for increasingly powerful weapons. It marks the dawn of the nuclear age in the 20th century. It bears witness to the consequences of the nuclear tests on the civil populations of Bikini and the Marshall Islands, in terms of population displacement and public-health issues.

ICOMOS considers that this criterion has been appropriately analysed. However, whereas the historical testimony to the tangible beginnings of the Cold War and the nuclear arms race is relevant, the theme of the dawn of the nuclear era needs to be related to the explosions at Hiroshima and Nagasaki, from the historical, human, and symbolic points of view.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that ideas and beliefs directly and tangibly associated with nuclear testing on Bikini Atoll are of outstanding universal significance. The nuclear tests that took place there gave rise to many symbols and images associated with the nuclear era in the second part of the 20th century. They also gave rise to international movements advocating nuclear disarmament.

ICOMOS considers that this criterion has been appropriately analysed. The arguments must, however, be set against the perspective of the arms race between the two military-industrial blocs facing each other. The American tests at Bikini were followed by those of the Soviets, and together the tests generated icons and symbols of the risk of total mutual nuclear destruction and a geopolitical balance based on terror.

ICOMOS considers that this criterion has been justified.

The State Party is looking into the possibility of an extension of the values of the site as a mixed property, on the grounds of the natural dimensions that are directly linked to the consequences of the nuclear tests, particularly with regard to criterion (ix).

ICOMOS considers that the nominated property meets criteria (iv) and (vi) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- Following the nuclear bombs dropped on Hiroshima and Nagasaki, the tests at Bikini confirmed that humanity was entering a 'nuclear era' in a long-term perspective. Its many military remains bear witness to the start of the Cold War, the race to develop weapons of mass destruction, and the balance of terror.
- The violence inflicted on natural, geophysical, and living elements by nuclear weapons illustrates the climactic relationship that man can have with his environment. The ecosystems, landscapes, seascapes, and underwater seascapes of Bikini bear witness to this relationship.
- The nuclear tests have changed the history of Bikini and the Marshall Islands through the displacement of populations, human irradiation, and contamination by radionuclides. These elements are historic and social.
- The Bikini tests, and more generally the Cold War, have given rise to a series of images and symbols

of the nuclear era. They also led to the development of international movements advocating nuclear disarmament. These are intangible testimonies that are directly associated with the property.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

After the evacuation of the inhabitants of Bikini, the construction of the military nuclear facilities, and the tests themselves, there was for a long period only a limited presence of observers from the US Department of Energy.

The attempt to resettle a community in the 1970s, to be supported by the exploitation of farming resources, turned out to be a failure because of the radioisotope contamination of the crops and drinking water.

Illegal shark fishing in the lagoon could constitute a threat, since this type of fish has proliferated as part of the creation of a new ecological balance. The many sharks, which include several protected species, form a major aspect of biodiversity and are a significant attraction for tourists.

Metal objects have been removed from the wrecks of the sunken naval vessels at various points in time. Any such removal is now illegal.

The possibility of using Bikini Atoll as a nuclear-waste site was considered at one point, but today this idea has been abandoned by the State Party, as it conflicts with the decision to promote tourism.

ICOMOS would encourage the State Party to regulate development projects in Bikini Atoll so as to ensure that they are compatible with the expression of the property's values.

Tourism pressures

Small-scale tourism was introduced experimentally in the late 1990s since nuclear contamination had diminished to a low level and was well under control. However, the remote location of the atoll and the difficulties of establishing a permanent air link restricted tourism of this kind. The State Party considers that the development of tourism is an objective, but tourism must remain low-scale in view of the isolated location of atoll.

ICOMOS considers that there is potential for tourism in the atoll, with regard to both natural and cultural resources. It is, however, essential to consider regulating tourism and the involvement of local communities from the outset. Priority must be given to setting up tourism facilities which respect the natural setting and the cultural values of the site.

Environmental pressures

Environmental pressures are linked with the permanent relationship between the coral atoll structure of the property, its oceanic environment, and climatic events. Problems could arise if this fragile balance is lost (see Natural disasters, and Impact of climate change).

Natural disasters

Up to now the climate of Bikini Atoll has been exceptionally stable; the atoll is not located in a typhoon area. The earthquake risk appears to be low: there has not been an earthquake there up to the present.

Impact of climate change

As Bikini is a coral atoll, it is potentially exposed to many aspects of climate change:

- increased occurrence of violent storms, gales, and exceptionally high tides;
- rising sea level and average temperature: ultimately, the covering of all or part of the atoll by the ocean cannot unfortunately be ruled out;
- modification of the coral reef by change in water acidity (colour, production of coral).

It is hard to predict the long-term effects on biodiversity precisely, but it will most likely change. It is possible there could be an increase in the salinity of the soil, for example, followed by a rapid impoverishment of the plant biodiversity on the land and a trend towards desertification.

ICOMOS considers that climate change constitutes a major threat to the integrity of the atoll.

Threats specific to the nature of the property

The removal of metal (lead, copper, etc.) from the remains of the sunken vessels is not only intrinsically dangerous but also constitutes a direct attack on the property.

The presence of stocks of bombs and fuel in the sunken vessels gives rise to risks of explosion and oil pollution of the area.

ICOMOS considers that the main threats to the property are the combined effects of climate change and the presence of stocks of bombs and fuel in the submerged vessels. Illegal metal removal and shark fishing should also be borne in mind.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The property consists of the coral reef, the islets, and the interior lagoon. The boundary is a line connecting the seaward ocean shorelines of all islands at a depth of mean low water. The total surface area is 73,000ha, of which land above sea level represents 1%.

The buffer zone is the area within a line at a distance of 5 nautical miles (9.26km) from the shore. Its surface area is 130,425ha.

There are apparently no inhabitants on the atoll at the present time. The Conservation and Management Plan indicates that a small permanent team of around ten persons could be introduced.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate.

Ownership

As in the rest of the Marshall Islands, land on Bikini Atoll is held under customary tenure through traditional clan relationships. Traditionally, land is divided into parcels (*weto*) allocated to their users by the chief of the community (*Iroij*). Inhabitants of Bikini have been displaced, but the community exists, with an officially recognized customary chief. The Kili-Bikini-Ejit (KBE) Local Government and a governor representing the central government are also involved.

Marine ownership of the lagoon is collectively that of the people of the Marshall Islands. It is exercised by the government, with recognition of customary rights, particularly for fishing.

The rights, title, and interests in respect of the sunken naval vessels in the lagoon have been transferred from the US Government to the Marshall Islands (*Compact of Free Association*, 1985, sec. 177).

The proposed marine buffer zone (within the 5 nautical mile line) is under the direct responsibility of the governor.

Protection

Legal Protection

The property is protected by the Historic and Cultural Preservation Act (1991). This Act provides for controlled access to elements of the property, particularly those under water; it prohibits the export of elements of the property (punishable by fines and imprisonment) and regulates the development and use of land inside the

property.

The local government produced ordinances in 1988, updated in 1996, to complete these provisions, severely regulating entry to Bikini Atoll and diving on ships. All yachts visiting Bikini Atoll must obtain permission from the KBE Local Government for entry and diving. These arrangements were further tightened in 2008 in order to regulate navigation and diving in the lagoon. In its additional documentation sent on 2 February 2010, the State Party indicates that a new order, no. 2-2010, has revised all the texts relating to the marine and underwater protection of the property, making them more precise.

The natural biodiversity of Bikini is protected by a local government decree (1997). It prohibits fishing for sharks or turtles in the lagoon and restricts the fishing of other species.

The Conservation and Management Plan briefly indicates that it is important to carry out an evaluation of the potential impact of any plan for demolition, construction, deforestation, or civil-engineering works on the attributes of the value of the property (6.a.(i)).

ICOMOS wishes to stress the importance that should be attached to evaluating the impact of any building project or for the transformation of the existing elements on the attributes of the value of the property.

Traditional Protection

Traditional protection is provided by the exercise of customary law in the ownership, distribution of use of the land, and organization of fishing (see Ownership). Furthermore, the State Party indicates that the Bikini community agrees to and fully supports efforts to preserve the nuclear test heritage.

ICOMOS considers that, in practice, the traditional ownership system of the Marshall Islands takes full precedence over public law, and that it can thus be assimilated to fully exercised private law ownership.

Furthermore, ICOMOS considers that the resolute and active support of the Bikini community for the protection of the property is of crucial importance. The community must in particular be fully informed about the consequences of possible inscription on the World Heritage List, which would mean that the remains of the nuclear tests would have to be left in place, since they form an integral part of the value of the property. ICOMOS, in its letter dated 17 December 2009, asked the State Party if it would confirm this point. The new Management Plan, included in the additional documentation of 2 February 2010, points out that families from Bikini are actively involved in the local government, and are present in the Management Office of the property.

Effectiveness of protection measures

Access to Bikini Atoll is strictly controlled, under the authority of the Kili-Bikini-Ejit (KBE) Local Government, and it is reserved to tourists and scientific teams. Divers in the sunken vessel area must be accompanied. The taking of any artefacts from the sunken vessels is strictly prohibited and is considered to constitute theft.

The marine surveillance zone extends for 12 nautical miles around all the atolls of the archipelago, particularly Bikini.

ICOMOS considers it necessary to extend the protection measures to include the remains of the military facilities on land. It would be necessary to draw up an inventory of them and have the most significant ones inscribed on the national list of historic sites.

ICOMOS would like to have more details of the Bikini marine surveillance system, which does not seem to be fully operational at the present time.

ICOMOS considers that the legal protection and traditional protection in place are appropriate, but that they must include the protection of the land-based military remains, through the drawing up of an inventory, and the inscription of the most significant remains of this type on the list of national historic sites.

Conservation

Inventories, recording, research

A substantial set of archive material and written and audiovisual documents forms a complementary dimension of the property. It is essential for understanding, interpreting, and presenting the value of the property.

Research efforts up to now have focused on the sunken vessels, but relatively little attention has been paid to the remains on land. In addition to the inventory already mentioned, ICOMOS considers that it is necessary to study them from a heritage and historical viewpoint.

Present state of conservation

The state of conservation of the main sunken vessels and the most important bunkers is generally quite good. They are, however, slowly deteriorating. For example, the deck of the aircraft carrier *Saratoga* is threatening to collapse; some of the land buildings have been demolished because they were considered to be dangerous; the coral reef is gradually reconstituting itself inside the Bravo crater by natural process. The intentional destruction of the vessels is primarily a human action, and is now being completed by the action of the natural elements.

Active conservation measures and maintenance

The state of conservation is monitored by observing the hulls of the sunken vessels and the structures on land. There are, however, no specific conservation measures or systematic monitoring.

ICOMOS considers that a general inventory of the terrestrial and underwater properties is necessary.

ICOMOS considers that, even if a large part of the property is destined to slowly return to a natural state, the planned monitoring programme must be set up and applied not only to the underwater parts but also to the land-based parts.

Effectiveness of conservation measures

ICOMOS considers that efforts are necessary in the inventorization, knowledge, and monitoring of the constituent elements of the property. In view of the particular significance of the property, exceptionally in this specific case the lack of a conservation programme does not represent a threat to the property's value.

In its reply dated 2 February 2010, the State Party confirmed the involvement of the Historic Preservation Office in the inventorization, protection and conservation of the property. It is in particular an active member of the Bikini Atoll Conservation Management Board.

In view of the changeable nature of the property, which is slowly returning to a natural state, ICOMOS considers that the meaning of conservation in this case is specific, and that it may be considered to be satisfactory. However, in order to ensure the expression of the value of the property, the following actions should be carried out, under the supervision of the official national organization for heritage preservation and conservation:

- Creation of a full and detailed inventory of all the elements of the property,
- Monitoring of the state of conservation of the property,
- Presentation of documentary material and scientific records associated with the history of the property.

Management

Management structures and processes, including traditional management processes

The management process is the responsibility of the Kili-Bikini-Ejit (KBE) Local Government, which is based on an electoral procedure in the Bikini community; this community currently lives on other atolls (see History).

The Conservation and Management Plan provides for the setting up of a Bikini Atoll conservation and management office. It will include the various partners involved in Bikini - elected representatives of the local government, traditional chiefs, the head of tourism, the Bikini Atoll Divers unit (currently being developed), the

conservation director (the appointment process is under way), and representatives of the young people and women. The office will be responsible for implementing and monitoring the management, conservation, and monitoring of the property. This office, the Bikini Atoll Conservation Management Board, was set up by Resolution 012 of the local government of Kili-Bikini-Ejit on 21 January 2010.

The office will be assisted by a scientific council of international experts.

Bikini Atoll Divers is an official operational organization under the auspices of the local government. It is currently being constituted in order to accompany people diving on the site of the sunken vessels. The group will live on the atoll and will set up a diving base there.

The management system also includes the Marshall Islands Vessel Monitoring System.

The State Party confirmed, in its reply dated 2 February 2010, the official involvement of the Historic Preservation Office in the management process.

ICOMOS, in its letter dated 17 December 2009, asked the State Party to specify the dates of: the actual setting up of the Conservation and Management Office, the appointment of the director, and the constitution of the Divers Group. ICOMOS considers that additional information is still required about these points, particularly as regards the Divers Group.

Policy framework: management plans and arrangements, including visitor management and presentation

The legislative texts have up to now formed the backbone of the management and monitoring of the property. They are implemented by the local government.

The Conservation and Management Plan has been drawn up (January 2009). It sets out the general strategic guidelines for the future of the property. In its reply dated 2 February 2010, the State Party refers to the definitive Management Plan (2010) and its enactment by resolution 012 of the local government of Kili-Bikini-Ejit, on 21 January 2010.

Tourist facilities have remained very limited up to now, but some accommodation capacity does exist, particularly on the islet of Eneu, with a set of buildings erected for the US base, a jetty, and a landing strip, with two more recent buildings for tourists.

A Peace Museum is planned at Majuro, capital of the Marshall Islands.

ICOMOS considers that a property inventory process, particularly for the land-based elements, must form an integral part of the management plan.

ICOMOS wishes to be kept informed about the Peace Museum project, its progress, its briefs and powers, and the close links it may have both with the management of site documentation and with the interpretation of the site.

Risk preparedness

There is no specific plan with regard to natural risks or the risks arising from human artefacts.

ICOMOS considers that an evaluation of the risks of unexploded bombs and of the fuel in the underwater remains, together with risk-prevention measures, must form an integral part of the management plan. In its letter of 17 December 2009 ICOMOS asked the State Party to provide a study evaluating these risks.

The State Party's reply refers to the Delgado report of 1991, drawn up as a result of cooperation between the National Park Service of the United States and the local government of Kili-Bikini-Ejit.

ICOMOS notes that the report contains a number of points of information which are a cause for concern. The report, which dates back almost twenty years, was the first to suggest that the site's nuclear heritage value could be recognised, and could be presented for cultural and tourism purposes.

ICOMOS considers it essential to carry out an evaluation of the current situation as regards the fuel oil pollution risk and the potential danger of bombs still present in the sunken fleet. The setting up of an international mission for this purpose should be considered as soon as possible.

Involvement of the local communities

The local communities are the owners of the land by customary law; they will be fully involved in the management process.

ICOMOS considers that the local populations must be fully informed about the consequences of possible inscription on the List with regard to the conservation and management of the nuclear remains.

Resources, including staffing levels, expertise and training

A permanent team of two people is planned at Majuro for the management of tourism at Bikini, together with about fifteen people at Bikini itself, including four professional divers.

The appointment of a conservation and management office director is planned.

ICOMOS recommends the building up of visitor facilities and of the presentation of the property's cultural values. This could be carried out in conjunction with the Peace Museum project.

Effectiveness of current management

The management system depends primarily on the application of the laws and orders that govern the property. The conservation and management plan is currently being drafted and the operational structures are currently being set up.

ICOMOS considers that the proposed management system does include the elements needed to be effective; however, details are required about how the Conservation and Management Office will function in practice, its director must be appointed, and the Divers Group must be set up and made operational.

ICOMOS considers that the management system for the property is adequate. Furthermore, ICOMOS recommends the setting up of the Bikini Divers Group, the reinforcement of visitor reception and of the presentation of the property's cultural values, and the constitution of a peace museum and of a documentation centre focusing on the value of the property.

6. MONITORING

A programme for the monitoring of underwater artefacts is being developed in partnership with professionals (a university and the Western Australian Maritime Museum). This will lead to the establishment of a database of artefacts and an assessment of their state of conservation. A monitoring process, incorporating photographic records, is planned.

ICOMOS considers that monitoring of the property is essential, as it is inherently subject to change. The monitoring must be extended to the land-based elements. The periodicity of monitoring needs to be decided, as do the bodies in charge of the monitoring process.

ICOMOS considers that, in view of the nominated property and the nature of its values, it is not necessary to carry out quantitative monitoring with numerical indexes. The monitoring proposed for underwater artefacts is therefore satisfactory, but it must be extended to include the land-based elements of the property.

7. CONCLUSIONS

ICOMOS recognizes the Outstanding Universal Value of Bikini Atoll, in the Marshall Islands.

Recommendations with respect to inscription

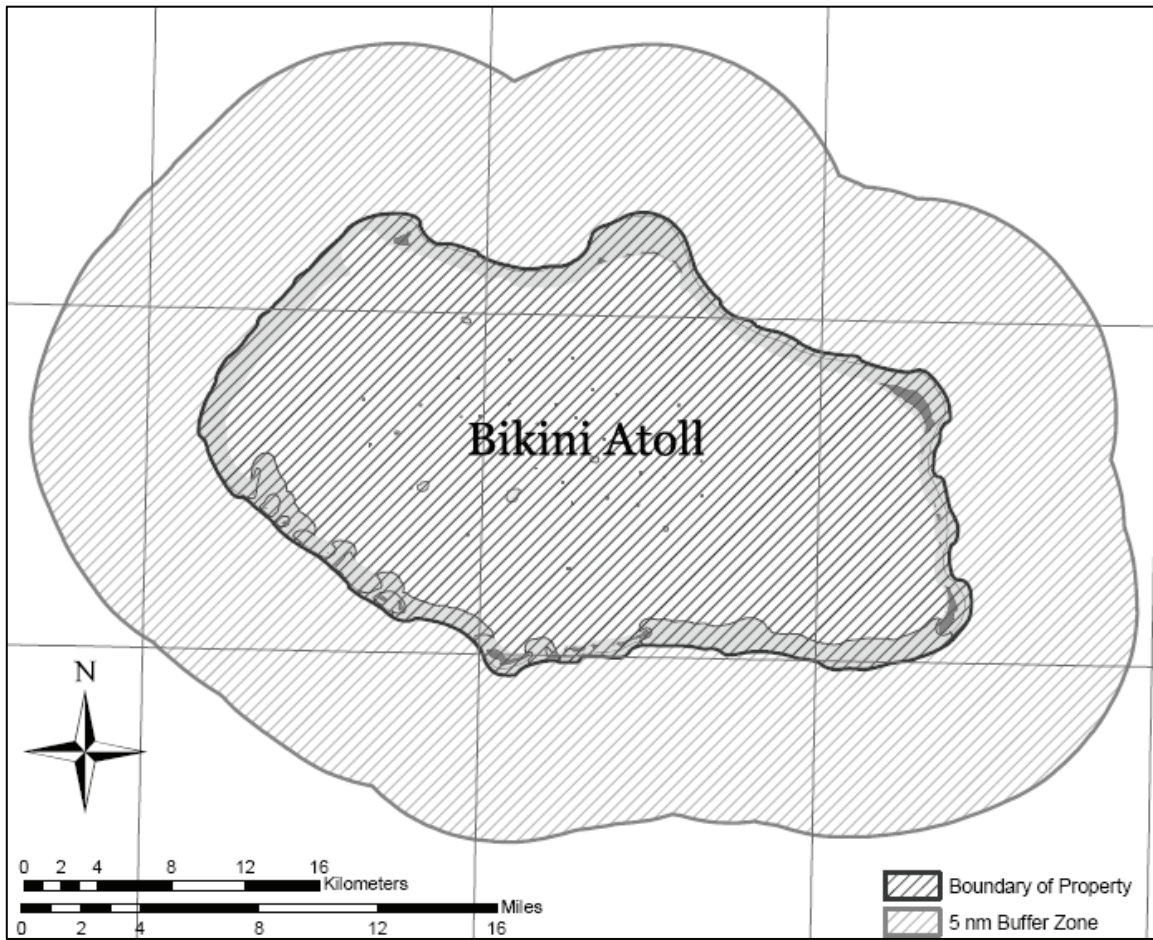
ICOMOS recommends that the nomination of Bikini Atoll, nuclear tests site, Republic of the Marshall Islands, be ***referred back*** to the State Party to allow it to:

- Draw up an inventory of the land-based properties that contribute to the value of the property; inscribe the most important of these on the national historic sites list; monitor their conservation, specifying the frequency for monitoring to be carried out and the organization that will take charge of monitoring.

ICOMOS also recommends that the State Party give consideration to the following points:

- Set up the Bikini Divers Group;
- Give consideration to the importance and value of the documentation relating to the history of the Bikini nuclear tests, and consider its management and its use, for example, in connection with the project for a Peace Museum and with regard to the interpretation of the property;
- Details should be provided about the number of inhabitants of the atoll, and the prospects for future development;
- Details should be given about Bikini's marine surveillance system;
- Visitor reception and the presentation of the property's cultural values should be strengthened. This could be done in connection with the Peace Museum project.

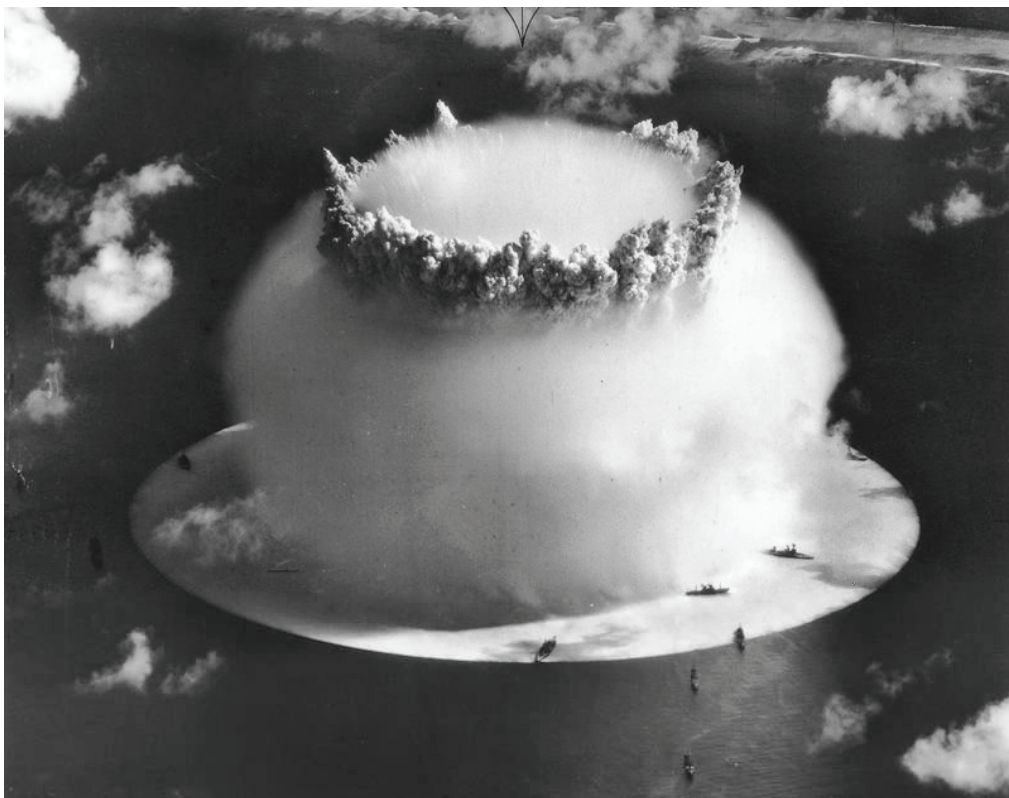
ICOMOS is concerned about the presence of bombs and fuel oil in the wrecks of the sunken vessels. This is a threat to the property which could make visiting the wrecks dangerous; pollution of the lagoon could also result. As the only technical evaluation of this risk dates back to 1991, a new expert appraisal of these dangers and a review of possible solutions must be considered without delay. For this purpose, ICOMOS recommends the constitution of a coordinated international mission by the State Party.



Map showing the boundaries of the nominated property



Evacuation of the inhabitants of Bikini in 1946



Operation Crossroads, 1946



Aerial view of the Bravo crater



Sunken remains of the aircraft carrier Saratoga

Hahoe and Yangdong (Republic of Korea) No 1324

Official name as proposed by the State Party:

Historic Villages of Korea:
Hahoe and Yangdong

Location:

Andong City and Gyeongju City,
Gyeongsangbuk-do province
Republic of Korea

Brief description:

The two villages of Hahoe and Yangdong in their landscape settings are seen as the two most representative historic, clan villages in Korea. They were founded in the 14th-15th century and subsequently expanded to their present size and composition in the late 18th and 19th centuries.

Their layout and siting, sheltered by forested mountains and facing out onto a river and open agricultural fields, reflect the distinctive aristocratic Confucian culture of the early part of the Joseon Dynasty (1392-1910).

The villages were located to provide both physical and spiritual nourishment from their surrounding landscapes. They include the residences of the head families, together with substantial timber framed houses of other clan members, also pavilions, study halls, Confucian academies for learning, and clusters of one storey mud-walled, thatched-roofed houses, formerly for commoners.

The landscapes of mountains, trees and water around the villages, framed in views from pavilions and retreats, were celebrated for their beauty by 17th and 18th century poets.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of six *sites*.

1. BASIC DATA

Included in the Tentative List: Hahoe Village: 18 August 1998 and Yangdong village: 25 January 2002

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 20 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committees on Historic Towns and Villages and on vernacular Architecture as well as independent experts.

Literature consulted (selection):

Choi, Jae-Soon et al, *Hanoak: Traditional Korean Homes*, 1999.

Choi Sang-hŏn, *Interior space and furniture of Joseon upper-class houses*, (1951), 2007.

Kim, Bong-ryeol. *I Ddang-e Saegyeojin Jeongsin (The Spirit Etched on this Land)*, 1999.

Yoon, Hong-key, *The culture of fengshui in Korea: an exploration of East Asian geomancy*, 2006.

Technical Evaluation Mission: 9-14 September 2009

Additional information requested and received from the State Party: ICOMOS has sent a letter to the State Party on 18 December 2009 requesting further information on the following points:

- Comparative analysis
- Conservation Councils
- Management plan
- Ownership
- Buffer zones

The State Party sent a reply on 26 February 2010. The analysis of this supplementary information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The two villages of Hahoe and Yangdong are both located in the south-eastern region of the Korean peninsula, the heartland of a distinct Confucian aristocratic culture during the Joseon Dynasty that ruled the Korean Peninsula for more than five hundred years. There is a distance of 90km between them.

The six sites are:

Hahoe:

- Village and surrounding landscape
- Academy 4 km to the east
 - both linked by a buffer zone

Yangdong:

- Village surrounded by a buffer zone,
- Academy 8km to the west,
- House 8km to the west,
 - linked by a buffer zone,
- Academy 4km to the east with a small buffer zone.

The two villages represent the two typical modes by which aristocratic clan villages were formed. Hahoe was a pioneering settlement formed when Ryu Jong-hye, of the Ryu clan, selected the land as the permanent home for his descendants at the end of the Goryeo Dynasty in the 14th century. Yangdong Village by contrast began to grow into a village of the nobility when the Son clan hailing from another village moved to a wife's hometown in 1457.

Both villages developed in a similar way. They demonstrate the characteristic style of nobility houses, *yangban*, in the region, with timber-framed and tiled roof buildings surrounding a small court or impluvium. This style is said to reflect the style of palace buildings of the Goryeo dynasty that migrated to the region after the fall of the dynasty, and is also well suited to the climate with its extremes of temperature between summers and winter.

Each of the *yangban* houses generally had separate quarters for men and women, and, where resources permitted, detached servants' quarters, grain stores, household stores and a library. The house of the head of the family would have been distinguished by an ancestral shrine and that of the main 'descent' family a large ritual or reception hall for maintaining ancestral tablets and hosting ceremonies. Overall the *yangban* houses of the nobility reflect the social order of the Joseon dynasty, with its rigid distinctions between male and female, outer and inner, young and old, servant and master.

By contrast, the more plentiful houses of the commoners, were one storey mud walled and thatch roofed buildings. Clustered around the *yangban* houses, they had all their living and service rooms under one roof.

Although the nomination dossier is very rich with visual material on the buildings and explanations of the architectural typology, ICOMOS notes that there is little information on construction materials and techniques, or on the human and organizational aspect of traditional building and craftsmanship.

Away from the houses, in secluded scenic spots, scholars, who were men of high standing from noble families, built separate pavilions, either *jeongja* (open sided structures), retreats where the scenery could be enjoyed, or *jeongsa* (study halls), for lectures, or revering ancient sages. However, as a pavilion could be sited in the compound of a study hall, it is sometimes

difficult to draw a distinct line between the two types of building.

Seowon, or a Confucian academy was a private educational institution set up exclusively for a man who had achieved outstanding learning and virtue. Its twin roles of enshrining a specific sage and educating students were reflected in its components: shrine, *jeonsacheong*, a building for the preparation of memorial rites, lecture hall, students' quarters (*jaesa*), library (*jangpangak*), and an elevated pavilion (*nugak*) where Confucian scholars held gatherings or took rests. The main buildings were typically sited along a north-south axis.

The clan organisations continue to conduct ceremonies honouring ancestors, maintain and repair buildings and sites, related to their ancestors, and promote good relationships among clan members. The clan organizations are also responsible for raising common funds to finance the construction and operation of facilities, such as head family houses, ancestral shrines, study halls, pavilions, Confucian academies and village schools. They also are in charge of publishing the clan's genealogical register and collections of ancestors' literary works.

The nominated area includes for Hahoe village part of the background mountain, part of the river and some of the communities' agricultural fields, and for Yangdong village part of the surrounding woodland.

The two villages are described separately:

Hahoe Village:

The Pungsan Ryu clan who formed the village were one of the five powerful local families of the Andong region. The family produced many notable politicians and scholars, and from the 16th century were recognized as a prominent aristocratic clan in the south-east of Korea.

The village is sited on the upper reaches of the Nakdonggang River where it loops around Mount Hwasan. The name Hahoe means the river meanders. The Nakdonggang River flows south into the Korean Strait and drains most of north and south Gyeongsang provinces. The river water allowed the region to prosper from rice production from the early Joseon period.

The nominated area consists of the village, some of the cultivated fields, the lower slopes of the mountain behind, and the edges of the river on the opposite banks of the river, on which is the Hwacheonseowon Academy. Also in the nominated area is the Byeongsansseowon Confucian Academy, a discrete site approximately 3km east of the village joined to the main site by the buffer zone.

The main elements of the nominated area are described separately:

Village layout

The village centre is a small mound on the upper slopes of which is Yangjindang House, the head family house. In plan, this mound is seen as the centre of a lotus flower with the pistils or stamens extending outwards from it. The road linking Yangjindang House to Chunghyodang house, the residence of the head of a branch of the family, forms the main axis of the village. Spread out round the village are *yangban*, or aristocratic houses, with their facades built to face a good view, and surrounding each of these are clusters of commoners' thatched roof houses.

The village and its main noble houses were set out to reflect *pungsu* principles, in their orientation towards protective mountains.

The descriptive text in the nomination dossier mainly concentrates on the houses of the nobility. ICOMOS notes that there is little description of the collection of commoners' houses, the spaces between buildings or of the surrounding landscape, with its forests, agricultural fields and valued views.

Houses of the yangban nobility

Most of these houses are timber-framed with tiled roofs and exhibit variations on the standard courtyard plan and detached ancillary buildings.

Yangjindang House

Dating from the mid 16th century, this house, the largest in the village, has served as the head family house for the Ryu clan, since it was built by Ryu Jong-hye, the clan's founder. It faces south overlooking Maneulbong Peak, its *ansan* or front guardian mountain. Unusually the house has two ancestral shrines and its basic frame is elaborately decorated.

Chunghyodang House

The current buildings date from the 17th century and were built for the head of a sub-family line of the Ryu clan. Only the ancestral shrine faces south towards Maneulbong Peak, while the other buildings face Mt Wonjisan to the west. Like the Yangjindang House, its timber frame carries decoration. A distinctive feature is the large wood-floored hall with two stories of rooms to either side.

Juiljae House

Built for the great grandson of the clan founder in the 17th century, Juiljae House has two warehouses and is surrounded by a low wall.

Namchondaek House

Originally a simple house built at the end of the 18th century, it was greatly enlarged in the late 19th century

but the main building was destroyed by fire in 1954. The standing buildings include a finely decorated pavilion re-located here from the opposite side of the river in the 1980s.

Bukchondaek House

The house assumed its present form in 1862, an expansion of a late 18th century dwelling. The women's quarters', *anchoe*, is the widest of any building in Hahoe and its large roof is supported by columns.

Hadonggotaek House

Built in the mid 19th century.

Jakcheongotaek House

Located near the river, this is an example of a small-scale noble house. It dates from the 19th century. A flood in 1934 washed away its main gate compound.

Bak Jeong-suk House

Although thatched this house is in the style of a *yangban* house. It has a mill with walls of mud reinforced with straw – one of the few domestic rice mills to have survived.

Commoners' houses

The village contains numerous examples of one storey commoners' houses. The walls of these were generally built of mud over timber framework and the roofs were thatched with rice straw. Inside floors were of beaten earth. The Yeokanjip House is typical of these commoners' housing.

Study Halls, Pavilions and Confucian Academies

The village has four study halls:

Gyeomamjeongsa Study Hall

Gyeomamjeongsa Study Hall was built in 1567 by Ryu Ul-lyong. Set on the western end of the Buyongdae Cliff it is framed by pine forest, and has picturesque views out over the Hwacheon Stream to the hills beyond. It consists of a study hall and inner quarters to accommodate those coming to study.

Wonjijeongsa Study Hall

Wonjijeongsa Study Hall was built in 1576 by Ryu Seong-ryong on the edge of the river for his own study and for teaching. It consists of a study hall and an elevated square pavilion, from which there are views out across the river to the pine forests of Buyongdae Cliff and beyond to Mount Wonjisan.

Binyeonjeongsa Study Hall

Ryu Ui-lyong erected this second study hall, a single building, near his home and it was used to receive guests, hold poetry gatherings or clan family meetings.

Okyeonjeongsa Study Hall

Construction of the Study Hall was began in 1576 by Ryu Seong-ryong and completed in 1586. This was his second hall, constructed in a quiet place outside the village in a beautiful landscape. In it he wrote *Jingbirok* (War memoirs). It includes *seodang*, *byeoldang*, *anchae* and a building for servants.

Sangbongjeong Pavilion

A single building within a walled compound, the pavilion was first built by Ryu Se-cheol (1627- 1681) and later renovated by his great grandson Ryu Young (1687-1761). On the opposite side of the river from the village, on a small hill, it faces across to Chunghyodang House, the head family house of Ryu Seong-ryong.

Byeongsanseowon Confucian Academy

The Academy is separate from the village, some 4km to the east. It was originally built as a school for the Ryu family. After Ryu Seong-ryong's death, his disciples and Confucian scholars built in 1614 Jondeoksa shrine for him, and upgraded the school to a Confucian academy with lecture halls and ritual spaces. The Academy sits on the south-eastern slope of Mt. Hwasan, the rear guardian mountain of Hahoe Village. In front is the Nakdonggang River and across the river Mt. Byeongsan, which literally means 'mountains looking like a folding screen.'

Within there is a lecture hall, two buildings for students, a library, an elevated pavilion, the Jondeoksa shrine and *jeonsacheong* (a building for the preparation of memorial rites). The view from the Pavilion looking down on the Nakdonggang River and towards Mt. Byeongsan beyond is celebrated.

Hwacheonseowon Confucian Academy

Originally built in 1786 and enlarged in the early 19th century, the Academy was destroyed in 1868 on the orders of Regent Heungseon, the father of King Gojong, to shut down all private Confucian Academies nationwide. It was restored in 1994.

Landscape setting

The beauty of the village landscape, surrounded on three sides by the river and with its mountainous backdrop, has inspired numerous poems, notably in the 17th and 18th centuries, many of which celebrate the theme of 16 beautiful sceneries in and around Hahoe village. Although the 16 sceneries vary over time, all celebrate the fortunate combination of mountains, water,

and trees - maple, chestnut and pine - and paint word pictures of the landscape.

Over the centuries the landscape picture has been improved, such as with the planting in the 16th century of a large forest of pine trees, Mansongjeong, on the opposite bank of the river from the village, to provide a foreground for the Buyongdae Cliff and to act as a wind-break against the north-west winds.

ICOMOS notes that no details are provided of the other forest areas or of whether the chestnut and maple still are found.

Agricultural land

The nominated area includes fields bordering the river between the village and the lower slopes of the mountain. They are primarily irrigated rice paddies.

The main agricultural fields of the village, known collectively as Pungsan Field, lie to the east beyond the mountain and are not included in the nominated area or the buffer zone.

Yangdong Village:

The village lies at the mouth of a narrow valley between the many folded ridges of Mt Seolchangsan to the north-west and Seongjubong Peak to the south-east, through which flows the Yangdongcheon stream, a tributary of the Allakcheon stream which flows into the larger Hyeongsangang River. With the guardian mountain at its back, the village faces out across the Allakcheon stream to a wide plain within which is the Angang Field – the main agricultural fields of the village, and now in the buffer zone. The Seongjubong Peak functions as its front guardian mountain.

Along with Hahoe village, Yangdong was commended as one of the four most auspicious sites in southern Korea in the *Pungsu of Joseon*. The village became the place where gentry studied while enjoying the beauties of the landscape. The small pavilion of Dongnakdang House was a place of retreat, where for instance Yi Eon-jeok in the 16th century devoted himself with spiritual and physical discipline to the study of Neo-Confucianism and to writing poems such as '15 Songs composed in a Forest'.

Yangdong is larger than most traditional clan villages with 149 households and proportionately larger houses. The dwellings lie in five 'dales' within the fold of the densely forested hills, on plots carved out of the surrounding woodland, with the *yangban* houses halfway up the slope and the commoners' houses clustered around and below them. There were two main clans, Son and Yi, competitively building their houses on prominent sites.

As with Hahoe village, ICOMOS notes that the descriptive text mainly concentrates on the houses of the

nobility and gives little information on the commoners' houses, or the surrounding landscape.

Seobaekdang House

This is the oldest house in the village built by the founder of the Son clan, Son So, when he settled in the village in the mid 15th century. It is also one of the earliest houses in Korea and preserves the layout of the early Joseon period with a ceremonial hall having a central location and the men's quarters being part of the main compound, in contrast to the segregation that emerged later. From the large, wooden floored main hall there are views of Seobaekdang Peak. As well as the main compound, there is a gate compound and an ancestral shrine.

Mucheomdang House

This is the head house of the Yi clan. Part of the house was built by Yi Beon in the late 14th century when he settled in the village. His son built the detached hall and a later descendent the ancestral shrine in the 17th century. The hall is distinguished by its broad dimensions, by paper clad lifting doors, and by decoration on the tops of the cylindrical pillars.

Gwangajeong House

This was the head house of the Son clan from around 1500 until the early 20th century when the role passed to the Seobaekdang House. Gwangajeong house consists of a main compound with wings at the front making it one of the longest buildings in the village, and an ancestral shrine enclosed by a wall. Like Seobaekdang house, it has a central hall, which has decorated pillars. The house is one of the few surviving houses from the mid-Joseon dynasty that has not undergone extensive remodeling.

Dongnagdang House

Situated some 8km away from the village, the house was built by the poet Yi Eon-jeok, after he retired from government service in the late 16th century. It includes the Gyejeong pavilion, built on a bluff overlooking the valley stream. The house achieved its present form over three generations. The main hall is distinguished by its decoration and the whole house displays a high level of skilled craftsmanship.

Hyangdan House

Built originally in 1543 by Yi Eon-jeok for his sick mother when he was governor of Gyeongsang province, the house now consist of a main building, a building for servants, a main gate compound and an extra building for men (outer *sarangchae*), which was built at a later date. A characteristic of this house is the use of many round pillars, as well as the highly refined workmanship exhibited in the household fixtures.

Nakseondang House

Lying to the north of Seobaekdang House, Nakseondang house was established as a separate household by Son Suk-don, the younger brother of Son Jung-don in the mid-16th century. It is now the branch head house of the Son clan. It consists of an *anchae*, a lower building (*araechae*), a *sarangchae* with pillars to the front, grain store, a gate compound and an ancestral shrine.

Sujoldang House

Built in the 17th century, the house consists of the *anchae*, *sarangchae*, grain store, main gate compound and ancestral shrine.

Ihyangjeong House

Built at the end of the 17th century, the house consists of the *anchae*, *sarangchae* and two grain stores.

Sangchunheongotaek House

Consisting of *anchae*, *sarangchae* and gate compound, the house dates from the early 18th century.

Dugokgotaek House

This large house consist of a main gate compound, *anchae*, *sarangchae*, lower building (*araechae*), grain store, and unusually, buildings for servants and for grinding grain. It was constructed at the beginning of the 18th century. In front of the house is a hall or *jaesil*, for ritual ceremonies.

Geunamgotaek House

Built towards the end of the 18th century, it consists of *anchae*, *sarangchae*, main gate compound, grain store and ancestral shrine and all the main buildings stand independently of one another.

Sahodanggotaek House

The mid 19th century house consists of *anchae*, *sarangchae* and gate compound. The daecheong wooden floored hall of the *anchae* and *sarangchae* both have formal round pillars on their central front sides. Within the *anchae*, there is a separate secondary main room for the mistress (*ansarangbang*) and part has an elevated wooden floor (*numaru*).

Jeong Sun-i House

Around the aristocratic clan houses, are clusters of simple thatched houses of commoners with walls of mud over timber frames, usually three rooms laid out in a single row and sometimes with small outbuildings.

Study Halls, Pavilions and Confucian Academies

Simsujeong Pavilion

Simsujeong Pavilion, was originally built around 1560 for Yi Eon-gwal, younger brother of Yi Eon-jeok. It was destroyed in a fire and the present building was reconstructed in 1917.

Suunjeong Pavilion

The pavilion sits on high ground at the west of the village and overlooks the Allakcheon Stream and Angang Field. It provides one of the best vistas in Yangdong village. It was built around 1582 by Son Yeop, great grandson of Son Jung-don. The pavilion has a heated floor room and an open hall with a veranda and decorative balustrades.

Oksanseowon Confucian Academy

Oksanseowon Confucian Academy is located some 8 kilometres to the west of Yangdong Village (just south of Dongnakdang House). The compound is divided into four areas for entrance, study, rites, and auxiliary facilities. The Academy boasts the ownership of the greatest number of documents and books amongst national Confucian academies (of which 48 survive). It was built in 1572 by Yi Je-min, a magistrate of Gyeongju, in response to the desires of the local literati. There is no visual link to the village.

Donggangseowon Confucian Academy

Sited some 4 kilometres to the east of the village, this Academy was founded in 1695 in memory of Son Jung-don, a prominent local scholar. Most buildings were destroyed in 1868 at a time when many academies were forcibly closed. In 1918, local literati resumed observing rites. Similarly there is no visual link to the village.

Landscape Setting

Yangdong Village has been shaped in the typical 'Mountain on back, river on front' *pungsu* topography. The village sits on a side of a mountain, and all the houses sit in dales between ridges keeping the image of the '勿' character, which means 'clean'. Only the close surroundings of the houses are included in the nominated area, not the Allakcheon stream or the fields beyond it.

History and development

Clan villages developed and flourished in the Joseon dynasty which consolidated its absolute rule over Korea, encouraged the adoption of Confucian ideals in Korean society, (which had been introduced to Korean Peninsula in the first century), absorbed Chinese culture, and, through prosperity founded on trade, fostered classical Korean culture, science, literature, and technology.

Although the concept of villages planned to harmonise with the local topography, through the implementation of *pungsu* principles, had appeared in the preceding Goryeo period, it was during the Joseon Dynasty that those who had become small and medium sized land owners and local government officers rose into *yangban* or nobility clans, and then played a central role in the founding or enlargement of new settlements, based on Confucian principles. These clan villages for the nobility usually housed members of one or two clans and existed alongside fortified, walled towns where government and county officers lived who were of lower status and from diverse backgrounds. The clan villages also produced civil and military officials for the government.

Hahoe village is an example of a new *yangban* settlement being formed at the end of the Goryeo Dynasty by three clans, Heo, An and Ryu.

In the 16th century the Ryu clan produced distinguished politicians and scholars and this is reflected in the architecture of the village, particularly the study halls.

The new village flourished but by the mid 17th century the Heo and An clans left and Hahoe village became the clan village of the single Ryu clan. The village continued to expand in the 18th and 19th centuries. During the 1980s, in line with the majority of Korean villages, young people migrated to the towns and cities and in 1991 the elementary school was closed. However there are some signs of a reversal of this trend with two newly built traditional houses in the 1990s.

Yangdong village is an example of a settlement that grew into a village of the nobility through the marriage of one of its daughters to the son of the Son clan. In turn his daughter married into the Yi clan. These two clans produced several distinguished figures in the 16th century.

The village expanded around the clan branches.

In the early 20th century a railway line was built to the village and a school constructed. In the 1940s a Buddhist Temple was constructed, and a decade later a Church. In the 1970s a bridge was erected over the Allakcheon Stream and in 1971 the pattern of arable land on the Angang Field was restructured and a community warehouse built.

In the 1980s, the village did not suffer such a severe decline in population as some other villages.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis in the original nomination dossier compared the two villages nominated to five other clan villages in Korea that have been given

national protection, alongside two walled towns but provided only basic information. It also only compared the nominated properties to a limited number of inscribed properties and not to other villages outside Korea that might in the future be nominated.

The supplementary material sent by the State Party in February 2010 provides extra information on both these areas of the analysis.

In considering comparison between the two villages and other properties already inscribed on the List, comparisons are made with four villages and towns in China, one in Japan, one in Viet Nam, one in South America and 21 in Europe. Historic villages and towns in Asia are seen to differ fundamentally from those in Europe in being built primarily of wood and being linked closely to agriculture, and particularly the cultivation of rice, Hahoe and Yangdong may be grouped with China's Xidi and Hongcun in Southern Anhui Province and Fujian *Tulou* as clan communities based on rice cultivation. However, the noble clans of these Korean villages belonged to a social class that emerged during the Joseon period, which are seen to be clearly differed from Chinese literati or merchant classes. Korean clan villages also have a distinctive structure with aristocratic residences being surrounded by commoners' homes, whereas Chinese villages characteristically have a continuation of houses with similar classes and structures. Korean villages are seen to be clearly distinguished in terms of form, function and materials.

In considering comparisons between the two villages and other villages that might be nominated in the future, comparisons are made with Japan, China and Viet Nam. As Confucianism has had heavy influence on East Asia (including China, Korea, Japan and Viet Nam) for more than 2000 years, it is appropriate to compare the two nominated villages to others in that geo-cultural area, which is called the East Asian Confucian cultural sphere. It is suggested that Korean clan villages reflect a social system that is quite different from that in Japan, China or Vietnam. In Korea during the Joseon Dynasty, there were strict patriarchal clan divisions and while clan members belonging to nobility lived along with the commoners, they pursued a literary life while the commoners did the farm work.

Such a stern class system is not found in historic villages in Japan, Viet Nam, or China. Korean clan villages reflect in spatial terms this hierarchical clan system. Those who formed the elite class in Korean clan villages maintain their privileged status through building ancestral shrines, study halls, Confucian academies for higher learning and village schools, for the performance of ancestral rites and the education of the young.

In justifying the choice of the two villages from amongst the remaining clan villages in Korea, it is stated that in the 1920s, Korea had some 15,000 clan villages (on both parts of the peninsula, later divided). Of these, 1,685 villages claimed their founding ancestors were

famous Confucian scholars of the noble class. Rapid industrialization and urbanization during the 20th century, and the Korean War of 1950-1953 have had a devastating impact on rural villages. The proportion of urban dwellers has moved from 3.8% in 1910, to 90.5% in 2009. Only seven traditional Korean villages are currently under national protection. Apart from Hahoe and Yangdong, the others are Oeam Village, Wanggok Village, Hangae Village, Seongeup Village and Nagan Walled Town. Hahoe and Yangdong are seen to have the greatest number of surviving assets in terms of number of protected buildings, number of outdoor pavilions and number of Confucian academies.

In terms of why two villages are needed to reflect the particular characteristics of Joseon period settlements and their architectural and artistic achievements, it is stated that they are seen to be the best preserved examples and both villages are situated in prominent natural environments, one by the riverside and the other one along mountain valleys.

ICOMOS considers that the comparative analysis as amplified by the supplementary material justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

Hahoe and Yangdong villages:

- Are the oldest and most excellent examples of clan villages, a form of settlement that characterised the Joseon period;
- Follow faithfully *pungsu* principles and maintain the functional and visual integrity of production, living and spiritual areas;
- Have outstanding and well preserved extraordinary buildings that represent the house, *Jeongja*, *jeongsa* and *seowon* of the Joseon period;
- Have kept for generations old records, documents, and artistic works, the academic and cultural achievements of Joseon's Confucian scholars;
- Maintain today the highest level of traditional family rituals and characteristic village events that were performed by Confucian scholars in the Joseon period.

Two properties have been nominated to manifest this outstanding universal value. ICOMOS considers that the villages have the capacity to demonstrate OUV for their ensembles of traditional buildings and for the way their planning and building traditions reflects the social structures and distinctive aristocratic Confucian culture of the Joseon Dynasty and how this persisted over time,

rather than for the movable cultural relics and achievements of scholars – both of which are, however, of considerable importance in substantiating Outstanding Universal Value.

Integrity and Authenticity

Integrity

The main attributes of the clan village such as houses of the nobility and commoners, formal spatial layout, study halls and academies, are present within the nominated boundaries of both villages, although in Hahoe the Byeongsanseowon Confucian Academy is 4km to the east and in Yangdong village the Oksanseowon and Donggangeowon Confucian Academies are some 8km and 4km respectively from the village and not spatially linked to it.

The harmonious landscape setting, including the river, forests and mountain that inspired writers is present in Hahoe, although partly in the buffer zone, and is present to a lesser degree of completeness in Yangdong. Here the Allakcheon stream, the Angang fields, (both of which are in the view from the *Suunjeong Pavilion*) and the upper reaches of the mountain are not included in the nominated area.

The property does not suffer from other than minimal adverse effects of development and has not suffered from neglect. However the setting of Yangdong village has been compromised to a degree by new infrastructure, such as bridges, roads and a railway.

Authenticity

In terms of the clan villages the way the attributes truthfully reflect Outstanding Universal Value relates to the ability of the buildings, village layout, setting and dynamic clan rituals to express the way the village houses are an exceptional manifestation of the Joseon political and cultural regimes and the way they were shaped by Confucianism.

ICOMOS considers that villages express well the hierarchical layout of the settlements, and the expressions of the influential clan nobility and scholars.

The way that the village developed their dynamic relationship with their environment to express harmony and beauty as well as functionality, is better reflected in Hahoe than in Yangdong.

Where authenticity has been compromised is in the use of materials for some of the restoration projects - see below – and the somewhat extensive remodeling that has taken place, particularly in Hahoe, where many of the buildings have been modified for new uses. Both of these interventions blur the link with Joseon period materials, techniques and planning, and the ability of the buildings to contribute to OUV.

The authenticity of individual structures is therefore vulnerable and there is a need to ensure that further erosion of detail does not take place and that, where possible, conservation can be improved.

ICOMOS considers that the conditions of integrity and authenticity have been met, but ICOMOS also considers that authenticity is vulnerable in relation to the conservation of individual structures and this needs to be addressed.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii), (iv), (v) and (vi).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that Hahoe and Yangdong Villages are two of the best preserved and representative examples of a clan village, a type of settlement characterizing the Confucian society of the Joseon period (1392-1910). The Confucian rituals, records and documents kept at the village, village faith and folk games are exceptional testimony to the culture of Joseon villages.

ICOMOS considers that this criterion can be demonstrated on the grounds that the villages themselves are an exceptional testimony to a cultural tradition, in this case the Confucianism of the Joseon dynasty which produced settlements that followed strict Confucian ideals over a period of some five hundred years.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that tile-roofed and thatch-roofed residential buildings and Confucian buildings such as *jeongsa*, *jeongja* and *seowon* artistically and technically reflect Confucianism, environmental friendliness and harmony with nature that are the distinctive features of traditional Korean architecture.

ICOMOS considers that this criterion can be justified as the village ensembles reflect a significant stage in human history, which in the case of Hahoe and Yangdong is the Joseon Dynasty which prevailed over five hundred years and profoundly influenced the development of the Korean peninsula, becoming the longest ruling Confucian dynasty. ICOMOS considers that the villages, and particularly the ensemble of *yangban* and commoners' houses, and their overall and

individual planning, do reflect the precepts of this Dynasty in terms of its social structures and cultural traditions as well as its power and influence and its literary, and philosophical traditions.

ICOMOS does however consider that insufficient landscape has been nominated for the six sites to reflect the idea of harmony with nature and, in the case of the Yangdong sites, that harmony has to a degree been compromised. The criterion can therefore be justified only for the architectural ensembles.

ICOMOS considers that this criterion has been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that Hahoe and Yangdong Villages are outstanding examples of traditional settlements in which tile-roofed and thatch-roofed residential buildings and Confucian buildings such as *jeongsa*, *jeongja* and *seowon*, artistically and technically reflect Confucianism, environmentally friendliness and harmony with nature that are the distinctive features of traditional Korean architecture.

The Joseon Dynasty's Confucian society, based on rice farming and of the interaction with natural topography, following *pungsu* principles. These villages are living heritage that are still inhabited by people and are open to development and change of the modern times, needing careful measures to sustain the village from diverse impacts.

ICOMOS considers that for this criterion to be justified it needs to be demonstrated that the two villages are settlements which represent a culture or human interaction with the environment in an outstanding way. The Joseon culture which fostered the villages was based on a harmonious interaction with the environment, both in terms of the layout of the settlements, and their relationship with farmland and the natural surroundings of river, forest and mountains, on rigid social divisions that determined the layout of *yangban* houses and their relationship with commoners' houses, and on a focus on study, learning and strong clan rituals.

ICOMOS considers that both villages reflect, through their overall layout of *yangban* and commoners' houses, and through the plans and surviving fabric of individual *yangban* houses, shrines and Confucian Academies, the distinctive aristocratic Confucian culture of the early part of the Joseon Dynasty (1392-1910). However they cannot be said to also reflect within the nominated boundaries the harmonious relationship between the village and its landscape setting, and thus an overall sense of beauty and harmony.

ICOMOS considers that this criterion has not been fully justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the houses of head families of prestigious clans, *seowon*, *jeongsa* and *jeongja* at Hahoe and Yangdong Villages were home to scholarly and educational activities of prominent Confucian scholars. Many artefacts they produced, including records, old documents, book printing tablets, recorded documents, poems and drawings, are valuable resource materials in understanding the Confucian culture of the Joseon period.

ICOMOS considers that this criterion has to be demonstrated for the way the property is directly or tangibly associated with living traditions, with ideas or beliefs, or with artistic and literary works of outstanding universal significance. It is properties that are inscribed on the List not ideas, activities or movable objects.

Although the nomination states that Hahoe and Yangdong Villages were home to Confucian scholars of the Joseon period and the location of their literary and educational activities, and that Hahoe produced many extraordinary scholars, it is not demonstrated how these traditions have become of universal value as opposed to great local and national value.

ICOMOS does not consider that this criterion can be justified for the property.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the serial approach has been justified.

ICOMOS considers that the nominated property meets criteria (iii) and (iv) and the conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

In the past, there has been a pattern of residents leaving the villages, but, today, the pattern is being reversed as some retirees are returning home or descendants are pursuing economic opportunities. Retirees or descendants usually return to family houses. If new construction is required, there are available plots of land

– and design controls in place to ensure that new houses continue traditional building forms (and their placement) as well as traditional materials. However ICOMOS considers that there is a need for greater clarity over overall spatial development plans.

Around the smaller nominated part of Yangdong village, there are undesirable developments near and abutting the Donggangseowon Confucian Academy, Dongnakdang House and Oksanseowon Confucian Academy.

ICOMOS raised these issues with the State Party through its letter dated 18 December 2009. In its response the State Party announced that Gyeongju City had agreed to mitigate the negative impact of the buildings around Donggangseowon Confucian Academy: by purchasing six plots of land (1,677 m²) in order to remove the buildings on them. The City has also agreed to purchase six plots near Oksanseowon Confucian Academy, and five plots at the entrance of Dongnakdang House. The plans, along with the budget for purchasing the plots and buildings, were approved by the City on January 21, 2010. They will be implemented between 2014 and 2017.

Near Yangdong, visually intrusive bridge has been constructed over Jagacheon Stream, which is the natural link between the sites. Its metallic materials and bright colour divert attention from the river course, including the view from the pavilion at Dongnakdang House.

Within the villages, all electrical power lines have been buried underground so that utility poles are not visible. There are also no utility poles and pylons seen in the Buffer Zones. However, in the case of Donggangseowon Confucian Academy in Yangdong Village, some pylons are seen in the setting. To reduce the intrusive effect, the village has asked the Korea Electric Power Corporation (KEPCO) to include the relocation of these pylons in its long-term plan. In the mountains behind Hahoe there are prominent pylons that spoil the view.

ICOMOS considers that it would be helpful to have a more detailed policy put in place to sustain the visual integrity of the wider landscape, including distant views.

Tourism pressures

Although both villages will shortly have relegated tourism facilities to buffer zones, any increase in the flow of visitors, especially in the case of Hahoe Village, will impact on the daily lives of village residents. How to keep the delicate balance between semi-public and semi-private space will have to be addressed to maintain the dignity – and comfort – of residents.

ICOMOS considers that possible solutions such as imposing limits on the daily number of visitors, rotating visitation days for selected houses or raising admission fees need to be addressed within an overall cultural

tourism strategy. The current tourism strategy is for an increase in visitors.

In Hahoe village, tourist facilities, including a number of privately-operated shops, have been relocated outside the boundaries of the property. Rather unfortunately, the new visitor facilities can be glimpsed from the village proper, but, fortunately, they are not visually intrusive except for one building – a multi-floor hotel. Although this is an issue being addressed, ICOMOS considers that there needs to be a firm commitment on the part of the State Party as to when demolition and rebuilding will occur.

The car park space immediately adjacent to the Byeongsanseowon Confucian Academy needs to be closed to all vehicles, except those required for handicapped access, and all such vehicles need to be parked at the newly constructed car park outside the property boundaries (and within the buffer zone).

In Yangdong village, a multi-functional community and visitor complex is being constructed at the entry to the village (within the buffer zone). The visual impact will be minimal. However the landscape indicated in conceptual drawings is not in keeping with the traditional landscaping found throughout the village, and ICOMOS has concern regarding the choice of finishing materials for the centre, in particular, tiles that “argue” with the designs and colours of traditional building materials.

Environmental pressures

The major environmental threat to the property comes from water pollution. Since 2006, Hahoe Village has implemented a project to clean up the village by installing simple sewage treatment facilities, sewage pipeline and water supply pipes underground. A similar project has been implemented in Yangdong.

Natural disasters

There is also concern about the possibility of devastating fires. The recent destruction of the South Gate in Seoul has led to investigation of sprinkler systems using a high pressure water mist system. This technology, now thoroughly tested, will be used for places of state value, including World Heritage Sites.

In the meantime, every house has a fire extinguisher, fire hydrants are systematically distributed throughout the property, and fire-fighting exercises are conducted regularly. Currently fire companies are located some 9km (Hahoe Village)/ 7km (Yangdong Village) away. However village fire station branches are under discussion. The 2009 Firefighting Plan, drawn by the Hahoe Village Management Office, shows the organisational chart of the village's volunteer fire department, its duties, inspection and maintenance of firefighting equipment and the action plan in case of fire.

ICOMOS considers that there is a need for a definite date to be established for the creation of village fire stations.

In Hahoe, there have been no floods in recent times and there appears to be little probability of flooding in the future. In Yangdong Village, there has been no flooding since 1994, when a dike was built between the village and nearby Allakcheon Stream.

Impact of climate change

Climate change could bring more unpredictable weather, including less predictable heavy rain. To mitigate the worst effects of such downpours, it is essential that the mountain slopes are well managed with adequate tree and grass cover. Little details are provided of this management.

ICOMOS considers that the main threats to the property are fire and over-visiting and that although these are addressed in the management plan it would be beneficial for clearer strategies on cultural tourism that relate to the capacity of buildings and the tolerance of residents and for village fire stations to be put in place, as considered.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property, including the buffer zone(s), are shown clearly on a series of maps and aerial photographs included in the nomination dossier.

Hahoe Village

The nominated areas of Hahoe village are in two parts: the main area includes the village, part of the mountain behind, part of the river in front and a strip of the far river bank which included Buyongdae Cliff, Gyeomamjeongsa Study Hall, Hwacheonseowon Confucian Academy and Okyeonjeongsa Study Hall. A much smaller area encloses the Byeongsanseowon Confucian Academy 4km to the east. Both lie within the same extensive buffer zone that extends to the nearest mountain ridges and to distant views of the river course and offers to the north, east and southeast considerable protection including views of what are called the 16 Beautiful Sceneries. To the southwest and west, there is no buffer zone as the property boundary offers sufficient protection.

Views out from the property need to be identified and given appropriate protection.

Yangdong Village

The nominated area of Yangdong Village is in four parts: the main village area with its stream and forested mountain backdrop and three smaller areas, one 4km away including Donggangseowon Confucian Academy and two 8km away, including Dongnakdang House and the Oksanseowon Confucian Academy.

An extensive buffer zone gives appropriate protection to the primary property to the north and northeast, while, to the southeast, there is no buffer zone as the primary property boundary offers sufficient protection to the property's attributes. (In both instances, either the primary property boundary or the buffer zone extends to the nearest mountain ridges.) To the west, the buffer zone offers adequate protection of Allakcheon Stream and a portion of Angang Field, and given a series of government land use controls, there appears to be no need to extend the buffer zone further to the west. To the south, however, ICOMOS considers that the buffer zone does not offer adequate protection from intrusive views of a major highway. Proper screening with local tree species could mitigate the impact and it appears that some screening will occur with the construction of a new visitor complex. However the State Party considers that the road, as well as the nearby railway, are part of the history of the village and do not need screening.

ICOMOS considered that Donggangseowon Confucian Academy, Dongnakdang House and Oksanseowon Confucian Academy, had problematic buffer zones when viewed from their respective approaches and raised the following issues with the State Party:

Donggangseowon Confucian Academy is approached from the north and the first glimpse of the associated property is compromised by a tight cluster of buildings immediately in front of the north elevation. The buffer zone needs to include this area and in time it would be desirable to remove or mitigate the impact of these buildings. To the west, and immediately outside the property (there is no buffer zone for this part of the property), there is a railway. It is understood that this might be removed in due course. ICOMOS considers that this area also needs to be within the buffer zone.

In the case of Oksanseowon Confucian Academy, several restaurants lie immediately to the left of the main approach. The location of the restaurants undermines the solemnity of the place. Consideration should be given to including this area within the buffer zone and mitigating the impact of the restaurants.

In the case of Dongnakdang House, a number of small-scale buildings (largely domestic) line the left hand side of the main approach. Although visually intrusive to some extent, the massiveness of the enclosing wall of the house diverts the visitor's gaze. Nevertheless ICOMOS considers that the buffer zone should be extended to the south side of this part of the property and the impact of the buildings if possible mitigated.

In its supplementary information the State Party announced that it had expanded the Buffer Zones of Donggangseowon Confucian Academy, Dongnakdang House and Oksanseowon Confucian Academy and re-designated them in order to protect complete 500 metre radii. This, combined with the land purchases outlined above, addresses ICOMOS's concerns and will greatly improve the approaches to the sites and protect their settings.

ICOMOS considers that the boundaries and buffer zones of the nominated areas of Hahoe and Yangdong villages are appropriate.

Ownership

The majority of buildings in the two villages are in private ownership or belong to foundations, conservation societies or clans. Likewise ownership of the farmland, woodland, and open spaces within the villages are also mostly in private ownership. The river, river banks, cemetery, and school are nationally owned as are parts of the agricultural land and woodland.

Protection

Legal Protection

Both Hahoe Village and Yangdong Village have been protected under the National Heritage Protection Act since 1984. For Hahoe village the boundary of the Cultural Heritage Protection Area reinforces the protection of the primary property, associated property and the shared buffer zone, and, in some instances, even extends the protection. For Yangdong village the boundary of the Cultural Heritage Protection Area reinforces the protection of the main village area and a small portion of the buffer zone, and the outlying property, except Donggangseowon Confucian Academy, and a small portion of the buffer zone (except in the case of Dongnakdang House). The forests are preserved under the framework of the Cultural Heritage Protection Law – just like the buildings and houses in the villages.

Within the villages, six houses in Hahoe (out of 124) and two houses in Yangdong (out of 149) are individually designated as National treasures.

In summary, at the state level, there is protection, through designation, of both Hahoe and Yangdong Villages, and all associated places, except for Donggangseowon Confucian Academy, and individual protection for eight houses.

This national protection has been strengthened by the following national directives or guidance: Mid- and Long-term Vision of the Cultural Heritage Policy: Cultural Heritage 2011 (2007); Detailed Implementation Plan for the Conservation, Utilization and Comprehensive Maintenance of Folk Villages (2004); Hahoe Village

Design Guidelines (2007); and Yangdong Village Design Guidelines (2007).

At Provincial level there are overall provisions for conservation, ranging from the definition of cultural heritage to their conservation, management and utilization. Donggangseowon Confucian Academy is protected at provincial level.

At local level, for Hahoe Village there are Ordinances of Andong City for Protecting Cultural Heritage (2004) which includes provisions for conservation and management. There is also a Master Plan for Hahoe Village Renovation (2002); an Urban Master Plan for Andong City toward 2016 (1998) and a Hahoe Tourism Complex Development (Creation) Plan (2003 [1998]).

For Yangdong village there is a Master Plan for Yangdong Village Renovation (2002); Long-term Comprehensive Development Plan for Gyeongju City for 2006-2020 (2006); and a Development Master Plan for Creation of Historic and Cultural City of Gyeongju for 2005-2034 (2004).

Additionally, the entire area of properties and buffer zones and the immediate surroundings are under a series of government controls, i.e. Control Area, Agriculture and Forest Area or Natural Environment Protection Area.

However such controls have not prevented certain visual intrusions.

Traditional Protection

Many of the smaller houses are maintained by their owners as are the agricultural fields.

Effectiveness of protection measures

Overall it appears that in spite of the two villages having had national protection since 1984 this has not stopped incremental changes which in some cases are now seen to be detrimental – such as extensive re-modelling, changes in roof and other materials and inappropriate extensions. In recent years the design guidance that has been prepared, has begun to take effect on the control of new interventions and on guiding restoration. However, as noted above, authenticity is vulnerable.

ICOMOS considers that the legal protection in place is adequate but needs to be strictly enforced through the design guidance now in place.

Conservation

Inventories, recording, research

The layouts of Hahoe Village and Yangdong Village, including empty plots of land, were mapped in great detail from 2007-2008. For each individual

cluster/compound there is a roof plan accompanied by a colour photograph of the site as well as a detailed floor/site plan that records modifications and additional buildings. And it is these annotated floor/site plans that form the baseline for future work, including the restoration of original features and/or replacement of unacceptable modifications and/or additional buildings with those considered in keeping with the overall character of the individual villages.

ICOMOS considers that these plans form a useful baseline but they could be augmented to provide more details of original fabric, particularly for those buildings which still retain a high proportion on their original timbers.

Present state of conservation

The overall state of conservation in both villages is good and the conservation of state-designated sites appears to be very good to excellent, with the caveat that in some instances conservation has been over extensive and involved the use of inappropriate materials. The one province-designated site, Donggangseowon Confucian Academy, appears to need some attention.

ICOMOS considers that there is however a lack of information on characteristics of the woodland and their current conservation, of the ancient individual trees and of the river banks. Although considerable study has been made of positive and negative landscape elements in both Hahoe Village and Yangdong Village, and "Programmes of Conservation and Management for the Core Zones" have been established, and some implemented, ICOMOS considers it would be appropriate for there to be an overall landscape strategy for each village to ensure that individual projects are coherent with the whole.

Active Conservation measures

There are programmes in place for the systematic conservation of buildings/structures in both villages and, there appears to be appropriate funding in place. As well, there is regular, on-going maintenance by villagers. For conservation involving a higher level of intervention, skilled and licensed technicians are employed. The training and licensing of skilled tradesmen is well-developed and the system is such that only licensed technicians can work on designated buildings. As a further control, signage posted on conservation sites lists the names and license numbers of all major tradesmen.

Standards and guidelines developed for the conservation of the villages are grouped under four categories: (1) layout and structure; (2) shape and materials; (3) equipment; and (4) public community facilities.

Given the overall number of houses and related structures within the villages, there is an understandable backlog of work to be done to correct inappropriate

modifications and/or additional buildings on sites. One of the most significant modifications has been the past conversion of thatched roofs to tiled roofs, which breaks down the differentiation between *yangban* houses and those of commoners and servants. Such modifications will be reversed as part of the conservation programme.

Local materials are readily available, although roofing tiles are now factory-produced rather than made by hand.

Nevertheless there are a considerable number of examples of properties within Hahoe village in particular where conservation has been carried out in an unsympathetic way such as in the pointing of stone walls and the surface treatment of timbers. Guidance needs to be adhered to for all buildings in order to conserve the traditional techniques and to encourage the use of traditional materials.

Maintenance

Day-to-day maintenance is the responsibility of house owners and caretakers, where the buildings are in domestic use and the nomination dossier indicates that this system poses certain risks. It is suggested that monitoring will improve matters (see below).

ICOMOS notes that little information is provided on maintenance of the wider landscape.

Effectiveness of conservation measures

The new design guidelines combined with grants, has ensured that a programme of conservation work is now being implemented to restore buildings as well as to maintain them and to undertake improvements to landscape within the villages. The wider landscape needs to be brought into the conservation framework.

ICOMOS considers that conservation measures and programmes now in place are having a beneficial effect on built structures, although detailed guidance on restoration technique and materials should be adhered to for all buildings in order to maintain the authenticity of individual buildings. It would be desirable to widen conservation to include forest areas, trees, river margins and the overall visual landscape.

Management

Management structures and processes, including traditional management processes

Both villages are currently managed by local governments according to provincial ordinances. A city management office has been established in Hahoe. In January 2009, both villages "passed municipal ordinances to establish a semi-public organization, called the Conservation Council, for each village."

Until these Councils come into effect, the current system is tri-partite and hierarchical. At the state level, the Cultural Heritage Administration is responsible for cultural heritage and carries out its responsibilities (under an Administrator and Deputy Administrator) through four bureaux and one major division. The Heritage Promotion Bureau is responsible for the nominated property under one of its four divisions – the Modern Cultural Heritage Division. The Bureau is advised by the Cultural Heritage Committee, as well as by the National Research Institute of Cultural Heritage. At the provincial level, in this case Gyeongsangbuk-do Province, certain responsibilities are assigned by the state to the province's Cultural Property Division. This division, in parallel with the Modern Cultural Heritage Division at the state level, has its own advisory body – the City and Province Cultural Heritage Committee.

At the city level, in this case Andong City (Hahoe Village) and Gyeongju City (Yangdong Village), certain responsibilities are assigned by the province to the cities' Culture and Arts Division (Andong City) and Cultural Property Division (Gyeongju City).

At the village level, in turn, certain responsibilities are assigned by the cities to the villages through the Hahoe Management Office – and through the Hahoe Village Conservation Society and Yangdong Village Conservation Society.

Conservation Councils

In January 2009, municipal ordinances were passed to provide for establishment of Conservation Councils in each village. The Andong and Gyeongju city governments have set up procedures for the Conservation Councils and made funds available to these bodies. The councils include not only residents, but professionals, government officers and administrative organizations.

The conservation councils have entered into contracts with the provincial and central government for the delivery of certain services in an efficient and transparent manner.

In Hahoe Village, the Conservation Council plans to launch a long-term (2010-2020) plan to take over the authority of the Village Management Office from Andong City, including the administration of entrance fees, tourism programs, and monitoring processes.

The Conservation Councils herald an important shift from government-led management to resident-led management – and their establishment reflects the understanding at all four levels of government that the longer term sustainability of the villages depends on the direct involvement of residents in management.

Although it is stated that the Conservation Councils liaise with each other and the various government departments liaise with both of them, there is currently

no formal link between the two Councils that could be seen as a single mechanism for the serial property.

The Conservation Councils – and, indeed, all stakeholders, including the Cultural Heritage Administration – need to be able to articulate a shared vision for both villages. Although this is spelt out in general terms – to sustain the villages for the next 600 years -, ICOMOS considers that it would be helpful if this could be more specific as a shared understanding of what is to be managed that is agreed by all key stakeholders.

Policy framework: management plans and arrangements, including visitor management and presentation

An outline management plan has been prepared for the two villages. This sets out clearly the attributes to be managed – buildings, landscape, spatial plan and local ceremonies related to the key buildings. It also summarises the existing management arrangements and makes the case for the Conservation Councils. In January 2009 a memorandum of understanding was signed between the Central government offices and other stakeholders for its implementation and this will be carried out through the new Councils. In time the Management Plan needs to be developed with strategies for key aspects of management.

A wide variety of scholarly and interpretative materials have been produced for both villages – from academic studies to accessible brochures explaining the individual villages and/or their associated traditions.

Great emphasis is placed on interpretative programmes for school children. At Hahoe Village, students can participate in rituals at Confucian academies and/or attend Masked Dance classes; Yangdong Village offers specially-designed school programmes for village children.

New and sensitive interpretative signage has been designed and is being installed. The design approach follows the successful redesign of interpretative signage for Changdeokgung Palace Complex in Seoul. The new interpretative signage system will be installed in Hahoe Village by the end of October 2009 and in Yangdong Village by the end of November 2009.

Risk preparedness

The fire prevention exercise mentioned above are the only measure currently in place.

Involvement of the local communities

The Conservation Councils provide for the formal involvement of local communities.

One of the most touching conservation measures is the spontaneous application of Yangdong Village children to

a One Heritage One Guardian programme. Normally, the programme attracts businesses or organizations that wish to help with the conservation of a particular place. The action of the children has prompted government to think more creatively about the ways in which the programme could be used to further the aims of conservation.

Resources, including staffing levels, expertise and training

As designated 'folk villages', Hahoe and Yangdong are supported financially by central and local governments. Resources are allocated for repair and restoration of houses, infrastructure, basic facilities for tourism and the design of an overall plan for improvement. Hahoe also receives 40% of tourist admission income. Over the last 24 years, Hahoe and Yangdong have received 20.1 billion Korean won (17 billion US dollars) and 27.5 billion Korean won (24 billion US dollars) respectively from government subsidies.

Cultural heritage expertise is available at national, provincial, city and local levels through staff and through Advisory Committees. For instance, the national Modern Cultural Heritage Division is advised by the Cultural Heritage Committee, which is respected and influential, as well as by the National Research Institute of Cultural Heritage. At the provincial level, the Cultural Property Division has its own advisory body – the City and Province Cultural Heritage Committee. At the city level, certain responsibilities are assigned by the province to the cities' Culture and Arts Division (Andong City) and Cultural Property Division (Gyeongju City), while at village level, certain responsibilities are assigned by the cities to the villages through the Hahoe Management Office – and through the Hahoe Village Conservation Society and Yangdong Village Conservation Society. Overall the level of available expertise is high, and advice provided is followed.

Effectiveness of current management

There is currently no overall management structure for the two villages. The creation of a Conservation Council for each village has helped to create a management system that involves the local communities in each village. The outline management plan sets out clearly the attributes that need managing and the rationale for the Conservation Councils and is good basis for moving forward. Nevertheless it does not envisage an overall arrangement for the whole serial property as prescribed by paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS considers that the current individual management system for each of the villages needs to be augmented by some sort of formal joint coordination of the Conservation Councils as prescribed by paragraph 114 of the *Operational Guidelines* and by an overall vision for the property.

6. MONITORING

Annual or biennial monitoring indicators have been set out for the following aspects of the properties: physical environment, living landscapes (traditional beliefs and practices) and productive landscapes. The Conservation Councils are responsible for monitoring.

ICOMOS considers that the monitoring arrangements are satisfactory.

7. CONCLUSIONS

Hahoe and Yangdong villages, and their associated outlying properties, reflect ideals embedded in the aristocratic Confucian culture and rigid social order that characterised the early part of the Joseon dynasty, through their siting in relation to mountains and streams, the disposition, construction and layout of *yangban* and commoners' houses, study halls, pavilions and academies, and overall their harmony reflecting *pungsu* principles.

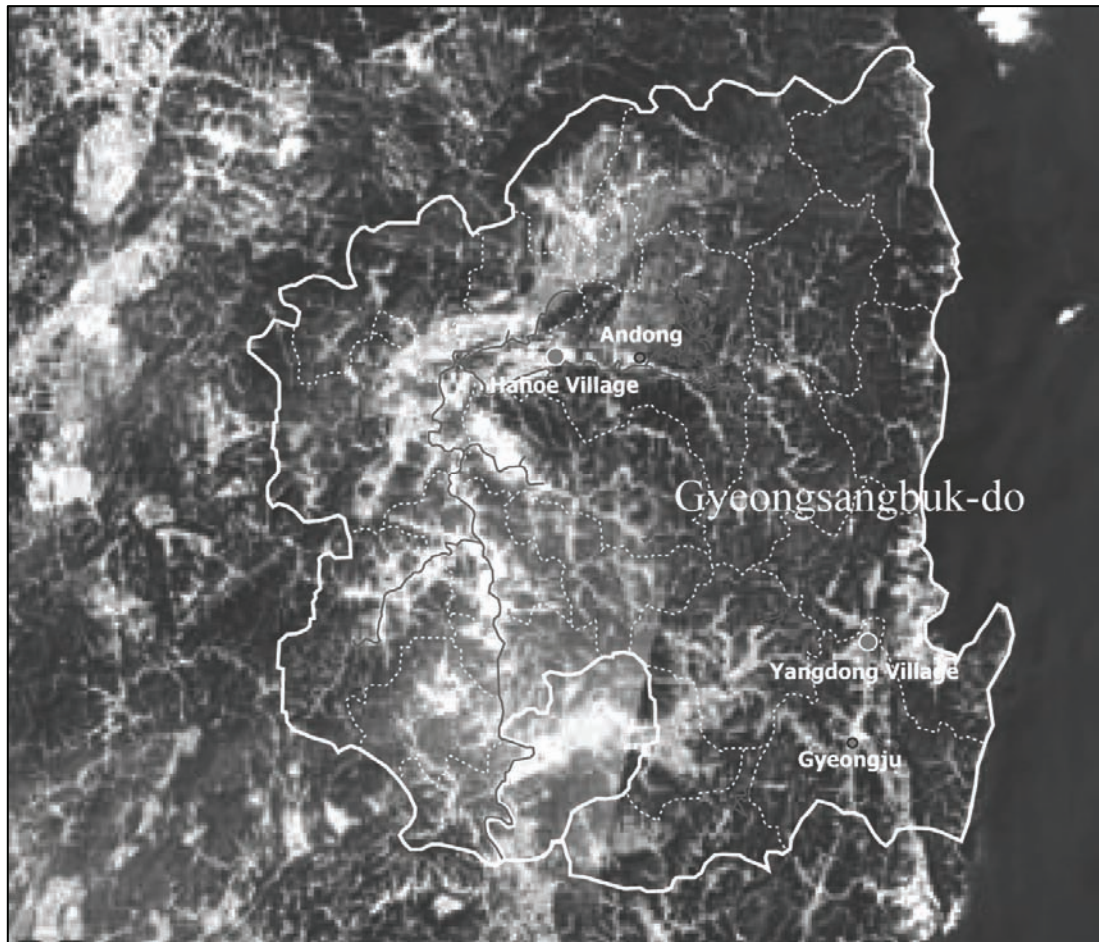
Recommendations with respect to inscription

ICOMOS recommends that the nomination of Historic Villages of Korea: Hahoe and Yangdong, Republic of Korea, be **referred back** to the State Party to allow it to:

- Put in place a coordinated management system for the two component sites, as prescribed by paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS further recommends that the State Party give consideration to the following:

- Ensure the detailed guidance on restoration techniques and materials is adhered to for all buildings in order to maintain authenticity of individual buildings;
- Widen conservation to include forest areas, trees, river margins and the overall visual landscape;
- Develop clearer strategies on cultural tourism that relate to the capacity of buildings and the tolerance of residents;
- Put in place village fire stations.



Map showing the location of the nominated properties



Aerial view of Hahoe Village



Aerial view of Yangdong Village



Hahoe Village, Bukchondaek House



Hahoe Cluster, Gyeomamjeongsa Study Hall



Yangdong Cluster, Dongganseowon Confucian Academy



Yangdong Village, Simsujeong Pavilion

The Imperial Citadel of Thang Long Hanoi (Vietnam)

No 1328

Official name as proposed by the State Party:

The Central Sector of the Imperial Citadel of Thang Long-Hanoi

Location:

National Capital
Hanoi
Socialist Republic of Vietnam

Brief description:

The Thang Long Imperial Citadel was built in the 11th century by the Ly Viet Dynasty, marking the independence of the Dai Viet. It was built on the remains of a Chinese fortress dating from the 7th century, on drained land reclaimed from the Red River Delta in Hanoi. It was the centre of regional political power for almost thirteen centuries without interruption.

The Imperial Citadel buildings and the remains in the 18 Hoang Dieu Archaeological Site reflect a unique South-East Asian culture, specific to the lower Red River Valley, at the crossroads between influences coming from China in the north and the ancient Kingdom of Champa in the south.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *group of buildings*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention*. (January 2008), Annex 3, this is also an historic town center in the category of *historic towns which are still inhabited* and an archaeological site in the category of *towns which are no longer inhabited*.

1. BASIC DATA

Included in the Tentative List: 21 June 2006

International assistance from the World Heritage Fund for preparing the nomination: 1 October 2007

Date received by the World Heritage Centre: 22 January 2009

Background: This is a new nomination.

Consultations: ICOMOS consulted its International Scientific Committees on Archaeological Heritage Management and on Historic Towns and Villages, and independent experts.

Literature consulted (selection):

Amis du Patrimoine Architectural du Viet Nam, *Colloque Unesco: Sauvegarde du centre historique de Hanoi*, 1993, Paris, APAV.

Brooks, G., Hanoi, Viet Nam – Conservation of an ancient city in transition, *The heritage and social changes symposium papers*, Sofia, BNC/ICOMOS, 1996, pp. 239-41.

Decoster, F., and Klouche, D., 1997, *Hanoi*, Paris, Institut français d'architecture & CNRS.

Logan, W. S., 2000, *Hanoi, biography of a city*, Sydney, UNSW Press.

Papin, Ph., 2001, *Histoire de Hanoi*, Paris, Fayard.

Sauvegarde et développement du patrimoine de Hanoi et Hué, 1994, UNESCO, Paris.

Technical evaluation mission: 19-22 September 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property is located in central Hanoi, in the heart of what has always been the seat of political and symbolic power of contemporary Vietnam. The city is located in the upstream section of the Red River Delta, west of one of the main meanders; this geographical location is the origin of the current name of *Hanoi* (= in the loop of a river). The property is in an alluvial region marked by the presence of many pools and stretches of water, along with canals and dykes. The hydrological context has formed the landscape and shaped urban development, requiring constant control of the water. Red River floods can be as high as 7.5m above low water level.

Vietnamese political power and its most symbolic contemporary manifestations are located within the immediate vicinity of the property: the National Assembly, the Ho Chi Minh Mausoleum, the Presidential Palace, the Headquarters of the Communist Party, Ba Dinh Square of the Proclamation of Independence, the Ministry of Defence, etc.

The property is made up of two adjoining sectors. In the east a long strip of land conforms with the north-south axis of the ancient Citadel or the Imperial Capital of Thang Long. It is bordered by four modern streets,

including a diagonal perspective in the south, Bac Son Street, built during the colonial period, which cuts off the southern edge of the ancient Citadel. The construction of the Imperial Citadel of Thang Long began in the 11th century. Its central section corresponds with the Forbidden City, the Emperor's Residence; it is today Kinh Thien Palace and its annexes.

To the west of this first section, on the other side of Hoang Dieu Street and facing the central Kinh Thien Palace, is an L-shaped archaeological area known as 18 Hoang Dieu. It was immediately adjacent to the Forbidden City and excavations here have uncovered the oldest remains of the property.

The 18 Hoang Dieu Archaeological Site was opened up and excavated starting in 2002, as part of the building work for the new National Assembly. Because of its continuous use, the archaeological site has revealed the lengthy chronology of the site, spanning around thirteen centuries of history (8th-19th centuries). It includes numerous testimonies in the form of traces of building foundations, hydraulic components, streets, and significant archaeological relics. The subsoil was found to be in a good state of archaeological conservation and the various stratigraphic layers are close to each other, but clearly legible, for a depth of around 5m. This favourable situation is due to the gradual abandonment of the site that started in the 17th century, without any destruction resulting from dynastic change. It was then protected against urban development because of its military and political role during the colonial period; it was finally occupied by the contemporary Vietnamese Army. The archaeological site provides a concentration of remains that directly reflect the different historical periods, in the heart of the millennial establishment of regional political power.

The most important discoveries in the earliest layers are the remains of palaces and Chinese foundations. The hydrological features of the soil required considerable ingenuity in constructing buildings. In the subsequent levels the foundations were improved by the use of a mixture of clay, gravel, and brick, which made it possible to erect larger buildings, starting in the Ly Dynasty, which were grouped in an ordered series within the Citadel.

A vast network of wells has been discovered, some of which contained ceramics and terracotta pottery, proving that the site was not only an administrative centre but also the place of residence associated with the reigning power.

A well designed drainage network covering the entire site served the palaces and residences. Excavation uncovered a large number of architectural elements from the palaces and houses, in particular decorative roof ornaments in the form of dragon-heads, phoenixes, tree and lotus leaves, chrysanthemums, etc.

The central sector of the Thang Long Citadel was the

political centre of a national or provincial state that reported to a distant authority, depending on the period, under various names and different dynasties, from the 7th to the 19th centuries. It included at its centre a Forbidden City inside a wall with five gates, only one of which has been preserved. A more or less rectangular wall with bastions surrounding the entire Citadel was built in 1805, most of which was destroyed during the colonial period. Its position is still clearly visible from the current road network. In the 19th century, under the Nguyen Dynasty, Hanoi ceased to be the capital and was replaced by Hué, further to south and more centrally located.

The Imperial Citadel of Thang Long was arranged along a north-south axis, along which the noteworthy monuments of this part of the property are located. Starting from the south, following the ancient protocol for access to the Forbidden City, the following main elements are to be found:

- The Flag Tower (Ky Dai) was built in 1805, as part of the Citadel's fortification system, on the remains of the old outer south gate, Tam Mon. It has a square base and two stepped levels rising to a height of 33.4m. It was conserved when the fortifications were demolished during the French period. It is built in octagonal brick in the form of a pyramidal redan. A central spiral staircase leads to the top. It was an observation post before becoming a symbolic monument and an integral part of the Vietnam Military Museum.
- There is a 15th century square between Ky Dai and Doan Mon Gate. Colonial military buildings were built here; today, they have been converted into a military museum. On the far side a former racecourse forms a lawn in front of the gate.
- Doan Mon Gate was the formal entrance to the Forbidden City, which lay to the south. It has original sections dating from the 15th century and restored sections from the 19th century. It played an important role in imperial ceremony. Built of stone and brick, it has five central arched doors, differing in size according to their role within the protocol, and two side doors. The gate is covered with a wide terrace, in the centre of which there is a two-storey pavilion. The upper level is covered with a double-layer roof with upturned corners. The roofs are tiled and decorated with dragons and foliage.
- Doan Mon Gate was connected to Kinh Thien Palace by means of a path dating from the Ly period. Military administration buildings in Neoclassical style were erected here during the colonial period.
- Kinh Thien Palace, dating from the early 15th century, formed the main part of the Forbidden City, the residence and symbol of Imperial power. It was built on the foundations of earlier royal palaces from the 11th and 12th centuries in the time of the Ly and Ly-

Tran Dynasties. It was, however, demolished and rebuilt during the colonial period, at the end of the 19th century. Its presence today is defined by its foundations, which are visible in certain places, and the two flights of steps with their stone railing representing two imperial dragons, characteristic of the sculpture from this period. The morphology of the site and its symbolic values were derived from geomantic principles (*fengshui*).

- The 1886 French brick building, erected in the centre of the former palace, Neoclassical in style with colonnades, has two storeys. This was the military headquarters in the colonial period, later to be occupied by the Vietnamese Army after independence. It became a cultural and political centre in 2004.
- Building D67, built in 1967 north of the foundations of Kinh Thien Palace, was the political and military centre of North Vietnam in the Second War of Independence; an underground bunker was used for meetings of the Politburo and Military Commission.
- Hau Lau Palace (Palace of the Princess) is located behind the former Forbidden City. It was built in the 19th century for the ladies of the court, on remains dating from the 11th century when building of the Thang Long Citadel began. After being severely damaged at the end of the 19th century, it was rebuilt during the colonial period in accordance with the symbolic principles of ancient Vietnamese palaces. The archaeological excavations have also revealed remains of hydraulic and port works that antedate the Citadel.
- Bac Mon Gate, the northern gate to the Forbidden City, was rebuilt in 1805. It is a brick arch within a massive structure that formed part of the fortifications of the Citadel. On its upper terrace there is a pavilion with a double upturned roof. Archaeological excavations have uncovered earlier remains.

There is a certain number of secondary constructions that accompany the main buildings. Since many of them are later and without any particular architectural or visual interest, the State Party has announced that they will be demolished at an unspecified date. This part of the property also has many trees, most planted in the 19th or early 20th centuries.

ICOMOS notes that remains of the defences of the historic Citadel have not been included in the nominated property. ICOMOS highlights the fact that the subsoil in the overall Thang Long area potentially contains important archaeological remains that are needed for a better understanding of the site.

History and development

The Viet or Kinh, the majority ethnic group in contemporary Vietnam, see themselves as a people that go back to the creation of the world, for which they have their own cosmogony. According to legend the foundation of the Empire dates back to the 3rd millennium BCE, when some fifteen kings and queens met to elect the first Emperor of the Nam Viet (the lands of the southern Viet).

In the 6th century BCE an independent kingdom was established, known as Van Lang, which straddled modern Guandong and northern Vietnam. The earliest written evidence indicating permanent human settlement in the Red River Delta dates from 211 BCE. A rural society with extensive hydraulic knowledge developed here, at the crossroads of cultural influences from the Chinese area to the north and civilizations in South-East and southern Asia.

Under the pressure of the Han Dynasty, the Viet Kingdom was reduced to the lower Red River Valley, which was finally conquered in 111 BCE. It then became one of the kingdoms of the southern marches of the Chinese Empire, and remained under its political and cultural control for almost one thousand years. The last phase of this long period of Vietnamese history is referred to as the Dai La Period. It was at this time that the first Chinese citadel was erected on the site of Hanoi, as indicated by the presence of wells and remains from the 7th-10th centuries CE.

Chinese domination of the Delta and the lower Red River Valley ended in the 10th century with the return of an autonomous dynasty (Dinh-Le) and the establishment of the independent Kingdom of Dai Viet in the lower Red River Valley. The development of a new citadel, Thang Long, on the site where the former had stood, confirmed this independence in the early 11th century (Ly Dynasty). The Citadel surrounded the enlarged Forbidden City built in brick in 1029 and was itself surrounded by a defensive wall. As the seat of power and the royal residence, a Chinese layout was adopted for the Citadel. It does, however, also illustrate the geomantic principles specific to Viet history and culture.

At the same time as the Dai Viet Kingdom asserted itself at the end of the 1st millennium CE, the Kingdom of Champa, a people with cultural influences from the Indian Ocean, developed in the centre and south of modern Vietnam. It was in contact with the powerful and rapidly expanding Khmer Empire, and it was an essential link between the spread in South-East Asia of cultures from India and southern Asia, Buddhism in particular.

The long history of this region of the lower Red River, and especially the Citadel that forms the nominated property, is characterized by the continuous interaction between Viet peoples and the various Chinese dynasties and their Confucian and Taoist traditions, and also with the Kingdom of Champa to the south, marked by

Buddhist traditions. It was an essentially agrarian civilization, with considerable expertise in drainage, dykes, and agricultural hydraulics.

Buddhist culture spread during the Ly (1010-1225) and Tran (1225-1400) Dynasties and played an essential role in the development of institutions and social and religious life. The Dai Viet Kingdom extended its influence and expanded. A change to the Le Dynasty (1428-1789) led to a return to Confucian values and to more rapid development, especially in the 15th century. Hanoi was at this time one of the most important South-East Asian ports. The erection of Kinh Thien Palace, in the heart of the Forbidden City, marked the apogee of the architecture and urban planning of the Viet culture itself. The Citadel reached its maximum size in the 16th-17th centuries, whilst a district of artisans and traders serving the rulers also developed. Thang Long Citadel, and especially the Forbidden City, played an essentially political and administrative role, along with the expression of royal etiquette. It was also the period of conquest of the Kingdom of Champa to the south, giving the dynasty a truly Imperial dimension.

However, a political change gradually took place, starting in the mid-17th century. The Emperor played an increasingly symbolic role, with the real power being exercised by two powerful families, the Trinh in the north and the Nguyen in the south. The latter prevailed at the beginning of the 18th century and established a new dynasty, with its new capital in the more centrally located Hué.

Thang Long still remained the northern Citadel, the Emperor's residence when travelling to the region. Its fortification system was rebuilt (1805), based on the European model of Vauban.

French colonial troops were present in modern southern Vietnam from the 1860s onwards. They undertook the conquest of the north in the 1880s. Thang Long once again became the centre of power. It was in particular the headquarters of the colonial power for the vast regional ensemble of French Indochina (modern Vietnam, Laos, and Cambodia). Many palaces were rebuilt in a European style, generally Neoclassical, such as Kinh Thien Palace, the former heart of the Forbidden City (1886). The Governor's Palace (in the buffer zone) was built and the fortifications were razed so as to permit a European type of urban development, including wide boulevards around and within the ancient Citadel (end of the 19th century).

After the First War of Independence (1954) and the division of Vietnam into two entities, the Viet Min power settled in Hanoi and the ancient Forbidden City became the military headquarters for North Vietnam. During the Second War, against South Vietnam and the United States, the D67 underground command bunker was installed within the area of Kinh Thien Palace (1967).

The Ministry of Defence gradually abandoned its use of

the property between 1994 and 2004, handing it over for cultural and historic uses. The site at 18 Hoang Dieu Street, initially chosen for the construction of the National Assembly, was found to be of exceptional archaeological value (2002). The project was maintained, but on a smaller portion of the initial site.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party proposes other centres of political power in the Far East which it believes to be comparable with the Imperial Citadel of Thang Long in Hanoi, as they are built to similar plans in comparable cultural and political contexts. They are the ancient Han capital (Chang'an, today Xi'an, in China), the Forbidden City in Beijing (China, inscribed on the World Heritage List in 1987), the Imperial Citadel of Nara (Japan, 1998), and the short-lived capital of the Viet Empire in Hué (Vietnam, 1993).

The emphasis is on the special and unique features of the Thang Long Citadel in Hanoi, notably the town-planning and building techniques, as well as the roof ornamentation from the Ly, Tran, and Le dynastic periods. It forms a unique synthesis of the influence of various Asian cultures. It is also unique in terms of the exceptional duration of its use as a centre of political power, which is not replicated in the other imperial cities.

ICOMOS considers the comparative analysis is inadequate, for the following reasons.

It is necessary to strengthen the typological and historical study of urban planning and their guiding principles, and of the architectural and decorative elements that form the originality of and similarities between each of the sites, as a function of the periods under consideration. The urban and architectural comparison within the region that is considered should be extended to other countries (Korea), and other cities and other remarkable palaces. Account should also be taken of the conditions of integrity and authenticity of the properties used for the comparison. The geographical location of Thang Long-Hanoi could also be analysed as part of a vast historic system of naval embassies with the Chinese Empire.

The comparative analysis should be extended to cover the influences from South-East and southern Asia, the importance of which is recognized today, notably through archaeological research at the 18 Hoang Dieu Site, which is an essential component of the property. In this respect, comparisons with other similar regional archaeological sites would be welcome in order to determine its importance.

It is necessary to consider a comparative approach to the geographical data, in terms of the lake and river substrate of the site of the Thang Long Citadel and the

city of Hanoi to which it gave rise. A similar comment can also be made regarding the defensive military components of the Citadel and their surviving remains.

The architectural and cultural testimony of the French colonial period should be put into perspective in relation to other similar properties, such as the Island of Saint-Louis (Senegal, 2000) and the Historic City of Grand-Bassam (Côte d'Ivoire, Tentative List). This would help determine its importance in Thang Long-Hanoi and, potentially, strengthen the property's symbolic urban and architectural values.

ICOMOS considers that the comparative analysis, in its current form, does not justify consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Imperial Citadel of Thang Long-Hanoi has unique historical value in terms of its virtually uninterrupted role as a centre of regional political power from the 7th century CE to the present. It bears witness to numerous conflicts that have led to the unification of the country and its independence.
- Thang Long bears witness to the development of a major and unique civilization in the lower Red River Valley for over 2,000 years. It is a synthesis and assimilation of influences from the Far East and from southern and South-East Asia. The property testifies to the cultural, philosophical, and religious contribution at various periods of Confucianism, Taoism, and Buddhism.
- The exchange of values in the cultural crucible of the Red River Delta is expressed in particular through the architecture, town planning, artefacts, and decoration. The Thang Long site bears exceptional witness to this through its monuments, its urban organization, and its 18 Hoang Dieu Archaeological Site.

ICOMOS considers that the conserved parts of Thang Long Citadel and the associated 18 Hoang Dieu Archaeological Site do indeed bear witness to an important and unique process of cultural development, at the crossroads between influences from China and South and South-East Asia. It was, moreover, a long-term regional process, combined with the historical definition of a national entity and the construction of its independence. However, the comparative analysis, integrity, and partial state of the archaeological knowledge of the property do not allow at present a decision as to whether it is of Outstanding Universal Value.

Integrity and authenticity

Integrity

The State Party claims that the Thang Long Citadel and the 18 Hoang Dieu Archaeological Site comply with the integrity criteria.

In general terms, the nominated property only corresponds to the central part of the Thang Long Citadel, especially the north-south axis of the Forbidden City which formed its core. The hydraulic components and the remains of the Citadel's defensive system are not included within the boundary of the nominated property or, at best, only to a minor extent.

ICOMOS considers that the condition of integrity as a citadel of the property in territorial and structural terms is only partial.

The urban integrity is mainly represented by the north-south axis, essentially in terms of the symbolic and political use of the property in the dynastic periods. It is marked by the alignment of major buildings.

ICOMOS considers that the legibility of this axis is confused by the predominant presence of later buildings, artefacts (museum aircraft), or trees that bear no relationship to this perspective and its meanings.

The presence of various phases of the occupation of the site since the 7th century is doubly highlighted by the historical chronological stratigraphy of the 18 Hoang Dieu Archaeological Site and the various fragments of architectural evidence of Thang Long. The continuity of the phases uncovered by the archaeological excavations is remarkably complete; it is extensively documented and confirmed by the artefacts found.

ICOMOS considers that this is a site that has often been rebuilt, notably as a result of historical events in the 19th and 20th centuries. In architectural terms the conditions of integrity are clouded by the disparate nature of the buildings, and they lose their relevance in the light of the various reconstructions and rearrangements of the Citadel. It is, moreover, necessary to note the dearth of direct evidence of the dynastic periods prior to the Nguyen Dynasty (pre-1800). No building from this period has retained its integrity; at best they are partially rebuilt retaining the structure's original spirit (gates), but otherwise their presence is in the form of components integrated into recent constructions that lack any stylistic relationships (foundation walls, stairs, decorative components, etc.). The most convincing survival from the dynastic period is the flight of steps with the two dragons.

Given the highly convincing archaeological evidence, and despite the weakness of the direct architectural testimony prior to 1800, the integrity of the continuous use over thirteen centuries is physically proven.

ICOMOS considers that most of the basic data concerning the integrity of the dynastic Citadel is incomplete or absent (urban territory and structure and civilian and military architecture). The conditions of the architectural, structural, and landscape integrity of the property are therefore poor, incomplete, and difficult to read. Continuity of political use is demonstrated by the archaeological elements uncovered at the 18 Hoang Dieu site, coupled with the later built testimony of the Thang Long Citadel. Furthermore, only a small part of the property has been the subject of systematic archaeological excavations. Its contribution to the property's integrity is therefore only partial.

Authenticity

The State Party presents the Thang Long Citadel and 18 Hoang Dieu Archaeological Site as meeting the authenticity criteria.

The authenticity is primarily expressed by the form of the outline of the Citadel, which was constantly adapted and reused, as well as the permanent presence of the Forbidden City as the heart of political power and the royal or imperial residence for almost one thousand years. All the elements that express these facts are perfectly authentic, even if no more than partial or incomplete.

The degree of authenticity illustrated by the archaeology, over almost thirteen centuries, and its legibility, due as much to its chronological and historical completeness as to the abundance and quality of the artefacts uncovered, is good.

The degree of authenticity expressed by the architecture of Thang Long is generally reasonable for the late 19th and 20th century buildings. The older buildings, dating from the dynastic periods, even when present, have been restored or modified, the Doan Mon and Bac Mon Gates and the Hau Lau Palace in particular. However, these modifications relate to the political history of the property. There has been no deliberate attempt at pseudo-historical restorations of the surviving property or of its immediate surroundings, a site of power and a place of national memory in Vietnam.

The archaeological excavations at the 18 Hoang Dieu Site provide an authentic source for useful cross-referencing with traditional written sources.

ICOMOS considers that the archaeological authenticity of the property throughout the lengthy history of the Thang Long Citadel is of a high level. It is, however, derived from a restricted area of excavations. The degree of authenticity of the architecture varies considerably, depending on the period considered, ranging from satisfactory for the colonial and contemporary buildings through incomplete for the early 19th century and to weak for the dynastic periods. Because of the complex history, the analysis of the authenticity needs to be refined and detailed for each of

the structures that contribute to the property's value.

ICOMOS considers that the conditions of integrity of the nominated property are not adequate. The conditions of authenticity are only fully satisfactory for the archaeological aspects, but then for only a limited area of excavations, and for the constructions dating from the late 19th and 20th centuries. They are inadequate for the monuments and built remains of the earlier periods.

Criteria under which the inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii,) and (vi).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

The State Party considers that the property bears witness to very important changes in the cultural values from China and South-East Asia, over a very long period of history, starting in the 7th century CE. The civilization of the lower Mekong Valley succeeded in creating an original and unique synthesis of the philosophical, religious, social, political, and aesthetic values derived from Taoism, Buddhism, and Confucianism. This led in particular to the exchange of influences in the areas of architecture, urban planning, and decorative arts, particularly well represented by various material testimonies in the property.

ICOMOS considers that the nominated property illustrates the meeting of influences, notably from China in the north and the Kingdom of Champa to the south. It is expressed through a series of important cultural exchanges that moulded an original culture in the lower Red River Valley. The comparative analysis must, however, be strengthened and the excavation programme extended to confirm its scope.

ICOMOS considers that this criterion has not been justified at this stage.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

For the State Party, the property bears witness to a continuous and millennial cultural tradition in terms of its number and diversity of archaeological, urban, and architectural remains. They demonstrate the long history of Thang Long as a major seat of political power and a centre of civilization in Asia.

ICOMOS considers that the Imperial Citadel of Thang Long and the 18 Hoang Dieu Archaeological Site bear witness to the long cultural tradition of the Viet population established in the Delta and lower Red River

Valley. It was a virtually continuous seat of power from the 7th century through to the present day. The comparative analysis must, however, be strengthened and the excavation programme extended to demonstrate the breadth of its wealth and diversity.

ICOMOS considers that this criterion has not been justified at this stage.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

According to the State Party the Thang Long Imperial Citadel is associated with important cultural and historical events, and leading artistic expressions and moral, philosophical and religious ideas. The succession of these events marks the process of formation and development of an independent nation over more than one thousand years, including the colonial period and the two contemporary Wars of Independence and the reunification of Vietnam. The importance of Thang Long in relation to these events is its central political role and its permanent role as a symbol.

ICOMOS considers that the philosophical and religious influences at the base of Viet society, over a long historical period, are real and important. They are, however, already recognized in the application of criterion (ii). The succession of the events affecting the history of Vietnam and their link with Thang Long, the continuous seat of power and its symbols, is also an intrinsic value of the property, already recognized in criterion (iii).

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that criteria (ii) and (iii) could be reconsidered, particularly in the light of an appropriate comparative analysis and expansion of archaeological research, and that the Outstanding Universal Value of the property has not been justified at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The property is located in the heart of the political and government centre of contemporary Vietnam, the Ba Dinh Political Centre, a continuation of the function demonstrated by the property itself. For the State Party this environment is a guarantee of the limitation and sustainable control of urban and economic pressures of the City of Hanoi on the property.

The situation needs to be re-examined for each of the elements that make up the property and the various parts of its environment:

The 18 Hoang Dieu Archaeological Site is part of the parcel of land initially allocated for the construction of the National Assembly. The project is continuing in the south-western quarter of the initial parcel; this building site is located inside the buffer zone. The building will not be higher than 30 m.

The district includes the Ministry of Defence. It was excluded from the buffer zone, but reference is made to a written agreement with the Ministry of Culture to control the development of this unit. The Ministry's buildings appear to be nearing completion but they already include one that is 34m high.

Private commercial districts liable to undergo urban development are located to the north and south of the property. In the north, there is no buffer zone; in the south, the buffer zone is a public space, but in the south-west there is a private sector without any particular regulation immediately adjacent to the Ministry of Defence boundary.

ICOMOS considers that there are current or potential development pressures close to the property, notably because of the absence of a sufficiently large buffer zone in the east, north, and south-east. Within the buffer zone and in direct contact with the 18 Hoang Dieu Archaeological Site, the potential impact of the architectural and environmental project for the future National Assembly on the values of the property needs to be clarified.

Tourism pressures

Urban tourism in Hanoi is considerable and expanding. Visitor numbers are estimated to be 1.3 million for the city as a whole (2007), but only some tens of thousands visit the Thang Long Citadel in its present condition, and the Archaeological Site is currently closed to visitors. This is a transition situation that will change rapidly, especially with the millennial anniversary of the founding dynasty of Thang Long and Hanoi, in 2010. Furthermore, Thang Long is largely an open and accessible public area; the monuments and some areas have controlled (museum) or strictly limited access.

ICOMOS considers that the very rapid growth in the number of visitors could pose a threat to the property if it is not carefully managed, notably in the open or potentially open archaeological zones that are by definition vulnerable.

Environmental pressures

The State Party provides a detailed analysis of the environmental and climatic threats to the property, on the one hand for the Archaeological Site and on the other for the built components of the Citadel. In the former case, humidity has significant consequences, both biological (moss and fungi) and technical (water infiltration in the remains and the ever-present risk of the site flooding because of its hydrogeological position).

Wind and sunlight can also affect the conservation of uncovered remains.

The old buildings of the Citadel are also affected by water, which can infiltrate easily owing to the use of brick and stucco. There is an extensive invasive flora. The frequently very abundant monsoon rain also requires roofs to be in an overall good condition and drainage systems to be regularly cleaned.

The effects of atmospheric pollution and road traffic are relatively reduced in the Citadel area because of its political and administrative functions.

ICOMOS considers that the combined effects of soil humidity and storm-water are the main environmental threats affecting the property.

Natural disasters

Flooding of the Red River is the main risk of natural disaster. The property is located in the heart of the Hanoi network of dykes and so it is not considered to be in a risk zone. The last two major floods of the city occurred in 1905 and 1972.

Although located near seismic fault lines, the Hanoi region is considered to be at low risk. The last substantial earthquake was in 1285.

ICOMOS considers that the risk of flooding is inbuilt, given the location in relation to the Red River.

Impact of climate change

The potential impact of climate change is from rising temperatures which risk causing more violent storms and wind.

ICOMOS considers that there is a potential climate-change risk: exceptional floods and tornadoes could become more frequent in coming years.

ICOMOS considers that there is a threat of public and private construction development in the immediate environment of the property. Humidity and its effects and the risk of exceptional flooding are the main climatic and environmental threats to the property.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The nominated property is made up of two adjacent parcels: the central part of the ancient Thang Long Citadel (13.865ha) and the 18 Hoang Dieu Archaeological Site (4.530ha), i.e. a total surface area of 18.395ha. The boundaries are formed by the surrounding streets and boulevards and the boundaries

of the parcel allocated for the National Assembly adjacent to the 18 Hoang Dieu site. According to the nomination dossier, there should no longer be any inhabitants inside the property zone following the decision for a major heritage project and the Ministry of Culture taking control of the site. However, the Management Plan still refers to 23 families as being present.

The buffer zone mainly corresponds to the western part of the property formed by the Ba Dinh Political Centre and its commemorative sites. It comes under a special organization and management regime because of its governmental functions and the presence of the Presidential Palace. It occupies a surface area of 108ha. An inventory of its main component buildings is provided in the nomination dossier. The buffer zone is reported to have a population of around one hundred people.

ICOMOS considers that the boundaries of the property lack consistency, currently forming a relatively unsatisfactory compromise between two approaches to the property: its definition as an archaeological site and its definition as a citadel. The definition of the property needs to be completed and clarified, principally by means of an improved comparative analysis and better analysis of the property's component buildings and archaeological spaces. The sole concept of the continuity of political power is not enough to provide a satisfactorily coherent definition of the property.

ICOMOS considers that the buffer zone is insufficient. It needs to be extended around the entire perimeter of the property (see Development pressures). In the public sector to the east the landscape agreement between the Ministry of Defence and the Ministry of Culture would benefit from being formally recognized and included in the protection system for the buffer zone of the property. This needs to be extended in the residential and commercial sectors in the north and south-west so as to guarantee the visual quality of access points to the property, in line with its values, and ensure that urban development is managed so as to protect the visual landscape of the property.

ICOMOS considers that the issue of the number of residents in the property and its buffer zone needs to be clarified.

ICOMOS considers that the property boundary needs to be reconsidered, either to present a more complete archaeological site in its own right, or to adopt an approach more consistent with an imperial citadel. ICOMOS considers that the buffer zone must be extended to ensure effective control of private and public urban development.

Ownership

The property is owned by the Socialist Republic of Vietnam. Ownership rights are currently exercised by

various ministries (Construction, Defence, etc.) and by the People's Committee of Hanoi (municipality). It is planned to eventually combine ownership under the sole authority of the People's Committee of Hanoi, to be exercised by its property management body, the Hanoi Ancient Wall-Co Loa Remains Preservation Centre.

The buffer zone comes under the special public ownership regime for the Ba Dinh Government and Presidential Centre.

ICOMOS notes that the clarification between the various public authorities currently exercising ownership of the property that has been announced needs to be confirmed.

Protection

Legal protection

Protection of the nominated property comes under two laws:

- The Law on Cultural Heritage Management (2001) ensures protection of the various recognized artefact and built components of the property;
- The Law on Construction for all building projects.

When the application of the two laws conflict (e.g. a project within the spatial territory of the nominated property) the Law on Cultural Heritage Management takes precedence.

The inscription procedure for the entire property under the protection of the Law on Cultural Heritage Management resulted from a series of prior decisions:

- Decision 100/VH-QD (1989) for the Flag Tower;
- Decision 22/1999 for the Hanoi Ancient Citadel.

The protection procedure was then defined and proclaimed in respect of the property through a series of specific decisions and decrees:

- Decree 92/2002,
- Decisions 17006/2001, 05/2003 and 3855/2006,
- Decision 16/2007 of 28 December 2007 lists and updates the earlier decisions regarding Thang Long Citadel and includes protection of the 18 Hoang Dieu parcel as an archaeological site.

These texts define the protection measures and classify the Thang Long Citadel and the 18 Hoang Dieu Archaeological Site at the highest level of recognition and national protection. The State authority responsible for their implementation is the Ministry of Culture. There is an agreement with the Ministry of Defence during the transition ownership phase.

The Law on Construction is applied by the People's Committee of Hanoi (Municipality).

ICOMOS considers that the legal protection regime is adequate.

Effectiveness of protection measures

Heritage protection measures are applied by the Thang Long Citadel management authority which, depending on the opinions of its experts, alerts and requests the intervention of the Ministry of Culture.

The municipal services are responsible for applying regulations governing new construction.

The Prime Minister has sole authority for implementing protection of the Ba Dinh Government Centre.

ICOMOS considers it necessary to specify the mechanisms for implementing the protection of the wider buffer zone under public and private ownership. In particular, it is necessary to define the mechanisms for consultation and decision-making between the municipal department in charge of issuing building permits and the property management authority, the Hanoi Ancient Wall-Co Loa Remains Preservation Centre.

ICOMOS considers that the legal protection in place is adequate for the nominated property, but that it should be expanded and detailed in the context of a larger buffer zone.

Conservation

Inventories, records, research

There is extensive written and iconographic documentation about the property and its history in the Mandarin tradition. Abundant historical documentation about the property and Hanoi in general was produced in the 19th and 20th centuries, most notably in the form of maps, drawings, and photographs, especially during the colonial period.

Various inventories of the buildings and archaeological artefacts from 18 Hoang Dieu have been produced and recently updated, in particular, a 2004 inventory report, topographical surveys in 2006, a report on the Citadel in 2007, and annual reports on the archaeological excavation campaigns from 2003 to 2008.

Excavation is under the authority and control of the Vietnam Institute of Archaeology.

The inventories, reports, and archives are conserved in four main institutions:

- Department of Cultural Relics Management, Ministry of Culture, Sports and Tourism;
- Hanoi Ancient Wall-Co Loa Remains Preservation Centre;
- Vietnam National Commission for UNESCO;

- Vietnam Institute of Archaeology.

ICOMOS considers that the level of documentation and research results obtained are adequate. However, the archaeological studies only concern a small part of the ancient Citadel, further reduced by the parcel allocated for the National Assembly. They would be improved by being extended to other parts of the Citadel so as to form an overall programme aimed at uncovering all the urban, architectural, and cultural elements of the entire property.

Current state of conservation

ICOMOS considers that the state of conservation of the buildings and the moveable artefacts uncovered during the archaeological excavations is and remains fragile, because of the humidity and its consequences, coupled with rain and storm risks. Archaeological and architectural conservation demands permanent and close attention.

The important and significant buildings of the Citadel are in a reasonably good state of conservation.

Active protection measures

The State Party indicates that the 18 Hoang Dieu Archaeological Site and excavation area have benefited, notably since 2005, from active measures for protection against humidity, the effect of the sun, and rising groundwater levels during periods of rain. Light, portable shelters have been installed above the excavations over a total covered surface area of around 1.90ha. A comprehensive drainage system has been installed for the entire site. Mould on the timber components is under control, as is the growth of moss and grass on the earth sections. The most fragile excavated remains have been backfilled with sand.

Temporary storage buildings for the excavated archaeological artefacts have been arranged in the immediate environs of the property.

The specific nature of the excavations and the conservation of the uncovered remains continue to be the subject of research, involving significant international cooperation (Japan and France).

A programme for the demolition of anachronistic constructions that clash with the property's values is in place at the Thang Long Citadel. This is a programme for restoration of the environment of the remains of the Citadel. These constructions are relatively recent, generally dating from the 20th century and built purely for the operational purposes of the military during periods of conflict.

This works programme is detailed in an additional document sent by the State Party, 'Principles for the development of the north and south sectors of Thang Long Citadel-Hanoi' (January 2010). Its implementation,

notably in the north and south sectors of the Citadel, is dependent upon the transfer of ownership from the Ministry of Defence to the Municipality of Hanoi.

As already indicated, there are now very few remains from the dynastic periods, and they have for the most part been incorporated into later restorations or reconstructions. Particular attention is paid to the conservation of the dragon steps at the entrance to Kinh Thien Palace.

The main difficulties encountered in the conservation of the 19th and 20th century buildings are humidity and its effects, such as mould and fungus growth, especially on the timber roof-frames, but also on brick and stucco structures. Some buildings are also suffering from the consequences of tree-root growth.

A specific programme for the protection of buildings from the French period, which are in relatively good condition, is set to start in 2009. It follows on from other specific programmes implemented in recent years: protection work on the foundations of Doan Mon Gate (2006), repairs to the Clock Tower at Bac Mon Gate (2003), repairs to Hau Lau Palace (2002), and restoration work on Doan Mon Gate gardens (1999).

ICOMOS considers that the conservation work undertaken is appropriate and that it needs to be constantly pursued.

Maintenance

Standard maintenance of the buildings is continuous and extensive. It is performed as a direct part of the property conservation programmes given the continuing threats to the property. It is carried out by staff from the Hanoi Ancient Wall-Co Loa Remains Preservation Centre, in liaison with the property management and conservation plan.

ICOMOS considers that the maintenance work is adequate and emphasizes its importance for the conservation of the property.

Effectiveness of conservation measures

ICOMOS considers that, given the high level of risk and maintenance and conservation requirements, the conservation measures taken by the State Party are adequate and effective.

ICOMOS considers that the conservation and maintenance measures are adequate and that they need to be constantly implemented.

Management

Management structures and processes, including traditional management processes

The Hanoi Ancient Wall–Co Loa Remains Preservation Centre, also called the Thang Long/Co Loa Centre, has been made responsible for managing the property by the government of Hanoi City since 2006. It reports directly to the city and is working on measures to transfer ownership and expertise from the Ministry of Defence and the Ministry of Construction. It has been established as the sole entity for decision-making and managing the property, under the control and responsibility of the People's Committee of Hanoi. It maintains institutional scientific and professional partnerships with experts in the Ministry of Culture, the Archaeology Institute of Vietnam, the National Commission for UNESCO, the Academy of Social Sciences, the Ministry of Defence and the Museum of Military History, the Ministry of Construction, and the Communist Party of Vietnam. The Centre has its own Consultative Scientific Committee in which institutional partners are represented.

The Centre's executive structure includes a management unit with a director and three deputy directors, along with a series of specialist divisions: administration, management, and conservation of the remains, planning and financial administration, and information and communication. Provision is made in the management plan for a Steering Committee to prepare decisions and monitor their implementation.

The Centre is entrusted with the management of two geographically distinct sites. It is responsible for the Thang Long Citadel and the Co Loa Citadel and Gardens, nearly 20km from Hanoi.

ICOMOS considers that the management authority is well defined and already operational. However, the fact that it is responsible for other properties, with a status and level of recognition that would differ in the event of Thang Long being inscribed on the World Heritage List, requires clarification and a more specific identification of the staff and services responsible for Thang Long Citadel.

Policy framework: management plans and arrangements, including visitor management and presentation

The management plan, drawn up by the People's Committee of Hanoi in 2008 and finalized in 2009, will come into force in 2010, along with the transfer of ownership already mentioned.

The conservation and development programmes for the site, which have already been mentioned, will aim to assess and prevent the long-term risks and threats to the property. Furthermore, the Plan aims to forecast and organize the tourism and cultural development of the property, and also to operate within a sustainable

development strategy. Its preparation was based on a series of studies and reports. It also makes provision for consolidating the human and financial resources required for its day-to-day administration, implementation of its conservation programmes, and development for the tourism and cultural use of the property.

The tourism and cultural development plan is essentially based, for the coming years, on promoting the central sector of Thang Long (i.e. the heart of the ancient Forbidden City) and the archaeological sector. It will include interpretation circuits and the presentation of scientific results. With regard to the interpretation of the sites, two approaches will be developed. First, the rehabilitation and restructuring of the museum located in the southern sector of the property, which will help improve distribution of the tourist traffic across the property's entire territory, and secondly, an interpretation centre to be set up in the existing buildings of the Citadel. A programme for the creation of visitor infrastructure is included in the management plan: car parking in the avenues adjacent to the property, a main entrance for visitors, two WC blocks, a restaurant and two cafés, etc.

The management plan has also been developed in harmony with the city's general development and infrastructure plans. However, the exceptional situation of the property in terms of its position and legal status (Ba Dinh Government Centre) means that it will not be affected by the major projects for the city's future growth.

ICOMOS considers that the measures included in the management plan are adequate overall. However, the State Party must make it a priority to ensure that the planned tourist infrastructure is well integrated in the property's various landscapes and perspectives in order to protect its visual value. It is also necessary to detail the scientific content and structure of the projected interpretation centre, notably with regard to the results of the archaeological excavations.

Risk preparedness

The issue of risk preparedness is approached by the State Party from two main angles: first, natural risks, such as humidity and raised water levels that permanently or occasionally affect the conservation of the property, and secondly, the future management of mass tourism at the property. The creation of tourism infrastructure, including a medical post, tracking visitor numbers, and monitoring the quality of information and the cultural level of guides, is also proposed.

To prevent the risk of wilful damage to the site, the property has access through the Centre to its own guards. Its location in the heart of the Ba Dinh Government Centre places it firmly within the ambit of this district's surveillance and monitoring resources. The same applies for other potential risks, such as fire or an accident involving large numbers of people. Additionally,

the existence of boulevards and relatively wide streets along all the property's boundaries facilitates access for emergency services.

ICOMOS considers that the measures planned in response to the risks involved with mass tourism at the property need to be detailed – for example, the existence of access routes reserved for emergency services within the Citadel.

Involvement of local communities

The local communities are involved through the institutional intermediary of the People's Committee of Hanoi (municipality) and the Communist Party of Vietnam.

Resources, including staffing levels and training

The Hanoi Ancient Wall–Co Loa Remains Preservation Centre has around one hundred employees, including its executive management. They include two doctors, five senior executives, around ten guides and interpreters seconded to the property, around twenty qualified technicians and employees, and around fifty researchers and conservation specialists working at the 18 Hoang Dieu Archaeological Site.

The Centre's operational budget is mainly provided by the People's Committee of Hanoi (municipality) and by the Government for the Archaeological Site. The Government of Vietnam has also provided funding for the conservation of the property and various promotional operations for a cumulative total up until 2008 of 6.3 million US dollars. It has committed a further 3 million USD for the 2008-2009 transition period. Various sources of international aid have also contributed to specific conservation, research, and study projects (the Japanese Government, the UNESCO Committee of Japan, the City of Paris, and the Île-de-France Région).

The management plan has projected the financial revenue for the property based on visitor numbers of around 1.2 million expected by 2015. This income plus the activities deriving from the property should then generate a substantial annual income that will be sufficient to cover the operation and standard maintenance of the property.

ICOMOS considers that it is necessary to differentiate more clearly between the staff allocated directly to the property from the staff employed in general services at the Centre with its multiplicity of activities. It is necessary to specify their technical functions and their professional qualifications. It would also be useful to identify which staff report to the Archaeology Institute and which depend on international aid, especially for the 18 Hoang Dieu site.

Effectiveness of current management

The future management (2010) will be provided by a

single organization, the Hanoi Ancient Wall–Co Loa Remains Preservation Centre. This organization has acquired considerable experience in heritage management. The maintenance and protection already being implemented is evidence of the effectiveness of the current management.

ICOMOS considers that it is necessary to specify the professional qualifications of the Centre's personnel involved in the conservation and management of the property.

ICOMOS considers that the management system for the property is adequate overall. ICOMOS considers that the general directions of the management plan are adequate. It needs to be promulgated and implemented; and the provisional works programmes outlined in the plan must be approved. The professional qualifications of the personnel involved in the conservation of the property need to be specified.

6. MONITORING

The nomination dossier begins with a list of the objectives designated for monitoring the property: the state of conservation of the structures and the archaeological site, material and environmental changes attributable to visitors, the stability and durability of the architectural and archaeological structures, environmental and climatic impacts, monitoring of humidity and groundwater levels, monitoring restorations and the demolition of buildings without any particular significance in order to restore the authenticity of the urban fabric of the Citadel, etc.

Five main monitoring indicators that are regularly checked are then described, listing the units responsible for them. They are designed to form the basis for monitoring documentation and to enable diagnostics to be made and the conservation policy of the property to be directed. They are:

- Regularly checking the conditions for archaeological artefacts and their storage (every three months);
- Recording climatic and environmental data in the archaeological sites (monthly);
- Conservation and archaeological monitoring of the Doan Mon Gate (every three months);
- Checking and verifying the state of conservation of registered monuments (annually);
- Checking the state of conservation of elements liable to suffer deterioration (every six months).

The Vietnam Institute of Archaeology and the Hanoi Ancient Wall–Co Loa Remains Preservation Centre are responsible for the monitoring.

ICOMOS considers that monitoring of the state of conservation of the property currently relies mainly on the quality of the scientific reports produced by the

various archaeological programmes, and not on an effective, global, and coherent policy. The indicators mentioned do not appear in the management plan as areas of monitoring to be implemented.

ICOMOS considers that monitoring of the property is only defined in very general terms at the present time and that it needs to form the basis of a complete programme in the next management plan, guaranteed in terms of human and material resources.

7. CONCLUSIONS

ICOMOS recognizes the importance of Thang Long Citadel, notably its historic importance as a continuous centre of political power in South-East Asia and as the site of an assimilation and unique synthesis of cultural elements from various parts of Asia.

The Outstanding Universal Value of the property has, however, not been demonstrated at this stage, for several reasons. The definition of the property is at the present time an insufficiently justified compromise between a promising but too restricted archaeological site, and an imperial citadel for which the architectural evidence of the dynastic periods earlier than the 19th century is either very incomplete or of only limited authenticity. The property as it is presented suffers from a low level of integrity, with too heavy an emphasis placed on the single historical concept of the continuity of power. The attributes of the value of the property, moreover, need to be justified as the result of a more extensive and in-depth comparative analysis given the complexity of the component parts of the property.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the Central Sector of the Imperial Citadel of Thang Long-Hanoi, Vietnam, to the World Heritage List be ***deferred*** in order to allow the State Party to:

- Reconsider the definition of the property so as to give it a material and cultural basis that demonstrates precise attributes in support of its potential Outstanding Universal Value;
- Strengthen and extend the archaeological study of the property;
- Complete the comparative analysis of the property to take proper account of its archaeological, urban, architectural, and cultural significance, in order to justify its potential Outstanding Universal Value;
- Strengthen and extend the discussion of the perceptions of the authenticity and integrity of the property in the light of their complexity, which is attributable to the history of the Thang Long Citadel and the weakness of the architectural and urban

evidence from the dynastic period;

- Give consideration to a buffer zone that surrounds the property and clarify the management rules to be applied to private construction projects within this area;
- Promulgate the management plan and approve the associated specific provisional programmes, and implement the management plan with all its programmes;
- Add a detailed monitoring programme to the management plan, in accordance with the general orientations set out in the nomination dossier.

ICOMOS considers that any revised nomination with revised boundaries, would need to be considered by a mission to the site.

ICOMOS further recommends that the State Party should take into consideration the following points:

- Guarantee and specify the professional qualifications of the personnel involved in the conservation of the property;
- Pay particular attention to monitoring the tourism growth, which is expected to be both significant and rapid.



Map showing the boundaries of the nominated property



Archaeological excavations



The Flag Tower



Bac Mon Gate



French building

Properties deferred or referred back by previous sessions of the World Heritage Committee

Sarazm (Tajikistan) No 1141rev

Official name as proposed by the State Party:

Sarazm

Location:

Penjikent District,
Soghdian Province
Tajikistan

Brief description:

Sarazm is an archaeological site bearing testimony to the development of human settlements in Central Asia, from the 4th millennium BCE to the end of the 3rd millennium BCE. Sarazm demonstrates the early development of proto-urbanization in this region, illustrated by the sophistication of its dwellings, its infrastructures, and its portable objects. It came into being because of complementarity, initially between pastoralism and early agrarianism, and later between the exploitation of mineral resources in the Bronze Age and the development of handicrafts. Sarazm demonstrates the existence of tangible and cultural interchanges between regions over great distances, and an initial development of trade links between the steppes of Central Asia, Turkmenistan, the Iranian plateau, the Indus Valley, and the Indian Ocean.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention of 1972, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), Annex 3, this is a *town no longer inhabited* in the category *Historic towns and town centres*.

1. BASIC DATA

Included in the Tentative List: 19 June 2000

International Assistance from the World Heritage Fund for preparing the Nomination: 23 November 2001

Date received by the World Heritage Centre:
27 January 2009

Background: This nomination has been deferred (31 COM, Christchurch, 2007):

Decision 31 COM 8B.29:

The World Heritage Committee,

1. *Having examined Documents WHC-07/31.COM/8B and WHC-07/31.COM/INF.8B.1,*

2. *Defers the examination of the nomination of Sarazm, Tajikistan, to the World Heritage List to allow the State Party to consider submitting a new nomination, in order to:*

a) *Explore further the values and significance of the property;*

b) *Give consideration to extending the installation of protective covers to all the excavated features on the site;*

c) *Reduce the level of excavation on the site and to divert the emphasis to the use of non-invasive techniques of geophysical prospecting for further exploration of the property;*

d) *Give consideration to setting up a conservation unit on the site.*

Consultations: ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and independent experts.

Literature consulted (selection):

Amiet, P., "L'âge des échanges inter-iraniens, 3500-1700 avant J.-C." in Ligabue, G., et Rossi-Osmida, G. (éd), *Sulla via del oasi, tesori dell'Oriente Antico*, Padova, 2007, p. 64-67.

Besenal R., Isakov A.; "Sarazm et les débuts du peuplement agricole dans la région de Samarkand", *Arts asiatiques*, 44, Paris, 1989, pp. 5-20.

Isakov A. I., *Sarazm*, Dushambe, Donish, 1991.

Isakov A. I., "Sarazm: An agricultural center of ancient Sogdiana", *Bulletin of the Asia Institute*, 8, Bloomfield Hills (USA), 1994, pp. 1-12.

Lyonnet, B., "Sarazm, céramiques : Chalcolithique et Bronze ancien", *Mémoires de la mission archéologique française en Asie centrale*, Paris, Broccard, 1996.

Technical Evaluation Mission: 9-12 August 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 18 January 2010, requesting it to provide a summary of the new results obtained through research since the nomination examined in 2007, and to indicate how they add to or modify the values of the property which have already been established or tentatively suggested.

ICOMOS received additional documentation from the State Party answering its questions, dated 14 and 26

February 2010; this documentation is taken into consideration in this evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The archaeological site of Sarazm is located in the valley of the River Zeravchan, on its left bank, at an average altitude of 910m. It is situated 15km to the west of the town of Penjikent, and 45km to the east of Samarkand (Uzbekistan). Sarazm - the name means "the beginning of the land" - is at the opening of the mountainous region surrounding the river bed, and at the gateway of a large plain that opens up to the west. It is a strategic location which is conducive to interchanges.

The nominated property is located on an alluvial terrace, a short distance away from the river, protecting it from flooding, near the river's confluence with a mountain stream. The terrace runs from west to east over a distance of around 1.5km, and its width varies from 400m to 900m. The protohistoric settlement seems to have covered an area of some 50ha at its apogee, when Sarazm had a population of about 3,000 inhabitants.

The settlement consisted of built areas, open spaces, and reservoirs. Sarazm does not have a clearly defined plan. The proto-urban ensemble, which had no protective enclosure, extended in various directions with no clear boundaries unearthed up to now.

The main archaeological zone of the property is covered by steppe vegetation and is protected by a recently installed metal fence. Thirteen excavation zones, representing less than 4% of the protected land, have been studied by archaeologists; partially backfilled, they leave visible the remnants of the structures unearthed (see Conservation).

To ensure better protection of the most interesting excavated areas, five large roofs have been constructed. Visitors can thus actually see the archaeologists' finds as they are unearthed. Conventional archaeological explorations have been reduced, and are being redirected towards geophysical survey methods, so as to obtain a non-destructive understanding of the remains of Sarazm. The most spectacular portable objects unearthed by the archaeological research have been deposited in the museum of nearby Penjikent.

Stratigraphy

Four stratigraphic levels have been unearthed at Sarazm, corresponding to four main successive periods of continuous settlement, from the middle of the 4th millennium BCE to the end of the 3rd millennium BCE. The approximate dates for the four periods are as follows:

Period I	3500-3300 BCE
Period II	3200-2900 BCE
Period III	2900-2700 BCE
Period IV	2700-2000 BCE

Sarazm was a vast proto-urban settlement which reached its maximum extension in Period III. Agriculture was based on irrigated and semi-irrigated farming close to the river and on the terrace itself, together with cattle breeding. Hunting apparently no longer played more than a minor role at Sarazm.

Architecture

The remains of buildings at Sarazm comprise dwellings, workshops for craftsmen, storage areas (granaries), palatial buildings, and religious buildings. All were essentially built of unburnt brick (adobe), which was extremely easy to use, cut, and shape. Roofs were flat with wooden beams, covered by a network of branches and reeds supporting one or several layers of clayey earth. There were doors and windows with sometimes quite complex systems, proving mastery in the implementation of ventilation and lighting. River stones were used during the last period of occupation.

Residential areas

Multi-room complexes are very frequent for all periods of occupation, with main rooms and adjacent wings. They comprise living areas with adjoining storerooms, workshops, kitchens, and outbuildings. Most of them have a fenced courtyard in which craft activities were carried out. Several related families living together occupied the residential complexes. The residential complexes were separated by squares, and wide or narrow streets, or spaces for cattle. Water reservoirs were also present inside the settlements.

Inside the rooms, religious functions corresponding to Period II were carried out in small domestic shrines, with round hearth-altars in the middle. From Period III onwards, the shrines became larger, with square and round hearth-altars. In some cases, the shrines were built in a location which was separate from the dwellings. The walls of the ceremonial buildings were often reinforced with buttresses and usually covered with paintings.

Monumental buildings

Three types of monumental structure characteristic of the development of the proto-urban culture of the ancient Orient have been discovered at Sarazm: a communal granary, a religious building, and a palatial complex.

Irrigation

The irrigation system of Sarazm is probably one of the most sophisticated of the Chalcolithic and Bronze Age in Central Asia. There are two successive phases: plain irrigation close to the main river, and terrace irrigation

from terraces using water from canals collecting water from the mountains. Remnants of canals and dykes have been unearthed.

Burials

No large necropolis has yet been found at Sarazm, but an excavation led to the discovery of a funerary enclosure with a round plan, in which were buried a woman, a man, and an adolescent. On and around the skeleton of the woman were found thousands of beads (steatite, lapis lazuli, cornelian, turquoise, and silver). Her hair was decorated with solid gold beads. Her hands were adorned with bracelets of sea shells probably originating from the Indian Ocean. The necropolis bears similarities to those of Turkmenistan, but the stone enclosure wall is reminiscent of the funerary customs of the Eurasian steppes.

Workshops and craft activities

For Periods I to III, the painted ceramics are hand-made; the potter's wheel appears in Period IV. The working of semi-precious stones (turquoise, lapis lazuli, agates, etc.), of which there are considerable deposits in the region, is one of the activities of the workshops, together with metallurgical production in the Bronze Age. The remains unearthed are pottery kilns, clay moulds, crucibles, etc., together with metal objects.

A two-deck pottery kiln, dating from the early 3rd millennium BCE, bears witness to the development of ceramics production at Sarazm; nothing similar exists elsewhere in Central Asia before 2000 BCE.

All the discoveries made show that Sarazm, in addition to its agrarian populations, became a craft centre, particularly in the 3rd millennium BCE, supplying manufactured products to its own population and to a vast hinterland. The town made ornaments and tools, using not only local and regional resources, but also resources transported over distances of more than 1,500km, such as seashells. To date, Sarazm is the most important metallurgical centre known to have existed in Central Asia in the 3rd millennium BCE. It illustrates interchanges and exchanges over long distances.

Buffer zone

The buffer zone includes the location of the archaeological base for personnel, and a storage area which will ultimately become a small site museum.

Today, part of the village of Sahibnazar is located inside the north and west parts of the buffer zone, and the village of Avazali is in the north-east section. These villages are inhabited by farmers who work the surrounding land. A specific protection regime applies in this area (yellow zone).

History and development

The proto-urban settlement of Sarazm dates back to the first half of the 4th millennium BCE. It may have been established on an earlier village of farmers dating back to the Neolithic. In its earliest level, a particularly rich funerary circle testifies to the existence of an important settlement in around 3500 BCE.

In geographical terms, Sarazm is situated at a point of contact between a mountainous area and an extensive plain. In the 4th millennium BCE, contacts developed between nomadic shepherds from the mountains and the agrarian populations of Transoxiana, on the basis of economic complementarity. The mountains that frame the main valley, to the north and south of Sarazm, are rich in a variety of mineral raw materials and metal ores. They can be crossed by high valleys and passes which are accessible in the summer, particularly to the south.

In addition to its own farming produce, it seems that Sarazm established itself, at a particularly early date near the beginning of the 4th millennium BCE, as a centre for inter-regional interchanges over long distances, particularly with the plains of Turkmenistan and the steppes of the north-east. Archaeological evidence, particularly from studies of ceramics, then demonstrates the great variety of contacts established by Sarazm over the course of its history. The remains reflect both pre-Elamite and Baluchistani influences, and tangible and cultural interchanges with the Indus Valley.

During the 3rd millennium BCE, Sarazm was an important centre for tin and bronze, and for copper and lead, in Central Asia. In addition, Sarazm developed production of manufactured goods: ornaments, ceramics, and tools. It also drew its prosperity from the exploitation of other regional resources: semi-precious stones such as turquoise, agate, and lapis lazuli, and also wool and leather. Sarazm was the first centre in Central Asia - probably from the start of the 3rd millennium BCE - to establish commercial relations and a network of cultural interchanges on such a large geographical scale. The town had connections to the west with Turkmenistan extending as far as the Aral Sea, to the north-east with the Eurasian steppe as far as Siberia, to the south-west with the Persian plateau as far as Mesopotamia and perhaps further, and to the south with Bactria, to Baluchistan and the Indus Valley, and as far as the Indian Ocean (sea shells). Findings at Sarazm in particular confirm the permanency of interchanges with the mountains of the Hindu Kush.

During the Bronze Age, Sarazm became a rich proto-urban settlement. The town had a sophisticated culture which required complex organization, and the capacities to erect dwellings with a wide range of different rooms and decorated monumental buildings. This was a centre where a large number of complementary activities were developed in an economy based on agriculture and cattle-breeding on the one hand, and the processing of local mineral resources and handicrafts on the other.

This led to a situation which is emblematic of the beginnings of urbanization, with socially diversified settlement, professional specialization, and a certain degree of sophistication in architectural construction and technical achievements.

Sarazm seems to have declined between the middle and end of the 3rd millennium BCE. No evidence of occupation has been found for subsequent periods, and it seems likely that nomadic shepherds then once again inhabited the region. The reasons why Sarazm was abandoned by its inhabitants have not yet been identified. Various scholarly hypotheses have been advanced: a population migration, an epidemic, or military attacks on a settlement which was prosperous but which was located in a non-fortified urban ensemble.

Following an accidental discovery by a villager in 1976, excavations on the site began in 1979. Since then excavations have been carried out at thirteen different places, covering a surface area of about 2.5ha (the archaeological urban area is estimated to be around 47ha). The excavated zones have been partially backfilled to preserve them from destruction. However, this solution turned out not to be fully satisfactory, as the structures unearthed were then subject to visible natural deterioration. This is why five of the excavation zones have been covered with metal shelters.

ICOMOS considers that in the new dossier and in the additional documentation of 14 and 26 February 2010, the State Party has satisfactorily taken into consideration Recommendation a) of the Committee decision 31 COM 8B.29.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

Initially, the State Party points to comparisons established some years ago with other Chalcolithic and Bronze Age settlements in a vast region to the west and south-west of the property, with a view to understanding the proto-urban culture of Sarazm and its connections. Some analogies have been demonstrated with monumental buildings discovered on several sites from the same period, such as the public storage buildings at Altyn Depe (Turkmenistan), the monumental religious building at Geoksyur (Turkmenistan), and the system of rooms from the 3rd millennium BCE and the disc-shaped hearth-altars of Mundigak III-IV (Afghanistan). Sarazm clearly belongs to the proto-urban cultural ensemble of southern Turkmenistan, which is also confirmed by the arrangement of the dwellings and objects: painted ceramics of the same style (Namazaga), characteristic stone weights, ornaments, etc.

In a closer geographical context, links exist with the archaeological sites of Margiana and Bactria, which can be detected in ornamental items, lead weights, and

funerary practices in the Bronze Age.

Another influence is reflected in the presence of large monumental funerary stone circles with buried individuals, recalling cultural practices of the steppes of Afanasevo and southern Siberia (Kazakhstan, Russian Federation). This link is confirmed by the presence at Sarazm of some ceramics that are typical of these cultures.

A cylindrical seal discovered at Sarazm and other archaeological finds can be compared with those of Proto-Elamite sites in Iran, particularly Tepe Hissar and Shahr-i Sokhta. They establish a link with these societies, and further afield with 4th and 3rd millennium Mesopotamia. This point distinguishes Sarazm from the whole of Turkmenistan, which to date has no proven links of this type. There is also a connection with the civilization of Ur in Mesopotamia in the middle of the 3rd millennium, as a result of the discovery of a thin gold rosette with twelve petals.

The importance of metals at Sarazm, and of its long-distance links with other regions, have been confirmed by recent studies, particularly with regard to its role in the control of tin, essential for the making of bronze. Similarly, its activity in semi-precious stones is also emphasized.

Archaeologists have also advanced new hypotheses, based on the suggestion of resemblances between Sarazm and sites that are today better known in the Jiroft Valley and Sistan Basin in Iran, and even with sites such as Mundigak in Afghanistan, Ra's al-Jinz in Oman, and Lothal in India.

Following these comparisons, the State Party stresses the interest and originality of Sarazm that distinguish it from the other proto-urban sites of the Chalcolithic and early Bronze Age (4th millennium to the middle of the 3rd millennium BCE). It is in particular the largest town currently known to have existed in these periods in this part of Central Asia.

At a very early date, Sarazm had a complex economy, based on the one hand on agriculture and cattle-breeding, and on the other on the exploitation of the region's mineral resources, the result of the remarkable geological riches of the high valley of the Zeravchan which have already been mentioned. Sarazm then became an important region for the production and control of metals.

It was also a major centre for handicrafts, using regional mineral resources and also imported seashells for jewellery. Its skills in the use of kilns enabled it to develop ceramics. It also transformed raw materials from local agriculture (weaving and leather). It is argued that Sarazm was a veritable protohistoric manufacturing town.

Sarazm also provides tangible documentation about the interchanges across Central Asia, well before the existence of the Silk Route. It displays elements originating from distant and extremely different cultures, encompassing a vast region from the steppes of Central Asia to Iran, and from Pamir to the shores of the Aral Sea.

The architecture of Sarazm presents analogies with that of other Central Asian regions of the same period, particularly in Turkmenistan, but more generally, its buildings are more complex and sophisticated. There is, moreover, no protective enclosure, whereas many protohistoric settlements of this period protected themselves with earth banks, moats, etc.

ICOMOS considers that the comparative analysis provided in the dossier is not very different from the previous one, bearing in mind that the recommendation adopted by the World Heritage Committee in 2007 was specifically to “*Explore further the values and significance of the property*”. Sites dating from the same period, such as Moenjodaro in Pakistan (inscribed in 1980), could be examined.

ICOMOS asked the State Party, in its letter dated 18 January 2010, to provide a summary of the new results obtained in the research field since the dossier examined in 2007, and to explain how these results add to or modify the values of the property that had already been established or tentatively suggested. The answer was provided by the State Party in the additional documentation sent in February 2010. The report on the research work carried out in 2007-2009 and its results was drawn up by the archaeological department of the Sarazm Reserve. The results clearly reflect the dynamism of the research carried out over this period, with the participation of international teams. The recent discoveries (kilns, buildings, portable objects, particularly metal ones, non-destructive structural surveys, etc.) firstly reinforce the already established value of the site, in terms of the size of the settlement, and validate the very long period of occupation of Sarazm. Secondly, the interchanges and long-distance relations of Sarazm, particularly with the Middle East, have been reinforced by this recent research work. Recommendation a) of decision 31 COM 8B.29 has been taken into account and the answer provided is satisfactory.

In view of the additional information provided, ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The development of Sarazm fully demonstrates the

protohistoric conditions for intercultural contacts and interchanges between various central Asian cultural traditions, during the Chalcolithic period and the Bronze Age.

- The geostrategic situation of Sarazm was the key to its unique development from the 4th millennium BCE. This centre of settlement, one of the oldest in Central Asia, is situated between a mountainous region suitable for cattle rearing by nomadic pastoralists and a large valley conducive to the development of agriculture and irrigation by the first settled populations in the region.
- The slopes of the Zeravchan valley contain natural geological resources which enabled Sarazm to become a major centre for bronze and tin metallurgy, particularly in the 3rd millennium BCE, and a proto-urban handicraft centre for the making of ornaments and tools for a vast region.
- These new developments gave rise to a considerable number of social changes, such as the beginning of specialization of production, the formalization of commercial exchanges, the appearance of social classes, and town-planning, which led to the development of a complex settlement with highly sophisticated architectural structures.
- Sarazm was the first centre in Central Asia to have trade relationships with peoples over a very extensive geographical area, ranging from the Eurasian steppes of Turkmenistan and the Aral Sea to the north and west and extending to the south and south-west to the Indus and the Iranian plateau, as far as the Indian Ocean. It became a rich and prosperous town with an elaborate culture which made a powerful contribution to the protohistoric development of the region.
- As testimony to an innovative ancient culture, the 5,500-year-old archaeological site of Sarazm holds unique scientific and cultural interest for archaeologists, visitors, and the inhabitants of Tajikistan and the region as a whole. Sarazm makes a major contribution to the extension of knowledge of protohistoric civilizations in Central Asia. Alongside the well known neighbouring civilization zones (Elam, Indus), Central Asia emerges as a veritable cultural entity, even in its north-eastern edges, at periods dating back to those of the oldest agrarian societies.

ICOMOS considers that Sarazm is an important archaeological site at Central Asian level, and that it fully illustrates proto-urban development and the birth of networks of tangible and cultural interchanges over long distances, from the end of the Neolithic until the Bronze Age. Some of the values asserted by the State Party had initially seemed to be fragmentary, particularly as regards metallurgical skills, handicrafts, and early long-

distance interchanges. However, the most recent archaeological research (2007-2009) has confirmed the importance of the property in the metallurgical field and in early long-distance interchanges. The recent research work has furthermore given consideration to essential matters relating to the conservation of the property.

Integrity and Authenticity

Integrity

The integrity of Sarazm as an archaeological site is good, as the site was abandoned at the end of the 3rd millennium BCE and there was no subsequent urban resettlement. The site was affected at a surface level by agricultural activities which were relatively shallow in depth, and by the recent development of villages around the site. The presence of the most recent occupation layer is satisfactorily represented, despite surface alterations caused both by agriculture and natural processes.

The site covers the area of successive ancient settlements, from 3500 BCE to 2000 BCE, and all periods are represented in the remains. It therefore constitutes a full testimony to the proto-urbanization of Central Asia by the first settlements and their continuation through the development of craft and commercial functions.

The adobe remains left exposed after the excavations (particularly after the earliest excavations) have undergone a process of natural degradation as a result of climatic effects, and particularly the cycle of moisture/freezing/thawing. However, this process seems to have been brought under control by partial protective backfilling, the shelters erected in the early 2000s, and the implementation of a programme of active conservation measures (cooperation with the CRATerre organization). The recent non-invasive analyses carried out using external geophysical methods, the results of which have been published since the first nomination dossier was drawn up, demonstrate a good state of conservation and integrity of the remains that have not been excavated and remained underground. Recent tests on parts which had previously been excavated and then backfilled show that the base of the built structures in the ground has been relatively well conserved. The integrity of the urban settlements at different periods, completed by surveys carried out by archaeologists (see Description and History), may be described as stabilized and satisfactory.

The integrity of the landscape is affected by the protective shelters, but their presence is inevitable at present as they are necessary for the conservation of the property.

ICOMOS considers that the new research carried out using geophysical surveys and recent evaluations of the state of conservation of the property are in line with recommendations b) and c) of Committee decision 31

COM 8B.29 and that the efforts undertaken should be continued.

ICOMOS considers that the integrity of the property and its control are closely associated with its conservation. The situation following the recent research, carried out since the first nomination dossier was drawn up, and the current conservation programme for the adobe remains have stabilized the integrity of the property at an acceptable level. However, the uncertainty surrounding the exact boundaries of the site is detrimental to the full and complete application of the concept of integrity.

Authenticity

As an archaeological site, Sarazm is fully authentic. All the original elements are still in their original location, where they were left at the time the site was abandoned, and any decay is purely the result of natural effects. Furthermore, the site has not been affected by uncontrolled excavations and treasure hunting, as this has not occurred in Sarazm, and the local population has always cooperated well with the archaeologists.

ICOMOS considers that the integrity of the nominated property is acceptable and under control, as a result of the works and programmes currently under way; however, integrity is not fully defined because of a lack of knowledge about the exact boundaries of the property. Authenticity is satisfactory. Overall, ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iii). Three of the criteria proposed in the nomination dossier examined in 2006 have been withdrawn ((iv), (v), and (vi)). ICOMOS considers that this delineates the most important values of the property, in accordance with the recommendations of the Committee when it examined the first nomination dossier, thus enabling a better evaluation of the levels of value.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that Sarazm was a strategic meeting point between the nomadic pastoralists of the mountains and the agrarian populations of Transoxiane, from the end of the Neolithic. Through organizing the trade between these two complementary groups, and then by producing metals, tools, and craft products thanks to the abundant raw-material resources in the region, Sarazm constituted a prosperous and enduring proto-urban settlement. It is today considered to be the extreme north-eastern point of the establishment of Chalcolithic and then Bronze Age

civilization in Eurasia and is related to the Proto-Elamite, Mesopotamian, and Indus worlds.

In the 4th and 3rd millennia BCE, the town developed as a major trading centre in Central Asia, in a region extending from the Eurasian steppes to the Aral Sea, and from Turkmenia and the Iranian plateau to the Indus Valley, facilitating trade and cultural interchange and contributing to the birth of the major trans-Eurasian trade routes.

ICOMOS considers that archaeological research at the present time has satisfactorily established the significance and the long time-span of the tangible and cultural interchanges associated with the proto-urban settlement of Sarazm, in 4th and 3rd millennium BCE central Asia.

ICOMOS considers that this criterion has been justified.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that Sarazm bears exceptional testimony to the development of proto-urban civilization in Central Asia, at a considerable distance from the traditionally acknowledged basins of Egypt, Mesopotamia, and the Indus valley. Sarazm considerably extends the area in which a proto-urban culture is believed to have existed, with many local variants, stretching from the Iranian plateau to Turkmenistan and from Central Asia to Baluchistan. It is a unique testimony to the encounter resulting from these different cultural interchanges in the Chalcolithic and the Bronze Age.

ICOMOS considers that in the additional documentation of February 2010 the State Party has provided satisfactory confirmation and additional archaeological evidence to support the inscription of the property on the basis of this criterion.

ICOMOS considers that Sarazm is a remarkable human settlement which is exceptional because of its geographical situation, in Central Asia, and the scale of its proto-urban development, in the 3rd and 4th millennia BCE. The town played a major regional role in the exploitation of metals, particularly tin and copper.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criteria (ii) and (iii) and conditions of authenticity and integrity; and that Outstanding Universal Value has been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

Located on a rather arid terrace area, the Sarazm site was not farmed in the modern era before the 1950s, when modern irrigation canals were dug. With the gradual increase of the population in the Zeravchan valley, people were in search of more land for agriculture. The migratory trend towards the Penjikent district was reinforced following the serious flooding which occurred in the neighbouring mountains in 2005-2006.

However, farming activities are prohibited inside the property, which is protected by a metal fence, and they are controlled in the buffer zone (the State Party has indicated that it considers farming activities to be declining in the buffer zone).

At the northern limit of the territory of the ancient protohistoric site of Sarazm and to its west, two contemporary villages have developed: Sahibnazar and Avazali. They occupy a large proportion of the buffer zone and they are tending to expand, but they have not encroached on the property itself. The villages consist of family dwellings of modest dimensions.

The buffer zone is crossed by earth roads and an asphalt road that lead to the villages of Sahibnazar and Avazali. These roads, like the building developments of the 2000s, do not appear on the official map in the nomination dossier, which shows an outdated map. They are, however, perfectly visible on satellite photos from the mid-2000s. A road crosses the property from one end to another.

The State Party indicates that no new development has been authorized in the buffer zone since 2001, and strict rules are applied depending on the agricultural uses to which the land is put and on their public owners (private ownership of land does not exist in Tajikistan).

ICOMOS considers that the pressure resulting from the development of farming, and the demand for private housing has been subject to regulatory control by the State Party for several years now. This effort should be continued and encouraged.

ICOMOS considers that particular care should be taken to ensure controlled and restricted use of the road crossing the property, so that it does not affect its conservation or the expression of its value (straying of domestic animals, uncontrolled circulation of cars and light commercial vehicles, uncontrolled visitor access to the site, etc.).

Tourism pressures

Up to now the number of visitors has been very limited and there have been no reports of any damage caused by visitors. This point has been taken into account in the

project aimed at increasing visitor numbers. No visits will be made without the presence of a trained guide; during the visits, the various facets of preservation of the property will be presented and explained. Visitors will not be allowed to get closer than 1m from the excavation trenches, and the areas surrounding the excavations will be maintained, and if necessary repaired and reinforced.

ICOMOS considers that the data provided by the State Party concerning population trends, town planning, and roads in the buffer zone must be updated, as satellite photograph monitoring indicates that changes have occurred both in the housing and in the road network.

Environmental pressures

The site is affected by the local continental climate, which has detrimental effects as a result of rapid changes in temperature and a long period of nocturnal freezing during the year. Frost, combined with the possible presence of humidity in the remains after snow or rain, is the most significant factor of deterioration of the adobe structures.

The archaeological remains may also suffer damage from livestock if surveillance is inadequate, wild animals (birds' nests, rodents, animal burrows), and the natural growth of steppe grasses and scrub.

Natural disasters

The only risk of a natural disaster in this zone is that of earthquakes. The probability of the property being affected is, however, very low, as most of the remains are low structures. The property has no steep slopes, and there is therefore virtually no landslide risk.

A strip of land in the buffer zone completely surrounds the property and its fence; it constitutes a circular thoroughfare and is used by the farmers in the buffer zone; it also provides very convenient access to the boundaries of the property if an intervention is necessary.

Impact of climate change

There is no proven threat from climate change at the present time.

ICOMOS considers that the main threats to the property are the risk of the development of uncontrolled building, uncontrolled use of the road which crosses from one end of the property to the other, and the pressure of the natural elements (freezing/thawing, animals, and wild plants). More generally, data relating to agricultural development, dwellings, and traffic inside the property and its buffer zone must be included in the monitoring of the property and give rise to appropriate measures.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The area of the property is 15.9ha. There are no inhabitants inside the property boundaries.

The buffer zone around the property is continuous. Its surface area is 142ha. Its boundary to the south is the A377 main road, which forms a straight line; its boundary to the north is a disused irrigation canal on the edge of the villages of Avazali and Sahibnazar; its boundaries to the west and east are roads leading from the main road to the villages.

The buffer zone is divided into three parts, governed by different regulations and used for different purposes:

- The main part (in yellow on the plan, 110.5ha) is a private zone of housing and agriculture, that has been controlled since 2001;
- The second part (in red, 25ha), in the south-east, is exclusively agricultural and under the direct control of the State Party;
- The third part (in grey, 6.5ha) is currently the area around the property where traffic and shared agricultural use are allowed, as already indicated; it does, however, include formerly excavated areas, which were later backfilled and can no longer contribute to the visual value of the ensemble; it is subject to strict regulation, and the archaeological base is established there by special permission, because of its mission.

Some 300 families live inside the buffer zone (all of them in the yellow zone).

ICOMOS considers that the extent of the property is defined by a clearly identified heritage space and by visible remains, notably following the most recent excavations, which were non-destructive or less destructive than the first excavations. This approach is satisfactory at the moment, but future extensions need to be planned for, as the possible surface area of the ancient settlements is estimated to be between 45ha and 50 ha. It therefore extends into the existing buffer zone, and possibly further. The fact that the extent of the property may increase must be taken into account by the State Party.

ICOMOS considers that the boundaries of the property are acceptable, and correspond with the current state of knowledge about ancient settlements at Sarazm; their possible extension in the future, depending on possible future discoveries, could lead to revisions. The buffer zone is adequate, but the same observation applies as for the property.

Ownership

By resolution of the Government of the Republic of Tajikistan No 198 and land certificate No 006981 issued on 19 April 2001, the plot of land of 47.34ha, known as the Sarazm Reserve, formed by the property and the grey and pink parts of the buffer zone, is the property of the Republic and under its direct responsibility.

The main part of the buffer zone (in yellow) is public property, assigned to the management of the inhabitants, farmers, and communal officials of the villages of Avazali and Sahibnazar (Jamoat of Sarazm).

Protection

Legal Protection

Historic and cultural monuments are protected by the Constitution, and are governed by the laws and normative texts of the Republic of Tajikistan.

The Constitution of the Republic of Tajikistan (§ 44) requires all citizens to respect and protect historic and cultural monuments.

The protection, management, and monitoring of historic and cultural monuments are governed by the Culture Law of the Republic of Tajikistan, ratified on 13 December 1997.

Sarazm has the legal status of a "Historic and archaeological reserve" as defined by the resolutions of the Government of the Republic of Tajikistan No 391 of 21 September 2000 and No 198 of 19 April 2001.

The first resolution declared that Sarazm was a "Historic and archaeological reserve"; it defined its extent and entrusted the Academy of Sciences of the Republic of Tajikistan and the Presidents of the District of Penjikent and the Province of Soghdian with the responsibilities of preservation and management (financing, allocation of land and control of prohibition of all construction on the site).

The second resolution established and organized the "Sarazm Historic and Archaeological Reserve." It is managed by the Archaeological Base of Penjikent under the supervision of the Institute of History, Archaeology, and Ethnography of the Academy of Sciences.

An agreement was concluded between the District of Penjikent (Hukumat), the representatives of the villages of the commune of Sarazm (Jamoat), and the Historic and Archaeological Reserve on 31 October 2005. It stipulates in particular that any chance find made by a local inhabitant during agricultural work or at the surface must be handed over to the Reserve, and that the location of the find must be precisely indicated. If the villagers are planning to move earth for any reason, they are required to notify the Reserve so that archaeologists

can be present during the earth moving.

Traditional Protection

The site was discovered in 1976 by a villager who found a few objects on the surface of a freshly ploughed field, including a bronze axe. This marked the beginning of fruitful collaboration between the archaeologists and the local population, which is aware of the importance of the site and of the need for it to be protected.

Effectiveness of protection measures

The protection measures seem to be effective.

ICOMOS considers that the protective measures for the property are adequate.

Conservation

Inventories, recording, research

All documentation and reports relating to the property are conserved in the archives of the Penjikent Archaeological Base.

To date, all archaeological research carried out under the various programmes has been regularly documented, so that the information is available and can be used for further activities of research, interpretation, or education without delay .

Many research articles have been published in various international archaeological reviews since the 1980s (Bibliography of site studies, pp. 37-39 of the nomination dossier).

An adobe architecture conservation research programme has been undertaken as part of an international partnership (France).

A programme about the influence the architecture of Sarazm may have had on constructions in the region in later periods is under way.

Another international programme (Italy) is planned for 2010-2012, with a view to carrying out non-destructive geophysical surveys.

ICOMOS notes that these measures are in line with recommendations made by the Committee when the first nomination dossier was evaluated.

Present state of conservation

The most exposed excavation zones are protected by roofs constructed in 2004-2005; they contain remains which were in a good state of conservation when the property monitoring mission was set up by the State Party in 2007-2008. The remains do not require any immediate consolidation work.

Amongst the initial excavations, which were not protected by roofs, some were insufficiently backfilled when the excavations were completed, which has damaged the vestiges that remained exposed. They have, however, stabilized through a natural process, and recent analyses of walls that were reburied at a later stage, supplied since the first nomination dossier was drawn up, show that the conservation situation is not as bad as expected. Furthermore, these initial excavations made possible the establishment of initial documentation which was essential for an understanding of occupation levels and of the importance of Sarazm in protohistory. They were carried out carefully, with the help of a large number of surveys and stratigraphic studies, using probes in areas of limited size.

Most of the surface area of the property has not been excavated, and the most important parts of the excavated zones have been protected by shelters. This suggests that the property is in a relatively good state of general conservation, despite some irreversible losses.

Active Conservation measures

At present, only some of the zones that have been excavated are protected by metal shelters. Those protected are, however, the largest zones to have been excavated.

The adobe structure conservation programme should enable these structures to be monitored and conserved. The programme has been operational since 2009 and the results recorded are encouraging.

ICOMOS takes a positive view of the efforts made for the conservation of the adobe structures, and wishes to stress the importance of ensuring that they are implemented as widely as possible and systematically monitored.

Maintenance

Weeding is carried out by the staff of the Base.

Effectiveness of conservation measures

ICOMOS considers that the conservation work carried out up to now is satisfactory. A study to consider the possible extension of the excavated zone areas to be protected by shelters would be useful.

ICOMOS considers that the conservation measures taken up to the present are satisfactory. They reflect a qualitative improvement in line with the recommendations made by the Committee when the first nomination dossier was examined. These measures must be continued and carried out systematically.

Management

Management structures and processes, including traditional management processes

Management of the protection of historic and cultural monuments is carried out by the Ministry of Culture, in conjunction with the Academy of Sciences. The Ministry prepares and applies legislation on monuments and sites; its approval is required for national research programmes and conservation projects, for which it requests funding from the Government.

The Academy of Sciences, via the Institute of History, Archaeology and Ethnography, supervises the drawing up of the scientific programmes. It establishes international cooperation agreements and coordinates field studies. The Academy allocates budgets for the running of the Archaeological Base of Penjikent and the Sarazm Reserve, and for projects for research and the conservation of the property.

The term "Sarazm Historical-Archaeological Reserve" defines the property as an administrative and scientific entity; it is attached to the Penjikent Archaeological Base. The Penjikent Archaeological Base runs the Sarazm Base, located on the site, the main tasks of which are the management of the archaeological site, the reception of scientific missions, the management of the archaeological object storage room (site museum), and visitor reception. It ensures the preservation and conservation of archaeological finds. It also manages Penjikent Museum and its archive room, with regard to excavation results and documentation relating to the Sarazm site.

ICOMOS considers that the measures introduced for the creation of the Archaeological Reserve of Sarazm take into consideration recommendation d) of Committee decision 31 COM 8B.29 and that the efforts made must be continued.

Policy framework: management plans and arrangements, including visitor management and presentation

The governmental decisions of September 2000 and April 2001 (see Protection) define the general administrative, scientific, and financial framework of the operation of the Sarazm Reserve; they also define its missions and ensure that the necessary human and material resources are provided.

A management plan covers the period 2006-2010. It first sets out a medium-term vision for the future of the site, as a development space shared between the local rural community and the archaeological site, as a space for historical knowledge and cultural tourism. It lists the strengths and weaknesses of the Reserve and the threats hanging over the property. It defines the priorities: development of conservation techniques, raising awareness of the property and its values,

developing visits and tourism, consolidating the revenues associated with the management of the property, better organization of the documentation and enrichment of the data currently available, and strengthening the technical capacities of the Reserve.

With regard to the actions announced, in connection with the general objectives set out above, it is hard to determine exactly what has been achieved, what is currently under way, and what has remained merely an intention. The plan is, however, currently being implemented. Furthermore, there is no presentation of actions carried out in partnership with foreign institutions, both as regards research (non-destructive geophysical research and archaeological studies – Italy, Germany), the conservation of the property (CRATerre programme, France), or presentation of the property (site museum, USA).

The management plan states that a special effort will be made with a view to the permanent opening of the site for visitors, including visitor information projects (signage, interpretation, website) and the site museum project.

ICOMOS considers that a full report on the actions carried out during the 2006-2010 management plan should be drawn up and submitted to the World Heritage Committee. This report on actions carried out or in progress must be used as the basis for drawing up the next management plan.

Risk preparedness

There is no specific programme in this respect. However, the fencing system and the traffic space around the property may be considered as factors which help prevent risks.

Involvement of the local communities

Close relations have been maintained between the Reserve management and the local communities since the property was discovered by a villager in 1976. The local inhabitants are proud of the property and respect it. They are keen to collaborate with the archaeologists and help to protect the property by their presence.

Resources, including staffing levels, expertise, and training

The Reserve staff currently consists of one director and thirteen other staff members (researchers, administrative employees, technicians, and guards). There is, however, no full-time conservation manager on the site.

The cooperation missions for archaeological research and the conservation of the property have enabled foreign scientists and professionals to make a contribution, to complement local competencies, and to assist with training.

ICOMOS considers that professional and scientific training initiatives for Reserve personnel are a priority. ICOMOS wishes to encourage the State Party to develop such initiatives, particularly in a regional context. Training initiatives linked to international cooperation projects must form an important part of the archaeological research and conservation programmes.

Effectiveness of current management

As no report has been provided stating the results of the current management plan (2006-2010), it is difficult to give any quantified appraisal of the effectiveness of current management.

However, ICOMOS welcomes the efforts made in the field of conservation, and particularly the training of local personnel in conservation techniques, together with the determination shown both to protect the site and to ensure that it is opened to visitors on a permanent basis.

ICOMOS considers that the efforts currently being made in the protection and conservation of the property must be continued and encouraged through international cooperation, as must efforts made to bring about permanent staffing of the site. This will involve, in particular, the development of visitor reception facilities (site museum, signage, presence of guides, etc.)

The strengthening of the teams and the training of personnel must be priority targets for the management of the property.

Compared with the first nomination dossier, the possibility of the presence of a conservation unit on-site has been raised, and the management system has been extended, in accordance with recommendation d) of decision 31 COM 8B.29. The management plan that will be ending in 2010 should lead to an overall improvement in the conservation and management of the property.

ICOMOS considers that the management system for the property is in place, and that it has begun to be expanded and to operate satisfactorily. A certain degree of fragility remains, however, as presence on the site of the property itself is limited. The management authority must ensure that it produces a report on the actions carried out, which can be used for the next management plan, and must increase the staffing of the Sarazm Archaeological Reserve in terms of both numbers and level of training.

6. MONITORING

The Penjikent Archaeological Base is responsible for monitoring the conservation of the property. It acts under the supervision of the national authorities (Institute of History, Archaeology and Ethnography of the Academy of Sciences of the Republic of Tajikistan). It draws up an annual report based on eleven technical indicators that define monitoring operations and observations.

No annual monitoring report has, however, been included with the nomination dossier.

ICOMOS considers that the announced monitoring measures are adequate for conservation, provided that the annual monitoring reports are in fact produced. ICOMOS considers that monitoring should be extended to include the buffer zone, with regard to agricultural and housing development, and to the use of the roads that cross the property and the buffer zone.

7. CONCLUSIONS

ICOMOS recognizes the Outstanding Universal Value of Sarazm, but wishes to point out a certain degree of fragility in its management, which means that the active continuation of international cooperation is necessary.

Compared with the first nomination dossier, the recommendations of further exploring the values and significance of the property and the use of non-invasive geophysical techniques have been taken into account, and action has been taken to ensure the presence of a conservation unit on the site, in line with the recommendations of Committee decision 31 COM 8B.29.

Recommendations with respect to inscription

ICOMOS recommends that Sarazm, Tajikistan, be inscribed on the World Heritage List on the basis of ***criteria (ii) and (iii)***.

Recommended Statement of Outstanding Universal Value

Sarazm is an archaeological site which bears witness to the development of settlements in Central Asia from the 4th millennium BCE to the late 3rd millennium BCE. Sarazm illustrates the early rise of proto-urbanization in this region, reflected in the sophistication of the dwellings, infrastructures, and archaeological findings. It came into being as the result of the complementarity initially between pastoralism and early agrarianism, and subsequently between the exploitation of mineral resources in the Bronze Age and the development of handicrafts. Sarazm demonstrates the existence of inter-regional trade and cultural interchanges over long distances across Central Asia. This was a long-lasting and prosperous proto-urban metropolis, at the north-eastern extremity of a vast area stretching from Mesopotamia to the Indus and the Iranian plateau.

Criterion (ii): The proto-urban centre of Sarazm bears testimony, from the 4th millennium BCE, to trade and cultural interchanges between the pastoral nomads of the mountains of Central Asia and the agrarian peoples of Transoxiane. Later, particularly in the Bronze Age, Sarazm complemented and extended its activities with metallurgy and handicrafts, demonstrating the existence

of a network of a diversity of interchanges on a very large scale. Sarazm had connections with the steppes of Central Asia, and in addition with the Turkmenian, proto-Elamite, Mesopotamian, and Indus worlds.

Criterion (iii): Sarazm constitutes a remarkable human settlement, exceptional in its geographical situation, in Central Asia, in the 4th and 3rd millennia BCE, to which its proto-urban and architectural remains and its archaeological findings bear witness. The town played a regional role over a long period and on a very large scale in the working of metals, particularly tin and copper, and the associated development of handicrafts to produce tools, ceramics, and jewellery. Sarazm is one of the places that gave birth to and saw the development of the major trans-Eurasian trade routes.

Integrity and Authenticity

The integrity of the property is acceptable and under control, as a result of the current conservation works and programmes, but it is still ill-defined because of uncertainty about the precise boundaries of the proto-urban site. All the original elements are in their initial location, where they were left when the site was abandoned, and the only deterioration of these elements is the result of natural processes.

Management and protection requirements

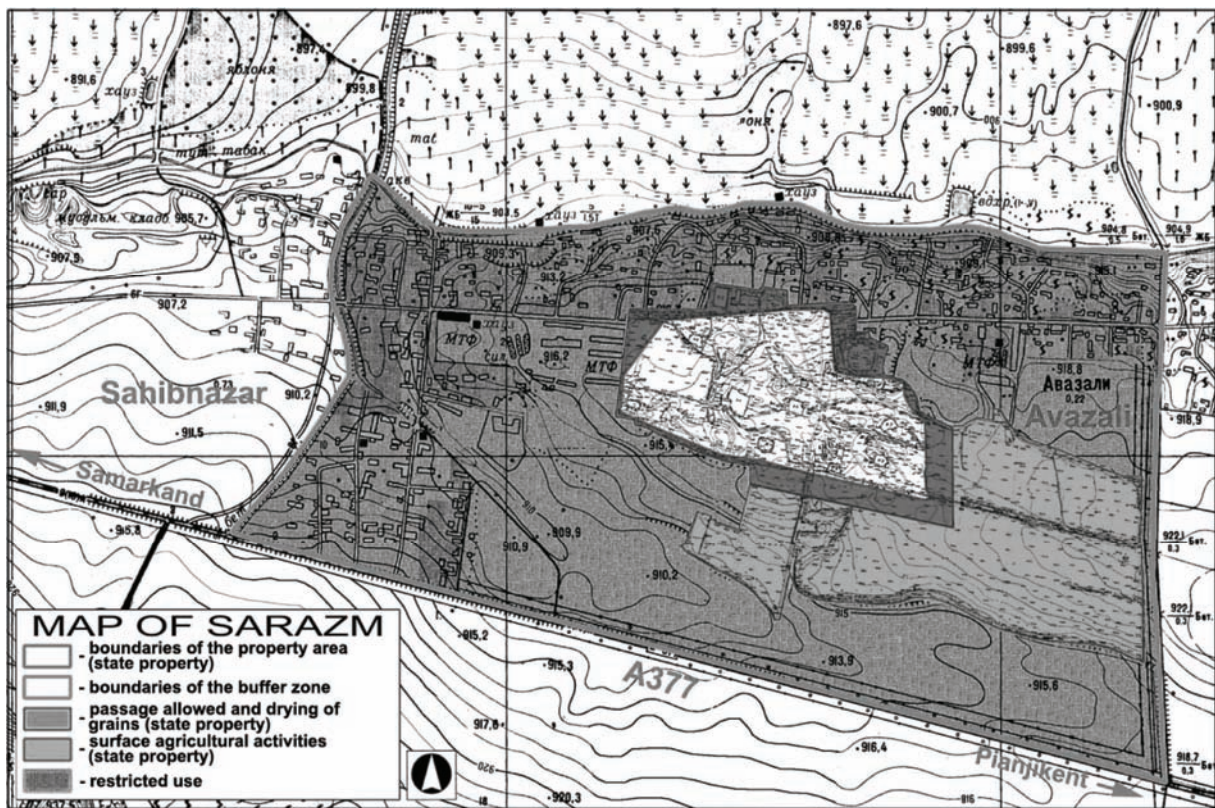
Sarazm has the legal status of a "Historical and Archaeological Reserve," as defined by the resolutions of the Government of the Republic of Tajikistan No 391 of 21 September 2000 and No 198 of 19 April 2001. It is managed by the Penjikent Archaeological Base under the supervision of the Institute of History, Archaeology and Ethnography of the Academy of Sciences. The protection of the property is satisfactory. The system for the management of the property is in place. It has begun to be expanded and to operate satisfactorily. A certain degree of fragility remains, however, as the presence of the management system on the site of the property itself is inadequate. The management authority must make sure that it produces a report on the initiatives carried out and strengthens the human resources of the Sarazm Archaeological Reserve, in terms of both the number of staff and the level of training. International cooperation for scientific research and for the conservation of the property remains crucial, and must proactively participate in the training of local personnel.

ICOMOS recommends that the State Party give consideration to the following:

- Consider changing the name of the property to make it more descriptive and better reflect the value of the property, such as "Proto-historic settlement site of Sarazm", "Proto-urban site of Sarazm", or another name.
- Continue and reinforce the upcoming archaeological programme in the context of the

international cooperation projects currently under way, in particular by the use of non-invasive geophysical techniques, to try to determine the boundaries of the proto-urban settlement of Sarazm and to confirm what are today the most hypothetical aspects of the value of the property (metallurgy and metal working, handicrafts other than ceramics).

- Continue and systematize the efforts being made to improve the conservation of the property (the CRATerre programme in particular), examine whether new protective shelters are necessary, and raise awareness of the annual conservation monitoring report.
- Draw up a report of actions completed or under way as the 2006-2010 management plan comes to an end, including initiatives carried out under international cooperation projects, and submit a new management plan, based on this report, for future years.
- Reinforce the Sarazm Archaeological Base with permanent staffing and open the property and the site museum to visitors, while ensuring that the values of the property are appropriately presented.
- Strengthen the training of the personnel employed by the Reserve, particularly in connection with international scientific and conservation cooperation projects.
- Extend the monitoring of the property to include control of agricultural and housing development inside the buffer zone and of the use of the roads that cross the property and the buffer zone.



Map showing the boundaries of the nominated property



View of the terrace of Sarazm from the south



Archaeological excavation IV – the funerary enclosure



Archaeological excavation V – the palatial complex



Archaeological excavation XI – the religious building

Extensions

Matheran Light Railway (India) No 944 quater

Official name as proposed by the State Party:

Matheran Light Railway

Location:

Maharashtra State,
Raigad District

Brief description:

The Matheran Light Railway is a narrow-gauge line in mountainous terrain in the immediate vicinity of Mumbai. Built by a private company, it was inaugurated in 1907. The line has always operated chiefly for tourism. Stretching 20km, it climbs around 700m. Its design principle was based on closely following the relief of the terrain in order to avoid having to construct any major civil engineering works; it has some steep gradients (5%) and many curves, sometimes with a very tight radius.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

1. BASIC DATA

Included in the Tentative List: 25 November 2005

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 28 January 2009

Background: This is a proposal for the extension of the Mountain Railways of India including the Darjeeling Himalayan Railway, inscribed on the World Heritage List at the 23rd session of the World Heritage Committee (Marrakech, 1999), Nilgiri Railway inscribed at the 29th session (Durban, 2005) and Kalka Shimla Railway inscribed at the 32nd session (Quebec, 2008).

Consultations: ICOMOS consulted the TICCIH as well as independent experts.

Literature consulted (selection):

Bailly, R., *Decauville, ce nom qui fit le tour du monde*, Le Mée-sur-Seine, 1999.

Bhandari, R.R., *Indian Railways, glorious 150 years*, New Delhi, 2005.

Bordes, J.L., *Le chemin de fer du Yunnan...*, 1902–1910, in *Centraliens* No 592, March 2009, pp. 58–61.

Coulls, A., *Railways as World Heritage Sites*, ICOMOS Thematic Study, Paris, 1999.

Scott, A., *World Heritage Railways*, Madrid, UNESCO, 2001.

Technical Evaluation Mission: 23 October–1 November 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The Matheran Light Railway (MLR) was built by a private company to connect Neral, in the Ulhas Valley, to Matheran Station, at an elevation of around 700–800m. Opened in 1907, it provided a link between the Mumbai–Pune main trunk line, enabling the colonial and Indian elite to access the summer residences in the Matheran region that enjoyed more temperate climatic conditions than the coastal city of Mumbai, a pleasant natural wooded environment, and extensive panoramic views.

The State Party is presenting this construction for its pioneering approach, using a unique technique of very tight curves compared with the other Indian railway lines already inscribed on the World Heritage List. Hairpin bends were used to avoid the zigzag system employed to scale the gradients of the Darjeeling Himalayan Railway.

It is a single-track, 20km, adhesion line with very narrow-gauge track (0.61m), climbing a little more than 700m between Neral and Matheran stations. The average gradient is 3.5%, with maxima of 5%.

To keep construction costs to a minimum, it was decided when determining the route to follow the contour of the terrain as closely as possible, to avoid having to build any major civil structures. The result is a line with a large number of curves (227), some of which have very tight radii, as little as 18m. The advantage of this solution is that there are no truly significant civil structures apart from one curved tunnel and two cuttings. The route makes clever use of the geographic relief to climb regularly up the side of Mount Barry. On the other hand, in a region of heavy monsoon weather, the line crosses numerous small streams on around 120 culverts and it is significantly affected by torrential stormwater runoff. Such a route design results in strict speed limits (between 8 and 16km/h), low transport capacity, and rapid rail wear in the curves.

The line starts in the town of Neral, midway between Mumbai and Pune stations connected by the historic standard-gauge line dating from the 1850s. It includes the following:

- Neral Station (39m elevation) which also has a depot and the MLR workshops.
- The first section of the line is 5.57km long, between Neral and Jummapatti Station (245m elevation).
- The second section, 11.57km long, runs between Jummapatti and Aman Lodge (759m elevation). The line passes through Water Pipe Station, and then climbs the north-east slope of Mount Barry via a series of hairpin bends. It passes around the mountain along its northern slope, via Panorama Point, before returning to the western slope, close to the watershed. It then passes through an area of wild jungle before arriving at Aman Lodge Station.
- The third section, 2.83km long, runs between Aman Lodge and the Matheran terminus (745m elevation), which also has a depot.

Neral, Jummapatti, Water Pipe, and Matheran stations all have buildings. They are part of the property proposed for extension, along with the depots and workshops, and the Officers' Rest House in Matheran. These buildings were originally erected between 1905 and 1907, when the line was built. However, they have undergone numerous modifications (see Authenticity).

Extension

To date, the Mountain Railways of India include three railway lines: the Darjeeling Himalayan Railway (State of West Bengal), the Nilgiri Mountain Railway (Tamil Nadu State), and finally Kalka Shimla Railway (Himachal Pradesh and Haryana States).

History and development

The Matheran region is a mid-elevation mountainous region at an altitude of 700–800m; it is rocky, with escarpments and forested areas, but relatively small. It is located immediately to the west of the Mumbai megalopolis, and forms a rocky barrier at the rear of the coastal plain. As early as the 1850s, the British considered it a potential residential area, with its wild and natural environment. It enjoys a pleasant climate for most of the year. It is then accessible by mule track up the southern flank of the hills.

In 1856 the Great Indian Peninsular Railway, then under construction, had reached the village of Neral, to the north-east of the Matheran hills. From there a toll road was opened in 1859 to reach Matheran. Right from the start, and still today, access to the Matheran hilltop is controlled and subject to payment.

Around 1900, the need to improve communications between the Plain and Matheran led to consideration being given to constructing a railway from Neral. The

private Matheran Steam Light Tramway Company was authorized under an Order to begin building the line in 1904.

The project's promoter was Mumbai businessman Abdul Hussein Peerbhoy. He obtained authorization for his company in 1903, along with government support, in particular through the acquisition of land.

The narrow-gauge line's technical design was the brainchild of the Indian engineer Rai Saheb Hari Chand, who had also been involved in building the Kalka Shimla Railway. Construction of the Matheran line, in a region of wild jungle, by indigenous workers was laborious, and it was finally completed by the army in 1907.

The line originally had four German locomotives built by Orenstein & Koppel (O & K), which specialized in very narrow-gauge lines for industry and the army. Their design with three (0-6-0) or four driving (0-8-0) axles, with the two end axles being coupled and mobile, made it easier to navigate the sharp radii of the curves. These locomotives provided considerably higher traction effort than those used on the Darjeeling Himalayan Railway, hitherto the reference in India for this type of track.

O & K, based in Berlin (Germany), was founded in 1876 and had developed this type of locomotive using the patents of Ewald Klien (1890–92). When the first Matheran locomotives were bought, O & K had already sold several hundred in Europe and worldwide. They were still in commercial use well into the 1990s, notably in Java. Numerous locomotives of this type are today preserved, some still in operating condition. They are owned by railway museums or associations of steam enthusiasts. None is currently operating on the Matheran line. However, an American locomotive from 1917, initially used on the Darjeeling line, was transferred in 2001 to the Matheran line for special tourist trains.

The Matheran line opened for service in 1907. Because of the cost of the infrastructure, the authorized fares were considerably higher than for all the other railways in the Mumbai region.

In 1928 a Brookville petrol locomotive was trialled, and, in 1938 two rail motor cars were put into service, one with a diesel engine and the other with a petrol engine. These applications were seen as precursors for Indian railways. In 1955, three diesel locomotives were acquired from the German firm of Jung & Co. Steam was definitively replaced by diesel traction in 1982, with successive purchases of other diesel locomotives, initially German and then manufactured in India.

Trains run according to a regular timetable, apart from summer to October during the monsoon season, which lasts about four months. The current monthly traffic varies between 11,000 and 20,000 passengers. There are five trains a day. With improvements to the road, this traffic now only accounts for around 10–20% of the tourists travelling to the Matheran region. Nonetheless,

the Matheran line remains a symbol for the region's inhabitants.

The line was closed from 15 June 2005 to 28 February 2007 because exceptionally heavy monsoon rains had caused significant landslides that destroyed much of the track and damaged several civil structures.

For today's traveller, travel on the line is presented as an unforgettable, romantic, and nostalgic trip. The line passes through beautiful mountainous and forested landscapes, and also through a rich and fragile area of jungle, considered to be ecologically sensitive. The trip takes two hours.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party puts forward a comparative analysis based on three points.

The first deals with mountain railways in India, the two oldest representatives of which, and which predate the MLR, are two of the lines already inscribed on the World Heritage List, namely, the Darjeeling (1899) and the Kalka-Shimla (1903) railways. The third mountain railway in India, the Nilgiri, came very soon after the MLR (1908). Reference is made to another line as belonging to the same national group: the Kangra Valley Railway. This ensemble is presented as probably being the first colonial mountain railway infrastructure. In terms of civil engineering, the MLR is the direct successor of the Darjeeling Railway (a so-called zigzag system improved by the use of hairpin bends, and the same gauge) and the Shimla line (the MLR's designer had worked at Shimla, and employed a similar choice of avoiding civil structures at all costs by adopting a very sinuous route).

The second point is the comparison with other narrow-gauge railways in India. There are in fact very few examples other than the examples of old mountain railways quoted, as they were rapidly converted to standard gauge. The State Party also mentions its intention to propose a fifth extension to the Mountain Railways of India, the Kangra Valley Railway.

The third point is the comparison with narrow-gauge railways built in other countries. It is said that they were essentially used as lines that were very inexpensive to build, in less challenging geographic situations in order to transport freight and over shorter distances. Furthermore, almost all these lines were soon abandoned once the freight traffic had fallen off. Today, there only remain vestiges of the infrastructures of these lines.

For the State Party, this makes the MLR a unique combination of technological solutions and an

exceptional example of a narrow-gauge railway used for passenger transport, still in service, and illustrative of a significant stage in the history of railways.

The Matheran Railway is mentioned in the comparative analysis included in the Kalka Shimla Railway dossier, as having come into service shortly afterwards. Its hairpin bends and the locomotives used are mentioned as defining its originality.

ICOMOS considers that the comparative analysis put forward by the State Party suffers from several methodological weaknesses and gaps in the information it contains.

The fact of basing the international comparative analysis on only one rail gauge (the British-based gauge of 0.61m (2 feet) or 0.60 m in the metric system) completely skews the comparison with other mountain railways of the same period, whether using narrow gauge as defined internationally (1m or less) or so-called standard gauge (1.44m).

The use of very narrow-gauge lines of the MLR type largely predates the MLR, both in India itself (Darjeeling Railway, 1881) and in Europe, where they were promoted very early, on in Great Britain, Germany, and France. Sharp & Stewart of Glasgow (UK) supplied the first locomotives for the Darjeeling Railway, using this gauge. The French firm of Decauville had been selling complete railway lines using a gauge of 0.60m since 1875, whilst MLR's Berlin suppliers had also been manufacturing rolling stock for this gauge since 1876. Lines of this type are still in use today, for tourism, in Europe notably (Wales, Burgundy, etc.). They are considered to be of local or regional heritage interest.

The other mountain railways around the world, dating from the same period as the MLR or earlier, are simply provided in the form of a long list of countries in the nomination proposal, without any comparative monographic approach. When the MLR was built, there were dozens of mountain railways in the world's major mountain ranges, some of which include remarkable civil engineering performances or technological innovations. Many are still in use and recognised today: the Semmering Railway, Austria (1998, criteria (ii) and (iv)), the Darjeeling Himalayan Railway, India (1999, criteria (ii) and (iv)), the Nilgiri Mountain Railway, India (2005, criteria (ii) and (iv)) the Kalka Shimla Railway, India (2008, criteria (ii) and (iv)), the Rhaetian Railway in the Albula / Bernina Landscape, Switzerland and Italy (2008, criteria (ii) and (iv)), the Cerdagne Railway, France (Tentative List), etc.

Finally, the other comparable lines, especially in Asia, are not taken into account, for example, the Yunnan Railway (Vietnam–China), designed at the same period in a similar colonial context (French Indochina), the Alishan Railway in Taiwan built by the Japanese, etc.

In conclusion, ICOMOS notes that the comparative analysis has only in effect been made at the national level, and that some properties with similar values have not been taken into account.

ICOMOS considers that the comparative analysis does not justify consideration of this property for the World Heritage List, as an extension of the Mountain Railways of India.

Justification of Outstanding Universal Value

The proposed extension is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Like the other Mountain Railways of India already inscribed, the Matheran Railway is an equally early and equally exceptional example of mountain railways for passenger transport.
- It employs daring and ingenious civil engineering to create a rail connection in a mountains site. It includes curves that are among the tightest ever used for a railway line, and spectacular gradients.
- The development of this type of mountain railway line, with passenger stations, is the oldest in Asia and more generally in the former colonial countries.
- It is a living example of civil engineering and transport enterprise undertaken by a private company. It has been in continuous service. It uses British rail technology with German rolling stock.
- It crosses spectacular and wild mountain landscapes of great quality.
- The railway led to the economic development of the Matheran mountain area.
- It is one of the best preserved railways in India, with its stations, signals, and natural and rural environment.

The justification for the property already inscribed is as follows: This site includes three railways. The Darjeeling Himalayan Railway was the first, and is still the most outstanding, example of a hill passenger railway. Opened in 1881, its design applies bold and ingenious engineering solutions to the problem of establishing an effective rail link across a mountainous terrain of great beauty. The construction of the Nilgiri Mountain Railway, a 46-km long metre-gauge single-track railway in Tamil Nadu State was first proposed in 1854, but due to the difficulty of the mountainous location the work only started in 1891 and was completed in 1908. This railway, scaling an elevation of 326 m to 2,203 m, represented the latest technology of the time. The Kalka Shimla Railway, a 96-km long, single track working rail link built in the mid-19th century to provide a service to the highland town of Shimla is emblematic of the technical and material efforts to disenclave mountain populations

through the railway. All three railways are still fully operational.'

ICOMOS considers that the justification for the Matheran Railway is not entirely convincing. It does not contribute any major new technical or social elements to the series, nor does it reinforce in any significant way the outstanding universal value already recognized in the ensemble of the three mountain railways in India. Its technical performance is relatively limited, and is already largely represented in the series now inscribed. It could be said that the Matheran Railway is the direct descendant of the Darjeeling Himalayan Railway and the Kalka Shimla Railway, but with a far lower level of and considerably less significant civil engineering. The choices made here are therefore effectively not new, even in India. The argument of very tight curves, the line's only unique feature, as an improvement on the Darjeeling zigzag, is ambiguous, especially within the context of an international comparison of mountain railways of the 1900s, at similar altitudes and with similar elevations. It is a factor in slowing the trains, restricting the payloads, and increasing highly disadvantageous rail wear which civil engineering was in fact seeking to eradicate at the time by adopting innovative routes and building large civil structures, or by using electric traction even as early as this period. The arguments put forward for the Matheran Railway are mainly of regional and national interest. The same applies to the undertaking's corporate approach, original for India at the time, but in no way innovative as such when viewed on a much wider scale.

Integrity and authenticity

Integrity

The railway nominated for the extension and its technical annexes appear *a priori* to possess a good level of integrity. However, certain elements that once formed an integral part of the line's operation have not been taken into account, such as Simpson's Tank, a reservoir and siding required at the time of steam traction, and others are poorly documented (Neral Station in particular). It would therefore be useful to provide an inventory of the infrastructure and buildings effectively belonging to the property, in addition to just the line currently in service (see Property boundaries).

The line is an integral operating property. Its use for regular commercial and tourist services conforms with the line's original use.

ICOMOS considers that the integrity of the property must be confirmed by compiling a precise inventory of its constituent equipment components.

Authenticity

The authenticity of the route has been very well preserved throughout the line's history. Reconstruction following landslips during monsoons has been carried

out in conformity with the initial plans. As the original railway infrastructure was sufficient for traffic requirements throughout its history, it has been preserved in a suitably maintained condition. The initial very light rails (30lb per yard) have, however, been replaced with slightly heavier rails (50lb).

Steam traction was gradually replaced from 1955 to 1982 (see Background), but the means for managing the line and its trains have fundamentally not changed, notably the signals. Principally relying on the professional conscience of the company's employees, safety is excellent; to date, there has been no significant collision.

The station buildings, depots, and hangars are by and large the same as in the line's early days. Nonetheless, they have undergone modifications. The Neral depot was modified in 1955 to handle diesel traction; Water Pipe and Matheran stations were rebuilt in 1985–86, and the Officers' Rest House in Matheran was extended and renovated in 2001.

ICOMOS considers that the authenticity is adequate for the infrastructure and the line's management conditions. However, the conditions of authenticity of the buildings are not guaranteed as a result of the work carried out in the 1980s. A programme of restoration and supervision by historic monument conservation professionals is required.

ICOMOS considers that the conditions of integrity and authenticity are almost met, but that they require a precise inventory of the property's component parts and a conservation programme for the buildings.

Criteria under which the inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv), like the three mountain railways of India already inscribed.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the Matheran Railway is an exceptional example of intercultural exchange and technology transfer between very remote geographical areas. It is an example of the globalization that characterized the colonial period. It illustrates a local private initiative, in cooperation with the colonial power, and the use of European technology, in this case innovative technological design, notably the use of German steam locomotives with the pioneering use of floating axles and the installation of very tight curves, probably with the smallest radii in the world. It created easy access and made human settlement possible in a mountains zone

with remarkable natural heritage and great landscape beauty. It permitted economic development and trade between the forest and mountain inhabitants and farmers, and the peoples living in the valley below and the colonial power.

ICOMOS considers that the Matheran Railway illustrates values already well represented by the series of three mountain railways of India that are already inscribed. It is a repetition of values already recognized, generally at a far lower level of civil engineering. What is presented as innovative compared to the three lines already inscribed is, on the one hand, the locomotives, the nature of which is very relative to this period, and they are not an intrinsic part of the property in the terms of the World Heritage Convention. On the other hand, the hairpin bends are presented as the tightest ever built in the world. Their value as a technical solution coming in the wake of the Darjeeling Himalayan Railway and the Kalka Shimla Railway and their originality in the history of Indian railways are undeniable; but when analysed as a technological solution in a global comparative study, at the time, they are only of very limited railway interest and were without any future.

The social values put forward do indeed seem important, but only within the context of the regional and national history.

ICOMOS considers that this criterion has not been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Matheran Railway illustrates a notable type of mountain railway construction by the engineers, following on from other infrastructures built in India in the 19th century. The Mumbai to Thane line arrived at the foothills as early as 1856. The Matheran narrow-gauge branch line was built between 1903 and 1907. It is an example of an exceptional technological ensemble that illustrates a stage in the history of the pioneering conquest of mountains by railways. The Matheran Railway is an audacious initiative by a local company, at its own risk and peril, perhaps the first of this type in a colonial context. The engineering design for gaining altitude by using hairpin bends and numerous curves is impressive, over a distance of nearly 20km, including the use of special locomotives with floating axles. It is testimony to a very complete railway ensemble, which is still in service, including the original coaches. The signals and the buildings date from the line's origin, and its track is still the same. It is a very authentic and unique ensemble that is a spectacular illustration of a railway technological ensemble in the pioneering period of the 19th century. The line was built with considerable respect for its surroundings, within a sensitive ecological and biological zone. It is testimony to the economic

development of Matheran Hill and the day-to-day life of its inhabitants. Today, it is the symbol for an entire region.

ICOMOS considers that the arguments provided are largely a repetition of those already put forward for criterion (ii), at times excessively affirmatively, as, for example, regarding the conditions of authenticity of the stations and the period of the Matheran Railway's design. Their correlation with criterion (iv), of an outstanding example of a type of building, would however be better than for criterion (ii). Nonetheless, there are dozens of examples around the world of railways used to open up mid- and high-altitude mountainous regions at the time the Matheran Railway was built, all using combinations of more or less original techniques, but the components of which are not new. Furthermore, the property's specific values seem to be overestimated, and largely recognized in the three Mountain Railways of India already acknowledged.

ICOMOS considers that the Matheran Railway is a good example of a railway system at the start of the 20th century, with a reasonably good level of conservation and authenticity, but the interest and originality of which are of a regional or national rather than an international level. It makes no real contribution to reinforcing the aspects of outstanding universal value of the serial property already inscribed on the List.

ICOMOS considers that this criterion has not been justified.

ICOMOS does not consider that the criteria for the proposed extension and the contribution to the Outstanding Universal Value of the serial property already inscribed have been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The Matheran Railway led to the creation of human settlement along its route. Despite this, it is said that there is no illegal encroachment on the buffer zone, notably in Neral, the section of the line in the most densely populated area. The station and its annexes are fenced or walled. The actual track is, however, used by pedestrians, a local custom, but one that is without any particular consequence on the property and its conservation, or for the safety of the traffic, at it is infrequent and travels at slow speeds.

ICOMOS considers that the proximity of Mumbai, a nearby megalopolis with a population of 30 million people, requires specific monitoring for development and housing issues close to the line, especially in Neral.

Tourism pressures

Matheran Mountain is a popular tourist destination that is profitable for tour operators. However, the high cost of operating the railway currently restricts the number of trains to five a day. If the financial balance were to be improved, the traffic could easily be increased.

ICOMOS considers that the development of tourism causes and will continue to cause urban pressure for leisure activities, for the moment not controlled by the buffer zone. There is consequently danger for the immediate environment of the components of the railway, its landscape, and the environment close to Matheran town, considered a sensitive and fragile ecological and biological zone.

Environmental pressures

The railway is located in a mountainous region that is by and large spared from pollution phenomena. The State Party does not consider that there is any particular environmental threat in the eco-sensitive zone which is, moreover, protected.

Natural disasters

In the more mountainous areas, the railway is potentially subject to falling boulders and landslides, especially during the monsoon, during which period the train does not operate. However, these are regular events that are well understood and which the permanent way gangs are able to deal with (see Risk preparedness). Some years may see serious events affect the line, such as in 2005–2007 when the line was closed for over 20 months.

Impact of climate change

Climate change could accentuate exceptional monsoon-related events.

ICOMOS considers that the main threats to the property are an uncontrolled increase in population near the line in Neral and poorly controlled development of tourism in Matheran.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The nominated property is comprised of the space between the rails themselves, extended to include the station buildings and the Officers' Rest House in Matheran. There is no description of the civil structures, stations, and buildings, nor any proper inventory of the property in the nomination dossier for the proposed extension.

The total surface area of the proposed extension is 1.32ha; there are no inhabitants.

ICOMOS considers that it would be necessary to confirm whether the ensemble of the railway infrastructure (tracks, civil structures, tunnel, technical buildings, signalling systems, sidings, etc.) is effectively included in the property under its current definition. A detailed inventory is essential. Plans of the buildings and a plan of the Officers' Rest House in, with its buffer zone, are needed.

According to the maps, the buffer zone is comprised of a double strip 50 feet (15 m) wide on either side of the line, in certain places, and 100 feet (30 m) in others. Slightly larger areas surround the buildings, apparently coinciding with survey lines. There is no explanation in the nomination dossier for the proposed extension why these choices were made.

The surface area of the buffer zone is 115.8ha; twenty people live within the buffer zone.

ICOMOS considers that an extended buffer zone taking into account the most sensitive aspects of the line's environment would be needed to protect the property.

ICOMOS considers that the boundaries of the property nominated for the extension need to be clarified and that an extended buffer zone would be needed to protect the property.

Ownership

The Matheran Railway, its real estate, and equipment are owned by the Government of India. Ownership is exercised by the Ministry of Railways, which also manages the line.

Protection

Legal protection

The State Party's railway laws apply to the Matheran Railway, in particular:

- The *Railway Act* (1989) concerning the technical measures for protecting and managing the property.
- The *Public Premises Act* (1971) notably includes the right for officers authorized by the Indian Ministry of Railways to remove unauthorized occupants encroaching on the property and its buffer zone.
- The Matheran has been designated by the Government of India's Ministry of Environment and Forests as an Eco-Sensitive Zone (order dated 4 February 2003).

ICOMOS considers that it is necessary to provide a map to clarify the relationship between the mountainous zone

designated as an Eco-Sensitive Zone and the railway line.

ICOMOS considers that it is necessary to extend the buffer zone of the property, notably in the mountainous section protected as an Eco-Sensitive Zone through to the surroundings of Matheran.

Traditional protection

The region's inhabitants attachment to the Matheran Railway and its symbolic role is a form of traditional protection.

Effectiveness of protection measures

The protection measures are satisfactory, subject to a revision of the buffer zone.

ICOMOS considers that the legal protection in place is appropriate, subject to an extension of the buffer zone in the Eco-Sensitive Zone and in Matheran.

Conservation

Inventories, recording, research

As for the other Indian railways already inscribed on the List, all technical documentation and inventories, along with legal and real estate documents, are owned by the Ministry of Railways. For the Matheran Railway, they are held and managed by the Central Railway Mumbai CST.

Some documents and records are deposited with the National Rail Museum in New Delhi.

Present state of conservation

The State Party considers that the Matheran Railway is in a good state of conservation, notably because of its continued use and ongoing maintenance. The stations have been more or less maintained in their original architectural state. However, Neral, Water Pipe, and Matheran stations have been extended because of the increase in the traffic compared with that when the line began to operate and the switch to diesel traction (see Authenticity).

ICOMOS considers that the documentation provided regarding the conservation and the work carried out is insufficient.

Active conservation measures and maintenance

The track is regularly maintained on an ongoing basis; this work is performed by a large body of skilled personnel. The schedule for the line's general maintenance is carried forward from one year to the next, but it depends largely on the climatic conditions and events – mudslides, landslides, etc. The line's

conservation is assured by this regular ongoing maintenance.

The line's stations and buildings are maintained by the specialist staff of the Regional Sub-Division of Railway Buildings. They are under the supervision of railway operational personnel. When changes or occasional damage to the buildings take place, these are recorded in a maintenance book and repair actions are taken by the Assistant Divisional Engineer in charge of these matters. The buildings are monitored annually by the Building Sub-Division. A more complete supervisory group has been announced with managers in charge of the various services (buildings, health and electricity).

Conservation of the buildings includes regular work on the timber, paintwork, roof maintenance, restroom and plumbing repairs, and maintenance of the gardens and trees.

In the populated areas, and Neral in particular, walls have been built to protect the line's rolling stock and the buffer zone. Others are planned.

Effectiveness of conservation measures

The maintenance and operation provisions for the line are a guarantee for the long-term conservation of the railway infrastructure.

The architectural protection of the stations and the buildings is under the control of an Assistant Divisional Engineer located in Kalyan. Three experienced technicians are in charge of the brickwork, timber, and plumbing work.

ICOMOS considers that the line's technical conservation measures are good, but that the conservation of the stations and the buildings must be supervised by personnel trained in the conservation of historic architectural heritage.

Management

Management structures and processes, including traditional management processes

The overall management framework of the property is provided by the Ministry of Railways. The three lines already inscribed and the Matheran line are managed in a similar way and conform to the same decisions and rules, that is, in hierarchical order:

- Central Railway Mumbai (CST).
- Divisional Rail Manager, Mumbai.
- Branch Offices of the various departments in charge of the management, operation, and maintenance of divisional railways in Mumbai.
- Local organisation of the line, especially at the Neral and Matheran terminal stations.

- Sales and marketing services and organizations in charge of tourism.

The operation and maintenance of the line (see Conservation) are provided on an ongoing and regular basis. This operational arrangement is similar to that instituted when the line was first opened.

Policy framework: management plans and arrangements, including visitor management and presentation

The various aspects of the line's management are grouped together in the Management Plan. In particular, they refer to:

- Management of the property's real estate, the demarcation of its boundaries with survey pegs; depending on the local situation, this also includes a fence and wall programme;
- Exercise of rights regarding illegal encroachments on the property;
- Management of buildings with historical significance;
- Line management, maintenance, and inspection;
- Management of bridges and tunnels;
- Management of the rolling stock and operations.

The service provided to passengers covers station amenities and transport, along with the publication of timetables and tourist information. In addition to the regular service, special tourist trains are run by a tourism company, Indian Railway Tourism & C.C. This service also includes a number of good hotels in Matheran for holidaying.

The rail traffic is estimated at a little over 68,000 passengers a year (2007–2008), but five to six times this number make their way to Matheran by road.

Despite its cost, an additional programme to increase the rolling stock is under way: two new diesel locomotives and new coaches in 2008. A project to restore an old steam locomotive is in the planning stages.

A significant tourist promotion campaign in India and internationally is now under way.

Risk preparedness

The monsoon risks are well known (see Natural disasters). The railway services have way gangs specially trained in track maintenance. In the event of more serious events, the Divisional Railways Department can provide material, personnel and financial assistance for restoring the track, as in 2005–2006. Some sections that are considered to be more delicate have specific local way gangs.

Involvement of the local communities

The local community is not involved in the management structure and plan.

ICOMOS considers it necessary to involve the local community, notably for a potential extension of the buffer zone and the promotion of the property to visitors.

Resources, including staffing levels, expertise and training

The line is maintained by a department with 62 technicians and workers (2008).

The operation and management of the rolling stock is performed by 73 technicians and workers.

The signalling and telecommunications department has six technicians and workers.

The non-technical and sales and marketing departments have 55 employees.

Funding is guaranteed by the Ministry of Railways. The current revenue is less than the expenditure. Partnerships are being sought.

Effectiveness of current management

The technical management of the property is effective. It would, however, be improved by promoting greater involvement of the local community.

ICOMOS considers that the management system for the property is adequate, but that it would be improved by being extended to involve the local community.

6. MONITORING

The Matheran Railway provides five return trips every day, except during the four months of the monsoon, and operates on a daily basis. In this context, the key indicators are the level of service compliance and the monitoring of the state of conservation.

With respect to the first indicator:

- The line was closed from 15 June 2005 to 28 February 2007 because of the exceptionally heavy monsoons in 2005 and 2006, resulting in the need for major civil engineering work on the line.
- The number of derailments due to the monsoon, still quite significant at the end of the 1990s, has been reduced.

The second indicator has not been documented as such.

ICOMOS considers that the technical monitoring of the property is satisfactory, but that there is no real monitoring of the property's heritage value at present.

7. CONCLUSIONS

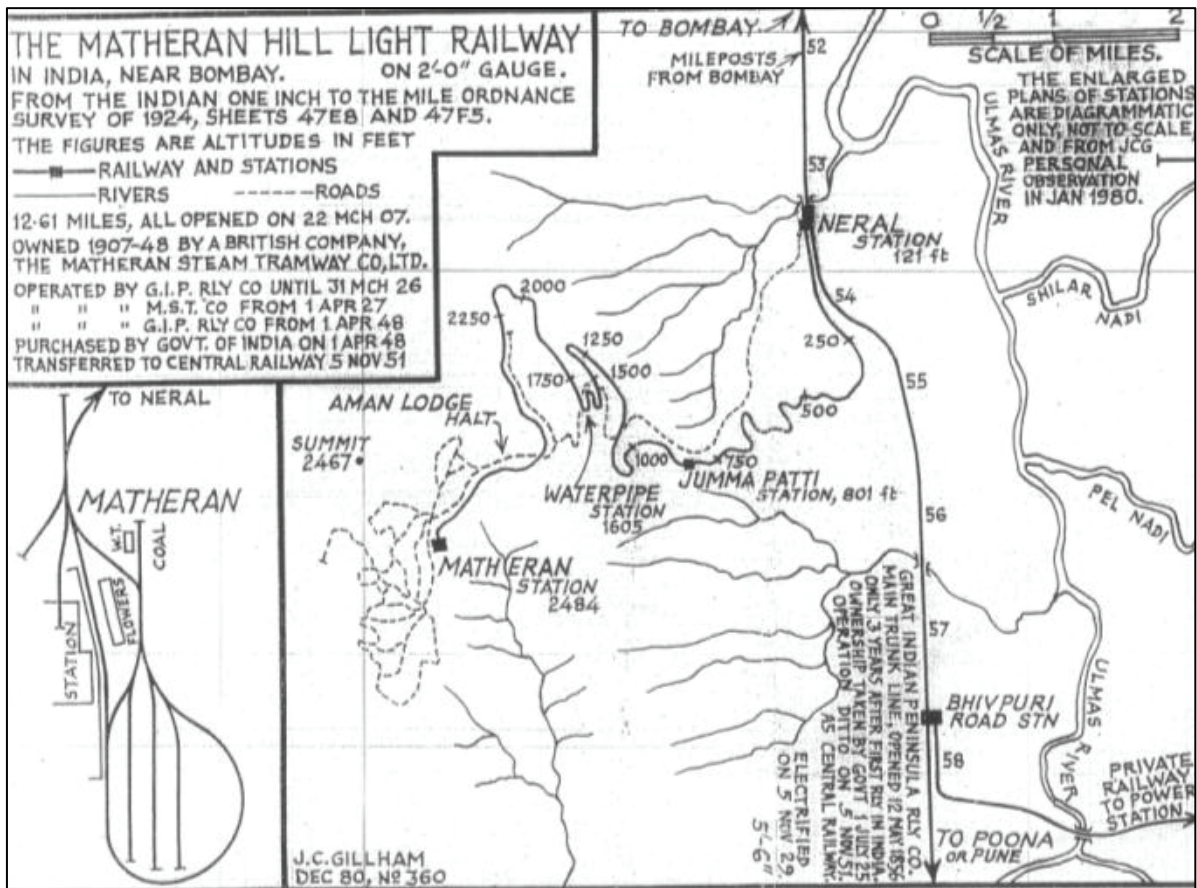
ICOMOS considers that the narrow-gauge Matheran Railway is an original and remarkable mid-elevation mountain line in the context of the State Party and its history. It incorporates railway concepts already developed for the Darjeeling Himalayan Railway and the Kalka Shimla Railway, in a markedly less exceptional geographical and technical context. There is no real technical innovation, while mountain lines were becoming increasingly frequent around the world at the time of its construction. Its construction by a private company and its role in the development of tourism in Matheran, close to the metropolis of Mumbai, are of considerable local and regional interest.

ICOMOS considers that the Matheran Railway does not enhance the universal value already expressed by the series of three mountain railways of India inscribed on the World Heritage List.

Recommendations with respect to inscription

ICOMOS recommends that the extension of the Mountain Railways of India to include the Matheran Light Railway, India, ***should not be approved***.

ICOMOS considers that the series of Mountain Railways of India is closed.



Map showing the route of the railway line



View of the line with contemporary wagons



«One Kiss» Tunnel



Aman Lodge Station



The Officers' Rest House in Matheran

D Europe – North America

New Nominations

Augustowski Canal (Belarus / Poland) No 1304

Official name as proposed by the States Parties:

Augustowski Canal: a work of man and nature

Location:

Republic of Belarus: Grodno Province, Grodno District, Sapockinie Settlement Executive Committee

Republic of Poland: Podlaskie Province, Augustów District, Municipalities of Bargłów Kościelny, Sztabin, Augustów, Town of Augustów, Nowinka and Płaska

Brief description:

The backbone of the nominated property consists of the historical linear structure of a navigable canal. The area of the property encompasses the Augustów Canal, together with buildings and hydraulic engineering structures and the area integral to them necessary to the operation of the Canal, described as the conservation protection zone. The property is located in the territory of the Republic of Poland and the Republic of Belarus.

Category of property:

In terms of categories of cultural properties set out in Article I of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, the property is also nominated as a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 30 January 2004 (Republic of Belarus) and 20 March 2006 (Republic of Poland)

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 16 January 2008

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Landscapes, TICCIH, and several independent experts on the development of artificial hydraulic lime and cement.

Literature consulted (selection):

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Technical Evaluation Mission: 7-11 September 2009

Additional information requested and received from the States Parties: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property covers 82,670ha, of which 74,250ha are located in the Polish territory and 8,420ha in Belarus. The buffer zone covers 243,000ha – 203,000ha in Poland and 40,000ha in Belarus.

The Augustowski canal is a trans-border, 103.6km long navigable waterway connecting the Vistula and the Neman rivers through their tributaries and artificial channels. It consists of natural lakes and rivers connected by manmade excavations and hydrotechnical facilities and equipped with a towpath running along the canal. A network of roads and bridges completes the waterway system.

The canal crosses an almost flat landscape which features several lakes and rivers, cultivated forested areas, parks, fields, rural settlements, small towns, and villages.

Hydrotechnical components and related structures

Locks, weirs, and channels constitute the most important components of the canal. Lock walls are constructed in stone and faced with bricks, while their most exposed parts are faced with sandstone or granite. The bottoms of the locks are piled using timber or concrete, depending on the subsoil. Gates and lock gates are made of oak and reinforced with iron bars.

The banks of the canal sections crossing less compact ground have been reinforced with a layer of heavy soil mixed with clay and withies bound with grass. Trees have been planted along the towpaths to provide the canal with wind protection, thus improving navigation conditions. Bridges were initially made out of timber, which required the replacement of components every 15 years because of heavy thermal variation and humidity. In the 19th and 20th centuries the wooden bridges were replaced with masonry, iron, and concrete structures.

Houses for the lock-keepers and other service buildings were built along the canal in different styles, varying according to the period of construction so as to be representative of the tastes and the political objectives of the contemporary ruling class.

Rural configurations

The spatial configurations of rural settlements are harmoniously arranged in a linear layout along one or both sides of the waterway.

On the Polish side of the canal there is a small number of dispersed settlements, most of which retain their linear character. The cultivated fields may be shaped in strips varying in width or in blocks. This pattern is the result of a long process of socio-economic transformation that took place in the 19th century (agrarian reforms, liberation of peasants) in the entire country beyond this region.

The 16th century villages on the Belarusian side have retained their single street linear form. Only Jaglowo and Mogilnice are different: the former was destroyed during World War II and reconstructed in its original form, whilst the second has maintained its original shape and fabric. Here the main road runs behind the farms, along the barns, a relic of earlier linear villages, and the farms are very elongated in shape, with the houses separated from the barns by orchards and gardens.

The creation of cooperatives and state-owned farms in Belarus in the 1940s resulted in a substantial modification in the field layout. In the first half of the 19th century the linear villages with the three-field farming system were replaced by settlements developed in a linear form along the roads: single-tier villages or linear-colony villages with strip field patterns.

An average farm consisted of a house, a barn, one stable, a shed, a cellar, and a well. The farm units were

rectangular: the houses faced the road while the farm buildings were at the sides with the barn closing the rectangle. Orchards and garden plots were located at the front or at the rear of the farm unit.

Rural architecture

Softwood was the basic construction material of traditional rural architecture: houses, farm buildings, and fences were all made of wood. In a few cases rammed clay technology was used, along with field stones for foundations.

Older types of house have gabled roofs and a corner-notched log structure or a frame structure with corner columns, with timber plank walls. Later buildings are timber-framed. The dominant type of roofing consisted of wooden shingles or straw thatching, later replaced with asbestos, metal sheets, or tar boards.

The external walls of the houses were decorated with lime-wash. After World War I they were further ornamented with timber boarding on gables and windows or with oil paints.

Service buildings specific to this area are the steam baths, small timber or brick buildings equipped with a stone hearth, and the tobacco drying rooms, which are large timber buildings with the centre part of the roof raised above the lateral surface to allow air circulation.

Other features: tourism-related buildings, religious heritage, cemeteries, and military relics

There is significant evidence of the tourism that has developed in the area since the early 20th century. In Poland, the Nad Jeziorami Hotel (Nowicki, 1939) and the Oficerski Yacht Klub in Augustów, both of which are protected monuments, bear witness to this, whilst in Belarus, the 18th century Wołkowicz villa with its English-style park attests to the early leisure use of the area.

The existing road network was integrated into the communication system of the canal and so, several roads still follow routes established since the 16th century.

Water circulation was controlled along the canal, and this allowed the growth of technological installations based on water power: water mills (Białobrzegi and Augustów) and small electric power plants (Dębowo, Augustów, and Rygol) are situated in the nominated property. In Belarus a starch production plant and a brick kiln still survive as testimony to earlier technology.

There are several monuments and objects scattered in the landscape which attest the religious differences between Poland and Belarus.

Specific features of the nominated area are the cemeteries, among which at least twelve are military,

bearing witness to the role played by the area in the last two world conflicts.

Other important remains related to the 20th century world wars are a network of bunkers, timber-earth shelters, and defensive earthworks dating back to World War II, when the canal area was part of the Molotov defence line, built by the Soviets in 1939–1941.

History and development

The idea of creating a waterway to connect the Vistula and Neman rivers arose in the late 18th century, at the end of Poland's independence. In 1821, Prussia introduced heavy customs duties on Polish and Lithuanian goods transiting its territory, thereby severing the access of Polish trade to the Baltic Sea.

In 1822 the construction of a waterway bypassing the Prussian territory was proposed. The canal was to connect the Vistula with the Neman, and further on, along the Dubysa and the Venta rivers, to open the way to the Baltic Sea in Ventspils.

The project for the canal was prepared in a very short time: geodesic and levelling measurements were carried out in six months in 1823, detailed maps with hydrographical profiles of the area were prepared, and the preliminary design was developed at the beginning of the following year.

At the end of May 1824 Tsar Alexander I decided that the plan should be implemented and managed by the Polish party. At that moment three alternative proposals were examined and the final plans were not approved until mid-February 1825.

The first flood control works of the Biebrza and the Netta rivers had already started at the end of July 1824 and in 1825 the building of locks began. Up to 1831 the construction works were carried out by the military, but after the failure of the 1830-31 Polish uprising against Russian rule and the subsequent disbandment of the Polish army the work was taken over by civil institutions.

By 1830 all the works covered by the original design had been completed, but in the meantime the scheme had been amended, with the adaptation of Netta River to navigation by creating the New (or Lateral) Canal

Most of the canal was already in use by 1829, but the timetable for works extended and in 1833, auxiliary canals were built to drain the surplus waters of the Netta and Hańcza rivers, the Tartak lock was added, and the parameters of another lock were changed. All building construction works had been completed by 1839. The construction of the canal involved many of the best Polish engineers of the time. Originally designed to play an important economic role, the canal lost its significance after changes in the political situation and the creation of a railway network. It became a local route

used for floating timber and revitalised the north-eastern part of the Polish Congress Kingdom and areas in Lithuania and Belarus.

After World War II the canal was divided by the national border between Poland and the USSR. Traffic within the USSR ceased almost completely and the Belarus part of the canal remained unused. In 1984 the Belarusian part of the canal was granted the status of monument and in 2003 it was entered in the national Register of Historical and Cultural Heritage, along with all the related infrastructures and buildings, as well as the surrounding protected natural and cultural landscapes.

The Polish section of the canal was used for purposes linked with the economy and tourism. In the 1950s and 1960s attempts were made to modernize the canal, but its local significance and the presence of the international border with the USSR discouraged Poland from modernization plans.

In 1968 the best preserved 50km of the canal, together with all buildings and facilities and a protected zone of 300m, were included in the register of monuments as a single complex, followed by the listing of the entire length of the Polish section of the canal in 1979. For the last 20 years of the 20th century the canal was used only for tourism.

In recent years extensive conservation and restoration works have been carried out on the canal structures and facilities, especially on the Belarusian side, where decades of neglect had caused damage to the fabric of the canal. These works have respected as much as possible the extant physical substance of the canal (see *Conservation* section for details).

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The nomination dossier provides a comparison with several canals selected within the European and North American region on the base of the following declared criteria: the same period of construction, transportation techniques, and construction technologies, the integration of the waterway with the landscape, and the preservation of the historical substance.

The nomination dossier states that the Augustowski Canal was the first to be built entirely with modern hydraulic lime, which ensured exceptional durability in water engineering structures. All the other canals – du Midi (France, 1667–71), Middlesex (USA, 1794–1803), Erie (USA, 1817–25), Bridgewater (UK, 1759–1822), Caledonian (UK, 1803–11) – built before the nominated property used soft binding agents, whilst contemporary or later canals – du Centre (Belgium, 1888–1917), Lachine (Canada, 1825–40), Rideau (Canada, 1825–32) – profited from the experience of the

Augustowski Canal and used hydraulic lime in the structures.

Secondly, the dossier states that the Augustowski Canal, owing to its small scale, presents a uniformity that other much larger canals, which were built in different phases, do not possess. In addition, the nominated property has not undergone modernisation but has preserved its structures and surrounding landscape in almost unchanged conditions. For these reasons it may be considered to be distinct from the Canal du Midi, the Canal du Centre, or the Rideau Canal, which are inscribed on the World Heritage List, or the Lachine Canal, which have been repeatedly modified and which traverses a substantially altered landscape.

The Augustowski Canal is considered to belong to a group of smaller-scale navigable canals, built according to the classical French model as described in Belidor's treatise *Architecture Hydraulique* (1750) with a small cross-section and manually operated locks and without grand hydrotechnical structures or complex system of water levelling. Within this group the Augustowski Canal is claimed to be unique because it has retained in full its historical structure and still runs across a landscape that has not yet been transformed.

With respect to the early application of modern hydraulic lime, ICOMOS considers that, although earlier experiences in the use of comparable materials are documented from the end of the 18th century in Europe and slightly later in North America (Eddystone Lighthouse, 1760–90; Pont Louis Vicat, 1812–24; Erie Canal, 1822; Canals Saint Martin and Saint Maur, 1820s; Thames Channel, 1828), the Augustowski Canal can be included among the engineering undertakings that made an early, large-scale use of artificial hydraulic lime as a binding agent and transferred and adapted the achievements of hydraulic engineering developed in France to local conditions.

ICOMOS considers that the unaltered conditions of the canal towpath and its landscape are not distinctive features of the Augustowski Canal, since this is a common characteristic of other canals (*i.e.* the Rideau Canal or the system of waterways in Great Britain). ICOMOS stresses that the Canal du Midi was also inscribed on the World Heritage List because it blends harmoniously with its landscape, thus representing an exceptional example of a designed landscape. Nevertheless, although not a feature unique to the Augustowski Canal – *i.e.* only one-third of the Caledonian Canal in Scotland or 87km of the 190km Göta Canal in Sweden (built in the same period as Augustowski Canal) are man-made channels – ICOMOS acknowledges that the nominated property has caused modest changes to the hydrological environment and the landscape pre-dating the canal. This, however, is not sufficient to demonstrate that the Augustowski Canal and the surrounding landscape are integral to each other. For instance, though the Rideau Canal has not been inscribed as a cultural landscape, after its

construction a number of settlements that did not exist before flourished owing to the impulse given by the waterway. By contrast, only a very few settlements developed in the area surrounding the nominated property and there is no particular evidence that the canal triggered development in the area, as revealed in Appendix I of the nomination dossier.

ICOMOS notes that the comparative analysis has not been carried out regarding the Augustowski Canal's nation-building role. Consideration might have been given to at least the Rideau Canal, which was built for military purposes, and the Defence Line of Amsterdam, which was inscribed on the World Heritage List as an extensive integrated defence system of the 19th–20th centuries based on the principle of controlling the waters. Comparison with the Bromberg (Bydgoszcz) Canal, which was built in the 1770s by Prussia when it began to expand through Poland, would also have been very relevant. The canal connected the Brahe with the Netze, thus establishing communication between the Vistula, the Oder, and the Elbe.

In conclusion, ICOMOS notes that the State Party claims that the property has values for its early and extensive use of artificial hydraulic lime, for its integration with the surrounding landscape, and for its role in nation building. However, the comparative analysis made with properties took into account only certain values of the properties selected for comparison and not the whole range of their values, and it did not consider other properties with similar values.

ICOMOS considers that the comparative analysis does not justify consideration of this property for inscription in the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- It is an exceptional example of a historical complex which has combined technological developments with the landscape.
- It is an exceptional example of a pioneering mass use (the first in the world) of the modern hydrotechnical binder in the construction of water-engineering structures.
- The structure of the canal constitutes an exceptional example of major technical achievements in the field of water engineering and of a world-wide transfer of knowledge and technology.
- The canal connected the existing navigable canals in the east and in the west of the continent, establishing in this manner an integrated system of waterways that, stretched

from west to east from the Atlantic to the Black Sea and the Northern Baltic.

- In the conditions of political and economic dependence of the Kingdom of Poland on Russia, the Augustowski Canal realized the idea of the Polish nation's pursuit for freedom and independence.

ICOMOS considers that the Augustowski Canal is an example of a waterway in which the construction of artificial channels has been minimized, taking advantage of the existing hydrological conditions: only 40% of the Augustowski Canal line is a manmade water channel, whilst the other 60% is formed by natural lakes and rivers. However, ICOMOS notes that the nomination dossier does not provide an accurate description of the conception and design process by means of which this result was achieved nor of the features that support this statement. On the other hand, the nomination dossier is very detailed in dealing with the political circumstances that gave rise to the waterway.

ICOMOS also considers that the construction of the Augustowski Canal represents a significant example of early, large-scale use of modern hydraulic lime obtained through an industrial process. The rediscovery of the process for producing artificial hydraulic lime is widely acknowledged to be a significant stage in the development of all modern Portland cements, and the 'Augustów lime' may be included among these attempts, based on the most recent French research. The building of the canal required the establishment of three cement factories along the line of the canal where the material was produced, but it appears that none of these has survived.

ICOMOS considers that, because of the political fragmentations of this region, the west-east communication system in Europe by inland navigation was achieved only much later, in the early 20th century when the Danube became navigable.

ICOMOS further considers that no sufficient evidence has been provided that the construction of the canal has influenced the surrounding landscape and settlements so as to create a 'canal cultural landscape.' The major transformations to the rural landscape mentioned in the description section of the dossier relate to processes that are independent from the creation of the canal.

ICOMOS finally considers that the canal was built when Poland was under the control of Russia, a fact that weakens the claim of the role of the property in nation building and the pursuit of freedom.

ICOMOS considers that the justification proposed by the State Party cannot be considered as appropriate.

Integrity and Authenticity

Integrity

The nomination dossier claims that the Augustowski Canal is a set of inseparable elements of the water-way, which runs through regulated river beds, a series of interconnected lakes, excavations and lateral canals, locks, hydrotechnical facilities, and auxiliary buildings. They constitute an integral historical complex, created organically within the surrounding landscape. The use of the canal at the local level, without modernization or technological changes, is deemed to have allowed the structure to be preserved in its original historical form with respect to its functionality and to its technological/structural aspects and to retain its integration with the cultural and natural environment. Finally, the Augustowski Canal in its preserved form is representative for the entire 19th century structure.

ICOMOS considers that all the artificial canal channels, the navigable lakes, and the navigable river lines that form the line of navigation known as the Augustowski Canal are within the boundaries of the nominated property. Nevertheless the boundaries of the nominated property include only a limited part of the surrounding landscape, which is not sufficient to illustrate its significance and functional inter-relations.

ICOMOS finally considers that the canal is not under any particular urgent threat, following the extensive restoration work undertaken in the recent years. The same cannot be said of the surrounding landscape and of several settlements, which have been subject to tourism pressure. This has resulted in housing development that is inappropriate and non-traditional.

Authenticity

The nomination dossier asserts that the canal has been maintained in its authentic form along the entire course of the waterway, including the original navigation route, lock construction, and water-way cross-sections. Of the eighteen locks along the canal thirteen have maintained their original 19th century structure, whilst eight are fully authentic structures, based on the implementation of modern hydraulic lime. All eighteen locks are equipped with manually operated mechanisms for filling and emptying the locks and opening the lock-gates. Additionally, the Augustowski Canal is a waterway that is still in operation and its maintained course can be used for the original purposes and function as a water connection into the entire system of inland waterways in Europe.

ICOMOS consider that the Augustowski canal has retained its course and several of its hydraulic structures. However, as a result of the deterioration caused by the lack of maintenance over the last decades on the Belarusian side, the canal has recently undergone an extensive programme of restoration/reconstruction which has considerably

modified its building materials and substantially limited appreciation and understanding of the technological value and of the qualities as binding agent of the Augustów hydraulic lime and mortar.

Finally, ICOMOS considers that the surrounding cultural landscape and related settlements, though largely preserving their historic features, do not provide sufficient credible evidence of the interlinking of the canal with the landscape to justify nomination as a 'canal cultural landscape.'

ICOMOS considers that the conditions of integrity and authenticity would be partially met only when the nomination relates solely to the canal and does not claim to be a cultural landscape.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i) and (iv).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that the Augustowski Canal is a perfect record of engineering activities that laid the foundations for the modern art of construction of hydrotechnical objects. The canal is a form of testimony to the creative epoch of huge economic development. It is the first canal in the world that was built entirely using modern hydraulic lime. This was an innovative and pioneering application on an industrial scale of the new underwater binding agent, which ensured hitherto unprecedented stability and allowed the structures of the canal to survive in their authentic form until the present day. Thanks to their perfect knowledge in the field of natural geography, the creators of the canal succeeding in integrating the technical structure into the natural landscape forms without destroying the environmental integrity.

ICOMOS considers that the Augustowski Canal has been an important work of engineering, which enabled in an early stage of experimentation the development a process for the production of artificial hydraulic lime, on the basis of Vicat's theories. Nevertheless, ICOMOS also considers that experimental production and applications of the artificial hydraulic lime were being carried out in almost the same period in other areas of Europe and North America, and so it is reasonable to state that Augustowski canal was one of the earliest examples of the development of artificial hydraulic lime production and use. Elsewhere in Europe, this experimentation led to the early development of lasting industrial centres for the production of limes and cements (i.e. Lafarge in France) but the nomination dossier does not clarify whether this was also the case for the nominated property.

ICOMOS further considers that, although the canal is an example of the intelligent use of the natural

topographical and hydrological conditions that made it possible to reduce the construction of artificial channels, the nomination dossier does not provide sufficient evidence of the sustainable balance that the canal and the surrounding landscape would have achieved nor of its role in giving life to a new cultural landscape, except that the canal was used as means of transportation for the timber trade, an activity that has disappeared.

ICOMOS considers that this criterion has not been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Augustowski Canal is an exceptional example of a historical complex that combines technological developments and landscape and which illustrates in a universal manner one of the most important stages of the development of human civilization. The first industrial use of hydraulic lime constitutes the beginning of modern concrete technology. The property is an outstanding example of a global approach to constructing alternative, cheap routes of transport. The canal made it possible to link the existing navigable canals of the European continent constructed at different times from west to east, thereby establishing an integrated system of waterways that stretched from the Atlantic to the Black Sea and the Northern Baltic. The Augustowski Canal is an exceptional example of a structure which reflects the universal pursuit of freedom by nations, since it expressed the aspiration of the Congress Kingdom of Poland to achieve economic independence.

ICOMOS considers that, because of political divisions, the creation of a west-east navigation route has been very problematic until recent times and so the Augustowski Canal may be considered to have played a minor role within the network of waterways built in the central region of Europe.

ICOMOS further considers that the Augustowski Canal was built under the control of the Russian Empire (the Tsar's approval was needed to initiate the project), although conceived by Polish engineers, and so the claim that the canal played a role in nation building and the pursuit of freedom is not evident.

Finally, ICOMOS does not consider that the Augustowski Canal represents an outstanding example of a technological ensemble in that it is one of many results of the transfer and adaptation to local conditions of technical achievements in the field of hydraulic engineering and building material development that were so frequent in that period.

ICOMOS considers that this criterion has not been justified.

In conclusion, ICOMOS does not consider that the criteria and Outstanding Universal Value have been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The States Parties consider that there are major pressures from building development, in particular the construction of summer resorts. The building of summer bungalows affects arable land, which is transformed into recreational plots. Traditional villages are also impacted by the construction of new settlements. This development trend may lead to the creation of a denser settlement pattern and to alteration of the character of the area. However, guidelines have been developed in 2007 to define the use of traditional styles for future buildings and settlements and their implementation has been started.

A further hazard to the nominated property is the heavy traffic on the local road network and the project for the *Via Baltica* highway, which is expected to cross the canal in Białobrzegi and the Rospuda valley, which includes natural areas of exceptional value.

ICOMOS recommends that a carefully balanced solution be found to overcome the problem of heavy traffic in the villages without compromising the values of the property, with particular reference to the *Via Baltica* highway.

Tourism pressures

Tourism has been a significant economic activity in the area since the early 20th century thanks to a campaign promoting the qualities of the Augustów lake-district. Dedication of the area to tourism resulted in the construction of several tourism facilities and centres from the 1930s until the 1970s, some of which possess architectural quality. Currently the most important aspect of tourism pressure is related to building development.

Environmental pressures

According to the States Parties, the major environmental pressures are related to increased human presence in the area. The main hazards identified are the absence of sewage treatment plants in the rural areas, the emission of pollutants (burning of coal and oil for heating), absence of solid waste management, and the use of detrimental materials in buildings activity.

ICOMOS recommends that no further building development be allowed until the problems related to sewage and waste management are effectively addressed.

Natural disasters

According to the nomination dossier, natural disasters have had relatively insignificant impact on the historical property and the natural environment. In the past, storms that hit the area resulted in forest damages, but they did not reach catastrophic proportions. The same applies to heavy snowfalls. Pest attacks caused serious damages to the forests in the 1920s. Earthquakes in the area have never exceeded 5.3 Richter scale and have not had any impact on the historical elements of the Augustowski Canal.

Impact of climate change

ICOMOS considers that, in the area, climate change is likely to cause intensification of floods.

ICOMOS considers that the main threats to the property are development pressures, inappropriate building interventions, traffic and pollution. ICOMOS recommends that a balanced solution be found to overcome the problem of heavy traffic in the villages without compromising the values of the property, with particular reference to the *Via Baltica* highway. ICOMOS further recommends that no further building development be allowed before problems related to sewage and waste management have been effectively addressed. ICOMOS also recommends the strong enforcement of guidelines for new buildings.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The nominated property covers the Augustowski Canal with associated buildings and hydrotechnical facilities and its integral area, which is indispensable for the canal to function within both the Polish and the Belarusian territory. The limits of the property coincide with the perimeter of the monument protected according to the law and the procedures in force in Poland and Belarus.

In Poland the boundaries of the nominated property have been established in order to protect the visual integrity of the proposed World Heritage Canal, according to different morphological situations. In open areas the proposed nominated area extends 1,000m from the banks of the canal coinciding with the zone of maximum protection for the cultural landscape of the canal corridor. The State Forests bordering the canal in eastern Poland are protected by legislation from any development and form an effective visual barrier to the canal for 200m on either bank. Away from where they form part of the canal corridor the actual banks of the lakes form the edge of the proposed World Heritage Site.

In Belarus the boundaries of the nominated property follow clearly identifiable roads and field boundaries.

The buffer zone includes the territorial features that manifest their relationships with the nominated property, and the boundaries of the buffer zones have been selected accordingly. Most of the buffer zone is protected primarily for natural values by legal provisions.

ICOMOS considers that the boundaries of the buffer zone have not been described in a clear manner, although the rationale of their delineation may be partially inferred from the cartography.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone can be considered adequate only when considering the nominated property as a historic canal and not a cultural landscape. ICOMOS further considers that the description of the boundaries of the buffer zone is not clear enough to ensure the certain definition of the land included within it.

Ownership

The property structure of the Polish part of the canal is as follows: land plots owned by the State Treasury, private lands owned by associations or religious communities.

The property structure of the Belarusian part of the canal comprises: land plots owned by the State Treasury, private lands, other lands.

In both Poland and Belarus the property of the State Treasury is managed by several organisations. In Belarus, the Augustowski Canal is managed as a waterway by the Integrated Enterprise *Grodnamieliawadgas*.

Protection

Legal Protection

In Poland, the most relevant legal instruments for the protection of the nominated property are the Law for the Protection of Monuments (23.7.2003), the Law for Town and County Planning and Development (27.3.2003), the Act on Nature Conservation (16.4.2004), and the Act on Environmental Protection and Development (31.1.1980).

The first act obliges all public authorities to ensure legal, organisational, and financial conditions for the protection of monuments. The land-use planning act outlines principles for national spatial development, contains provisions on the province and municipal planning levels, and requires feasibility studies to be carried out before developing any plan. The last two acts specify, respectively, the aims, principles, and forms of nature and landscape protection and the principles for the protection and sustainable use of natural environment.

In Belarus the most relevant legal tools is the Law for Environmental Protection (26.11.1992) and the Law on the Protection of Historical and Cultural Heritage (13.11.1992).

The nominated property is completely protected by the legislation in force in both states parties. In Poland, the waterway and its related engineering facilities as well as the surrounding landscape have been registered as a monumental complex since 1968 and were subsequently enlarged in 1979. In the forested areas, the protected zone includes 200m of land surrounding the canal, while in the open areas this protected zone extends to include a 1,000m wide zone. In Belarus, three different provisions, issued in 1984, 1986, and finally in 2003, protect the Canal with the related engineering facilities and the neighbouring zone.

Additionally, in both countries the nominated area and the buffer zone include several areas that have additional protection for their landscape and environmental values. At the planning level, the feasibility studies on the Augustowski Canal and its cultural landscape are the base for the local land-use plans.

Effectiveness of protection measures

In Poland, monuments included in the national register are the responsibility of the Province Conservator of Monuments who issues permits for a number of activities concerning monuments. Locally, these are recognised in the development Plans, which in the nominated property make use of a GIS digital base. The Augustowski Canal and its proposed buffer zone have already been recognized as having special status by local authorities within their planning instruments.

In Belarus, changes in the existing buildings and new construction on the territory included in the nominated area and buffer zone are regulated by the legislation concerning historical and cultural heritage protection, town-planning, and building activity. All kinds of design and building works on these areas must be coordinated with the Ministry of Culture and with the local executive authorities.

ICOMOS considers that the overall legal protection in place is adequate. ICOMOS also considers that the protective measures for the property are adequate but recommends that coordination among the various municipal spatial and development plans be ensured through wider plans at the county or provincial level. ICOMOS further recommends that the planning instruments include consideration of the values of the nominated property and be used as tools to harmonize development and heritage safeguard.

Conservation

Inventories, recording, research

Archival and bibliographical material on the nominated property is conserved in archives and libraries in Poland, Belarus, and Russia.

ICOMOS considers that documentation and inventories of other relevant cultural resources and of their state of conservation should be developed by the States Parties, as a comprehensive database and for future monitoring.

Present state of conservation

The nomination dossier states that the canal has retained numerous original elements, despite two hundred years of continued use, and that several conservation projects have been completed, such as reinforcement of the banks and the restoration of staff houses.

ICOMOS notes that the canal site and its components have undergone extensive works to restore the facilities and hydraulic structures along the entire line of navigation. However, ICOMOS considers that this intervention has resulted in some over-restoration of a number of these structures. The most substantial restoration interventions were completed in Belarus only a few years ago.

Active conservation measures

The nomination dossier contains a detailed list of conservation measures regarding virtually every relevant aspect of the canal and its surroundings with information on the problem to be solved and the bodies responsible for implementation. These measures include the conservation and maintenance of buildings, hydrotechnical structures, and forests, the eradication of timber pests, protection against fire, and the implementation of a basic infrastructure.

ICOMOS considers that, following the extensive restoration works that have been carried over recent years, the canal structures must now be maintained and the programme outlined in the nomination dossier, if effectively carried out, should ensure the necessary maintenance. ICOMOS considers, however, that issues related to landscape conservation and building activity limitation need an additional effort on the States Parties' part.

Maintenance

The hydrotechnical structures and facilities are subject to continuous maintenance.

Effectiveness of conservation measures

ICOMOS considers that conservation works carried out in recent years to the canal structures have

demonstrably improved the condition of the Canal, although the most recent interventions, owing to the high level of decay of the structures, have included substantial reconstruction works and have caused some over-restoration. ICOMOS further considers that the spreadsheet in the nomination dossier illustrating threats and corresponding corrective measures demonstrates that problems to be addressed in the area are identified and represents a good base for the development of future conservation actions.

ICOMOS considers that the conservation measures adopted for the canal are adequate. ICOMOS recommends that conservation efforts should also be undertaken for other relevant cultural resources within the nominated property. ICOMOS finally recommends that systematic research and inventorization be carried out for all the relevant material features that sustain the value of the nominated property.

Management

Management structures and processes, including traditional management processes

In both States Parties a committee for the management of the Canal has been established through inter-institutional agreement. In Poland the committee is named Management Committee (2 September 2009); while in Belarus this body is named Project Management Commission (July 2009). Both include all relevant authorities. The national agreements establishing the committees provide for close cooperation between the Parties. The committees are in continuous close contact and are based on previous experiences of cooperation that led to joint projects for the conservation of canal components (years 2004–2007). The possible establishment of an overarching international committee is under discussion.

At the local level, a cross-border operational management agreement between the Council of Plaska (Poland) and the Council of Grodno (Belarus) has been established.

Authorities involved in the management of the canal are present at the local level and are responsible for the protection of cultural and natural heritage, spatial planning, water and waterway management, forest management, and agriculture.

Policy framework: management plans and arrangements, including visitor management and presentation

Management of the nominated property includes a variety of activities that are already being implemented by the competent bodies. In Poland the Management Committee has been given the tasks of developing general guiding principles for the management of the Polish side of the Canal and of coordinating the activities

related to use, protection, conservation, promotion, and tourism within the nominated property.

In Belarus, the Project Management Commission has been established with the task of developing the Management Plan for the Augustowski Canal for the Belarusian side of the property. The action plan includes the coordination at all levels of protection measures, the development of studies on the nominated property to improve the knowledge and to identify its potentials, and the preparation of a strategy for managing tourism and visitors.

Meanwhile operational programmes have been developed within the agreement between the Plaska and Grodno municipalities to repair and build roads, create tourist infrastructures, and develop guides and booklets to promote both sides of the canal.

The nomination dossier describes in detail the identified threats to the property and corresponding corrective measures, the body responsible for the implementation of these measures as well as the necessary budget for each action to be undertaken.

ICOMOS notes that the States Parties have not clearly prioritized the hazards that threaten the property and clarified which are the areas of most relevant and probable threats to which the property is liable.

Risk preparedness

The major hazard to the nominated property is fire and the nomination dossier has identified counteractive measures and bodies responsible for their implementation.

ICOMOS considers that flooding should also be included in the hazards to the property and recommends that a risk assessment and preparedness plan be elaborated.

Involvement of local communities

No information on the involvement of the local communities is contained in the nomination dossier.

Resources, including staffing levels, expertise, and training

Each administrative body with responsibilities over the Canal has its own technical staff, which includes professionals with different competences (architects, conservation specialists, hydrotechnical engineers, forest scientists, foresters, etc.).

With regard to financial resources, the nomination dossier provides details on the past budget allocations, used mainly for the restoration of the canal structures.

ICOMOS considers that the economic success and the status of the waterway have ensured that the allocated

funds have been sufficient to retain the values of the nominated property.

However, ICOMOS considers that, in the future, considerable investments are needed to improve basic infrastructures and services, i.e., sewage and waste management systems.

Effectiveness of current management

The established management system appears well considered and based on a solid administrative structure that is already in place. To ensure the full effectiveness of the management, ICOMOS considers that priorities among the actions to be undertaken should be identified and an adequate budget and time-frame set up.

ICOMOS considers that the management framework that has been established is a good base for the coordination of existing and future plans and programmes. To ensure the full effectiveness of the management, ICOMOS considers that priorities among the actions to be undertaken should be identified and an adequate budget and time-frame set up. ICOMOS considers that a risk assessment and preparedness plan for flood should be developed.

6. MONITORING

As a working waterway with a sustainable income and staffing, environmental pollution, water quality and the conditions of the hydrotechnical facilities as well as of forests and traffic are continually monitored by several competent institutions.

ICOMOS considers that several areas that are relevant so as to ensure the retention of the values supporting the nomination have not been included in the monitoring exercise, such as building activity, state of conservation of the hydraulic structures and canal facilities, and changes to the rural landscape.

ICOMOS considers that the monitoring rationale and activities are adequate when considering the Canal as an operating waterway, but other activities more directly related to the cultural values of the nominated property need to be included in the monitoring exercise.

7. CONCLUSIONS

Although 'Augustowski Canal, a work of man and nature' has been nominated as a cultural landscape, ICOMOS considers that the nomination dossier does not convincingly demonstrate that the construction of the canal has actually modified the natural and human environment to such an extent as to create a 'canal cultural landscape.'

As a historic canal, ICOMOS considers that the nominated property does not satisfy the proposed justification for inscription and that Outstanding Universal Value has not been demonstrated.

Recommendations with respect to inscription

ICOMOS recommends that Augustowski Canal: a work of man and nature, Belarus, Poland, ***should not be inscribed*** on the World Heritage List.



Map showing the boundaries of the nominated property



Section of the Augustowski Canal



Hydraulic facilities in Augustów



Borki lock



Niemnowo triple lock

Mining Sites of Wallonia (Belgium)

No 1344

Official name as proposed by the State Party:

The Major Mining Sites of Wallonia

Location:

Wallonia, Hainaut and Liège Provinces, Boussu, La Louvière, Charleroi, and Blegny Communes
Belgium

Brief description:

The Grand-Hornu, Bois-du-Luc, Bois du Cazier, and Blegny-Mine sites are the best preserved coal-mining sites in Belgium, dating from the early 19th century to the second half of the 20th century. They are testimony to surface and underground mining, the industrial architecture associated with the mines, worker housing, mining town planning, and the social and human values of their history, especially the Bois du Cazier disaster (1956).

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of four *groups of buildings*.

1. IDENTIFICATION

Included in the Tentative List: 8 April 2008

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 29 January 2009

Background: This is a new nomination.

Consultations: ICOMOS consulted the TICCIH and several independent experts.

Literature consulted (selection):

Bergeron, L., *Les villages ouvriers comme éléments du patrimoine de l'industrie*, TICCIH, 2001.

Gaier, Cl., *Huit siècles de houillerie liégeoise : histoire des hommes et du charbon*, Liège, 1988.

Hughes, S., *The International Collieries Study*, a joint publication of ICOMOS and TICCIH, 2003.

Jaquet, P., *et al.*, (éd.), *Le patrimoine industriel de Wallonie*, Liège, 1994.

Liebin, J., Les charbonnages, in Genicot, L.-F., and Hendrickx, J.-P. (eds), *Wallonie-Bruxelles: berceau de l'industrie sur le continent européen*, Louvain-la-Neuve, 1990, pp. 43-56.

Robert, Y., *Le complexe industriel du Grand-Hornu*, Scala, 2002.

Technical Evaluation Mission: 5-8 October 2009

Additional information requested and received from the State Party: On 29 September 2009 the State Party was requested to provide additional information regarding the justification for the property's serial inscription, comparative analysis, and management.

The State Party responded in a letter dated 16 November 2009 which included a three-page summary and various annexes. The analysis of this documentation is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The four sites forming the property are located in the same coal region, forming a strip 170km long and 3-15km wide which crosses the country from east to west. It is separated into two distinct geological basins: Hainaut in the west and Liège in the east. The former extends on the French side into the Nord-Pas-de-Calais Basin, while the latter extends on the German side towards Aachen.

The nominated property consists of three sites in Hainaut and one in the Liège region. Each includes between twelve and twenty-six registered elements of an architectural, industrial, or technical nature.

The Grand Hornu colliery and workers' city has twelve main elements within a highly integrated industrial, urban, and architectural ensemble. It was designed in the 1810s by the founder of the colliery, Henri de Gorge, and the architect Bruno Renard. The central industrial section was developed between 1816 and 1832 and the surrounding workers' housing was completed over the first half of the 19th century. The ensemble is an example of the utopian projects of the early industrial era in Europe.

The *industrial buildings* that form the core of the ensemble are arranged along an approximately east-west main axis, where they served the historic mining operations that closed in 1955.

On the western side, a main building forms a monumental entrance with colonnade and pediment; it is flanked by stores and the lamp room. After passing

through the two corner buildings with lanterns, this first ensemble extends towards the interior along two orthogonal side wings (stables to the north, stores to the south). The interior buildings are accessed from here. They are arranged around a main central courtyard in the form of an extended ring and they included the machinery construction workshops, now partly in ruins, the carpentry shop, and administration offices. This internal courtyard, flanked by a series of arcades, has in its centre a statue of the founder of the colliery, Henri de Gorge. To the east, along the main axis of the industrial buildings, is the crypt, where the founder and various managers of the colliery now lie.

The industrial ensemble is surrounded by the *workers' city*. This is concentrated on an ensemble of streets, trapezoidal in shape. Most of the housing was built at the same time as or shortly after the industrial buildings. The estate includes a total of 450 individual dwellings. They are in rows, originally built in lots by street, using standard plans with identical facades and each with a garden. The southern estate, which is directly linked to the industrial ensemble, is in the form of an ideal city with the manager's residence forming the southern annex.

The site with its buildings, closed over fifty years ago, today illustrates the architectural and social dimensions of the Walloon coal-mining heritage. It was designed as an 'ideal city' at the very beginning of the Industrial Revolution on the European Continent (1810-20).

A modern building was added in 1991 to the industrial buildings to house the Museum of Contemporary Arts of the French Community of Belgium (see Authenticity).

The Bois-du-Luc colliery and workers' city includes 22 registered built elements or ensembles, the majority of which were erected between 1838 and 1909. The colliery is, however, one of the oldest in Europe, dating back to the end of the 17th century.

The nominated property groups together five geographic zones with distinct industrial, technical, and social uses, all with a direct link to the operation of the mine.

The *south central part* is arranged around the operation of the Saint Emmanuel pit, its two shafts and its service buildings in Neo-Classical style (overmen's room, lamp room, shower-baths, etc.). The pit still retains many technical elements, in particular headgear, lift cages, and an 1842 winding gear. This industrial section also includes the first manager's residence and the more recent electricity sub-station ensemble. When the mine was closed in 1973 many neighbouring industrial buildings were demolished - the coke plant, screening and washing equipment, locomotive shed, etc. The western section is arranged in a U-shape around a vast square courtyard with its opening facing the industrial site. The buildings included an ensemble of workshops and colliery offices. Today they house an eco-museum and a mine museum. A large metal lift gate mounted on

two towers and the workers' estate marked the boundary of the industrial site and the colliery workshops.

The *southern and south-western part* of the property directly extends the colliery operations with the enormous Saint Emmanuel slagheap.

The workers' estate form the *north central part* of the nominated property. The Carrés (or Bosquetville) estate was built in 1838, based on a cross-shaped symmetrical street plan and a ring road. It defines four built ensembles, two of which are rectangular in shape and the other two trapezoidal. The two-storey facades are regular and homogeneous along all the streets. The street layout evokes the underground organization of the mine galleries. At the central intersection there are some larger buildings. One of these opens on the café and a community hall for the mineworkers. The open interior areas were given over to the workers' gardens. The Carrés Estate was refurbished in 1975, and again in 1994, to improve its level of hygiene and comfort.

To the north-west, the workers' estate is extended by the long Rue du Bois-du-Luc and its 131 houses built in the 19th century. To the north it includes a school.

The *north-eastern part* of the property mainly comprises the Le Bois pit and its houses, the Saint Patrice slagheap and, forming a link with the Carrés Estate, Quinconces Park (1866). The latter has a monument to Sainte Barbe (Saint Barbara), the patron saint of miners, and a bandstand.

The *northern part* of the property, along the access road to the main mining site, includes a series of functional and social extensions to the colliery. The oldest building in this section is the hospice, built in 1861. It was extended with a hospital and the Church of Sainte Barbe at the beginning of the 20th century. It also has the second manager's and the engineer's residences, the laboratory, a hotel, employees' houses, and a school.

The last pit closed in 1973. Bois-du-Luc illustrates the industrial, urban, and social dimension of the classic era of the Walloon coal-mining heritage. In particular, it contains many technical remains that are specific to the history of coal mining.

Le Bois du Cazier colliery illustrates a mining operation originally dating from the 19th century, the current components of which date from the late 19th century and above all from the first half of the 20th century. The nominated property contains 26 registered components. The history of this colliery is marked by the last major mining disaster in European history, which occurred in 1956 and cost 262 lives.

Located in the north of the nominated property, the *industrial section* is largely rectangular in shape, arranged around the Saint Charles and Foraky pits. The entrance, located at the north-east end, is through a gate, a grid, and the gatehouse with an inscription to the collective memory of the place where the families waited

for news after the 1956 disaster. The monument to the victims stands immediately beyond this entrance.

To the east lie a series of functional buildings, forming an alignment that extends from the monumental brick pediment, made up of stores, offices, the changing room, shower-baths, lamp room, and the large workshop.

At the centre of the industrial site, starting from the entrance, are to be found the carpentry shop and stables, a hut of the type reserved for immigrants, and the locomotive shed. Beyond that, the area is marked by two monumental pediments which indicate the start of the machine rooms. These are similar to those of the stores and mark the industrial space; they were built in the 1930s. The central hall housed the electricity generator, the blowing engine, and the compressors; it is extended by the main staircase. The west hall housed the machines and the technical peripherals for the Saint Charles pit, the winding gear. The pit has two metal headgears which frame the coal delivery building.

To the south of the industrial zone, at the rear in relation to the entrance, stand the surviving remains of the Foraky pithead machinery, damaged by the 1956 disaster. Today they form an ensemble dedicated to the memory of this event (memorial space, bell, monument to the Italian workers, and remains of the pit).

These industrial buildings have been converted into a museum and cultural ensemble dedicated to industry in general and glass in particular, along with topics such as workplace safety, migrations, etc.

This industrial ensemble is extended to the north-east of the property and in its centre by two slagheaps, No 1 and No 2, which form, together with the industrial section, an overall landscape that is characteristic of mining operations.

The central part of the property includes the Bois du Cazier cemetery.

The southern section of the property corresponds with the large Bois du Cazier slagheap (No 3). It rises some 70m above the original ground level. Today a path provides access to its peak where a landscape viewing point is installed.

The site was finally closed in 1967. It mainly illustrates the technical and social dimensions of mine working at the end of the 19th century and in the 20th century. It is especially notable as a place of remembrance for mining disasters, and more generally the hard and dangerous nature of the miners' work. It includes numerous technical and industrial elements which enable a comprehensive understanding of the extractive mining system as it may have been in the first half of the 20th century to be obtained.

The Blegny-Mine colliery has been the site of coal-mining since the 18th century. However, it has been rebuilt several times, notably following its destruction

during World War II. The nominated property includes thirteen registered elements, some of which are old, in the centre of an industrial mining structure that is typical of the mid-20th century. Coal mining was still active here in the early 1980s and the surface equipment has been conserved. The site was rapidly converted into a mining museum, including some shallow underground galleries that are open to visitors.

The south-west section of the property is arranged around the Marie pit, its metal headgear, and a series of surrounding buildings. These are the oldest elements at Blegny-Mine, dating back to the end of the 19th century. Converted into a mining museum, the site has in particular retained and restored: the blowing engines (first installation around 1927, extended with a second unit in 1970), the lamp room, four generations of compressors (early 20th century, 1923, 1950s, and 1970s), and the winding gear (1924). This section also includes the wash tanks and the coal slurry tanks (settling tanks).

The southern section is arranged around pit No 1 and its annexes. It is surmounted by a 45m concrete tower housing the winding gear, the two lift cages, and the control booth. This system, which provides access to the galleries, still operates as part of the museum and tourism programme.

The buildings surrounding pit No 1 form a continuous ensemble, including the shaft station, forge, and machine shops. It also includes the machine building for the screening and washing plant (1946). In its day it was an innovative system and it is the only one of its kind to have been conserved in its entirety.

This section also includes separate technical premises, including the laundry for the miners' work clothes, a small manual screen, carpentry shop, and timber store.

The western section forms the mine entrance from the access road. It includes the mine offices and administrative services (1924).

The centre and north of the property comprises a double slagheap and its slag handling system. The peaks rise to 37m and 55 m above the original ground level respectively.

Blegny-Mine illustrates the industrial and mining development of the collieries in Western Europe throughout the 20th century. It is one of the last pitheads to have operated in this region of the world. It retains more or less intact its monumental technical components and a significant part of its galleries, as the site was rapidly converted into a mining museum. This ensemble forms a significant and explanatory overview of surface and underground mining techniques.

History and development

Coal was probably used to operate the Roman

hypocausts in Liège as far back as Antiquity. However, the first archival reports of its use date from the 12th and 13th centuries, making the Walloon seams among the earliest exploited in Europe.

Alongside traditional domestic uses, coal was used for industrial purposes very early in glass, brick, and lime kilns, dyeworks, breweries, etc. The first trials in steelmaking, in the Liège region, date back to the early 17th century. Its use and the organization of its extraction adopted an advanced capitalist form. In the mid-18th century coke was known in Liège and Charleroi, but its application to steelmaking was still some way off. The first steam-operated mine drainage machines also appeared at this time.

In the early 19th century French mining legislation and the adoption of British methods led to the rapid development of underground mining to produce coke for steelmaking, and later for the pioneering mechanical engineering industry in continental Europe. The Grand Hornu site is an extremely good illustration of this founding period of modern mining. Belgium's independence in 1830 helped to spur on this growth and made the Walloon mining basin an exemplary centre of the Industrial Revolution outside England.

The second half of the 19th century largely saw these mines continue to grow, gradually benefiting from the progress made in the second era of industrialization, such as the use of compressed air for cutting, electrification of coal extraction, mechanized pumping and sorting, chemistry of coal by-products, etc.

At the turn of the 20th century the Walloon mines began to suffer from severe competition. Production continued all year round throughout the major events and economic changes, such as World War I and the Depression of the 1930s. It was not really affected until World War II, after which the Walloon production plant was still largely in serviceable condition, though outdated and having to cope with seams that were increasingly difficult to exploit. Bois-du-Luc is testimony to this long period of maturity of the Walloon mining system.

At the end of World War II, the Belgian Government decided to undertake a massive relaunch of coal production to underpin the country's reconstruction and industrial development. However, the low productivity of the Walloon mines led to the extensive recourse to immigrant labour, especially Italian. The Bois du Cazier mine is indicative of this period both for immigration and for the difficult mining conditions, leading to the 1956 disaster.

In 1951 the European Coal and Steel Community (ECSC) was formed as a prelude to the construction of the new Europe. This was an opportunity to restructure the Walloon mines, but 1958 saw the beginning of a movement towards the progressive closure of the less profitable pits. Almost 20,000 mining jobs were lost in a very few years. The *Société anonyme des*

charbonnages du Borinage was created in 1959 to bring under the one umbrella all the basin's mining assets, undertake their closure when they became non-viable, and relaunch production using more modern methods at the best of the mines.

A final push was made in the early 1970s to introduce modern techniques at the few remaining active mines that were still considered to be productive. Blegny-Mine in particular is indicative of this period. Confronted with competition from coal imported from Eastern Europe, Africa, etc and delivered at low cost to North Sea ports, the last remaining Belgian pitheads closed in 1983-84. This trend went hand-in-hand with the general collapse of heavy industry in Wallonia in favour of 'port steelworks' that began in 1970. The final mining crisis expresses one of the most significant aspects of this deindustrialization process, in terms of landscape, town planning, and social history.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party's comparative analysis is divided into two parts.

In the first, it focuses on the *distinctive features* specific to each of the four sites nominated as serial components.

The apparent uniformity of the mining heritage in its main functional components should not ignore the geological conditions and the economic, historical, and social context specific to each component. In this respect, each site makes its own contribution to the series; they are described in length (see Description and History).

The State Party expanded this section, which partly meets the concept of a comparative study, fully in its response dated 16 November 2009, notably with the comparison to other Belgian coal mining sites.

There were several hundred collieries in the Walloon region; today, they have all been closed for over two decades. Much of the infrastructure has been completely swept away and reused for completely different purposes, and thus profoundly modified. Very few mining complexes have retained their quality as evidence of this past. Recognition of this industrial heritage has resulted in the listing of various components (slagheaps and technical and industrial components of the collieries) as sites or monuments, but the vast majority are incomplete.

The four nominated sites are already included in this inventory; they are the only ones that are still complete and meet the conditions of authenticity. At the same time they best illustrate Wallonia's mining past.

One colliery, Cheratte, was finally not included despite its architectural qualities, because of its state of complete ruin.

In the section entitled *Complementarities*, the State Party presents an international comparative study. It briefly quotes the major mining sites already recognized in the World Heritage List. These are the British sites of the Industrial Revolution - Ironbridge Gorge (1986, criteria (i), (ii), (iv),(vi)), Blaenavon Industrial Landscape (2000, criteria (iii), (iv)), and Cornwall and West Devon Mining Landscape (2006, criteria (ii), (iii), (iv)). The Belgian sites represent a broader historical period, from the rise of the industrialization phenomenon to the mid-20th century. They also highlight technology transfers in the mining sector.

The most comparable site, in terms of the industrial theme and period, is probably the Zollverein Coal Mine Industrial Complex in Essen, Germany (inscribed in 2001, criteria (ii), (iii)), which ceased operations in 1986.

In the field of utopian cities connected with industry, the Royal Saltworks of Arc-et-Senans, France, is a central reference (1982, criteria (i), (ii), (iv)), and to this should be added New Lanark in the United Kingdom (2001, criteria (ii), (iv), (vi)).

Finally, the Walloon coal mining sites are located in close proximity to and enjoy significant geological, mining, and social affinities with the Nord-Pas-de-Calais mining basin in France (on the French Tentative List). However, because of the different history and the nature of the heritage conserved, the Belgian analytical and descriptive approach differs from the French approach as an evolving cultural landscape. The immediate environment of the Walloon sites precludes such an overall landscape approach.

ICOMOS considers that, in its first section, the comparative analysis suitably justifies the selection of the components proposed for the serial inscription. Furthermore, on the basis of the State Party's response on 16 November 2009, ICOMOS considers that the series is now complete.

However, on the basis of the TICCIH-ICOMOS thematic studies (see Bibliography), ICOMOS considers that other European or foreign coal-mining sites might have been taken into account in the comparative analysis, even though they are not included in the World Heritage List: in the Saarland, the Ruhr, the United Kingdom, Poland, the United States, China, Japan, South Africa, etc. This gap in the comparative study concerns Blegny-Mine in particular. The same applies to industrial social utopias and 19th century industrial urban planning, with Crespi d'Adda, (Italy, 1995), the Guise Phalanstère (France), or even the Catalan industrial colonies (Spain) and the watchmaking towns of La Chaux-de-Fonds and Le Locle (Switzerland, 2009), etc.

ICOMOS considers that the State Party's comparative analysis has been carried out at the national level for similar properties and at the international level only for properties already inscribed on the World Heritage List. However, this gap is largely filled by the ICOMOS-TICCIH thematic studies. The ensemble makes it possible to identify the specific values and comparative significance of the nominated property.

ICOMOS considers that the comparative analysis, together with the ICOMOS-TICCIH thematic studies, justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of outstanding universal value as a cultural property for the following reasons:

- The abundant presence of coal in the Walloon subsoil permitted the development of its extraction in ancient times for domestic and pre-industrial applications.
- The British example of the Industrial Revolution spread very early to the Walloon mining basin, resulting in the rise of heavy industry in the early 19th century. This was fostered by the region's traditional use of hard coal, the proximity of the British example, and the possibility of rapidly developing the transport of heavy materials by canal or rail.
- The four sites selected are testimony to the history of the Industrial Revolution in Europe, from its arrival on the Continent to the early 19th century, and then during the second era of industrialization, through to its decline in the second half of the 20th century. This history has many facets - technical, architectural, social, landscape, and urban.
- The property is testimony to the built utopias of the 18th century and their implementation in the 19th century within the context of the Walloon mines, for the industrial buildings and workers' housing.
- In the 20th century, through the large-scale recruitment of immigrant labour, the collieries were privileged places for intercultural exchange in the context of mining and industrial work.

The four sites of the serial nomination are complementary and exemplify Belgian mining history. The first two illustrate the birth and development of this type of industry in the 19th century, within an overarching architectural and social vision of the paternalistic type. The other two are testimony to the technical developments and utilitarian architectonic options of the early and mid-20th century. The ensemble therefore provides considerable analytical and typological consistency in coalmines during the various phases of contemporary industrial history.

ICOMOS considers that this justification is appropriate.

Integrity and Authenticity

Integrity

The integrity of the mining, industrial, and social testimony, in light of the various dimensions of the declaration of value proposed by the State Party, is not borne specifically or totally by any of the sites alone. This lack of individual completeness of the sites is a justification for the serial approach.

The historical dimension of the beginnings of the Industrial Revolution and its initial growth (1800-70) is above all present at Grand Hornu and Bois-du-Luc. These two sites are remarkable testimony to the ambitions and utopias of 19th century industrial architecture and town planning in Europe. The technical and industrial testimony for this period is not as strong, but it is present at Bois-du-Luc.

Industrial organization at the height of European coalmining (from the end of the 19th to the first half of the 20th centuries) is clearly to be seen at the Bois du Cazier site. It also reflects the essential social values of the mining and industrial world at this period: immigration and the dangerous nature of the work, as evidenced by the 1956 disaster.

The technical dynamics of coal extraction and processing, as they were in the final phase of operations in the second half of the 20th century in Europe, are mainly present at Blegny-Mine. All the machinery and the access to the galleries at this site provide a complete perspective of this industrial and technical phase of human history. It forms an integral operating ensemble.

The industrial mining landscape dimension of the sites is present in many places, notably the imposing slagheaps in Bois-du-Luc, Bois du Cazier, and Blegny-Mine. The landscape value is, however, of varying quality depending on the site, and is sharply limited by the surrounding environment, with which at times the coalmine has no direct rapport. The nomination dossier does not rate this element of the property's value highly, and so it is only a secondary dimension of its integrity.

ICOMOS considers that the elements of the series have been selected for the quality, value, and extent of the testimony they provide, each within its own frame of reference. Each expresses an original and complementary dimension of the value of the ensemble of the serial nominated property and each has the necessary components with sufficient integrity for a clear expression of this overall value.

Authenticity

Grand Hornu. The industrial buildings are currently in a fairly good state of conservation, but in a form that was restored and reconstructed in the 1970s from an abandoned site in ruins. Some buildings however have retained this condition, notably the remains of the

workshops, which appear roofless but in their initial masonry architectural state. There are no technical or industrial remains. The architectural authenticity of the industrial ensemble is therefore weak, while expressing the atmosphere of an ideal industrial city of the early 19th century.

The Museum of Contemporary Arts of the French Community of Belgium, which provides a new use for the industrial site, has installed a new building that blends closely with the existing heritage. The overriding architectural decision was to stress its differentiation while at the same time ensuring that the volumes and materials were compatible with its historical environment. It can be considered favourably since it does not adversely impact the authenticity of the place or its expression.

The state of the workers' houses poses a real problem of authenticity. The houses were sold to private owners, starting in the 1950s, and legitimate work to modernize and maintain the facades has been carried out without there being any concerted conservation policy for the urban heritage. The State Party considers that these transformations are reversible. Extensive conservation-restoration work for the attributes of the authenticity is to be considered for this part of the property.

Bois-du-Luc: This is a very complete ensemble (see Description) in terms of its industrial and urban structures, and the architectural components meet the conditions of authenticity. The later abandonment of mining than at Grand Hornu (1973) occurred in a cultural and social context that was more aware of heritage conservation. The actions by the State were programmed and organized in consultation with the private and public owners. The exterior restorations were carried out with greater care and respect for authenticity. The adaptation of the houses to a contemporary urban use may be considered successful, having been carried out under the aegis of a single owner with a social role. The eco-museum, which occupies a large part of the industrial site, and the mine museum contribute to the expression of the site's authenticity.

Bois du Cazier. The structure of the site and its industrial and mining buildings form an ensemble that bears witness to the heyday of mining in Wallonia from the end of the 19th century to World War II. It also testifies, perhaps even more strongly, to the social conditions and the dangers of mining operations. The memorial to the 1956 disaster and the industrial museum contribute to the expression of the authenticity of these testimonies. In terms of construction, only the three pediments and the two metal headgears provide visual elements of an authentic nature. The other aspects of the buildings on the site have been extensively modified, notably with a view to making this a memorial after the disaster and the closure of the site. The architectural and organizational contributions to the site carried out within this context are of an interpretive and functional nature, underpinning the collective memory; from a morphological and

architectural point of view they cannot be said to be authentic.

The environment of the industrial site, comprising the slagheaps and the cemetery, contributes to a sense of the property's landscape authenticity.

In short, the testimony of the workers' memory is absolutely authentic, and it is underlined by the landscape environment of the industrial site, but the site's architectural and structural components are much less so.

Blegny-Mine: The industrial site is an authentic expression of a mining facility of the final period of coal mining in Wallonia. Its physical dimensions and the comprehensive nature of its technical and industrial evidence emphasize this authenticity and allow an interpretation of the quality of the mine's technical and social conditions post-World War II. Still in operating condition, the technical and industrial process for extracting and preparing coal meets the conditions of authenticity.

ICOMOS considers that the listing as historical monuments or as heritage sites announced by the State Party is important for the conservation of the authenticity of several components of the nominated property and for guaranteeing the integrity of the sites (see Protection). It is important to complete and proclaim them without further delay.

ICOMOS considers that the authenticity of the components of the nominated serial property varies depending on the component considered. Strong points so far as authenticity is concerned are to be found alongside notable gaps, and some of the latter, such as the Grand Hornu workers' estate, require urgent attention.

The whole property meets the conditions of integrity in a satisfactory way; despite certain gaps, the property also meets the conditions of authenticity at a sufficient level.

Criteria under which the property is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that from a technological point of view the Walloon coalmines are among the earliest to have been exploited in Europe. They played an exemplary role in mining, notably during the modern era. They represent a site where the innovations of the English Industrial Revolution were disseminated on the continent of

Europe very early, as early as the 18th century. This role was extended and reinforced in the 19th century when the Walloon mining region in its turn became an exporter of mining technology and machines worldwide. As a global coal extraction system, the Belgian colliery model was widely disseminated and taught.

The Walloon mines are one of the oldest and most important places of cultural intermixing through the participation of workers from other regions (Flemish in the 19th century), and then through immigration from various European regions (Italians, Czechs, Hungarians, Poles, Yugoslavs, Russian prisoners, etc.). The 1956 accident at Bois du Cazier symbolizes this mixing of cultures in the melting-pot of the mine: the victims were primarily Italian and Belgian, but ten other nationalities were also represented.

The Grand Hornu and Bois-du-Luc sites reflect the influence of architectural and urban trends linked to the utopian view of the industrial and worker city that arose in the Age of Enlightenment.

ICOMOS considers that this criterion has been demonstrated. The political efforts to revive the economy through more focused coal mining in the post-World War II era, followed by the incipient construction of the new Europe through the ECSC (European Coal and Steel Community) might also be quoted.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the four sites of the Walloon coal-mining heritage form a microcosm of the Industrial Revolution from the technological and social points of view.

At the technological level, the property is testimony of the three successive technical systems associated with the Industrial Revolution: its initial development, through to around 1860, based on coal, steam, and iron; then the changes wrought by the second era of industrialization, electricity and chemistry in particular; and finally, from the 1960s, the final efforts at mechanization in front of the inevitable deindustrialisation of Western Europe (Blegny-Mine in particular).

On a social level, the Belgian coalmines illustrate, in the opinion even of Karl Marx, all the constituent elements of industrial capitalism: the switch from family capitalism to the proprietary limited company, the creation of a working class entirely identified with its production tools and shared values, and the development of idealistic and utilitarian paternalistic management. The Grand Hornu and Bois-du-Luc city-factories provide two complete examples from the 19th century.

ICOMOS considers that the ensemble of the four sites that form the property provide a prominent and complete example of the industrial mining world in continental Europe at the various stages of the Industrial Revolution. It provides significant testimony of its industrial and technological components, its urban and architectural choices, and its social values. It also provides a significant overview of mining landscapes of this period.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the serial approach is justified by the selection of relevant and complementary sites.

ICOMOS considers that the nominated property meets criteria (ii) and (iv) and the conditions of integrity and authenticity, and that Outstanding Universal Value has been demonstrated.

Description of the values of the property

The four sites of the nominated property are complementary and exemplify Belgian and European mining history. The ensemble provides great analytical and typological coherency in presenting coal mining and its social dimensions throughout the various phases of contemporary industrial history.

- First, as a mining project in terms of the organization and construction of the industrial site, in the various periods of the Industrial Revolution taken as a long-term process. More specifically, its beginnings and its first peak (Grand Hornu and Bois-du-Luc), its functional utilitarianism in the second era of industrialization (Bois du Cazier), and its late reconstruction and final productive intensification in the phase of decline (Blegny-Mine).
- The property is testimony to the utopias of the industrial city within the context of coal mining, notably in the form of the ideal city of Grand Hornu organized around an industrial site with strong architectural significance, and the very complete industrial and social ensemble of Bois-du-Luc, illustrating the Christian paternalism of family-owned companies in the 19th century.
- The property is testimony to the technical systems used to extract coal, particularly the old machines at Bois-du-Luc and the technological ensemble at Blegny-Mine. The latter, by virtue of its completeness, both above and below ground, and its state of conservation permit satisfactory interpretation of the coal production process.
- The interculturalism and workers' values coupled with immigration are clearly present in Bois-du-Cazier, because of the 1956 disaster and the presence of the memorial.
- The presence of the mining landscape with the slagheaps allows a comprehensive understanding at three of the sites: Bois-du-Luc, Bois du Cazier, and Blegny-Mine. They complete

and reinforce the attributes of the Outstanding Universal Value listed above.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

In general, there are few risks for the State Party linked with uncontrolled economic or industrial developments. All the sites are listed or in the process of being so, thereby guaranteeing that special attention will be paid to any potentially threatening planned activities. Additionally, industrial activity has ceased and its resumption is improbable given the investment that would be required.

The industrial sites all have a cultural or social function today, and the current infrastructure meets the needs of these changes in use. All have been recently restored. There is little space left for new construction, so attention must mainly be directed to the development in existing sites and the restoration.

ICOMOS considers that there is at times pressure from urban growth (buildings, roads, supermarkets, etc.) in the buffer zones, notably close to urban centres.

Tourism pressures

Through their roles as cultural, memorial, or museum centres, the industrial sites already receive many visitors. This does not pose any problems, since the sites have all been stabilized and restored; the risk of accidents is limited. Furthermore, the surface areas concerned, the volumes of the buildings, and the decisions made when they were converted allow for the reception and circulation of a large number of visitors. At present, none of the sites has reached its maximum capacity and significant increases are not an issue at any of them. However, special attention needs to be paid to the presentation of the workers' estates.

Environmental pressures

There are few, if any, environmental pressures. On the contrary, it could be said that the cessation of operations on the sites has resulted in an improvement in the air quality with a reduction in dust and smoke.

The colonization of the slagheaps by wild or planted shrub vegetation is helping to stabilize these artificial hills, which are in places very high and steep. This provides a natural means of preventing the risk of landslides or collapses.

Impact of climate change

Belgium enjoys a temperate marine climate with relatively high rainfall and no very significant temperature extremes. The seasons are not very marked. The impact on the buildings and industrial

components is predictable and well managed.

The effects of climate change are at present indiscernible. Events such as tornadoes or exceptional storms, possibly linked with climate change, have so far not affected the property.

Natural disasters

Belgium is a country with little exposure to natural disasters, even though risks can never be excluded. In terms of tectonic activity, Belgium is not on any fault line. The earthquakes are of low amplitude and are not noticed by the inhabitants. However, there is a risk of the shoring of the mine galleries being weakened in the event of an earthquake.

With respect to mine risks, the safety precautions demanded by the mine administrative authorities precludes any risk of gas emanations and consequent accidents.

The situation of Blegny-Mine is special, as it is possible to visit one of the old galleries. Specific inspection and maintenance procedures have been imposed on its management.

ICOMOS considers that the threats to the property itself are low. On the other hand, pressure from urban growth exists at some points in the buffer zones.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The components of the property and their buffer zones are:

- *Grand Hornu*: The property has a surface area of 15.8ha; 859 people live within its boundaries. The buffer zone has a surface area of 63.7ha, and 387 people live within it.
- *Bois-du-Luc*: The property has a surface area of 62.2ha; 622 people live within its boundaries. The buffer zone has a surface area of 113.6ha, and 349 people live within it.
- *Bois du Cazier*: The property has a surface area of 26.7ha; there are no residents within its boundaries. The buffer zone has a surface area of 130.8ha, and 1,049 people live within it.
- *Blegny-Mine*: The property has a surface area of 12.8ha; there are no residents within its boundaries. The buffer zone has a surface area of 105.4ha, and 158 people live within it.

ICOMOS considers that the boundaries of the four components of the property are adequate, given the values expressed by each within the series.

ICOMOS considers that the definition of the buffer zones surrounding the components of the property is adequate for Grand Hornu, Bois du Cazier, and Blegny-Mine, being based on identical criteria, but not for Bois-du-Luc, where it should completely enclose the property to the south, south-west (around the Saint Emmanuel slagheap), and at the north and north-western extremity (Vent de Bise).

ICOMOS considers that the boundaries of the nominated property are adequate; the definition of the buffer zones for Grand Hornu, Bois du Cazier, and Blegny-Mine is adequate, but it needs to be revised for Bois-du-Luc, where it is inadequate.

Ownership

In general, the industrial parts of the sites were acquired by the regional or local authorities following the closure of the mines. The history of Grand Hornu has been marked by periods of disuse and abandonment between its early closure (1955) and its being taken over by the authorities some twelve years later.

The management of the industrial sites was then transferred to cultural, tourism, or social associations under long-term leases.

There are two types of ownership in the inhabited zones: semi-public entities in charge of public housing acting as the lease owner of the housing (the Carrés Estate in Bois-du-Luc) and private owner-occupiers (the former workers' houses in Grand Hornu).

The main public and semi-public owners are:

- *Grand Hornu*: Hainaut Province (site), Boussu Commune (landscaped areas).
- *Bois-du-Luc*: Walloon Region (site), Centr'habitat public housing association (estate), Louvière public social assistance centre (hospital), Louvière City (hospice, schools and park), Le Doyenné (church and schools).
- *Bois du Cazier*: Walloon Region General Commissariat for Tourism (site), Charleroi Commune (cemetery).
- *Blegny-Mine*: The property's ownership has been complex since the mine's closure. Following an institutional reform, ownership of the industrial property was transferred from Liège Province to the Walloon Region General Commissariat for Tourism. The underground mine and the galleries are still the nominal property of the former concession holder, SA Charbonnages d'Argenteau, the actual operation of which seems to have been entrusted to Liège Province. Currently, no agreement has been established between the owners and the site manager, the Blegny-Mine Tourist Domain Association.

ICOMOS considers it imperative to clarify the situation regarding the ownership of Blegny-Mine and the property management concession in the hands of the management association with all speed.

Protection

Legal protection

The listing as an *historic monument of the Walloon Region* is recognition of the heritage value of a property, but also a public commitment to take the necessary measures for this property's protection and conservation. This commitment takes several forms:

- In terms of regulations, a listed property can only be restored or modified with the authorization of the Walloon Region. This authorization is in the form of a planning permit issued after consultation with the Heritage Department and the Royal Commission for Monuments, Sites and Excavations.
- Technically, a consultation procedure is organized and the opinion of experienced heritage specialists is required to draw up an application to perform any work within the perimeter of a listed property. Authorized work must comply with specifications and contractual supervision. Competency and financial guarantees are also required from any contractors.
- The Walloon Heritage Department provides a financial contribution of 60-95% of the cost of restoration work for listed properties. The balance is provided by the communes, owners, etc.
- Legal action may be taken in the event of any unauthorized work being performed.

It appears that two other levels of protection also exist. Recognition of protected heritage status tends to be reserved for the sites; it is a less stringent and more flexible administrative restriction than that applied to listed historic monuments. There is also a higher level of classification, 'Exceptional Heritage of the Walloon Region.'

At times, municipal orders and plans can strengthen and extend the regional level of protection.

Only the industrial site, buildings, and interior courtyards in Grand Hornu are listed as historic monuments (1993). The other components are not, especially the director's residence and the entire worker estate. The State Party reports that their listing is currently in progress; it should be finalized in 2010.

In Bois-du-Luc the majority of the industrial and social buildings and the workers' housing are listed as an historic monument (1996). They have been covered by the higher level of Exceptional Heritage of the Walloon Region since 2006. Listing is reported to be in progress for the built components so far not listed - the employees' houses, engineer's and second director's

residences, hotel, workers' houses outside the Bosquetville Estate, and the Saint Patrice et Saint Emmanuel slagheaps.

Since 1990 the Bois du Cazier industrial site has been covered by Walloon Protected Heritage status. Only a few architectural and monumental components are listed as monuments: the entrance, the three monumental pediments, the caretaker's premises, the stables, and the No 1 pit machinery. All the buildings, their surroundings, and the slagheap at the rear have been listed as a site under the same order. A monument listing procedure has been announced for the site's other buildings, along with the cemetery's communal grave and the monument gifted by Italy.

The Blegny-Mine site appears not to be covered by any form of Walloon Region protection. A procedure has been announced for the surface and underground components in the future.

In addition, the proposed buffer zones were being established at the time of writing this evaluation.

Responsibility for the unlisted zones that are not covered by any specific regulations, within the property or the buffer zones, falls to the municipal implementation of the Regional Territorial Development Plan: in Grand Hornu in 1983, in Bois-du-Luc in 1987, in Bois du Cazier in 1979, and in Blegny-Mine in 1987.

ICOMOS considers that the level of protection varies significantly between the sites. It is clearly incomplete at Grand Hornu, currently non-existent at Blegny-Mine, and undergoing strengthening at Bois du Cazier and Bois-du-Luc.

ICOMOS considers that the sector plans, all at least twenty years old, should be updated to ensure proper protection of the buffer zones, which are currently not specifically protected as part of the property's value.

Traditional protection

The traditional protection concerns the involvement of the residents or the neighbouring population regarding the components of the property. It is expressed in the form of a living working-class culture and an ongoing very strong homage to the mine victims in Bois du Cazier, a living memorial to the Walloon and immigrant miners. It is also expressed by the attitude of the inhabitants of the worker estates towards their homes.

Effectiveness of the protection measures

The effectiveness of the protection measures currently varies significantly from one component of the property to another. Only Bois-du-Luc is covered by an adequate set of protection measures. The numerous listings announced need to be completed. The regulatory situation at Blegny-Mine is of particular concern.

ICOMOS considers that the variation between the protection measures in place at the different property components is too great, and that they are inadequate as they stand.

Conservation

Inventories, recording, research

There is a series of sector inventories of historic monuments in the Heritage Department of the Walloon Region. In addition, there are recent studies (2009) on the possibility of listing the various components that make up the property.

There are also numerous historical, territorial, and tourism studies carried out by the public services, associations managing the various sites, tourism development and promotion bodies, and the History of Science and Technology Faculty of Liège University. The last-named in particular was involved in establishing CLADIC (the coal mining industry archive and documentation centre) at Blegny-Mine.

The documentation services and public libraries, both at the site museums and in city and university institutions in Belgium, contain extensive documentation dealing with the various architectural, urban, social, and industrial aspects associated with the property's value. The Bois du Cazier documentation centre, for example, specializes in the industrial archaeology of the Sambre region.

Apart from CLADIC for the history of the mines and occasional training courses, ICOMOS is not aware of any study and/or training programme relative to the conservation of a technical and industrial property of such a complex and specific nature. It would be useful to organize such an activity for the property, as part of a management plan, with a view to its long-term and quality conservation.

Present state of conservation

Apart from the Grand Hornu workers' houses with their extensively modified facades, the state of conservation of the property's components is generally good. It is monitored by the cultural, tourism, and museographic associations in charge of the majority of the industrial sites, through semi-public structures for the other components of the property, the dwellings in particular.

Nonetheless, this generally favourable state of affairs seems to reflect widely varying local dynamics specific to each site and limited involvement by the regional services responsible for heritage conservation, which alone are in a position to ensure a homogeneous approach under a management and conservation plan valid for the entire property and which remains to be defined (see Management).

Active conservation measures

The authority responsible for conservation and restoration is the Heritage Department of the Walloon Region.

In practice, the conservation work for the public and semi-public sites is mainly provided by the owner bodies in consultation with the other local and regional authorities concerned, generally under multi-year plans. They are supported by specialist associations, such as Wallonia-Brussels Industrial Heritage, Museums and Society in Wallonia (industrial, scientific, and technical heritage group), and Walloon Archives.

ICOMOS considers that an overarching conservation plan should be implemented, factoring in the specific nature of the property's component parts, but with the aim of harmonizing and homogenizing the approach to enable a coherent expression of the attributes of the property's value to be formulated.

Maintenance

General maintenance measures are largely handled by the sites' managing associations and institutions.

Effectiveness of the conservation measures

ICOMOS considers that the effectiveness of the conservation measures is too disparate.

At *Grand Hornu*, starting from an initial situation of complete abandonment, the section under public conservation seems well assured today, but not the section relating to the workers' houses.

Conservation at *Bois-du-Luc* seems to be well under control.

Conservation at *Bois du Cazier* is dominated by the memorial and social considerations, relegating the integrity and authenticity of the property's tangible components to second place.

The state of conservation of *Blegny-Mine* is excellent at present, notably the site's above- and below-ground functioning parts. However, the absence of any clear medium-term maintenance policy, a legal situation which is unsatisfactory, even confused, and the absence of any public protection measure give reason for concern for the coming years.

ICOMOS considers that the conservation is currently too diverse between the property's various sites and that it should be completed, coordinated, and planned through the introduction of a conservation plan for the entire property.

Management

Management structures and processes, including traditional management processes

The management of the industrial sites largely takes the form of a delegation of contractual activities of a cultural, social, or museographic nature by public or semi-public owners (see Ownership) to specialist associations or professional public entities. As a general rule, though not in all cases, a lease and a contract govern the relationships between the owner and the manager.

At *Grand Hornu*, the manager is the Walloon French Community and the Museum of Contemporary Arts.

At *Bois-du-Luc*, the sections of the industrial site open to the public are entrusted to the Ecomuseum and the GABOS cultural activity group. They receive financial assistance from various regional and local authorities.

At *Bois du Cazier*, the overarching management is entrusted to the 'Bois du Cazier' association, which benefits from the financial support of the General Commissariat for Tourism, the Charleroi Community, and the Belgian French Community. Its activities are shared by the site's overall management, the memorial, and the glass museum.

The poorly defined legal situation of *Blegny-Mine* means that the site's management, in practice provided by the company *Domaine touristique de Blegny-Mine*, is the result of a tacit bilateral agreement. No official contract binds the various stakeholders in the management of this site, which is, moreover, complex and very specific in terms of its component parts (see Description).

A series of public, semi-public, and individual owners manage the other buildings used for community purposes or for housing, especially at Bois-du-Luc.

For the moment, there is no clearly established overarching management framework for the components of the series. On this point, the nomination dossier (p.62) refers to a management system with objectives in theory tending towards the same goal for the various sites that make up the property. However, in its response of 16 November 2009 the State Party provided information about discussions and the early stages of the implementation of an overarching management authority, currently referred to as a 'taskforce,' which needs to be clarified and given official status. Furthermore, the management bodies of the four sites have decided to join together in a common approach and to establish a working group. This commitment has been drawn up in a joint declaration that has been approved by the Boards of Directors of the various sites.

ICOMOS considers that the management structures are too diverse and insufficiently coordinated at the present time. Ownership issues need to be settled as a matter of urgency, as does the agreement with the management

company at Blegny-Mine. A consultation and coordination body needs to be established between the various sites to operate on a regular basis. The fact that the mining site owners and the public financial backers are almost always the same regional authorities should make it relatively easy to achieve this. Without a clearly defined body, it is not possible to refer to the management of a serial property.

Policy framework: management plans and arrangements, including visitor management and presentation

The only plans referred to in the nomination dossier are the regional planning sector plans (pp. 61-62) and the relevant general provisions for controlling zoning and building permits. Reference has already been made to the fact that they mainly regulate economic development, housing, and leisure areas in the buffer zones. ICOMOS also noted that they date back 20-30 years and that there is no indication of any current or planned update.

The nomination dossier details the arrangements for tourists and visitor numbers at the property's component parts. It also details the financial contributions, consolidation by the public partners, and the sources of cultural and tourism expertise available at each site. In the same way it clearly specifies the promotional and interpretative policies implemented individually at each site.

ICOMOS considers that a coordination body, which is currently lacking, is required for promotion and interpretation policies.

In its 16 November 2009 response, the State Party announced an operational unit on this point. Developed in the form of an Action Plan, it will be implemented by a working group and subject to regular evaluation.

Finally, ICOMOS considers it essential for a management system to be implemented which is coordinated between the various stakeholders and the various sites that comprise the serial property, in accordance with paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*. It should include an agreed and scheduled plan for the conservation of the property, including the research efforts required to ensure the long-term viability of an ensemble of such a scope and such a specific nature. It should confirm the effective implementation of and the resources available to a policy coordination body at each of the sites.

Risk preparedness

Risk management primarily relates to the safety of the old mines and the public's admission. The former is governed by the Belgian Mines Code, the most recent version of which dates from 1998. A manager has been appointed and appropriate inspections are made

regularly.

The only site where there is frequent inspection of its facilities is Blegny-Mine in terms of its industrial safety and the admission of the public, since much of it is still operational. The lift cages and cables undergo daily visual inspection; other regulatory inspections are performed at this site at frequencies ranging from weekly to yearly. They are carried out by qualified personnel from approved agencies. There are specific electricity safety measures for the underground facilities, with a local emergency generator.

The absence of firedamp and dioxygen (O₂) levels are checked continuously. If a first threshold is reached, the ventilation systems are automatically started up. Other alert levels and automatic safety procedures are in place. Blegny-Mine is classified as a 'non-firedamp mine,' *i.e.* one which presents a low and stable potential mine risk.

The pits at the other sites are also under passive supervision, as all have been closed. The risks involved in admitting the public to the old mine buildings are of the same order and subject to the same safety and health rules as all other similar premises open to the public. They have been secured and have automatic fire warning systems. Some premises considered more liable to theft or break-ins are protected by alarms and surveillance systems.

It should, however, be noted that at the time of compiling the nomination dossier, the position of safety manager at Blegny-Mine was vacant (p. 74).

Involvement of the local communities

On the one hand, the municipalities of the four sites are involved in the management and development programmes, as well as in consolidating the property's finances for conservation. On the other hand, the site management associations and local cultural associations imply the involvement of the local population, notably the former miners. The latter attend the Bois du Cazier memorial events in particular and are in charge of much of the current operation of the Blegny-Mine facilities.

Resources, including staffing levels, expertise and training

Numerous staff, specializing in the relevant activities, are in place at the sites that make up the property. In most cases they are employed by the associations and companies in charge of management and the cultural and museographic activities at the sites:

- At *Grand Hornu*, around one hundred people, some of whom work part-time.
- At *Bois-du-Luc*, around fifteen people are employed by the two museographic associations.
- At *Bois du Cazier*, the management association employs a staff of 28 people; ten Charleroi municipal

employees are also seconded on site.

- At *Blegny-Mine*, 76 people are present under various contractual arrangements. The tasks involve running the site for visitors, as well as three maintenance teams.

ICOMOS notes that no information is provided about the staff in charge of the conservation of the properties, apart from brief mention of an assistance mission provided by the Walloon Heritage Institute at Bois-du-Luc, without any indication as to the work is carried out (p. 75).

Effectiveness of the current management

The effectiveness of the tourism and cultural management at each site, considered as an autonomous entity, appears satisfactory. It is in most cases provided by a large number of staff, although no mention is made of their skill levels. These teams are also in charge of general maintenance of the public areas and, at Blegny-Mine, they are also tasked with the technical operation of the mining site.

ICOMOS notes the almost complete absence of any information about the conservation missions for the site and the staff in charge of these missions, as well as the absence of a coordinated conservation plan for the series of sites.

ICOMOS considers that the management system of the property is adequate with regard to cultural and museographic management at each of the sites, as well as for technical operation and general maintenance. However, the management system has no clearly defined coordination entity for cooperation between the various sites that form the serial property; there is no evidence of any conservation planning.

6. MONITORING

The nomination dossier explicitly indicates that there are no specific indicators to measure the property's state of conservation (p. 75). However, 'health status files' were developed for each building to coincide with the compilation of the nomination dossier. In theory, these are to be updated every five years. The files produced are annexed to the documents for each site. They are no more than photographs of the building facades with qualitative statements ranging from 'very good' to 'very poor.' The 'work/urgency' section has not been filled in.

ICOMOS notes that the current tool for monitoring the conservation is the system of 'health status files' for the buildings. This is currently under development and does not form part of an overall conservation and monitoring strategy. The attributes of the property's universal value must be the subject of monitoring, as part of a coherent and homogeneous programme for all the sites that make up the serial property, under the responsibility of a common authority.

ICOMOS considers that monitoring is technically in place at the level of the individual public and private buildings that form the property, but that no overall monitoring has been defined to date in terms either of its indicators or of a common framework and of the exercise of responsibility for the monitoring.

7. CONCLUSIONS

ICOMOS recognizes the Outstanding Universal Value of the Major Mining Sites of Wallonia (Belgium), comprised of the former Grand Hornu, Bois-du-Luc, Bois du Cazier, and Blegny-Mine collieries. It is, however, prevented from achieving its full expression in the light of the current state of protection, conservation, and management of the nominated serial property.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the Major Mining Sites of Wallonia, Belgium, to the World Heritage List be ***deferred*** in order to allow the State Party to:

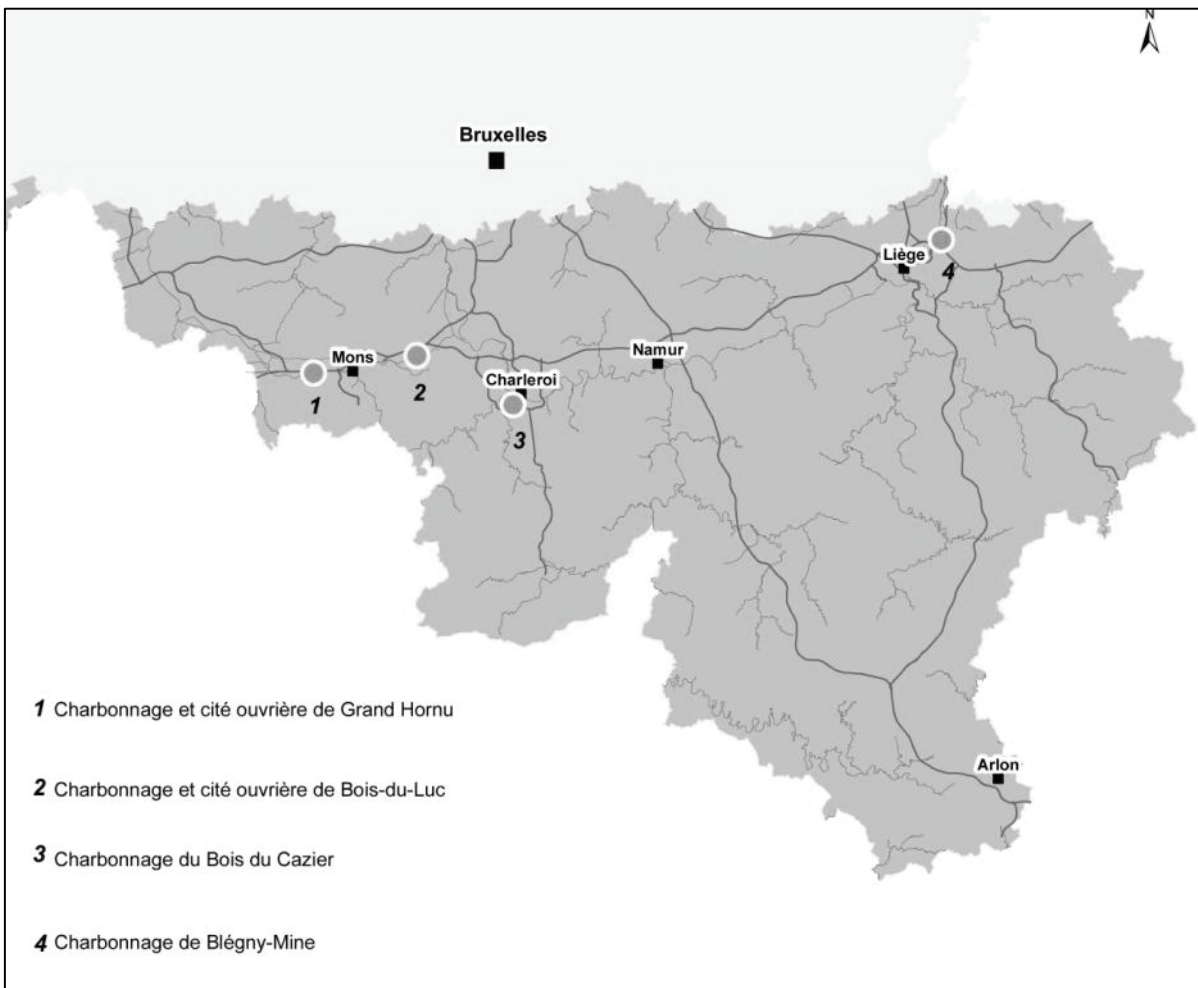
- Clarify the ownership situation of Blegny-Mine and contractualize responsibility for its management with the management company;
- Review the buffer zone at Bois-du-Luc, in accordance with the principles already applied to the buffer zones for the three other sites;
- Make in-depth protection of the property's components effective through systematic inclusion on the list of historic monuments and protected cultural sites in Wallonia. The protection must be coordinated between the various sites and it should achieve the highest level possible;
- Formalize and promulgate a harmonized protection system for the buffer zones in direct relationship with the property's Outstanding Universal Value, and take into account the need to protect the surroundings of the property's components, especially through control of urban development;
- Create a conservation plan for the entire property, defining its methodology and monitoring and specifying its managers and stakeholders. This plan should, in particular, take into account the restoration of the conditions of authenticity of the private houses on the Grand Hornu estate;
- Formalize and make effective, in accordance with paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage*

Convention, a consultation and management coordination structure between the various sites, operating on a regular basis, specifying its structure, the stakeholders, the scope of its authority, and its material organization. It will, in particular, be in charge of a coherent and homogeneous monitoring system yet to be defined.

ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

ICOMOS further recommends that:

- the safety manager at Blegny-Mine be appointed without further delay;
- as part of the Conservation Plan, a study and training programme for the long-term conservation of this technical and industrial property with its specific nature be designed and implemented.



Map showing the location of the nominated properties



Grand Hornu, the monumental entrance



Bois-du-Luc, aerial view



Bois du Cazier, general view



Blegny-Mine, gallery

Episcopal City of Albi (France) No 1337

Official name as proposed by the State Party:

The Episcopal City of Albi

Location:

Midi-Pyrénées Region
Tarn Department
France

Brief description:

The old city of Albi reflects the culmination of a medieval architectural and urban ensemble, on the banks of the lower reaches of the Tarn River. Today the Old Bridge, the Saint-Salvi quarter, and its church are testimony to its initial development (10th-11th centuries). Following the Albigensian Crusade against the Cathar heretics (13th century) it became a powerful episcopal city. The lofty fortified Cathedral (late 13th century) dominates the city, demonstrating the power regained by the Roman Catholic clergy. Built in a unique southern French Gothic style from brick in characteristic red and orange colours, its interior is richly decorated (15th-16th centuries). Alongside the Cathedral is the vast bishop's Palais de la Berbie, overlooking the river, and it is surrounded by residential quarters that date back to the Middle Ages.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *group of buildings*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), Annex 3, this is also a *historic town* in the category of *inhabited historic towns*.

1. BASIC DATA

Included in the Tentative List: 20 September 1996

International assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre:
27 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Historic Towns and Villages and

independent experts.

Literature consulted (selection):

Abraham, B., *et al.*, *Le bâti brique*, Collection techniques d'amélioration d'habitat existant, EDF, Paris, 1993.

Nélidoff, Ph., *et al.*, *Les cités épiscopales du Midi*, Actes du colloque, Presses Universitaires Champollion, Albi, 2006.

Poisson, O., *et al.*, Les peintures murales de la cathédrale Sainte-Cécile d'Albi, in *Monumental. Revue scientifique et technique des monuments historiques*, 2, Éditions du Patrimoine, 2007, pp. 20-29.

Sire, M.-A., *La cathédrale Sainte-Cécile d'Albi*, Monum, Éditions du Patrimoine, 2002.

Sundt, R., "La cathédrale d'Albi et les églises gothiques à chapelles hautes", Actes du 3^e colloque d'histoire de l'art méridional au Moyen Âge, Narbonne, 1995, pp. 121-28.

Technical Evaluation Mission: 14-18 September 2009

Additional information requested and received from the State Party:

ICOMOS sent a letter to the State Party on 6 January 2010 requesting it to:

- Expand the thematic study;
- Confirm the actual operation of the 'Property Committee' and describe its practical working methods;
- Set out in detail the monitoring and intervention means available in respect of any potential development projects outside the buffer zone;
- Describe the provisions for controlling road traffic in the town centre, notably with regard to the potential conveyance of hazardous materials.

The State Party replied on 26 February 2010 by sending eight additional documents. The analysis of this documentation is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Lying on the south-west edge of the Massif Central, the historic town of Albi developed on the left bank of the Tarn River from an ancient *oppidum* that commanded the passage along the valley floor. Located between the river to the north and a ravine to the south-west, it forms a relatively flat and easily defensible promontory. The site was occupied throughout the Middle Ages, forming an important regional seat of power and trade (see History). Several surviving structures bear witness to this medieval city.

The *Old Bridge (Pont-Vieux)* was built over the Tarn in the first half of the 11th century, at the crossroads of the Massif Central route to the Garonne Valley and the east-west road along the Massif Central foothills. It is a remarkably early example of a Romanesque engineering structure. Its arches were rebuilt in the 13th century. It initially had a fortified gate tower and a drawbridge and a toll was collected. It was modified in the 15th century with the addition of houses. Its superstructure was altered and widened in the 19th century. It has seven arches mounted on thick pillars with triangular upstream cutwaters. Today it constitutes a clear avenue measuring 3.80m wide and over 150m long that is open to road traffic.

Saint-Salvi Collegiate Church, which is mentioned as early as the 10th century, is located in the heart of the district of the same name. It forms a counterpoint to the Cathedral within the urban landscape and reinforces the medieval tone of the old town when viewed from the right bank of the Tarn. Until the French Revolution it housed the tomb of Saint Salvi and had long been the town's most venerable spiritual place. Its architecture is complex, reflecting a long continuum of building campaigns from the 10th to the 15th centuries, followed by restorations in the 18th and 19th centuries. Measuring 67m long by 22.50m wide, with a cloister to the south, it is today the largest Romanesque building in the region. The frequent use of horseshoe arches and cruciform pillars resting on circular drums are noteworthy.

From the end of the Albigensian Crusade, a term that covers an historic episode that affected a vast part of today's south-western France, in the first half of 13th century (see History), the town developed as an episcopal centre, the seat of regional religious and political power.

Sainte-Cécile Cathedral is the architectural and monumental centre of the programme of the restoration of Roman Catholicism. It was to become a dominant symbol of the city, visible from a considerable distance. Vast in its proportions, the main body of the building was erected between 1282 and 1390. It is a fortified church with tall vertical walls, the original openings of which are high and narrow. They are framed by semi-circular buttresses, forming regular vertical ribs that rise up the entire height of the facades. Visually, this structure reinforces the building's verticality, giving it a sense of austerity and lofty power. The upper edges of the facades have a horizontal capping reminiscent of fortifications, which masks the roof; its current form is recent, the result of the restoration by César Daly at the end of the 19th century. Two corner buttresses, one level with the choir, and a further two symmetrical side buttresses are crowned with finials, which also date from the César Daly restoration.

On the western side the main entrance is flanked by a high bell-tower rising 78m high. It is buttressed by four circular corner towers, in the same architectural spirit as the main buttresses. Completed later than the main

building, this tower dates from the end of the 15th century.

To the north the Cathedral includes an orthogonal rectangular ensemble which forms the sacristy. To the south, a baldachin shelters the side entrance to the nave. Dating from the 16th century, it is late Gothic in style and highly ornate, and presents a significant contrast in style compared with the rest of the building.

Albi Cathedral is symbolic of a Gothic style that is peculiar to southern France. One of its most outstanding features is that it is built entirely of *briques foraines*, that is, local fired brick easily produced to specific dimensions. Brick contributes to the desire for restraint and simplicity in response to criticism by heretics of the luxury of Roman Catholic churches. Given its external mass, the Cathedral might be mistaken for a fortress of faith, in which both the form and the material evoke the spirit of the religious project.

The internal structure is unique in that it does not have any aisles or transept, resulting in a vast single nave 97m long, soaring up 30m to the keystone, and an internal span of 19.2m; the choir is a direct continuation eastwards of the nave, both architecturally and stylistically. The load-bearing structure of the vaulting is comprised of narrow walls built up against the buttresses, which define the high side-chapels that are characteristic of this building. In the 15th century, however, they were divided by the insertion of an intermediate gallery level with the external openings.

The interior of the Cathedral presents a striking contrast with the building's external appearance by virtue of its rich ornamentation, mainly added in the 16th century by Louis I and Louis II of Amboise - rood-screen, choir rails, statuary, vast programme of painted decoration, etc. It is one of the rare Gothic cathedrals in which the walls and vaulting are almost entirely covered in murals, forming vast iconographic ensembles and covering some 18,500m². It depicts the Last Judgment at the western entrance, in the vaulting of the nave, the side chapels, etc.

The *Palais de la Berbie* draws its name from a modification of the Occitan word *bisbia* (bishopric). It was designed and built as an episcopal fortress by Bishop Durand de Beaucaire, in the final phase of the Crusade. It housed the seat of the Inquisition and its prison for the Albi region.

It was erected in several phases, from the 13th to the 15th centuries, around the main courtyard. The effective protection that it afforded the Bishop discouraged any attack during the Hundred Years' War, which decimated the region. It forms an architectural and religious companion to Sainte-Cécile Cathedral since it, too, is a brick-built fortress. This material, unusual on such a scale, makes the blind, oppressive surfaces in red and orange appear overwhelming.

The Palais underwent extensive alterations from the 15th to the 18th centuries, giving some of the completely or partially reconstructed sections a Renaissance style that clashes strongly with the original fortress.

Today it is a somewhat composite ensemble, with large sections that conform with the original architectural design, especially the Bernard de Castanet facade and the Saint-Michel towers. To the north it has a large terrace with a late 17th century pleasure garden overlooking the Tarn River.

Today the Palais houses the Toulouse-Lautrec Museum and its interior has undergone extensive restoration and redevelopment.

Four old quarters immediately surround the Cathedral and the Palais de la Berbie, to form together the historic city of Albi properly speaking. They are today a homogeneous urban ensemble made up of numerous medieval and 15th and 16th century houses which reflect a new period of wealth and growth for the city. They blend brick, timber framing, stone, and rendering together harmoniously. They include Gothic and Renaissance decorative elements and the colours range from pinkish-beige to deep red through many tones between these two extremes.

Work in the 19th and early 20th centuries led to the significant restructuring of the network of thoroughfares following the demolition of most of the fortifications, clearing the area immediately around the Cathedral, the creation of new streets and squares, and the reconstruction of various single dwellings. On the one hand the old alignments were respected, whilst on the other the new facades, almost always in brick, integrate well into the former urban environment and act as a counterpoint to the episcopal buildings. This private architectural and urban sensibility can be seen as a consequence of the restoration of the Cathedral in the 19th century and early public awareness of the heritage values of the property. This type of restoration and adaptation of the built environment, respecting the fundamental architectural harmony that underlay the value of the old city, continued throughout the second half of the 20th century and into the current urban renewal projects.

To the west, the *Castelviel Quarter* is built on the extreme western end of the historic promontory. It corresponds to the old Celtic *oppidum* and the first *castra*, and then the fortified house of the Counts of Toulouse who created the medieval city. Castelviel was for a long time an agglomeration apart from the episcopal city, outside its ramparts. It is arranged around a main axial thoroughfare running from the Sainte-Cécile bell-tower towards the old castle (now demolished).

To the east, the *Combes Quarter* drops down to the banks of the Tarn and the entrance of the Old Bridge. It corresponds with the city's old commercial and river activities, as well as the arrival of major roads. Several

well conserved bourgeois houses dating from the Romanesque period are evidence of this.

To the south-east, the *Saint-Salvi Quarter* is a small circular agglomeration, built around its collegial church, which has long been autonomous. It developed in the 10th century along small alleys and the Pile and Cloister squares, with the role of a commercial and craft centre. It has a significant heritage of corbelled medieval houses with jettied galleries.

To the south, the *Castelnau Quarter* developed at the same time as the Cathedral, in the 13th and 14th centuries. It is the result of a joint programme by the political and religious powers for developing the city. It was built around wide straight streets from the start. Designed as a residential quarter, it was home to the medieval Albi elite, and several fine patrician dwellings survive.

The nominated property also includes:

- The banks of the Tarn River below the Palais de la Berbie and the Cathedral, which reveal the residual presence of the old ramparts; today, this area is a landscaped park.
- On the right bank of the Tarn, the property includes the river banks and the lower section of the old Madeleine Quarter by the end of the Old Bridge. It is an exceptional point for observing the urban landscape of the ensemble of the Episcopal City.

History and development

The promontory between the Tarn River to the north and the Bondidou Ravine to the south-west was the site of an ancient *oppidum*; traces of occupation of this site date back to the Bronze Age. It corresponds with the present-day Castelviel Quarter (see Description). The site was first occupied by the Celts, and then housed a small Gallo-Roman settlement. It was sufficiently important to be the seat of a bishopric as early as the 5th century. It was fortified during the early medieval period and buildings appeared along the banks of the river, which was navigable. In 418 the Visigoths invaded and took control of the region, followed by the Franks in 507. All the remains from these periods are archaeological.

The Saint-Salvi Quarter (10th century) and the Old Bridge (11th century) are testimony to early medieval economic and urban development. The Madeleine Quarter was built on the right bank around the end of the Old Bridge. By virtue of its geographical location, Albi benefits from contact with both the moist and cool heights of the Ségala and the Rouergue regions and the warmer and drier Garonne Basin lowlands. Albi was deforested very early and became an agricultural region producing a variety of crops, the town becoming a market town for farmers where a variety of products were traded,

depending on the season: grain, wine, cattle, and hemp, and later pastels, etc. The Tarn River is naturally navigable from Albi to the Garonne. The city became a centre for a regional wholesale trade in wool and fabrics manufactured in the surrounding countryside.

The feudal period in Albi was marked by the presence of the Counts of Toulouse, and then by the overlordship of the powerful Trencavel viscounts in the 12th and 13th centuries. Land ownership was also shared among other right-holders in addition to the feudal lords, namely the bishop and canons of Saint-Salvi. The urban development in clearly distinct districts and quarters reflects this sharing of the space (see Description).

Urban development in the 12th and 13th centuries was accompanied by religious dissent at the regional level, with the inhabitants of Albi forming one of its centres, alongside Toulouse, Carcassonne, Foix, etc. The Catholic ecclesiastical establishment appeared to be cut off from the social realities of both the aristocracy and the bourgeoisie of the period. In the 12th century the dissenters became organised; they were known as the Albigenses or Cathars. They were evolving towards a dualist interpretation of the world and the human condition, as well as towards religious practices that were rapidly judged to be heretical by the Roman Catholic authorities. The preachings of Saint Bernard (1145) and the Cistercians, and then of Saint Dominic (1206-07), alternated with declarations of heresy and excommunication, notably the Fourth Lateran Council, which instigated the inquisition of the Albigenses (1179). Two successive crusades were then decreed by the Church against the dissenters: the first (feudal) from 1208 to 1209 and the second (royal) from 1224 to 1229. Despite the name, the Albigensian Crusade, the city of Albi was in material terms relatively unaffected by the military events, which rapidly turned into the conquest of the feudal lords in the north and then a royal annexation. The restoration of the Catholic faith by force was accompanied by the definitive anchoring of Languedoc within the French sphere.

The Roman Catholic church's firm recovery of control over the population also resulted in the elimination of the local elite, who were favourable to Catharism, and in the establishment of a powerful clerical grip on spiritual and material life. Albi is typical of these developments in the 13th century, becoming an episcopal city under the overlordship of the builder-bishops. Bernard de Combret started building the fortified castle and the Palais de la Berbie during the final phase of the Crusade; his successor, Bernard de Castanet, began construction of the imposing Sainte-Cécile Cathedral, a veritable incarnation of a fortress of the Roman Catholic faith (see Description). At the end of the 13th century and the start of the 14th, considerable urban growth paralleled the erection of the episcopal ensemble, including new quarters and religious institutions outside the walls.

In addition to its symbolic populist dimension, the choice of brick in the 13th century as the building material for the

large buildings can be explained by the poor quality of the region's limestone quarries and the natural abundance of clay in the Tarn and Garonne basins. It has given a common language to the Languedoc cities in this region, notably in Montauban, Toulouse, and Albi. Furthermore, the new episcopal city benefited from the input of very diverse artistic and architectural influences from the northern regions of France as well as from Flanders and Catalonia.

The major European crisis in the mid-14th century, with the beginning of the Hundred Years' War, famine, and plague, had a lasting effect on Albi and its region. The city contracted and vegetated, closed within its walls, which were strengthened at the start of these events. Its craftsmen and its trade suffered long-term consequences, and the urban population collapsed.

The Renaissance, beginning in the mid-15th century in the Albi region, brought economic recovery based on the extraction of pastel, a plant-dye in fashion at the time. A new local elite developed, bringing in its wake the construction of fine residences in a Renaissance style and the renovation of the old quarters in the historic centre. The seigneurial bishops Louis I and Louis II of Amboise undertook the completion of the Cathedral, building the external entrance baldaquin and the choir, with its rood-screen and internal stone rails; they then launched an imposing programme of internal murals and statuary, assisted by both regional artists and others from France, Flanders, and Italy (see Description). They reflect a Late Gothic style, characterised by extremely rich decoration, at times overly ornate, coupled with highly expressive characters.

In the 16th and 17th centuries the episcopal Palais de la Berbie underwent a series of important architectural transformations. Its military aspects were softened and partly replaced by buildings of Renaissance inspiration and gardens, to form a more light and open palatial ensemble that was more pleasant to live in. The Palais de la Berbie gradually took on its contemporary appearance. The successive bishops of Albi, raised to the rank of archbishop in the 17th century, were still the lords of the city and its dependencies; they presided over the Estates of Albi, exercising a dual spiritual and temporal power right up to the French Revolution. At the end of the 17th century the historical city, still encircled by ramparts and clustered around its fortress-cathedral, retained the appearance of a medieval citadel. It is sometimes referred to as the Red City because of the colour of its brick.

The city's appearance changed in the 18th century, when demolition of the ramparts began to facilitate the urban development required as a result of population growth. The number of building projects grew in the second part of the century, resulting in the creation of new quarters and a rational extension of the road network, notably to the east of the city. Nonetheless, this period was also marked by a decline in trading activities, which started to shift to the new transport axis formed further south by

the Canal du Midi and the Garonne River.

After the Revolution, the clergy's properties were sold, to become administrative centres or warehouses. The Cathedral was briefly converted into a Temple of Reason. Although the rood-screen and the choir escaped relatively unscathed from damage during the disorder under the Terror, the statuary and the reliquary did not.

In the 19th century urban renewal projects were again taken up and expanded, especially in the second half of the century; the Old Bridge was widened and navigation along the Tarn was improved. The end of the 19th and the beginning of the 20th centuries were marked by an economic revival due to the growth of the glass-making and hat-making industries, along with the extraction of coal near Carmaux.

Major restoration work was undertaken on the Cathedral at the end of the 19th century, in the spirit of Viollet-le-Duc and under the supervision of the architect César Daly. Its immediate surroundings were cleared in order to enhance its appearance, along with a significant reordering of the old city's streets so as to facilitate urban traffic. A number of peripheral quarters appeared, extensive infrastructural work was carried out around the city, and modern buildings, generally built of brick, appeared in the old quarters. Having become unsuitable for episcopal functions that had become reduced to their simple ecclesiastical dimension, the Palais de la Berbie was gradually abandoned. In the early 20th century it became the Toulouse-Lautrec Museum to house the collections left by the painter's family to the city where he was born.

At the end of World War II the historic urban centre was first abandoned, losing many of its inhabitants, who moved to the new buildings in the city's outskirts. However, it escaped a project that would have seen it demolished and replaced with a modernist reconstruction. It was then recognised as an urban ensemble with considerable heritage value and declared a Conservation Area by the Municipality in 1968, which led to the implementation of a conservation plan in 1974. The pace of work was stepped up at the end of the 20th and the start of the 21st centuries, resulting in a high level of conservation for this urban ensemble within the perimeter of the former episcopal city.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party begins with a diverse series of comparisons with large monuments in fired brick from around the world and different historical periods. However, most of these buildings are built in brick with an added surface finish in enamelled brick, not in large *briques foraines* with a perfectly smooth and unadorned

finish as is the case in Albi. These monuments are generally isolated or set in urban ensembles of limited consistency so far as architectural style is concerned, or in a ruinous state within ensembles with limited integrity. The most similar, in monumental terms, to the large monuments in Albi are without doubt the Minaret of Jam, Afghanistan (2002, criteria (ii), (iii), (iv)) and Roskilde Cathedral, Denmark (1995, criteria (ii), (iv)), which are contemporary with Albi but very different.

The comparison then continues with religious monuments of the same period and scale, notably the large Gothic cathedrals. The latter are generally built of stone and their architectonics and floor plans differ markedly from the highly specific characteristics of Albi Cathedral: vertical and narrow rounded buttresses extended by internal load-bearing walls, large single naves without columns, no transept, numerous high side-chapels, high and restricted lighting, specific external symbolism, etc.

The internal decoration can also be compared with that of many cathedrals, the outstanding universal value of which has already been recognised. While adopting numerous structural and decorative elements specific to this period of religious architecture in Europe (bays, Gothic arches, choirs closed with rood-screens, etc.), Albi demonstrates significant particularities that are often rare or unique, such as a very extensive programme of well preserved murals, ceilings that are completely decorated, a well preserved rood-screen and closed choir, numerous decorated side-chapels, etc.

From the urban point of view, Albi is then compared with other cities, especially European ones, where fired brick is extensively used and which are already inscribed on the World Heritage List: Split, Croatia (1979, criteria (ii), (iii), (iv)), Florence, Italy (1982, criteria (i), (ii), (iii), (iv), (vi)), Siena, Italy (1995, criteria (i), (ii), (iv)), and Salamanca, Spain (1988, criteria (i), (ii), (iv)). Unlike Albi, however, these cities are not entirely built of brick; this is the case only for certain imposing monuments or residential quarters. They are not typical and complete ensembles that illustrate the urban and monumental use of this building material as Albi, which reflects the full spectrum of applications for this material. Its interplay of colours and reflections in the green waters of the Tarn offer unusual colour nuances and a rare aesthetic quality.

The comparison continues with similar cities in southern France - Arles (1981, criteria (ii), (iv)) - and those with episcopal ensembles - Avignon and the Papal Palace (1995, criteria (i), (ii), (iv)) and Narbonne and its Cathedral ensemble. Albi differs in that its episcopal ensemble is still complete, it has high structural unity, combining religious monuments with palaces and residential quarters, and demonstrates homogeneity in terms of the construction material used and the originality of its Cathedral.

The study concludes with a comparative overview of the large medieval churches in southern France. It highlights the grandiose character of Sainte-Cécile, which through its dimensions and its volumes reflects the Gothic traditions of northern Europe, but with the particularities already mentioned making it a mixed and unique work, the characteristic elements of which may be found here and there in other buildings across the region of southern France.

ICOMOS considers the approach for the comparison adopted by the State Party to be interesting, and the value of the episcopal group of buildings including Sainte-Cécile Cathedral and the Palais de la Berbie appears to have been established. They are, however, treated superficially or only partially, notably at the regional level (the actual region of the property) and at the European level (Mediterranean Europe and Northern Europe). Finally, the conclusions regarding the uniqueness or the rarity of the characteristics of the nominated property seem to be emphatic. A more detailed comparative study encompassing more broadly the concepts of episcopal cities in Europe, medieval urban centres, and the originality of the role played by brick in Albi should be carried out to fully justify the property's values in these areas, which have been asserted rather than demonstrated so far.

In its 6 January 2010 letter ICOMOS requested the State Party to expand on this point. The State Party replied with a detailed document that examines one by one the points suggested; they provide a final overview of the specific features of the nominated property. The notion of a cathedral ensemble is first re-examined and then by extension that of the episcopal city, at the level of a detailed analysis for Mediterranean Europe and northern Europe. The second part discusses at length the use of brick in the Middle Ages, for both secular and religious structures in Europe and in the Toulouse region. The final section deals with medieval urbanization. The study confirms that the nominated property's urban and architectural values fall within widely represented categories. The specific features of the property are mainly reflected in the very homogeneous dimension of the episcopal city, where the power of the cathedral ensemble completely dictates the urban layout. An original and perfected use of brick is confirmed, within a clearly asserted regional context and style.

ICOMOS considers that the additional comparative study provides satisfactory responses regarding the overall value of the property.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural

property for the following reasons:

- It is an outstanding example of a human settlement over a long period of history, the medieval episcopal city having evolved into an urban centre.
- It has specific military and religious architecture the material expression of which provides rare, if not unique, examples, such as the Cathedral, both in terms of its external architecture and its internal decorative programme.
- It is a remarkable confluence of artistic exchange from various regions of France and Europe.
- It is a remarkable example of architecture in the southern French Gothic style, built exclusively in brick. Its main uniform surfaces imbue it with an austerity consonant with the religious project of the 13th century that followed the Albigensian Crusade.
- The property as a group stands out for the consistent and constant use of an uncommon material, local fired brick, or *brique foraine*, throughout the various periods of its history and up to the present day.
- The ensemble of monuments and residential quarters is coherent and homogeneous; there is no truly anachronistic construction. This ensemble has not undergone any major changes thanks to the continued existence of its main monuments, Sainte-Cécile Cathedral, Saint-Salvi Collegiate Church, the episcopal Palais de la Berbie, and the Old Bridge.

ICOMOS considers that this justification is appropriate overall.

Integrity and authenticity

Integrity

The urban ensemble nominated is a historic centre that has remained unchanged throughout the centuries from what it was at its height. The urban morphology is still clearly legible, the monuments are all present, without any major alterations, and the overall landscape formed by the city is well preserved.

It is acknowledged that buildings and dwellings have been added to the urban fabric, but they have always been in harmony with the context, using brick as the sole building material. A sufficiently significant number of old private dwellings have been preserved, in good architectural condition, to be able to express the integrity of the urban fabric.

All the old architectural elements are located within the historic zone nominated for inscription, and this exactly corresponds with the city boundaries as they were in the Renaissance.

Earlier and recent administrative arrangements coupled with significant involvement of the local population

contribute to preserving the integrity of the episcopal city's heritage.

However, ICOMOS notes that significant historical alterations have been made to the immediate environment around the Cathedral, and more broadly to the network of streets in the old town, notably in the 19th and 20th centuries. The same applies to certain components restored in the 19th century at the Cathedral or changes made to the residential quarters as a result of recent constructions, albeit in brick but in a style and height that conform poorly with the old built urban context. Formed by a succession of layers in completely different styles and architecture, the integrity of the Palais de la Berbie is fully present in terms of its footprint. These alterations to the conditions of integrity have not, however, compromised the value of the nominated property or its significance; it is therefore possible to qualify them as secondary.

Authenticity

Throughout the centuries the site has been spared the ravages of war and urban change. The technical and architectural quality of the restorations carried out in the 19th and 20th centuries enabled this ensemble to endure over time and retain an excellent level of authenticity, both for its major symbolic monuments and for its private dwellings. The recent restoration campaigns have all been implemented in accordance with international standards, under the supervision of the Head Architect of Historical Monuments (*Architecte en chef des monuments historiques*). The urban morphology is still clearly legible, the toponymy is intact, the monuments are in a good state of conservation, and the natural environment has not been spoilt by anarchical housing development. The State Party considers the state of authenticity of the property and the dynamic for its long-term conservation to be good.

ICOMOS considers that the property has been relatively well spared from the ravages of time, war, and even overly aggressive modern development. The conditions of authenticity for its urban structure, a significant number of buildings dating from the Middle Ages and the Renaissance, and most of its monuments are satisfactory as a result of appropriate conservation. There is broad visual consistency attributable to the chromatic nuances of the local fired brick used throughout the property's history right up to the present day.

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which the inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iv), and (v).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of

the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the Palais de la Berbie and Sainte-Cécile Cathedral are testimony to a considerable exchange of architectural influences between Albi, northern France, Flanders, Italy, and Catalonia. It has resulted in a form of architecture specific to southern France. The site was the platform for an exchange of artistic influences between various regions in the north and the southern countries between the 13th and 16th centuries, as illustrated by the perfectly preserved sculptures in the Cathedral choir and the largest mural in any European cathedral.

ICOMOS considers that the arrival of artists and craftsmen from various regions of Europe to work for the great princes on building churches and palaces was relatively commonplace in the periods under consideration. Albi bears witness to its having been a regional stage, certainly an important one, but without, however, being a centre with any perceptible influence on other arts of France or Europe. The specific qualities of the building programme in Albi would tend rather to be indicative of other criteria, notably that of being an original and outstanding example of the adaptation of a type of construction to a specific geographical, cultural, and historical situation (criterion (iv)).

ICOMOS considers that this criterion has not been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the nominated property provides an outstanding example of a type of construction using what are known as *briques foraines*, a form of brick characteristic of the city's urban physiognomy since the Middle Ages. It illustrates a particular use of this universal material in the various monuments or buildings throughout the ages.

In addition to the comment above about Sainte-Cécile Cathedral being the original and outstanding adaptation of a form of construction to a specific situation, ICOMOS considers that the justifications provided regarding the architectural and urban role of brick are acceptable. Brick has been used continuously from the 13th century up to the present day. The monuments are well maintained; they have not undergone any major transformations or destruction; they are therefore perfectly legible within the urban landscape. The site, comprising major and minor monuments, along with more common buildings, retains a high degree of urban, stylistic, and visual consistency. Moreover, the local Albi fired brick is unique in terms of its specific form, which is

not found anywhere else and goes beyond the classic formats in use since the Roman period.

ICOMOS considers that this criterion has been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the site is an outstanding example of a human settlement that has gradually been structured in such a way as to form an original episcopal city and an urban centre of regional importance. It developed on a promontory overlooking the Tarn Valley, around a monumental urban core formed by Sainte-Cécile Cathedral, the episcopal Palais de la Berbie, and the visual counterpoint of Saint-Salvi Collegiate Church. The site's identity is remarkable for its natural setting, the building material that at the same time is unique and presents many nuances of colour, its artistic and decorative wealth, and its unique history and the resulting symbolic values of the property, notably with respect of Sainte-Cécile Cathedral. The unity and urban homogeneity of the nominated ensemble allow it to fully express its values as a traditional human settlement and its territorial use.

ICOMOS considers that the justifications provided are acceptable. It is an outstanding example that represents the integrity and authenticity of the development of an episcopal city from the Middle Ages through to the start of the modern era. The nominated property also illustrates, through the ambitious and symbolic construction programme of Sainte-Cécile Cathedral, a commitment to personifying the spiritual and temporal power of the Roman Catholic Church following the suppression of the Cathar heresy by the two Albigensian Crusades.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criteria (iv) and (v) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- The urban and monumental ensemble of the episcopal city of Albi provides a complete and well preserved example of this type of urban settlement in 13th-19th century Europe. However, the city is much older, as evidenced by the Old Bridge, Saint-Salvi Church, and the Castelviel quarter.
- It presents a high level of visual homogeneity through the general use of *brique foraine*, with its

local characteristics, while also providing considerable diversity of colour and building applications ranging from humble dwellings to the largest monument.

- Sainte-Cécile Cathedral and the episcopal Palais de la Berbie are testimony to an ambitious building programme aimed at incarnating the spiritual and temporal power of the Roman Catholic Church, following the suppression of the Cathar heresy by the Albigensian Crusade. The external appearance of the Sainte-Cécile fortress church and the feudal sections of the Palais de la Berbie, emphasised by the use of smooth vertical brick walls, fully illustrate this programme.
- The internal structure of Sainte-Cécile is an original and unique adaptation of the Gothic cathedral of northern Europe to a specific context in southern France. It is characterised by its lofty nave without a transept, its many buttresses extended by internal load-bearing walls, and its high side-chapels. A number of late Gothic constructions were added to the Cathedral, along with a series of murals and sculptures, in the 15th and 16th centuries.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

Albi, the seat of the Prefecture of the Tarn Department, plays an important administrative role and has mainly developed tertiary sector activities. These have very little impact on the property's value.

ICOMOS considers that the economic and urban development pressure is in general well assessed and controlled within the boundaries of the property and its buffer zone. The State Party is, however, urged to ensure better control of certain parameters, such as road traffic in the town centre, especially that of hazardous materials. The State Party also needs to make sure that the legibility of the historic urban landscape is not altered by disproportionate construction in the peripheral areas which up to the present do not come under any special protection measures, notably south and north-east of the buffer zone.

ICOMOS included these two points in its 6 January 2010 letter. The State Party replied to the first point indicating that traffic in the town centre is regulated by municipal decisions, notably a 7.5-tonne limit on all vehicles in the town centre (1999), and a very recent decision banning all hazardous material traffic (February 2010). Further, all the roads in the nominated property are either reserved exclusively for pedestrians, or subject to strict speed restrictions (20 or 30 km/hr).

The long-term protection of the urban landscape is provided by the current operation of building permit mechanisms under the local town-planning provisions. In the longer term this concern is being taken into account

in the consideration being given by the municipal authorities under the various procedures being developed for the greater Albi urban area, well beyond the current buffer zone, in the form of a ZPPAUP (urban and rural architectural heritage protection zone) and a SCOT (territorial cohesion plan).

Tourism pressures

Each year the city receives nearly 650,000 visitors. This traffic is perfectly well managed by reason of the city's easy access to its suburbs. Most of the pedestrian and retail streets lead to the peripheral parking areas (buffer zone). As a result, visitors are dispersed and can circulate without difficulty throughout the entire historic centre.

ICOMOS considers that the tourism pressures are well understood and suitably managed. Tourism route signs should, however, be installed.

Environmental pressures

The episcopal city is not subject to any specific environmental pressures. The public services regularly monitor air and water quality. Major works have been carried out on wastewater collection and treatment within the boundary of the nominated property, in the buffer zone, and across the entire territory of the commune. As a result, the overall quality of the water flowing in the Tarn has been markedly improved by comparison with the situation in the 1980s.

ICOMOS considers that there are no major environmental pressures. The landscape dimensions of the property must, however, be a concern for the management authority (see Development pressures).

Natural disasters

To date, natural disasters have never constituted a threat to the episcopal city. The river is certainly subject to flooding, but the built-up areas are located on higher ground. Only the banks themselves may be affected and there is a risk of their collapsing at certain points. Only the Old Bridge might be directly affected by exceptional flooding.

ICOMOS considers that there is in theory no major threat of any natural disaster.

Impact of climate change

In periods of extreme drought the clay soil contracts, resulting in differential settling which could affect the foundations of some buildings.

ICOMOS considers that there is no major direct threat to the property. Nonetheless, the landscape protection measures announced beyond the current buffer zone need to be confirmed.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property correspond to the episcopal city as it was in the Renaissance, along with the adjacent Tarn River and its banks and the Old Bridge. The property has a surface area of 19.47 ha.

A continuous buffer zone completely encircles the property. Particular attention has been paid to protecting the banks of the Tarn upstream and downstream from the property. The entire buffer zone falls under the protection of the 1962 Law on Conservation Areas. It has a surface area of 64 ha.

The nominated property has a population of 950, and there are a little over 3,500 inhabitants in the buffer zone (2008 figures).

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are justified and adequate.

Ownership

The monuments and public spaces belong to the State Party through the Ministry of Culture (Cathedral) and the Ministry of the Environment (banks of the Tarn), or to local authorities through the Municipality of Albi (Saint-Salvi Church, Old Bridge, the road network in the episcopal city) and the Tarn General Council (Palais de la Berbie and its gardens).

Most of the dwellings located within the property belong to private individuals. A social housing collective is owned by the semi-public organization Tarn-Habitat.

Protection

Legal protection

The main monuments of the episcopal city have been protected by French legislation on historic monuments since the mid-19th century. They therefore benefit from long-standing legal protection:

- Saint-Salvi Church has been designated in this way since 1846.
- Sainte-Cécile Cathedral and the episcopal Palais de la Berbie were designated in 1862.

The outline laws currently in force applying to all or part of the property are:

The *Law of 1913 on Designated Historic Monuments* identifies monuments of national importance; their environment is automatically protected within a radius of

500m. The following were added to the monuments listed above:

- The Old Bridge (1921);
- Saint-Salvi cloister (1922).

The facades and roofs of dwellings within the property boundaries have also been listed:

- Four in Rue Saint-Julien and one in Rue d'Engueysse (1924);
- Two in Rue de la Grand'Côte (1940);
- One in Rue de la Grand'Côte and one simultaneously in Rue Sainte-Cécile and Rue Mariès (1971).

The *Law of 1930 on Sites* applies to Boulevard Général-Sibille.

The 1913 and 1930 laws were extended with the possibility of *inscribing* other monuments or historic spaces. This constitutes a second inventory list for cultural properties of lesser importance. Inscription results in a specific obligation on the owner, in consultation with the public conservation services, to obtain authorization for all work. For the episcopal city of Albi this regulatory possibility has been applied relatively broadly to various public elements, but above all to many house facades and roofs.

The so-called 'Malraux' law of 1962 on *conservation areas* led to an early municipal project in the 1960s, approved by ministerial decree in 1968. A protection and enhancement plan followed and was approved in 1974. This plan and its regulations establish conservation and enhancement rules for each plot of land, following evaluation by the *Architectes des bâtiments de France* (a body of official professionals reporting to the Ministry of Culture). This regulation covers filing an application and supervising and inspecting both public and private work; it guarantees the quality of work in accordance with national standards. In Albi this legal provision applies to the entire property and the entire buffer zone.

The Municipality has also developed an Urban Quality Charter to promote respect for heritage and its enhancement which was submitted to the private commercial sector and their technical services. After a lengthy public consultation process, it was finally adopted in August 2009. It is a common development tool intended to ensure shared quality. It defines best practices, what is allowed and what is not, for facades so far not listed, for shop fronts, signage and lighting, occupation of public space (street furniture, café terraces, billboards, etc.).

Effectiveness of conservation measures

There is a broad range of complementary legal protection, some of which is very long-standing; the nominated property and the entire buffer zone are subject to restrictive regulatory or contractual provisions. The overall

effectiveness of their application by the national, regional, and municipal services, with their qualified staffs, is enhanced in Albi through the now long-standing support by the Municipality and the inhabitants of the town for protecting their heritage at the collective and personal levels.

ICOMOS considers that the legal protection in place is adequate and effective.

Conservation

Inventories, recording, research

All the main buildings in the episcopal city and the buffer zone have been listed in an inventory. The archives are curated by the city's administrative services and by the decentralised national services located in the region. However, a new and more complete inventory is currently being compiled with the object of providing conservation programmes with an efficient updated tool.

The national, regional, and municipal archives house extensive documentation about the history of the city of Albi in general and the episcopal ensemble in particular. The ecclesiastical archives provide additional resources relating to the period of the Albigensian Crusade alongside the standard public archives.

Following chromatic research on the materials (bricks, timber, and rendering) and the facade structures, measures were introduced to improve the property's conservation. They are included in the provisions for the Conservation Area and the Urban Quality Charter (see Protection).

Present state of conservation

The monuments are in a good state of conservation, right down to an excellent level of detail, thanks to the long-standing policies that are being implemented and their quality and regularity. The summary in the nomination dossier of the ten programmes of works carried out since 2001, for a total budget of nearly 45 million euros, gives a clear indication of this result.

Active conservation measures

The historic monuments are covered by annual maintenance and restoration programmes. These are drawn up, supervised, and approved by the State Party's various specialist services represented locally by the Regional Department of Cultural Affairs (DRAC) in Toulouse and the Departmental Architecture and Heritage Bureau (SDAP) in Albi. These programmes are financially consolidated by the State, the other public stakeholders (region, department, and municipality), and project private partners, if any. Specific financial packages are put together for each project, depending on the type of legal protection, the owner, and any local or regional stakeholders concerned.

The work is generally performed within the allotted timeframes and under good scientific and professional conditions, as only approved contractors are allowed to work on the projects. Monitoring the work and the state of conservation is provided, over the long term, by the State Party's Department of Historic Monuments, notably its *Architectes des bâtiments de France* unit. The other notable public or private buildings are restored or renovated under various financial aid programmes provided by the State and the local and regional authorities.

Management of the Conservation Area, alongside the protection of listed monuments and sites, is under the responsibility of the Municipality. All its programmes are submitted for approval and monitoring by the *Architectes des bâtiments de France*.

Maintenance

The maintenance of the property's historic monuments is the responsibility of the public owners (State, Region, and Municipality). It is integrated in the annual maintenance and restoration programme for each of the buildings. It is monitored and implemented by each of the owner's relevant services. The Municipality maintains the public spaces and streets. Owners maintain their private dwellings under the 'Shared Charter of Best Conduct.'

Effectiveness of conservation measures

Tracking eventual and inevitable deterioration over time is well managed; it allows for an effective process for programming works that need to be carried out. The conservation programme is in place for 2009-2014; financial consolidation is yet to be finalised.

The effectiveness of the conservation of private buildings combined with an approach to the site taken as a whole for almost forty years has led to the urban landscape of the episcopal city of Albi being of excellent quality.

Whilst the scientific and professional level of conservation is in general very high, for some private buildings of minor interest some 'fake-old' architectural elements have been added during restoration work.

ICOMOS considers that the rapid finalization of the financial consolidation for the planned work and greater rigour for the minor buildings and sites should be encouraged.

ICOMOS considers that the protection, maintenance, and conservation measures implemented are adequate and effective.

Management

Management structures and processes, including traditional management processes

The administrative aspect of the management lies in the procedure for work permits and their monitoring when the *Architecte des bâtiments de France*, the Departmental Architecture and Heritage Bureau (SDAP) and specialist municipal services (building and works permits) are involved.

Conservation management is part of a more general process for managing and enhancing the property, which is shared between numerous public institutions and municipal services, with clearly defined roles with respect to the property. These include day-to-day management and maintenance of the public roads and traffic management, public spaces and gardens, management of the river and its banks, waste collection and urban cleaning services, etc. Numerous specialist semi-public and private stakeholders are also involved in the management of the property: the Museum, the Catholic Diocese of Albi, local associations, retailers' association, cultural associations, private owners of residences, the Tarn-Habitat social housing association, the Tarn River Association, the Tourist Bureau, fire and safety services, etc. Each exercises its own responsibility over the property, in accordance with their respective practices, but generally within the constraints of public plans.

Coordination between these very diverse stakeholders was initially provided by the Steering and Coordination Committee for the inscription nomination, under the aegis of the Municipality, in continuity of its existing public service and conservation of the urban heritage responsibilities.

Its successor, a Property Committee, was established and officially installed in office in June 2009. It makes possible the exchange of information and arbitration between the various stakeholders in the episcopal city, along with the decision-making needed for the sustainable management of the property.

In its letter of 6 January 2010 ICOMOS requested the State Party to confirm the operation being practised by the Property Committee and to describe its working methods. In its reply of February 2010 the State Party provided a detailed account of the Property Committee's implementation in 2009, its composition in three sections, and its remit. It has taken over from the Steering Committee and is mainly in charge of monitoring the property's conservation and protection, organizing cooperation between the various stakeholders, and relations with the inhabitants. It meets at least twice a year and has a permanent secretariat.

Policy framework: management plans and arrangements, including visitor management and presentation

The existing series of plans and regulations provide the framework and the current management directives for the nominated property. These are grouped together in a Management Plan, the supervision of which will gradually be handed over to the Property Committee. They are in particular:

- A master plan for the development of the city of Albi;
- A local town plan and updated plan for the enhancement of the conservation area, 2003;
- A plan relating to the quality of lighting in general and more particularly that of the old centre, since 1996;
- A tourism development plan, 2008.

It is intended that the Management Plan should go further by harmonizing the existing procedures and preparing future policies under a single contractual document committing all stakeholders for the years ahead:

- The first section concerns the planned and grouped organization of the contractual ownership of the historic municipal monuments, heritage promotion, continuous research, and inventories.
- The second section concerns the everyday management of public spaces and urban life through the application and development of the Charter.
- The third section concerns environmental quality through preservation of the natural elements (water, air, and soil).

The Tourist Bureau plays an important role in advising and informing visitors. Guided tours of the main monuments and the Toulouse-Lautrec Museum installed in the Palais de la Berbie provide a good understanding of the property. Tourism signage for pedestrians is provided throughout the property and in the buffer zone; it contributes to a good distribution of the flow of visitors. Additionally, a pedestrian master plan was drawn up in 2006.

Risk preparedness

Those areas of the banks of the Tarn more exposed to risk in the event of flooding are included in the boundaries of the risk-prevention plan in the event of the banks collapsing. The nominated site is, however, in an area of natural silting which tends to reinforce the banks by the build-up of sediment.

In terms of fire, the risk is limited, and it is monitored by the following measures: recent replacement of the electrical installations in the main monuments, installation of fire alarms and safety lighting, and regular

checks of the heating systems.

Involvement of the local communities

The Municipality of Albi is heavily involved in the management and conservation of the property.

The Property Committee is a forum for discussion and consultation with private stakeholders and associations. There is a 'town centre district advisory body' that transmits the inhabitants' opinions and suggestions to the city; it meets twice a year under the chairmanship of the deputy mayor who is responsible for heritage issues.

Resources, including staffing levels, expertise, and training

In terms of the technical management of conservation, the State services in the Midi-Pyrénées Region, the Region itself, and the specialist services of the Tarn Department provide a very diverse group of conservation professionals - architects, town planners, historians, archaeologists, engineers, etc. In addition to the Regional Conservator of Historic Monuments and the Head Architect of Historic Monuments, responsible for monitoring the property, the Departmental Architecture and Heritage Bureau (SDAP) has a *Bâtiments de France* architect and nine employees.

The selection process for contractors and tradesmen approved to carry out restoration work, and the follow-up supervision of their expertise, provides a high level of safety with respect to the compliance of the conservation work carried out. A wide range of contractors can be called on locally, regionally, and even from other regions of France, depending on the specific requirements. The high level of local specialization in the use of brick should be noted.

The city of Albi currently has 280 employees across all its various technical and administrative services.

The semi-public organizations directly in charge of presenting the property to the public include 25 people at the Museum and Palais de la Berbie and 12 permanent employees at the Tourist Bureau. The Sainte-Cécile and Saint-Salvi religious buildings have around ten employees to assist visitors. Additionally, a number of temporary guides are employed during the peak tourist season.

Effectiveness of the current management

ICOMOS considers that the management system for the episcopal city, as established with all the stakeholders, is an effective one.

ICOMOS considers that the management system for the property is adequate.

6. MONITORING

Up until now monitoring has been made possible by the combined actions of the *Architectes des bâtiments de France*, the Head Architect of Historic Monuments, and the municipal services. The understanding of the development of the urban fabric is attributable to the various urban policies that have been implemented (Conservation Area, city challenge contract, and the office for assisted housing) and by studies executed within their respective frameworks.

The general state of conservation of the Episcopal City has been known for many years and is recorded for each protected monument in its inventory and individual monitoring file. However, it is not yet based on any quantified indicators specific to the overall property that could be used to precisely measure the overall state of conservation. The actions announced in the Management Plan will be assessed by a large number of such indicators, currently being developed. These new measurement tools will contribute to identifying and strengthening the conservation diagnostics and will provide scientific and technical specialists with common monitoring tools. In order to ensure the efficacy of this shared monitoring, the Committee will have general management guidelines and a standard dossier will be used for each major monument.

The city is currently developing monitoring indicators for tourism management, a recent and innovative operation in France. Albi has been chosen as an experimental site for the study of tourism development.

ICOMOS considers that the individual monitoring of the components of the property has always been provided through the various management structures, but recommends that heritage and tourism monitoring indicators should be defined and implemented at the level of the entire property.

7. CONCLUSIONS

ICOMOS recognises the Outstanding Universal Value of the episcopal city of Albi, and stresses the quality of its protection and its remarkable general state of conservation.

Recommendations with respect to inscription

ICOMOS recommends that the Episcopal City of Albi, France, be inscribed on the World Heritage List on the basis of ***criteria (iv) and (v)***.

Recommended statement of Outstanding Universal Value

Brief synthesis

The episcopal city of Albi presents a complete built

ensemble representative of this type of urban development in Europe from the Middle Ages to the present day. Its monumental and urban elements are complementary and well preserved, in subtle harmonies of tones and appearance thanks to the use of local fired brick. It is testimony to a programme which was simultaneously both defensive and spiritual that was implemented by the Roman Catholic bishops following the suppression of the Albigenses or Cathar heresy in the 13th century. Saint-Cécile Cathedral is the most remarkable monumental symbol, in a Gothic architectural style unique to southern France, to which systematic internal painted decoration, a choir, and late Gothic statuary were added in the 15th and 16th centuries. Finally, the outstanding value of the city is expressed by a medieval urban landscape that is both well preserved and extremely authentic.

Criterion (iv): The historic city of Albi presents an outstanding medieval architectural and urban ensemble. It is homogeneous and is expressed through a high-quality urban landscape that possesses high visual coherence because of the generalised and enduring use of local fired brick. Sainte-Cécile Cathedral is an exceptional architectural and decorative example of the adaptation of the Gothic style to the context of southern France.

Criterion (v): The Albi urban site developed gradually over the centuries, and notably from the Middle Ages. The events of the Albigensian Crusade transformed it into a symbolic episcopal city structured around its Cathedral and its episcopal fortress-palace. This is one of the rare examples of ensembles of this kind that are to such a high degree complete and well preserved. It expresses in a very comprehensive way a type of urban settlement that was characteristic of medieval and Renaissance Europe.

Integrity and authenticity

All the old architectural elements are included in the nominated historic zone, which corresponds exactly with the boundaries of the city as it was in the Renaissance. Any exceptions from this level of integrity are mainly attributable to redevelopment of the urban districts in the 19th and early 20th centuries. These were limited in scope and do not affect the coherent appearance of the city overall.

The conditions of authenticity of the urban structure of the property, of a number of buildings from the Middle Ages and the Renaissance, and of most of the monuments are satisfactory thanks to appropriate conservation. The city enjoys considerable visual coherence attributable to the chromatic nuances of the local fired brick, which was in use over a lengthy historical period up to the present day.

The integrity and the authenticity of the urban landscape of the ensemble should be emphasised; they should be a priority objective for long-term preservation.

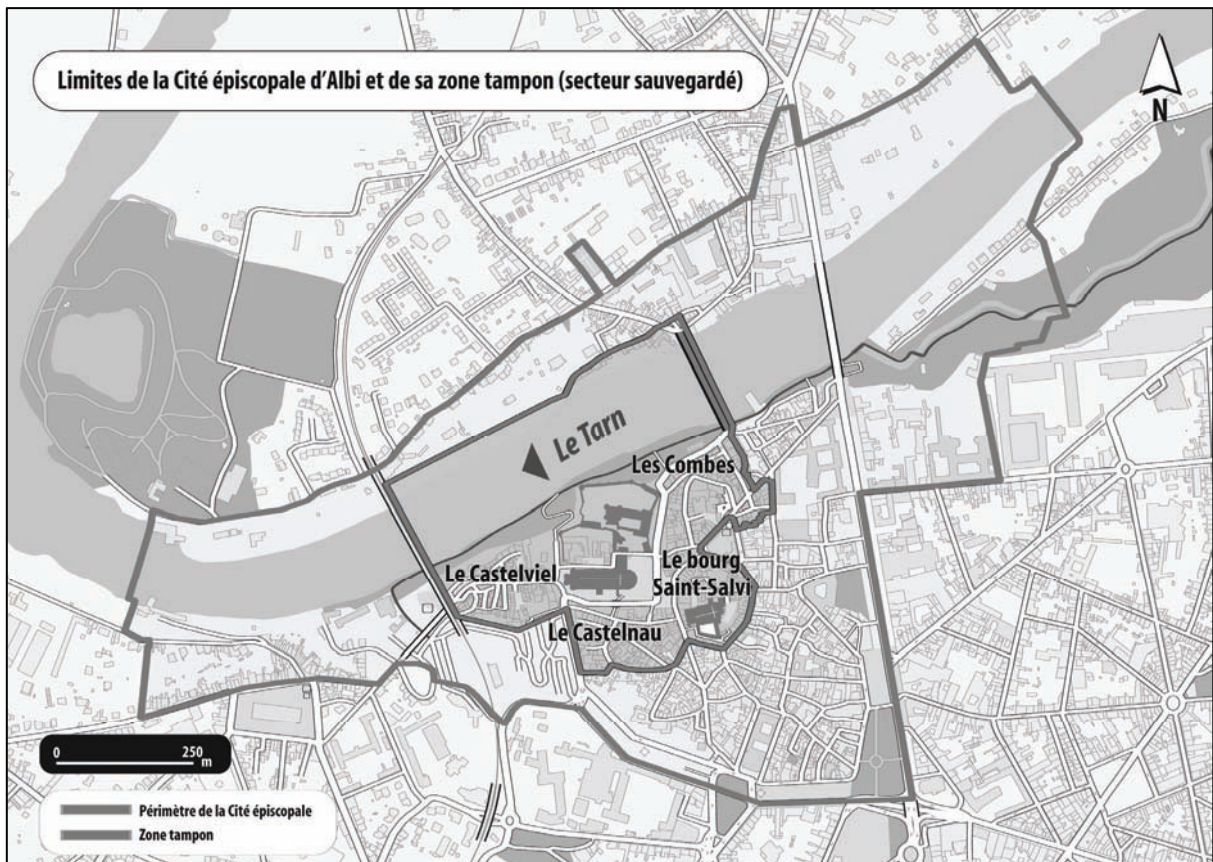
Management and protection requirements

The episcopal city's main monuments are all under the protection of the French law of 1913. The so-called 'Malraux Law' of 1962 on conservation areas led to an early municipal project, which was approved in 1968. A protection and enhancement plan followed and was approved in 1974. The protection arrangements are adequate and operate satisfactorily. An extension of the protection of the urban landscape has been announced for the area outside the buffer zone (broad protection procedure, known as ZPPAUP).

The management system for the property is long-standing, and involves numerous stakeholders with well defined specialist functions, which they exercise with recognised expertise. The Municipality is seen as the current coordinator of this system, notably through its consultative management with the inhabitants in the Conservation Area, which includes both the property and its buffer zone. A *Property Committee* has been established and is responsible in particular for monitoring conservation and protection, coordinating the various stakeholders, and relations with the inhabitants.

ICOMOS recommends that the State Party give consideration to the following:

- Ensuring that the legibility of the overall historic urban landscape is not altered by disproportionate constructions in the peripheral districts, especially to the south and north-east of the buffer zone. The State Party is invited to keep the World Heritage Centre informed of the regulatory developments currently under review: ZPPAUP (urban and rural architectural heritage protection zone) and SCOT (territorial cohesion plan);
- Despite the good overall management of the property and the regular monitoring of its conservation provided up until now, it would be desirable for the heritage and tourism monitoring indicators that have been announced to be defined and implemented as soon as possible.



Map showing the boundaries of the nominated property



General view of Albi and its episcopal city



The Palais de la Berbie



Sainte-Cécile Cathedral



The Old Bridge (Pont-Vieux)

Sites of Christianity in the Galilee (Israel) No 1309

Official name as proposed by the State Party:

Sites of Christianity in the Galilee

Location:

Northern District
State of Israel

Brief description:

The Sites of Christianity in the Galilee is a serial nomination of eight sites, associated with the youth and ministry of Jesus, and whose location (apart from one site) is clearly defined in the Christian Gospels. Clustered around the north-western coast of the Sea of Galilee, are Magdala, Tabgha, the Mount of the Beatitudes, Capernaum, and Chorazin; and in its hinterland, Nazareth, Kafr Kanna and Mount Tabor.

The Galilee is considered to be the cradle of Christianity, the place where the major concepts of Christian beliefs were formulated, and where Jesus defined the moral principles of social justice, love, and peace for humankind as the central pillars of the Christian faith.

Some of the sites and landscape have been intermittently the focus of pilgrimage since the early days of Christianity and are seen to have been a source of inspiration for millions of believers over the past two millennia.

Overall the sites are said to reflect the landscape of Galilee which is sometimes called the 5th Gospel for the way it brings alive the other Gospels.

Category of property:

In terms of categories of cultural properties set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of eight *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, these sites are nominated collectively as a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 30 June 2000

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 30 January 2009

Background: This is a different nomination to the one that was submitted in January 2008 and withdrawn by the State Party before its examination by the 33rd session of the World Heritage Committee (Seville, 2009).

Consultations: ICOMOS has consulted its International Scientific Committees on Management of Archaeological Heritage and on Intangible Cultural Heritage together with several independent experts.

Literature consulted (selection):

Aviam, M., "Christian Galilee in the Byzantine Period", in Meyers, E.M. (ed.), *Galilee through the Centuries – Confluence of Cultures*, p.281-300, Winona Lake, 1999.

Brown, R. *The Birth of the Messiah*, New Haven: Yale University Press, 1999.

Freyne, S.V., "Archaeology and the Historical Jesus", in Bartlett, J.R. (ed.), *Archaeology and Biblical Interpretation*, London and New York, p. 117-144, 1997.

Harel, Menashe, *The Historical Geography of the Land of Israel*, Tel Aviv, 2002.

Horsley, R., and Silberman, N., *The Message and the Kingdom*, Putnam, New York, 1993.

Reed, J.L., *Archaeology and the Galilean Jesus: A Re-examination of the Evidence*, Harrisburg, 2000.

The New Testament (Gospels).

Technical Evaluation Mission: 8-17 October 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Seven of the eight sites in the Galilee have been chosen as '*sites that are clearly defined in the gospels*' and which are perceived to be associated with the youth and ministry of Jesus. The exception is Mount Tabor, which is associated with the transfiguration of Jesus.

The sites are highly varied in character and meaning. The settlements associated with Jesus along the shores of Galilee no longer exist as living communities, and are now archaeological sites with neighbouring modern buildings; while the villages of Nazareth and Kafr Kanna (Cana) developed into substantial towns in the 20th

century, and in these a few individual buildings, re-built on the site of earlier structures, have been nominated. Many of the standing buildings were constructed in the 20th century and the majority incorporate earlier fabric. Although nominated as a cultural landscape, very little of the Galilee landscape, much of which is now intensively cultivated and to a degree developed, has been included in the boundaries.

Most of the sites present a context of religious traditions and narratives documented to varying degrees from the 4th century onwards. A few sites have tangible evidence to link them either with Christ's ministry or to the subsequent evolution of pilgrimage traditions, while others have none or only slight evidence.

Overall the sites are said to reflect the landscape of Galilee, which is sometimes called the 5th Gospel, for the way it brings the other four Christian Gospels alive.

The serial nomination is presented as the first step towards a larger trans-national nomination, which might reflect sites associated with Christ's Apostles. ICOMOS notes that there is, however, no reflection on this extended process, nor are any potential sites mentioned that might be being considered as extensions to this initial nomination.

The Galilee area is characterized by mountain ridges that extend in an east-west direction, rising to 500 to 600 metres above sea level, and separated by flat, fertile valleys which have encouraged cultural contact and trade from west to east. The northernmost ridge is of limestone where settlement developed alongside springs at the base of the cliffs. Further west around Nazareth, the ridges are of chalk and settlements were founded higher up the slope or on the summits.

The main feature is the Sea of Galilee, an important focus for Christ's ministry. It extends 20km north-south and 12km east-west with flat fertile plains to its east and west, whose rich dark soils have attracted settlers from an early date. The main source of water for the Sea is the River Jordan to the north, which empties into the lake in a small delta. Hot springs also cascade into the Sea and these encourage a concentration of fish in certain areas. Fishing has been an important supplementary occupation for settlers since early times and had a conspicuous association with the Christian Gospels.

As enshrined in Christian tradition, Jesus spent his childhood in Nazareth and began his ministry in Kafr Kanna (Cana). Both sites were then small farming villages in central Lower Galilee. Leaving the region of his birth, Jesus went eastward to the settlements of Capernaum, Chorazin, Bethsaida, and Magdala along the northern shore of the Sea of Galilee (or Lake Gennesaret as it is referred to in the New Testament). The lakeside towns were to become the centre of his Galilean activity, so much so that Capernaum, and not Nazareth, is called his city (Mark 2:1, Matthew 9:1). It is

from here that he journeyed to Caesarea Philippi, Tyre and Sidon, and to the Land of the Gadarenes — and it is to here that he always returned. Although the New Testament Gospels of Matthew and Luke firmly identify the birthplace of Jesus as the Judean town of Bethlehem, all of the canonical Gospels describe his roots in Galilee. Many of the reported events of his life, apart from the flight into Egypt, his baptism in the River Jordan, his journey to Tyre and Sidon, and his crucifixion and resurrection in Jerusalem, occurred in the relatively small area extending from Nazareth in the west to the northern shore of the Sea of Galilee.

The association with Galilee was powerfully recalled according to the Gospel of Matthew, when Mary Magdalene and the other women came to the empty tomb of Jesus and learned of his resurrection. They were solemnly instructed by an angel: "*He is going before you into Galilee; there you will see Him*" (28:7). Jesus himself soon appeared to them with the same message: "*Do not be afraid; go and tell my brethren to go to Galilee, and there they will see me.*" (28:10). It is said that it is in the hills and lakeside towns of Galilee that his message lived on.

"And Jesus went about all Galilee, teaching in their synagogues, and preaching the gospel of the kingdom, and healing all manner of sickness and all manner of disease among the people." (Matthew 4:23)

The eight sites are composed of two clusters: a western cluster in the central Lower Galilee and an eastern cluster along / near the north-western shore of the Sea of Galilee. And some of the sites are further divided into separate elements.

The western cluster consists of three sites associated with the childhood of Jesus and his early ministry: Nazareth (Basilica of the Annunciation; Church of St. Joseph; Church of St. Gabriel; and Mary's Well); Kafr Kanna (biblical Cana) (Wedding Church and Church of St. George); and Mount Tabor (Church of the Transfiguration and Church of St. Elijah).

The eastern cluster consists of five sites and landscapes associated with Jesus' activities around the Sea of Galilee: Magdala; Tabgha (Church of the Multiplication of the Loaves and Fishes; Church of the Primacy of St. Peter (Mensa Christi)); Mount of the Beatitudes, Capernaum (Franciscan Compound; Greek Orthodox Compound); and Chorazin.

These are considered separately:

Western Cluster:

Nazareth

According to the New Testament, the town was the home of Joseph and Mary, Jesus' parents, and the site of the Annunciation, when the Angel Gabriel told Mary that she would bear Jesus as her son (Luke 1:26-38). Jesus spent his boyhood and early adulthood in the town

after returning to Israel from Egypt (Matthew 2:22-23) and until his public ministry.

The ancient small village of Nazareth, in a valley surrounded by chalky hills, was served by a single spring. The large modern town has grown up around this nucleus. The major present-day churches are built over the remains of ancient churches.

The nominated area is of four buildings in two groups with two buffer zones. One group is the Basilica of the Annunciation and the nearby church of St. Joseph, and the second is the church of St. Gabriel and nearby Mary's Well.

The large Basilica of the Annunciation was reconstructed in the second half of the 20th century. It is on two levels. The lower church overlooks the crypt, built around an ancient grotto, hewn out of the rock possibly as early as the Iron Age. It was venerated as the house of Mary and the site of the Annunciation. Around the grotto are fragmentary walls of a 4th century building, a synagogue-church, walls and columns of a Byzantine church, and the more massive walls and columns of a Crusader church.

The Church of St. Joseph was constructed in the early 20th century overlying the walls of a Crusader period basilical church, uncovered by archaeological excavations in the 1890s. It does not seem to have been visited by early pilgrims.

The Greek Orthodox church of St. Gabriel was constructed in the 1750s. An underground vaulted hall is part of a Crusader church.

Mary's Well (or spring) is covered by a modern stone structure built in 1998, on the excavated walls of a Late Ottoman stone fountain house. Excavations in the 1990s exposed the remains of earlier fountain houses, dating to the Crusader and Mamluk periods, as well as the fragmentary remains of stone channels dated to the Roman period. The name is based on a tradition linking the Annunciation to the spring.

Kafr Kanna (biblical Cana)

Cana has been long revered as the site of Jesus' first miracle of turning water into wine at a wedding, although it is not mentioned specifically in the New Testament. The present day village is a large commercial and industrial area 6km north of Nazareth. The population is mainly Moslem, with a significant Christian minority, whereas until the 20th century the Christians were in the majority. There are several churches in the ancient nucleus, of which two are dedicated to the wedding miracle.

The white stone Franciscan Wedding Church was built in the 1880s, and enlarged in 1905, copying the façade of the church from the priest's home town of Salzburg, Austria. Excavations in the late 19th and late 20th century revealed fragments of a middle Roman building.

Opposite the Franciscan church is the present day Greek Orthodox church of St. George, constructed in 1886.

The location of the settlement appears to have moved to the present site, Kafr Kanna, from one to the west, Karm er-Ras. It seems that the location of the village in Jesus' time was at Karm er-Ras and the present site was re-developed in Late Roman and Byzantine times. Karm er-Ras was only discovered through excavations and nothing can now be seen. Although considerable details of the site are presented in the nomination dossier, this is not part of the nominated property.

Pilgrimage to Kafr Kanna seems to have started around the 4th century.

Mount Tabor

In the New Testament the Transfiguration of Jesus took place on a mountain that is identified (according to ancient tradition) with Mount Tabor. The mountain is the place where Jesus is said to have revealed himself as the founder and leader of the Christian community.

On the summit of the mountain are the Franciscan and Greek Orthodox Compounds.

Documentary evidence suggests that the first monastic chapel on the mountain may have been constructed in the 7th century, although the mountain had been inhabited since pre-historic times and in the Roman and Byzantine periods housed Jewish villages. The mountain is also associated with large numbers of hermits living in caves, from at least the 5th century - of which some archaeological evidence has been found. By the 9th century, four churches are recorded as being on the mountain.

During the Crusader period, the three remaining churches were restored but then destroyed when the place was over-run by the Turks. They were rebuilt by Benedictine monks but again destroyed by the Turks, after which the Benedictines abandoned the mountain and their churches disappeared under Saracen fortifications. The forts were demolished in the 13th century and afterwards a Christian community was once more established but this did not survive further battles between Turks and Crusaders. By the end of the Crusades the mountain was a sea of rubble and even that was levelled in the 17th century.

In 1870 the Franciscans started building on the site and within nine years a small convent was established. Archaeological excavations started in 1895 and continued until 1900. The work uncovered a mosaic floor, the lower courses of the walls of a Byzantine baptistry, a tomb and grotto.

In 1919 the foundations of a large new Basilica were laid. Although assurances were given that the excavations would be respected, much of the

archaeological material was walled up and built over. The Basilica was completed in 1924.

What can now be seen are meagre traces of a Roman wall, part of the ruins of the Saracen battlements, a grotto of Melchizedek (restored 1974) on the property of the Greek Orthodox monks, and further ruins that seem to have been part of a monastery.

The Greek Orthodox Compound includes the Greek Orthodox Church of St. Elijah, constructed in 1858, and a Monastery. The church was decorated in 1912 by a Greek artist named Socrates, who painted the scene of the Transfiguration in the Apse. The southern chapel includes a re-positioned Byzantine mosaic floor with white, black and red tesseras.

Eastern cluster:

Magdala

Magdala (today Migdal), on the shores of the Sea of Galilee, has since the 19th century been considered to be the site of the hometown of Mary Magdalene, one of the most revered of Jesus' disciples. New archaeological excavations have revealed a 1st century AD Roman town, a Byzantine monastery and a later 8th-9th century building, and strengthen its position as an important archaeological site on the Sea of Galilee, but without providing a convincing link to Maria Magdalena. Excavations are continuing.

Tabgha, Mount of the Beatitudes and Capernaum

Tabgha and its vicinity have been associated since the 4th century with three key events in the ministry of Jesus: the miracle of loaves and fishes, the Sermon on the Mount and the conferring of the primacy on St. Peter recorded in the Gospels of Matthew and John. Excavations have revealed a 4th century mosaic of loaves and fish on a church floor, and the Byzantine remains of the church of the Primacy of Peter (Mensa Christi).

The Church of the Multiplication of the Loaves and Fishes is part of a Benedictine monastery. The Church was built in 1980 over 4th-6th century ruins.

The Church of the Primacy of St. Peter (Mensa Christi) is a small church on the edge of the lake constructed in 1932, incorporating remains of Byzantine and Crusader Period churches. Within the large grounds of the compound are extensive guest house facilities, restaurant etc, of quite recent date. The site appears in pilgrims itineraries from the Byzantine period.

Jesus withdrew from the coastal towns to the place called "the Mount of the Beatitudes", where he preached the central tenets of his new moral and ethical message in the *The Sermon on the Mount* (Matthew 5-7, Luke 6:17-49). Today this name refers to the site of an early 20th century Catholic Church of the Beatitudes, 1km to the north-east of Tabgha, overlooking the historical Mount of the Beatitudes below. The modern site of the

Mount of the Beatitudes and Tabgha are the most important sites on the present day pilgrimage route.

In some places, settlements were established where the mountains of the eastern Lower Galilee descend steeply to the Sea of Galilee, leaving an extremely narrow strip of shoreline. The town of Capernaum was one example. Although its agricultural hinterland was tiny, the regional road adjacent to it provided its inhabitants alternative means of subsistence, such as trade and tax collection.

Jesus established his base in Capernaum, where he performed many healings, reported in all the Gospels, and offered teaching in the local synagogue. Here he gained the adherence of his first disciples, Peter, Andrew, James, John, and Matthew, with whom he sailed on the Sea of Galilee. Capernaum is mentioned 21 times in the Gospels.

The area includes the sites of the mainly unexcavated settlement, its necropolis, shore-line and piers, and modern Franciscan and Greek Orthodox compounds.

Within the Franciscan Compound is a partly reconstructed Byzantine synagogue and adjoining modern buildings. Underlying these are the remains of a possibly 1st century AD synagogue, and, nearby, the extensive excavated remains of a Byzantine settlement, possibly overlaying Roman and earlier structures. To the south is St. Peter's Memorial, erected in the 1990s, on the supposed site of St. Peter's house. The site is dominated by a recent construction of little architectural value, above the St. Peter's memorial and synagogue.

In the Greek Orthodox Compound, the church dates from 1925. Between the two compounds are the remains of the village, a small part of which has been excavated near the Greek Orthodox compound. Further west are the unexcavated remains of the Roman period harbour and jetties.

There are current issues of dispute between the church authority and the State Party concerning a new pier, the growing beach-head and sinking water line, as well as ownership and land use issues arising from the church authority being affected by adjacent properties.

Chorazin

Jesus extended his mission from Capernaum to other towns along the northern shore of the Sea of Galilee and farther inland. He preached and performed miracles at Chorazin and at Bethsaida, and fed the multitude from a few loaves and fish from the Sea. The villagers refused to follow him and were scolded in the well known passages in the Gospels of Matthew and Luke: "*Woe to you, Chorazin! Woe to you, Bethsaida!*" (Matthew 11:21).

The archaeological site of Chorazin overlooks the lower shore of the Sea of Galilee and Tabgha and Capernaum. It is an example of a typical Talmudic late Roman-Byzantine village, still set in a working agricultural landscape that is said to have changed little *in the last*

4,000 years'. A new tradition of pilgrimage is said to be developing, but so far without much evidence registered on-site.

Regional road No. 887 crosses through the middle of the site.

Galilee Landscape:

The property is nominated as a cultural landscape for it is said to encapsulate the Galilee landscape that brings the Gospels to light. The nomination dossier presents wonderfully evocative 19th century photographs of this landscape, with small villages, dominated by churches set amongst rolling fields and orchards.

Today, however, this rural landscape has changed substantially: Nazareth and Kafr Kanna are now substantial towns and the settlements along the shores of Galilee no longer exist as living communities. There is the added difficulty that very little of this landscape has been nominated – mainly a small area joining three of the sites of Tabgha, Mount of the Beatitudes and Capernaum, bordering the Sea of Galilee.

History and development

The period of Christ's Ministry is outlined above.

In 324 AD the Emperor Constantine declared Christianity to be the official religion of the Roman Empire. Christian pilgrimage to traditional and newly-identified holy sites became common during the 4th century and intensified greatly during the 5th and 6th centuries. Memorial shrines, churches and monasteries were constructed for the pilgrims at the sites themselves and in their environs. Jerusalem was the most important pilgrim destination for the sites associated with the Crucifixion and Christ's Burial and resurrection. Together with the other shrines commemorating Jesus' Nativity at Bethlehem and his Ascension on the summit of the Mount of Olives, Jerusalem's holy places began to attract pilgrims from all over the Roman world.

Galilee soon became another major destination for Christian pilgrimage. In Galilee, shrines (usually altars) and early chapels (some remains of which have been uncovered in excavations) are recorded at Capernaum, Tabgha, Nazareth and several other sites by 4th century pilgrims.

By the 5th and 6th centuries further churches and monasteries were added to pilgrim sites commemorating events relating to the life of Jesus and to his ministry (e.g. at Tiberias, Cursi, Cana, Mt Tabor etc.). By the 6th century the pilgrimage tradition was firmly established and related to defined routes.

This period saw an expansion of Christian settlements in western Galilee, with others alongside Jewish

settlements in cities, and in some of the villages such as Capernaum.

The 7th century saw a decrease in pilgrimage and in settlements in the peripheral areas, reflecting the uncertainties brought about by the Moslem conquest to the south-east of the region. During the next four centuries of the early Islamic Period, Christian and Jewish communities continued to exist, a few created new chapels, such as at Magdala, and Christian pilgrims and travellers continued to visit the holy sites, although less frequently.

A period of Christian renaissance in Galilee, including a resurgence of pilgrimage, was heralded by the Crusader conquest (Christian knights led holy Crusades from Europe) of 1099 AD, and the establishment of the Kingdom of Jerusalem. This led to restoration of holy sites such as Mt. Tabor, Nazareth, Cana and Tabgha and the creation of new consecrated sites – as well as castles and citadels.

However, this revival was comparatively short-lived, as the Crusader Kingdom lasted less than 200 years. In 1187, Saladin succeeded in crushing the Crusader army, and in spite of subsequent Crusades that led to temporary Crusader rule over large parts of the land, including Galilee, in the 1260s AD the Mamluk Sultan Beibars finally thrust out the Crusaders from their last strongholds in Galilee.

The following centuries, under Mamluk (14th-15th centuries) and Ottoman rule (16th-19th centuries), were periods of relative stagnation for the region. The majority of the population became Muslim and although Christian and Jewish minorities continued to exist at several sites in Galilee, there was no tradition of pilgrimage.

It was not until in the late 19th century when there was resurgence of European-Christian interest and activity in Galilee, and Catholic Italian-Franciscan and German-Benedictine societies began purchasing some of the traditional Holy Christian sites in the Nazareth and Sea of Galilee vicinities, that pilgrimage once more began to flourish, a tradition that continues to this day.

The development of the sites into pilgrimage centres thus took place in three main periods: 4th-6th centuries (Byzantine Period); 11th-12th centuries (Crusader Period) and late 19th-20th centuries.

Pilgrims recorded their itineraries from the 4th century onward, most of them written in Latin.

Two survive from the 4th century and two from the 6th century describing visits to the Galilee and its holy places including Tabgha, Capernaum, the Mount of the Beatitudes, Nein, Nazareth, Tiberias, Mt. Tabor, Cana and Magdala.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

In terms of comparing the Galilee with other sites already inscribed, the comparative analysis provided by the State Party suggests other sites related to the birth of world religions that might be compared, concluding that the Galilee is unique in terms of the wider landscape providing the context for reflection. The State Party also compares the Galilean sites to those of Jerusalem, and concludes that the Galilee is complementary to Jerusalem, in terms of each site reflecting different aspects of Jesus' life.

The analysis does not attempt to undertake comparisons with other religious cultural landscapes associated with pilgrimage traditions.

ICOMOS considers that the comparative analysis is undeveloped in terms of comparing religious cultural landscapes, both inscribed and not inscribed. Furthermore the analysis does not give a detailed justification for the selection of sites, particularly in relation to the suggested enlargement of the nomination in the future.

ICOMOS considers that the comparative analysis has not justified consideration of this property for inscription on the World Heritage List.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- It is the cradle of Christianity.
- Its sacred geography is directly associated with its sacred history - Jesus, the Gospels and the traditions of Christianity.
- It is, and periodically has been, a pilgrimage destination for people from around the world.
- Overall the historical monuments and archaeological excavations within the sites and the open areas around them still reflect elements of the unique interaction between people and the environment that gave rise to one of the great religious and cultural traditions of human history.

ICOMOS considers that what has not been set out precisely is how the nominated property as a whole, in terms of its tangible attributes, reflects the sacred and spiritual traditions of Christ's youth and ministry and the subsequent traditions of pilgrimage from the 4th century onwards.

The information sources for the associations of the Galilee sites with pilgrimage from the 4th century

onwards are on the whole recognised as highly credible, based on a large body of literature, and narratives. However these do not relate to all the nominated sites – and those to which they do relate do not all demonstrate physical attributes that can be said to be tangible reflections of this evidence.

In terms of the association with Christ's Ministry, it is difficult to directly relate the sites to this ministry in tangible terms, although in a few of the sites some elements of their fabric are contemporaneous.

The sites are thus nominated for their generic association with Christ's ministry and the subsequent pilgrimage traditions and in turn are said to reflect a wider generic associations between the Gospels and the landscape of Galilee.

ICOMOS considers that it is difficult to evaluate the nominated property in the terms of the World Heritage Convention which recognises properties that manifest certain attributes that can be said to convey outstanding universal value as justified through the criteria. The nominated property is mainly linked to the justification for outstanding universal value through associations which are not in the majority of cases conveyed by the tangible attributes of the sites.

Integrity and Authenticity

Integrity

The sites on the Sea of Galilee, although nominated together as a cultural landscape, form part of a wider cultural landscape around the sea. They are small islands lining the sea-shore, one next to the other – each site separated by high fencing.

The immediate surroundings to some of the sites (within buffer zones) are under such distinct pressure from present and potential development that it is difficult to read the individual sites within the wider cultural landscape.

The sites nominated in the western cluster are small sites within large urban areas. Again it is difficult to perceive these as being part of the wider Galilee landscape or how they link to the eastern cluster. The link between all the sites is their association with the early life and Ministry of Jesus and the subsequent pilgrimage traditions. As these associations are not tied to tangible evidence in the majority of the sites, it is difficult to say where these associations begin and end.

In the case of the associations of Jesus' Ministry and the pilgrimage traditions, ICOMOS considers that it has not been ascertained to any degree how the attributes that reflect outstanding universal value are specific only to the nominated sites. There appear to be other Galilean sites that have not been included, such as the Greek Orthodox Church in Kafr Kanna which have similar associations to those nominated, and there are other key

pilgrimage sites such as Jerusalem, Bethlehem and the Mount of Olives. How the sites have been selected, and how the nominated sites together as a group manifest these associations through tangible attributes within the sites have not been established.

ICOMOS considers that it is therefore not possible to say that integrity has been established.

Authenticity

The State Party assessment of the authenticity is related to two main points: the direct link of the sites to the life and ministry of Jesus as expressed in the gospel narratives and their continuous connection to the Christian pilgrimage traditions that developed subsequently.

As set out above, ICOMOS notes that what has not been established is precisely what the attributes are that convey outstanding universal value for the property as a whole. In some cases, there appears to be no tangible evidence within the sites to link them either to the Ministry of Jesus or to the persistent traditions of Christian pilgrimage. There are sites that have been included, such as Mary's Well in Nazareth, which appear to have no linkages with the era of the youthful Jesus and the Galilean period of his ministry, or strong pilgrimage traditions. Magdala which has no specific links with Mary Magdalene, while the archaeological site of Chorazin, which reveals a typical late Roman/Byzantine village, and other sites have only generic links in terms of contemporary fabric.

Many of the sites now have modern buildings on them - for instance the Church of the Multiplication of the Loaves and Fishes was built in 1980 over 4th to 6th century ruins; The Church of the Primacy of St. Peter (Mensa Christi) was constructed in 1932, incorporating remains of Byzantine and Crusader Period churches; the Catholic Church of the Beatitudes is a 20th century building and is not on the site of the historic Mount of the Beatitudes; the Greek Orthodox church at Capernaum dates from 1925. These 20th century buildings cannot be said to have historic or architectural value. Their value can therefore only lie in their siting, or in the material beneath some of them, or in their traditional associations with Christ's Ministry. In the case of the earlier buildings that have been overlaid by much newer ones, some of these pre-date Christ's ministry so could have been standing in his lifetime; while others date from the 4th-6th century or later, in which case they can only be associated with later pilgrimage traditions.

There are no full structures contemporaneous with Christ's ministry, but the following have elements:

- Nazareth: the Grotto in the Basilica of the Annunciation
- Kafr Kanna (biblical Cana): fragments of middle Roman building at the Wedding church

The following sites have some elements associated with pilgrimage traditions dating back to the 4th-6th centuries, the earliest reference to pilgrimage traditions, or to Crusader times:

- Nazareth: the Grotto and remnants of 4th century fabric in the Basilica of the Annunciation;
- Tabgha: 4th century mosaic floor and small amount of 5th century fabric;
- Nazareth: parts of Crusader church in the Basilica of the Annunciation.

Some sites have Crusader fabric (Nazareth: walls of Crusader period underlying 20th century Church of St. Joseph, and Crusader fabric excavated near Mary's Well but not visible) – but do not have documented pilgrimage traditions.

Sites associated with pilgrimage traditions from the 4th century but with no early or Crusader fabric:

- Kafr Kanna
- Mount Tabor

The remaining sites therefore only have associations with the traditions of Christ's ministry and in some the fabric is of the 19th and 20th centuries.

ICOMOS does not consider that overall a case has been made for how the nominated sites as a group can be seen to display attributes associated with the outstanding universal value of the nominated property.

ICOMOS considers that the conditions of integrity and authenticity have not been met.

Criteria under which inscription is proposed

The property is nominated on the basis of criteria (iii) and (vi).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the Galilee is the primary geographical focus of the youth and ministry of Jesus and the sites included in the nomination have been either mentioned specifically in biblical texts or venerated by Christian pilgrims since the Byzantine Period. It is argued that a broader cultural context for this focus is provided by the layering of remains from the Roman, Byzantine and Crusader Periods – and the layering of meanings provided by centuries of veneration by pilgrims, while the evocative sacred landscapes, "the 5th Gospel", give material form to abstract biblical concepts.

The living cultural tradition is seen as being the tradition of pilgrimage that was established around the area from

the 4th century onwards and which was focused on places associated with Christ's ministry.

ICOMOS considers that although the tradition of pilgrimage to the Galilee area has been attested through documentary evidence to have existed in the 4th-6th and 11th-12th centuries, and that the sites of pilgrimage relate to those sites mentioned in the Gospels in connection with Christ's ministry, what has not been demonstrated is how the nominated property can be seen to manifest an outstanding reflection of that ministry or the traditions of Christian pilgrimage.

The nominated sites, apart from part of the Basilica of the Annunciation in Nazareth, and fragments of a middle Roman building at the Wedding Church in Kafr Kanna, have only general associations with Christ's ministry and with pilgrimage which are not reflected in attributes on the sites and cannot be said to present a unique or exceptional testimony to those traditions.

ICOMOS does not consider that this criterion has been demonstrated.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that pilgrimage activities have been part of the Galilee since the early days of Christianity, offering pilgrims a direct connection with biblical texts through following in the footsteps of Jesus and his Apostles. The term 'Land of the Bible' reflects the interrelationship of the biblical text, the words and actions of Jesus, with the historical landscape, the geography of the Galilee. It is argued that the spiritual, intangible aspect within the physical, tangible aspect creates an experiential whole of universal value.

ICOMOS considers that although five of the Galilean sites (Nazareth, Kafr Kanna, Tabgha, Mount of the Beatitudes and Capernaum) are associated with ideas of universal value through events or living traditions related to the youth and ministry of Jesus in the Galilee, these associations have not been shown to be either tangible or direct in the sense that the sites can be read and understood for these associations.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the serial approach has not been justified.

ICOMOS does not consider that the criteria and Outstanding Universal Value have been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The immediate surroundings to some of the sites (within buffer zones) are under such distinct pressure from present and potential development as to potentially reduce the value of the sites as part of the larger cultural landscape.

Sites in the eastern cluster appear to be especially vulnerable to development pressures from changing agricultural methods on land of the proposed nominated area and buffer zone controlled by tenant farmers. For instance, the Mount of the Beatitudes site is negatively affected by production methods of tenant farmers on land within 10 metres of the site boundary (such as large scale plastic 'netting'). A positive outcome is hoped for from current court cases between the farmers and the church authority, but change could take a very long time.

Recent constructions near the Mount of the Beatitudes already impair the overall quality of experience here and construction in the vicinity is likely to increase within a medium timeframe (2-5 years) as a result of property purchases in the area by international evangelist communities. Construction permits have already been approved to the expressed anxiety of the long established church authorities. A major infrastructure project (Highway 900), could also impact negatively on the Mount of the Beatitudes.

At Taghba, a major extension to the present facilities is under construction, to provide residential accommodation to the monastic community, and for conference/meeting purposes.

ICOMOS urges the State Party to reconsider the layout of Highway 900 and to consider mitigating agricultural policies that have adverse impacts on the settings of the sites and the overall cultural landscape in relation to how it reflects the Gospels.

Tourism pressures

There appears to be considerable pressure from tourism at many of the active pilgrimage sites.

The present assumed large-volume religious tourism/practice is of course difficult to recognise and separate from the large volume of more general tourism seen at the sites.

The proposed sites are all highly vulnerable in terms of fabric and environment.

ICOMOS considers that there is a need to protect the sacredness of the sites through better management of tourists.

The current approved Master Plan for the region allows for up to 6,000 hotel rooms to be constructed on the

north-east side of the Sea of Galilee from Tiberia upwards, with one half (up to 3,000) for the area of Migdal – which could mean a total of 120,000 to 150,000m² of buildings constructed here alone, of which up to 750 beds appear to be within the nominated areas.

Although only a minor component of this is currently built or under construction, ICOMOS considers that the likelihood of future large scale development should be regarded as high. For example, Magdala is surrounded on three sides by a tourism zone (only the side facing the Sea of Galilee is free and the new archaeological site is in acute conflict with approved plans for a commercial hotel), while behind Capernaum, there is a tourism zone above the site and one hotel has already been built in the zone.

Environmental pressures

Traffic on the Sea of Galilee is today restricted, partly due to very few docking facilities, but could increase significantly with tourism.

The Sea of Galilee constitutes a major component of Israel's drinking water. Its water level has in a few years reduced by nearly 5 metres, sinking 2 metres in less than 3 years. The sinking water level affects all the sacred sites and their connection to the water - for all the sites, traditional contact with the Sea is seen as essential. The growing beach-head is defined as state owned land, and use of it by the church authorities as trespassing. This strip of un-fenced new dry land provides access to the property of each church authority. ICOMOS regards this situation as highly problematic in terms of the reduced ability of church authorities to protect their own land from unwelcome visitors.

Natural disasters

Earthquakes are the main natural risk, particularly around the Sea of Galilee.

Impact of climate change

There is major concern about the falling water levels of the Sea of Galilee.

ICOMOS considers that the main threats to the property are development and tourism pressures. Furthermore, ICOMOS urges the State Party to reconsider the layout of Highway 900 and to consider mitigating agricultural policies that have adverse impacts on the settings of the sites and the overall cultural landscape in relation to how it reflects the Gospels.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries are generally well defined. They are fairly tightly drawn around the monuments or sites, which are surrounded by quite large buffer zones.

They reflect existing protection areas - for example, the northern limit of the Mount of the Beatitudes (landscape) and the southern limit of Kafr Kanna (urban environment).

The boundaries of some of the buffer zones were amended in the Management Plan submitted in November 2009.

The buffer zones appear to have been put forward as a means of offering protection for areas currently without adequate control. In Nazareth, the extensive buffer zone around the two churches may prove to give vital protection to part of the old town but could be argued to be in disharmony with the needs of the old town. As many of the nominated sites do not have high tangible value, ICOMOS considers that it is not clear what role the buffer zones will have, or the controls that they might impose.

The proposed buffer zone for Chorazin follows the landscape ridges, but is importantly interrupted by regional road N°887 that connects numerous inland settlements with the Sea of Galilee – a road interpreted as becoming increasingly important. The buffer zone also includes development areas.

For Mt Tabor the buffer zone runs along the base of the mountain, roughly coinciding with the start of the national park areas. The reasons for its deviations from these are not clear.

ICOMOS considers that for the buffer zones to be a realistic instruments in planning terms, detailed planning provisions/regulations would be required setting out what could and would be controlled. None of the above is reflected in the submitted material.

ICOMOS considers that the boundaries of the nominated areas encompass the built fabric and are adequate; the rationale for the boundaries of the buffer zones in terms of what is to be protected is not clear.

Ownership

The sites are mainly owned by four organizations as well as by the national government: Greek Orthodox Jerusalem Patriarchy; Custodia Terrae Sanctae (Franciscan); Catholic Order of St. Benedict; Association of the Franciscan Church in Rome; and National Reserves and Parks Authority.

The ownership matrix in the nomination dossier does not include Mary's Well, which is owned by two other organizations. The matrix also fails to distinguish between publicly and privately owned properties within Magdala and Chorazin.

Protection

Legal Protection

There are strict laws in place for the protection of cultural heritage sites:

- Antiquities Law (1978): Applies to pre 1700 objects;
- Planning and Building Law (1965): Operates on three levels (national, district, local) and offers protection for antiquities, holy places and landscape features;
- Protection of Holy Places Law (1967);
- Amendment No. 31 (Site Protection Scheme) (1991): Introduces inventories and expropriation procedures; and
- National Parks, Nature Reserves, National Sites and Memorial Sites Law (1998): Provides possibility to declare, establish and maintain such sites.

Archaeological remains of the nominated sites are protected under the Antiquities Law of 1978, with the sites being declared as Antiquity Areas. Above ground heritage is protected through National Master Plans and the Planning and Building Law. Amendment No. 31 to this law established and defined the need for national inventories of heritage. These are not yet in place.

Under the 'Holy Places Law', a site may be declared as a 'Holy Place'. Although currently used for the Baha'i World Heritage property, this measure is currently being discussed in relation to the protection of the sites on the Sea of Galilee. These discussions are at an early stage.

Potential conflicts between protection of heritage sites and forces of urban development/ construction are apparent at Magdala and Capernaum – see above. Although current heritage protection appears to be based on robust legislation, ICOMOS considers that it remains unclear how or to what extent future protection can remain unaffected by a hierarchy of planning documents rooted in political rather than legislative dimensions; nor how the legislation accommodates the needs of heritage protection in the light of already approved and expected-to-be-approved construction permits close to nominated sites.

Other national level plans deal with tourism and shore-land use of the seas, including the Sea of Galilee.

Traditional Protection

Various members of religious orders are involved in the day-to-day operations of their sites. Relationships between the State Party and the Christian church authorities are complex, even characterised by strong tension – as they also are between the church authorities themselves.

The Church Authorities only received the 2009 nomination dossier from the Israel Antiquities Authority (IAA) in a meeting on 9th June 2009. It appears that local representatives have little knowledge of the nomination, its contents or frame for 'their' property. A wish by the Church Authorities not to involve them in endless, fruitless and individually coloured discussions was the 'secondary source' reason given by IAA representatives.

There remains concern that the church authorities are not really interested in the nomination, as they prefer things as they are, and consider that they would not achieve any benefits through World Heritage status.

Effectiveness of protection measures

Generally, the protective measures are strong on the national and district levels. On the local level, however, economic considerations rather than cultural heritage protection sometimes drive decision-making. Also, land use planning allows for conflicting uses in areas adjacent to cultural heritage sites.

ICOMOS considers that the legal protection in place is generally strong, although there are conflicts between land use planning and cultural heritage protection which need to be resolved.

Conservation

Inventories, recording, research

The nomination dossier falls short of providing a complete inventory of sites and buildings. ICOMOS understands that government databases still do not contain much detail material on the properties of these church authorities – possibly illustrating the relative independence or autonomy that the Christian church authorities have established.

Present state of conservation

Recent buildings/structures are generally well-maintained and in good condition. As noted earlier, almost all of the buildings in the property can be considered relatively recent constructions.

On the other hand, the remains in archaeological sites, which are described as being in poor to good condition, are exposed to weather conditions without protection. This has and will continue to have a negative impact on their integrity.

More specifically ICOMOS notes that there are problems with the remains at Magdala; the archaeological site of the ancient chapel near Tabgha, which is directly associated with the Sermon on the Mount, is in ruins and needs to be preserved in an appropriate way; also in Tabgha, part of the mosaics in the Church of the Multiplication of the Loaves and the Fishes are in critical condition. Conservation needs to be aligned with controlled access to prevent further deterioration; and there are problems with the mosaics on cement at Capernaum.

Active conservation measures

There appear to be periodical controls for archaeological sites; and the various religious bodies maintain extensive teams of contract and regular staff to maintain their buildings and grounds, including the conservation of their sites. It is unclear as to how much on-going access there is to professionally trained conservators.

Maintenance

See above comments under *Active conservation measures*.

Effectiveness of conservation measures

It is hard to judge the effectiveness of the conservation measures for the more recently constructed buildings/structures in relation to their value as buildings, but most seem in good repair. In contrast, the conservation measures for the archaeological sites appear to vary in application and effectiveness, and there are issues regarding weathering and the exposure of the remains to the weather.

ICOMOS considers that the conservation of the sites is good for recently constructed buildings/structures and poor to good for archaeological sites, for which more specific attention is needed.

Management

Management structures and processes, including traditional management processes

The sites are located within five local authorities and municipalities that are coordinated under the Northern District Planning Commission.

More specifically:

- Basilica of the Annunciation (*Franciscan*), Church of St. Joseph (*Franciscan*) and Church of St. Gabriel (*Greek Orthodox*) are under the Nazareth Municipality;
- Wedding Church (*Franciscan*) and Church of St. George (*Greek Orthodox*) are under the Local Council of Kafr Kanna;

- Magdala, an archaeological site (*Franciscan*), is under the Jordan Valley Regional Council;
- Church of the Multiplication of the Loaves and Fishes (*Benedictine*) and Church of the Primacy St. Peter (Mensa Christi) (*Franciscan*) are under the Jordan Valley Regional Council;
- Mount of the Beatitudes (*Franciscan* (Rome)) is under the Jordan Valley Regional Council;
- Capernaum, an archaeological site (*Greek Orthodox, Franciscan and National Reserves and Parks Authority*), is under the Jordan Valley Regional Council;
- Chorazin Park, an archaeological site (*National Reserves and Parks Authority*) is under Mevuot Hermon Regional Council; and,
- Mount Tabor (*Franciscan and Greek Orthodox churches and monastery*) is under the Regional Council of Lower Galilee.

National and District zoning plans provide the umbrella for comprehensive planning and coordination. Each of the Church Authorities is responsible for the management of their sites individually and independent of each other, but within the overall planning framework.

The management framework has been set out in a supplementary document of November 2009. This lists all the relevant authorities, laws and plans. This stresses the fact that each of the individual church authorities has their own individual management systems. There is therefore no one over-arching framework. This management structure was approved by the District Planning Commission in August 2008.

Policy framework: management plans and arrangements, including visitor management and presentation

At present, there is no formal management plan to coordinate the overall management of the property. In fact, it is argued that each owner, to date, has demonstrated its capacity to responsibly manage its own site and that it is not considered desirable to unify and standardize the management strategies, principles, policies. It is further argued that any attempt to do so 'would strongly aggravate the Custodians and create alienation'. Nevertheless it has been agreed (in a meeting in June 2009 to establish a forum – see below) that coordinated management would be desirable and some sort of Master Plan for the overall property is needed.

This coordinated approach could be beneficial in raising standards. An analysis of some of the decisions made by owners reveals actions that would seem to undermine some of the cultural values of their sites. For example, (1) the construction of large-scale buildings of weak architectural quality (eg. Mount of the Beatitudes); (2) the erection of temporary structures that affect the sacredness of sites; (3) the inappropriate placement of tourism facilities, thereby undermining the experience and perception of the setting and landscape (eg.

Tabgha); and (4) the construction of new facilities in the immediate surroundings (Magdala and Tabgha).

A voluntary management Forum was agreed in principle by the key authorities in January 2009, and held its first meeting in June 2009. Once established, this should be a vital instrument for discussing topics of mutual concern, and for working to develop coordinated arrangements and in time for developing a Master Plan.

The Forum would need to develop a realistic mandate and goals for its work and operational procedures for collaboration and day-to-day site management. In view of the present sensitive relationships between all the stakeholders, the Forum could need support and assistance.

The current impact of tourism on the main pilgrimage sites is posing a challenge, and especially the impact of tourists as opposed to pilgrims. Tourists typically make short visits; pilgrims, usually in small groups and accompanied by a priest, stay up to several hours. The first group tends to have little interest in the spiritual dimension of the site, while the second group craves quiet for contemplation and reflection. This conflict is not unique, but ICOMOS considers that it needs to be addressed in terms of the values attached to the main pilgrimage sites.

There are inadequate places for cars and buses and parking areas are too near the sites. Toilet facilities are lacking in some sites and will be difficult to install in terms of visual impact.

ICOMOS notes that there is little interpretive information at the various sites, with the exception of the Basilica of the Annunciation in Nazareth. Given the pressure from tourists, this could be seen as an advantage. Pilgrims have little need of such interpretation.

Risk preparedness

There is no information provided about risk preparedness.

Involvement of the local communities

Only in Nazareth and Kafr Kanna do the sites seem to present any real relationship to a local community. Little is known about the attitudes of the Christian communities or the adjoining local communities.

Resources, including staffing levels, expertise and training

Financial resources are provided by individual owners and seem to be adequate for some of the sites, although those sites that are mainly archaeological in nature seem to require more funding.

The properties are managed by resident church personnel and seasonal volunteers. In terms of specialist staff, it is stated that these are brought in as required.

Effectiveness of current management

On a site-by-site basis, current individual management systems seem effective for some aspects, particularly day-to-day management. However, as mentioned above, there are concerns about a series of decisions that have affected, and continue to affect, the cultural values of the sites and more attention needs to be given to strategies for protecting the setting of sites and for visitor management.

Nonetheless, through a courageous process of preparing the nomination, highly significant progress has been achieved in building trust between the State of Israel and the stakeholders of the sacred sites. Levels of contact and trust are in the making that should prove to extend beyond personal relationships to a more effective and coordinated basis for management.

ICOMOS does not consider that the current individual management systems deliver the sensitive management that is needed for all aspects of the management of the sites and their settings, and considers that more work needs to be done to strengthen collaborative arrangements.

6. MONITORING

Little information is given in the nomination dossier regarding the monitoring system and the relevant indicators for the different kinds of sites (buildings / structures as opposed to archaeological sites).

ICOMOS considers that there is not sufficient information to judge the adequacy of sites monitoring.

7. CONCLUSIONS

Sites around the Sea of Galilee associated with Christ's ministry became pilgrimage sites for two centuries from the 4th century AD, just over three hundred years after Christ's death, a tradition that was recorded by contemporary pilgrims, and fostered buildings for worship and to house pilgrims. This tradition was re-invigorated at the time of the Crusades for a further two centuries, but then lay dormant for six centuries until the end of the nineteenth century. By the 20th century some sites were abandoned as living villages; others have been the focus of considerable building activities to create new churches and monastic buildings of no special architectural value and which overlaid the surviving early fabric; and the western villages have become large towns. All around these sites the Galilean landscape has been transformed by modern and comparatively intensive agricultural techniques and to a

degree by infrastructural developments and the provision of pilgrimage and tourism facilities.

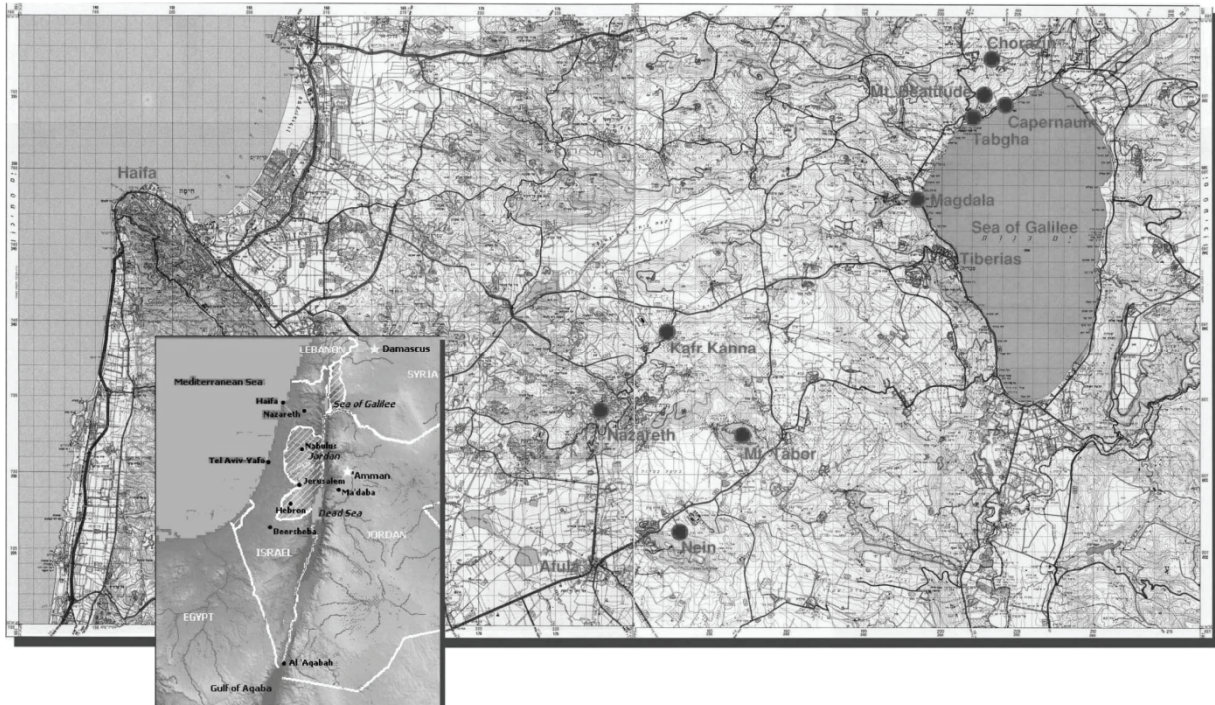
The intangible links that relate the nominated sites to Christ's Ministry, and thus to the early pilgrimage traditions, remain, but the tangible links with the time of Christ's ministry, with the earliest phase of pilgrimage or with the Crusader period are extremely slight and only exist in some sites. The Galilean landscape that until the mid 20th century appears to have remained to a large degree evocative of the rural landscape of the previous two millennia cannot now be said to provide that spiritual link with the landscape of the Gospels.

It is undoubtedly the case that the substantial spiritual and religious living traditions of some of the nominated sites are of great significance, but ICOMOS considers that this significance is not manifest in a form that either substantiates the long antecedents of the pilgrimage traditions, or evokes the rural landscapes of the Gospel period. It is thus difficult to see how sites can be defined that convey, through their attributes, these early associations or can be read as a link between the present day pilgrimage activities and the two great earlier periods of pilgrimage that in turn link the sites to the era of Christ's lifetime. Moreover the logic for the separation of places associated with Christ's ministry in the Galilee from other sites associated with his life and work has not been substantiated, nor the justification for the precise selection of sites and thus for the overall serial approach.

ICOMOS considers that the nomination appears to have brought positive benefits in terms of allowing dialogue between the different Christian groups around the Galilee and hopes that this collaboration will continue and develop and allow for better identification, recording and conservation of what remains from the period of Christ's ministry.

Recommendations with respect to inscription

ICOMOS recommends that The Sites of Christianity in the Galilee, State of Israel, ***should not be inscribed*** on the World Heritage List.



Map showing the location of the nominated properties



Nazareth, view of the Franciscan Terra Sancta



Kafr Kanna, Franciscan Wedding Church



Mount Tabor, Church of the Transfiguration



Archaeological excavations of the city centre of Magdala



Northern shore of the Sea of Galilee, aerial view of the Mt. of Beatitude



Northern shore of the Sea of Galilee, the archaeological site of Chorazin

The Canal Area of Amsterdam (Netherlands) No 1349

Official name as proposed by the State Party:

The seventeenth-century canal ring area of Amsterdam inside the Singelgracht

Location:

City of Amsterdam, North Holland Province
The Netherlands

Brief description:

The historic urban ensemble of the canal area in Amsterdam was designed at the end of the 16th century and completed in the 17th century. It was a project for a new 'port-city,' to be built around the old town between the old defence canal and the new Singelgracht Canal. A network of canals in concentric arcs forms the main infrastructure, along with radial canals and streets. With its regular building plots, the successive construction campaigns permitted the development of a vast, homogeneous urban ensemble, but one which included a large architectural variety, with gabled houses and numerous monuments. This model town planning, the first truly 'ideal city' in Europe, came about at the peak of the economic, port, cultural, and artistic development of the United Provinces.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *group of buildings*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), Annex 3, this is also a *historic town* in the category of *inhabited historic towns*.

1. BASIC DATA

Included in the Tentative List: 26 September 1995

International assistance from the World Heritage Fund for preparing the nomination: None

Date received by the World Heritage Centre: 30 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International

Scientific Committee on Historic Towns and Villages and independent experts.

Literature consulted (selection):

Agence Nationale pour l'Amélioration de l'Habitat (ANAH). *Les politiques de réhabilitation urbaine en Europe du Nord: Rapport Amsterdam*, ANAH, Brussels, 2003.

Brekelmans, Marijke L.A.J.T. *Hollandse Renaissance als bron van de Nieuwe Kunst*, Koninklijke-Nederlandse Oudheidkundige Bond, Amsterdam, 1989, pp. 22-41.

De Zwaan, J.A. *Amsterdam, Monumentenstad*, Bond Heemschut, Amsterdam, 1975.

Dutch Ministry of Cultural Affairs, *Dutch Arts: Architecture in The Netherlands*, International Information Department of the Dutch Ministry of Cultural Affairs, Rijswijk (Netherlands), 1991, 62 pp.

HCR, Historical River Centers; *La ville historique et l'eau: Florence, Séville, Strasbourg*, CUS, Strasbourg, 2006.

Levend/Living Amsterdam, hoe een stad met haar monumenten omgaat/A city protects its historic past, Stichting Amsterdam, Amsterdam, 1987.

Zantkuyl, H.J., *Restaureren in Amsterdam*, KNOB, Amsterdam, 1975, pp. 80-84.

Technical evaluation mission: 23 September-2 October 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 18 December 2009 regarding the following points:

- Revision of the property boundaries;
- Information about current development projects;
- Information about issuing building permits;
- Information about possible development projects;
- Implementation and operation of the management system.

The State Party responded on 26 February 2010. The analysis of this documentation is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Amsterdam is a commercial and port-city, dominated by its merchant and middle-class elite, especially in the 16th and 17th centuries. There are virtually no prestigious buildings apart from the large public edifices, which in any case do not concern the nominated property. The city is organised around its port and the canals that govern its merchant activity. It is divided into districts in which houses and warehouses alternate, expressing a culture and traditions essentially linked to maritime trade. The nominated property aims above all to express these

values, within a large-scale hydraulic, urban, and social programme. It was created at the height of the political and economic power of the United Provinces. It represented a town-planning project that was the largest in Europe in its day (see History).

The nominated property corresponds with the urban development of Amsterdam to the west and south of the historic old town and medieval port at the end of the 16th century and throughout the 17th century. It is a vast ring-shaped zone that encircled the old town and it was accompanied by the repositioning inland of the city's fortified boundaries, the Singelgracht. This was a long-term programme that involved extending the city by draining the swampland using a system of canals in concentric arcs and filling in the intermediate spaces. The canals were linked to the Amstel and the IJ, the confluence of which had provided the site for the city's founding port. The canals then provided interior communication channels connecting with the rivers and the port, while the backfill provided building land for houses, shops, and warehouses for the large maritime companies such as the famous VOC (Dutch East India Company).

Towards the interior, where it meets the old historic centre, the nominated property is limited by the western section of the old 15th–16th century urban boundary, converted into a canal, the Singel. The property includes its embankments and houses. To the south, the internal boundary of the property is extended by a short section of the Binnen-Amstel River, then by the start of the Nieuwe Herengracht canal district.

To the east the property is bordered by a radial section of the Plantage Muidergracht canal. Then to the south, its boundary doubles back to the Binnen-Amstel via the Nieuwe Achtergracht.

To the west of the river, the entire Prinsengracht ring-shaped canal and the houses that line it form the outer limit of the nominated property.

To the north, beyond the Brouwersgracht radial canal, the property extends as far as Haarlemmerstraat and its houses, on the property side of the railway line.

Within the property the network of canals is extended to include two ring-shaped canals parallel and similar to the Prinsengracht and the Singel – the Herengracht and the Keizergracht. The main waterways connect via small radial orthogonal canals to the Singelgracht ring canal which delineates the outer buffer zone of the property.

The relatively narrow embankments of the canals form paths, often tree-lined, to allow for circulation, as well as radial streets and numerous bridges at the intersections with the canals. The property includes a certain number of locks, notably the Amstelsluizen built in the 17th century.

This is a large-scale urban programme that was completed in several stages, starting in the later years of the 16th century and continuing throughout the 17th century and beyond for the completion of the built environment. It imposed stringent conditions on purchasers, notably strict regular plot sizes, alignments, facade heights and widths, and free circulation on the embankments in front of the houses.

The urban ensemble forming the property is a dense illustration of 17th century Dutch architecture, along with some later developments. It highlights functional types linked to an urban habitat 'on the water,' combining the requirements of maritime trade and its global warehousing functions. It is evidence of specific urban requirements, such as the merchant's house built on the canal, with its high narrow gable facade, the living areas in the lower levels and storage of goods in the upper parts of the building. Goods were hoisted by pulley directly from the embankment or boat to the attic, through an opening at the top of the gable.

The gable facades are lit and dominated by regular rows of large windows, framed by unadorned brick walls of three to six storeys. The gable pediments vary greatly, bearing the main decorative elements of the building exteriors. They give them an individual, personalised style and are testimony to stylistic changes throughout the 17th and 18th centuries, specific to the architecture of the United Provinces. The stepped facades constitute a point of departure in the architectural history of the gable, anchored in local traditions derived from the Renaissance and the Middle Ages. Baroque and classical European influences then took over, leading to curved, triangular, scroll, and bell-shaped forms matching the attic opening, followed later by cornice pediments. These basic motifs take on a multitude of different compositions, of which the 'neck gable' (*halsgevel*) developed by Philips Vingboons was to become a characteristic and popular trait of Amsterdam architecture that spread to many countries.

While housing largely dominates the urban fabric, it also includes large warehouses that span several plots. Mainly erected in the 17th century, these sometimes underwent redevelopment in the following centuries. They are sited between the houses and still retain the principle of gabled facades, giving the ensemble a stylistic continuity.

Churches, generally Protestant, but also of other denominations, are included in the urban ensemble. They sometimes introduce a striking monumental break in terms of volume and/or height because of their bell towers (Westerkerk and Noorderkerk, Krijtberg Catholic church). Nonetheless, these religious buildings and the charitable works associated with them still comply with the general principle of a layout based on plots, the rules for alignment, and the gabled facades in various styles, adding a spiritual and religious personalisation: very late Gothic (Onbevlekt Hart van Maria), Baroque (De Duif), classical cornices (St Ignatius), or more composite

facades using an interplay of triangular pediments and circular motifs (Adventskerk).

There are only a few rare, small squares in the canal area, but there are many trees planted along the canals.

This urban extension was the largest and most homogeneous of its time. It led to a hydraulic and urban ensemble in close symbiosis, forming a unique and characteristic urban landscape. Four thousand buildings in this city, which is symbolic of perfectly controlled urban development around its canals, bridges, and locks, are now protected at the national and municipal levels.

History and development

In the 13th century Amsterdam was a small fishing village on the banks of the Amstel River and its mouth on the IJ, an arm of the Zuiderzee inlet. The name comes from the combination of Amstel and Dam, the latter word indicating a dyke or dam built to hold back the sea. This earth levee was also used to carry traffic and was extended by a bridge over the Amstel, made toll-free by a decision of the Count of Holland, Floris V. Amsterdam was proclaimed a city in 1306, and by the end of the Middle Ages it had become an important centre for maritime trade in northern Holland as its port developed on the river mouth. It mainly traded with the Hanseatic League, which it joined in 1369; but it was Antwerp that still dominated the maritime trade of The Netherlands and the North Sea.

Protected behind its dyke, the city grew around the port and Damplein, but the marshy soil had first to be drained and many houses built on piles. At that time it was restricted inside an initial semi-circular canal, the Singel, designed both for drainage and for military defence. In 1452 a fire destroyed almost all the city's timber-framed buildings, and brick became the most common material for rebuilding the city. The city built fortifications along the Singel at the end of the 15th century.

The Netherlands passed under Spanish rule in 1515 with the accession of Charles V. The country rose in revolt in the 16th century in defence of public freedom and religious tolerance, since much of the population had espoused the Reformation. After a period of wars and compromises, the seven provinces of the northern Netherlands formed the independent United Provinces in 1581. This situation attracted rich Jewish families, Antwerp traders, and French Huguenots in particular to Amsterdam, the largest city in this relatively dispersed federation without any prince regent. It became a land of refuge and of free-thinking. For two decades the military situation, the naval in particular, with Spain remained tense; there were many conflicts, but maritime trade and warehousing activities developed quickly. The Dutch East India Company (VOC, 1602) and the Dutch West India Company (WIC, 1621) were created to trade with the Indian Ocean and the Americas respectively. The

17th century was a particularly flourishing period for the United Provinces, whose sovereignty, economic importance, and cultural uniqueness were fully recognised by the Treaty of Westphalia (1648).

At the end of the 16th century, Amsterdam developed very rapidly and the port-city soon ran out of space within the medieval confines of the Singel. A vast project, for defence and urban growth, was carried out in the 16th and 17th centuries. The new line of defence based on a new boundary canal, the Singelgracht, designed by Daniel Stalpaert, extended the city outwards by around 800m. The Singel was then transformed into an inland port (1601–1603). The positioning between the latter and the Singelgracht opened up space for a new urban area that still had to be drained and backfilled. The project, conceived by Hendrick Jacobszoon Staets, led to the construction of a new port and trading city, built along a network of three new main canals which made it possible for trading vessels to dock. They were in the form of a series of concentric arcs, parallel to the Singel and adopting the same hydraulic morphology. They were dug simultaneously starting from the IJ, towards the south. The two first sections took the work as far as the Leidsegracht radial canal, allowing backfilling and building to begin; the third section extended the work to the Amstel around 1620. Following exactly the same principles, a fourth section was undertaken beyond the river towards the 'eastern islands' in the mid-17th century.

However, regular planning following the annular canals stopped at the outermost edge of the three, the Prinsengracht. In its western section, between it and the new Singelgracht defence line, the Jordaan district followed the old plot boundaries of the gardens after which it is named, breaking with the rectilinear pattern of the initial plans. This district, which was originally more working class and inhabited by immigrants, is the only part of the nominated property at its urban boundary with the Prinsengracht Canal.

This planned extension of Amsterdam is the work of the mercantile middle class that ran the city. It managed the projects financially, supervised the drafting of the plans, coordinated the work, issued building regulations, and supervised their application. In meeting the needs of trade, practical functionality and hydraulic and military safety were the driving forces for the project. The general rise in wealth of the city and its inhabitants in the 17th century made it possible for this ambitious urban and port extension to be completed in accordance with the initial project.

Amsterdam's growth made it one of the great European capitals, and its port became the most important for international maritime trade. In 1685 the city's *per capita* income was four times that of Paris, allowing the quantity and quality of the real-estate development along the canals throughout the century. Amsterdam continued to develop its tradition as a mercantile, middle-class, humanist, and tolerant city. It continued to welcome

immigrants, notably the French Huguenots after the revocation of the Edict of Nantes and more generally the free-thinkers of Europe. In this way, it enriched its economic and artistic elite, but also its expertise with the arrival of highly skilled craftsmen. At that time Amsterdam was one of the cultural capitals of Europe and among the most brilliant and most dynamic, notable for its printers, whose products were sold throughout the world.

The orderly growth of the city's new districts along its canals became a reference urban model, an image of the ideal city that would be adopted and repeated right across 18th century Europe.

The example of this city, enriched by its maritime trade, defended by its canals, dykes, and locks, and never flooded throughout its entire history, attracted the attention of all the great European builders of the day. It directly influenced civil engineering and town planning in England, Sweden, and Russia, where Peter the Great recruited its craftsmen and engineers to create Saint Petersburg, in similar swampy land on the banks of an estuary.

The end of the 18th century and the beginning of the 19th century saw the prosperity of the city and its port decline. Wars against France and England undermined its maritime trade. The renewal of the port would come in the 19th century as a result of the creation of canals - the North Holland canal in 1825, followed by the direct connection with the North Sea in 1876. Its traffic is still, however, less than that of Rotterdam, close to the mouths of the Rhine and the Meuse.

A trend towards converting the warehouses into apartments began in the 18th century and gathered pace as time passed, in response to the growing urban population, and then to the city's role as a capital demanding greater services. In the 19th and early 20th centuries office buildings were erected, in harmony with the old context in terms of scale, architecture, and materials. However, the arrival of the railway and the central station on the banks of the IJ cut the city off from its direct contact with the inlet.

In the 20th century Amsterdam became an important administrative and financial centre. It shares the role of political capital of the Kingdom of The Netherlands with The Hague. In World War II around 100,000 Amsterdam Jews were deported, the majority of whom lived in the canal districts. The material damage caused by the war was relatively minor.

Retail shops and growing tourism are reflected in the city's changes in the second half of the 20th century.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The nomination includes a detailed comparative analysis with other cities. The comparison begins with other European cities, such as Antwerp, Bruges, Mechelen, and Ghent in the former southern Netherlands (Belgium), Venice, Rome, Palmanova, and Genoa in Italy, Friedrichstadt, Berlin, and Potsdam in Germany, Copenhagen in Denmark, Gdańsk and Toruń in Poland, Saint-Petersburg in Russia, Paris in France, and London in the United Kingdom, along with Québec City in Canada.

In all these cities, urban districts and architectural ensembles were planned and built; some of them had to meet the same economic demands because of their status as commercial ports open to the world or as capital cities. In none of them, however, was there such complex urban development, including canals, streets, and buildings, implemented in as planned a manner or on such a large scale. Here hydraulic engineering goes hand-in-hand with town planning.

The hydraulic engineering applied in Amsterdam was unique in its day and it transcended the geographical constraints of the site, unlike in the other water cities. Bruges, Ghent, and Venice were created around natural waterways, and the canals are often no more than sections of embanked waterways. Only Antwerp, which experienced a similar destiny, albeit on a smaller scale and a century earlier, presents a similar early urban development, although on a smaller scale. For its part, Saint Petersburg was built starting in the early 18th century, closely following the direct example of Amsterdam; it was the capital city of a vast empire, but it had no role as a trading or middle class city. All the grand palaces and the urban development along its canals are very different.

Secondly, a comparison is made with other cities in modern Netherlands, such as Leiden, Delft, and Utrecht. Whilst in these cities the hydraulic expertise is similar, the scale of the development is far less than that in Amsterdam.

ICOMOS considers that the choice of cities for the comparison is overall well made. However, certain analyses have not been carried through, notably the comparison with Antwerp, a port-city which in terms of history and development most closely resembles Amsterdam. Its port expansion preceded that of Amsterdam and was in all likelihood the source of its inspiration. A network of canals was also drawn up there in the early 17th century, before the Escault was closed for political reasons, and thereby changing North Sea trade in favour of Amsterdam.

The comparison could have been extended to include certain other cities established by the Dutch in their

colonies (in Indonesia for example) and ports that were directly influenced by the urban extension of Amsterdam, notably New York (United States) with the urbanisation of Manhattan.

Methodologically, ICOMOS considers that the comparison could have been more coherent by being based on more precise town-planning criteria – town-planning typologies (half-moon or concentric circles); canals, their configuration and surrounds; architecture; and the political, economic, social, and cultural context of the project.

Despite certain remarks about the form and content, ICOMOS notes that the comparative analysis has been made using properties of similar value, whether inscribed on the World Heritage List or not, or listed at the national, regional or international level.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value for the following reasons:

- The hydraulic and urban programme for the district inside the Singelgracht in Amsterdam was carried out on the basis of a series of main canals arranged in concentric arcs of a circle around the old town. It was simultaneously a project for drainage and sea and land water management, for the creation of artificial land for urban development, and for the organisation of water transport and port activities that demonstrate the high level of Dutch engineering.
- The urban development of the canal district was entirely carried out in the 17th century. It occupies regular lots drawn up on an overall orthogonal plan formed by the main canals and radial passages. It now includes around 4,000 houses, warehouses, and religious buildings that are listed as historic monuments.
- The district developed from private housing with flat gable facades, with large openings and pediments with a great variety of stylistic forms, including the city's typical neck gable. The architectural and urban ensemble created around the canals is testimony to the flowering of a middle-class and humanist culture based on economic success and tolerance.
- Amsterdam's urban success in the 17th century is attributable to an efficient system of controlled development. It was implemented and

administered by the Municipal authorities, representatives of the middle class, and the merchant elite, most of whom had established themselves along the new canals.

- The property presents a fully implemented example of large-scale town planning that was a reference model worldwide from the 17th to the 19th century.

ICOMOS considers that the elements put forward by the State Party to express the value of the nominated property are fully acceptable.

Integrity and authenticity

Integrity

The overall plan of the canal district inside the Singelgracht in Amsterdam has remained virtually unchanged since its creation in so far as the streets and location of the building plots are concerned. The tree-lined canal streets are unchanged, as are the majority of the narrow streets that connect the historic centre to the rest of the city. The integrity of the ensemble of streets and the hydraulic network is presented by the State Party as being especially authentic.

However, three radial streets were widened at the end of the 19th century, especially Weesperstraat, which was converted into a major arterial road leading to the city centre; its modern buildings affect the visual integrity of this area of the property.

Almost everywhere the nominated property reveals a unique hydraulic and urban organisation designed to create building land and control water. It includes all the attributes needed to express its value. The hydraulic system still operates in accordance with the same principles. Most of the components of the hydraulic system, locks and timber lifting bridges, have undergone technical modifications and they have sometimes been reconstructed in order to adapt to the modernisation of land and maritime transport. The integrity of the hydraulic ensemble and the associated structures is present in terms of their overall water management; the notion of integrity and hence of authenticity is, on the other hand, relatively weak for the engineering structures viewed individually.

The vast majority of the property's buildings, notably along the Prinsengracht, Keysergracht, Herengracht, and along a good part of the banks of the Singel, correspond with the original constructions, with traditional gabled facades. Few lots have been consolidated to provide larger built units. The external appearance of the buildings has been conserved in the vast majority of cases for this central zone of the nominated property, and the state of conservation of the facades is generally good. The architectural and visual integrity of the heart of the canal district is therefore good.

Nonetheless, ICOMOS notes that the situation differs considerably at the south-eastern and northern ends of the property. In addition to the arterial road mentioned above, to the east, the visual integrity of the northern zone is undermined by the close proximity of the large buildings in the Westerdok quarter, in the current port.

ICOMOS considers that the integrity of the property is adequate in so far as the conservation of the canals and the streets is concerned, since they still fully comply with and reflect the original plans. The integrity of the hydraulic operation of the ensemble has also been conserved; for obvious reasons of technical, economic, and urban adaptation, the individual engineering structures have undergone modification. The urban landscape presents a good level of integrity and is well preserved, notably the central part of the main canals; it is less so in the eastern section, because of the arterial road and its anachronistic buildings, and in its northern end, with its lesser landscape interest undermined by the visual presence of the large neighbouring buildings.

Authenticity

The same elements that form the bases for or affect the town-planning integrity are found in terms of their authenticity.

The vast majority of the buildings along the canals and radial passages have been retained on their original sites. The gable facades and their decorative elements, generally perceived by the owners to be of value, have been relatively well conserved. The use of the buildings has, however, changed; warehouses have been converted into residences or offices, the attics into apartments, the ground floor into shops, cafes, or small thematic museums. Changes in fashions for colours and certain aspects of external restorations have affected some buildings, but the individual authenticity of many public and private buildings is good, or at worst satisfactory.

On the other hand, the widening and conversion of Weesperstraat into an arterial road in the 1960s went hand-in-hand with the construction of modern buildings that bear little stylistic relationship with the old districts. The buildings are sometimes quite tall and often massive in proportion. More generally, the zone beyond the Amstel is less authentic because of the presence of taller buildings that bear no relation to the property's value.

Similarly, the new shops and facades on Amstelstraat and Vijzelstraat, as well as the development of Rembrandt Square, no longer bear any resemblance to the characteristics of the initial urban fabric.

ICOMOS considers that, despite the transformation that part of the urban structure of the nominated property has undergone throughout its history, it still presents authentic and large-scale testimony to the creation *from the ground up* of a port-city and to its economic and

cultural development in the 17th and 18th centuries. In its letter of 18 December 2009 to the State Party, ICOMOS recommended reviewing the perimeter of the nominated zone so that it demonstrates adequate and recognized authenticity.

In its reply of 26 February 2010 the State Party undertook a detailed analysis of the streets, blocks of houses, and visual perspectives affected by the presence of anachronistic buildings, along with the historic justifications provided by old maps. This additional analysis reveals the good quality of the historic urban fabric in the northern section, even though the visual perspectives are affected by buildings located outside the property. The eastern section is a major component of the historic urban development of the 17th and 18th centuries, to which it still bears witness with its many authentic historic buildings, despite the passage of the Weesperstraat, which of course affects the integrity of this zone. For the State Party, the central Binnen Amstel waterway must absolutely remain part of the property and not just the border. However, in order to take account of the buildings that bear no relationship with the property, the State Party suggests two reductions: one at the end of the eastern section and another adjacent to Rembrandt Square.

ICOMOS considers this additional study to be adequate, along with the proposals for the new definition of the boundaries of the property. Nonetheless, the impact of the Weesperstraat arterial road on the visual integrity of the property's northern fringe and to the east is considerable.

ICOMOS considers that the conditions of integrity and authenticity have been met for the majority of the property with, however, reservations regarding the visual integrity of the northern fringe and the Weesperstraat arterial road.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), and (iv).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that it is an entirely new, large-scale 'port city' built around the medieval core of Amsterdam, which had become too small. Conceived at the end of the 16th century, it was scrupulously developed throughout the 17th century. It is a masterpiece at once of hydraulic engineering, of town planning, and of a programme of architectural construction.

It constitutes a rational project to convert a swamp and flood-prone area into a vast housing and port trade district. The network of canals creates and defines the structure of an urban landscape into regular plots, the basis for a vast new city forming a homogeneous

ensemble in terms of its overall perception but with a great wealth of individual decorative detail. The gabled house developed, a type of building used both as a dwelling and for the family's commercial operations.

The new port-city illustrates the exceptional economic and commercial success of the Amsterdam middle class, and also the success of its humanism and religious and philosophical tolerance. At its peak the city was a refuge in Europe and a prestigious intellectual and artistic capital.

ICOMOS considers that the arguments put forward are acceptable and that the nominated property effectively represents a masterpiece of human creative genius.

ICOMOS considers that this criterion has been justified.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design;

The success of the hydraulic, urban, commercial, and port programme for 17th century Amsterdam represents the coming together of a vast set of skills accumulated from Antiquity and the Renaissance in Europe. Its completion, and then its representation on engravings that were distributed throughout the world, make it a renowned example of architecture, town planning, and hydraulic management. It became the symbol of an ideal city and an example worldwide. As a result, it became an especially prolific source of inspiration.

In the 17th century Amsterdam was the world's leading port and warehouse for international trade, in constant contact with all parts of the known world. As a result it became the third largest city in Europe, after London and Paris. The continuous arrival of immigrants and visitors from many countries created a melting pot of ideas; the exchange of influences was continuous and of far-reaching, fostered by the human culture and religious and philosophical tolerance of the city. Amsterdam was, especially in the 17th century, an extraordinary intellectual, artistic, and cultural crucible, at the heart of the definition of the values of the modern European world.

ICOMOS considers that the nominated property is testimony to a considerable exchange of ideas over a period of almost two centuries, with respect not only to civil engineering, town planning, and architecture but also in a series of technical, maritime, and cultural fields. In the 17th century Amsterdam was a crucial centre for international trade and intellectual exchange; history describes it at the time as the 'capital of the economy-world' (Fernand Braudel).

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the geometric plan based on its network of concentric canals and radial passages, the perfectly controlled urban ensemble, the port and commercial role, and the many historic gabled houses bear eloquent witness to an urban, port, and architectural ensemble. It is the most extensive and the most exceptional example of this type ever created in the 17th century.

The drainage and creation of land form a concerted pioneering project in an initially particularly inhospitable environment; it is the creation from the ground up of a large-scale port-city that incorporates an overarching synthesis of the available knowledge and expertise built up from Antiquity and the Renaissance. It was the realisation of the utopian ideal city created in response to economic, social, urban, and geopolitical and aesthetic needs.

ICOMOS considers that the canal district in Amsterdam, built in the 17th century, represents an outstanding type of built urban ensemble that required and illustrated a diverse range of expertise in hydraulics, civil engineering, town planning, and building and architectural techniques. It established the model for the entirely artificial port-city as well as the type of Flemish single neck gabled house. At the time the city was the most accomplished illustration of a significant period in the history of the modern world.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criteria (i), (ii), and (iv) and conditions of authenticity and integrity (the surface area of the property requires adapting) and that Outstanding Universal Value has been demonstrated.

Description of the attributes

- The canal district of Amsterdam illustrates the high level of human expertise in hydraulics and civil engineering that was required to build the entirely artificial infrastructure of a large-scale port-city in the 17th century.
- The result is exemplary town planning, organised around the main canals in concentric arcs and their radial passages. It is the work of the city's middle class and commercial elite.
- The main architectural characteristics are linked to a type of private house that was also focused on port trade. The built heritage also includes warehouses and religious buildings belonging to various European denominations.
- The facades are aligned and of similar dimensions; they have indented or neck gables,

with a large variety of pediments. Along with the canals and the tree-lined embankments they form a very characteristic architectural ensemble and a reference urban landscape.

- Amsterdam, especially its canal district, illustrates the economic and cultural apogee of The Netherlands in the 17th and 18th centuries, along with its international influence. At the time, the city was seen as the realisation of the notion of the ideal city, which was used as an urban and construction model in many places around the world.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The State Party recalls that all urban development within the City of Amsterdam must meet the Municipality's town planning and heritage conservation plans. The city centre Borough includes the property and its buffer zone.

Within the nominated property the use of only a few buildings has changed. A special permit is required to modify or pull down a listed building, and virtually all those contributing to the urban, architectural, and landscape value of the property are listed. Work that may affect the infrastructure is examined in detail and reviewed by the relevant property conservation departments. As a result all urban development within the property is described as being fully controlled, whether for private buildings or the use of public space.

However, the State Party itself draws attention by means of detailed, substantiated descriptions to the fact that Amsterdam is now one of the largest European metropolises, part of the conurbation of the 'green heart' of The Netherlands, one of the most densely populated regions of the world. Major urban development projects affect and will continue to affect Amsterdam and its agglomeration in the years ahead.

The following elements, which are directly related to the value of the nominated property, should in particular be taken into account:

- *The construction of the north-south underground line within the property.* This line is currently being bored at a great depth and will have a station on Vijzelstraat. The State Party indicates that all necessary measures have been taken to protect the long-term integrity of the property at the subterranean level. From a visual point of view the impact of the exits will be minimal; moreover, the integrity of this street had already been affected in the early 20th century when it was widened.
- The underground car park and underground railway, in the buffer zone: this is a potential project aimed at limiting car use in the city centre.

In its reply of 26 February 2010 the State Party indicates that this project has been suspended until at least 2017. The World Heritage Centre will be advised if the project is revived.

- The construction of tall buildings in the buffer zone, especially on the northern edge of the city on the IJ in Westerdok, has a direct impact on the line of the horizon in the northern section of the property; the existing buildings already impact adversely on the visual axis of Prinsengracht. The State Party has taken care to include part of this port area that is undergoing major redevelopment in the buffer zone to ensure control of the visual impact on the nominated property. However, there is a legal difficulty, as building permits were granted prior to the Act for the protection and conservation of the central Borough of Amsterdam (1999) being passed. Ibis Tower and Dexia Tower, both in the buffer zone, also have a significant visual impact on a certain number of the visual perspectives of the property.
- Other tall buildings outside the buffer zone occasionally affect the lines of the horizon viewed from the property, both in a northerly direction because of the tall buildings on the northern bank of the IJ, and to the south. Rembrandt Tower is 150m high and is visible from a long way off.
- Large advertising hoardings and giant screens are present throughout the old city, i.e., within the nominated property and its buffer zone. They are temporary or permanent, mounted on large metal scaffolds, and have been authorised by the Municipality in exchange for payment. Since 2003 they have been subject to conditions of use. The institutions in charge of conserving the heritage of the historic city, the local and national press, and citizen associations are strongly against this practice because of the perceived highly negative impact on the visual integrity of the historic sites. After a lengthy period of inaction, the relevant authorities have recently taken action, just before the evaluation of the nomination of the property for inscription on the World Heritage List: sizes have been reduced by 50% and no new advertising sites have been authorised.

ICOMOS takes note of the various aspects of urban pressure from construction that already affect the nominated property and which is liable to affect it even more seriously in the future. It congratulates the State Party for its frankness regarding this point and the well documented submission that raises the issues.

Major challenges for future public policies include control and consideration being given to the visual impact of building development across the entire agglomeration taking into consideration its relationship with the heritage values of the nominated property.

ICOMOS emphasizes the extremely negative impact of large advertising hoardings and screens and their supporting structures on the property's value. This issue seems to have been underestimated by short-term public vision. They are fortunately reversible, and their removal should rapidly be scheduled.

In its reply of 26 February 2010 the State Party indicated that the Executive Committee of the Central Borough of Amsterdam had significantly tightened its policy with regard to advertising displays in 2008 and 2009, with the introduction of stricter rules. Inspections have been increased, as has the policy of consultation with advertisers and local associations. A budget of €400,000 will be used to buy out advertisers willing to remove their advertisements.

Advertising on shop fronts and their exterior lighting are not directly referred to. A 'good conduct charter' on this point would be a welcome development. The same applies to the use of unobtrusive enclosures on working sites that respect the property's values, as practised in many historic cities.

ICOMOS considers that it is critical that the State Party should pursue this policy with determination through to its conclusion, in order to guarantee the expression of the Outstanding Universal Value of the property. A precise report on the state of this threat would be essential for the next session of the Committee.

Various urban and social projects are underway in the buffer zone:

- Coalition Project 1012: renovation and social revaluation of the medieval section of the city;
- Chinatown Project: reinforcement and structuring of commercial and tourism activities of the Chinese and Asian communities;
- Kop Singel Building Plan: reconstruction of an old 50m tower and its immediate surroundings;
- The project to extend the Binnengasthuis involves the partial reconstruction and modification of historic buildings to create the University's new Human Sciences Library.

In its letter of 18 December 2009 ICOMOS requested clarification, in particular with regard to the Kop Singel and Binnengasthuis projects which, as they involve extensive reconstruction and restructuring, risk affecting the authenticity of the buffer zone.

In its reply of 26 February 2010 the State Party indicated that the Kop Singel project had been suspended. The project involving the university Binnengasthuis site dates back some years and is progressing within a public context concerned with architectural quality in harmony with its environment. Furthermore, the buildings concerned were entirely rebuilt in 1897 and so they do not contribute directly to the value of the property. Finally, the relatively recent listing decision was taken in 2001 after the university library project was announced;

it provides for renovation work to adapt these buildings in conjunction with the heritage services. This procedure has been complied with.

A number of building renovation projects within the property are reported. These include the Prinsengracht Hospital, the conversion of the former Public Library an (historic monument), along with the conversion of the former ABN-AMRO bank building and the Keizersgracht office building into apartments.

ICOMOS notes these urban projects, as presented at the time of the assessment, and encourages the State Party to continue ensuring their high architectural quality, in harmony with the visual expression of the property's value.

Tourism pressures

Amsterdam and its historic centre are significant tourist attractions. In 2007 tourists accounted for over 4.9 million hotel nights. The number of tourists moves relatively easily on foot along the embankments and streets and in the canal boats. The number of hotel beds is adequate and continues to grow within the property and the buffer zone.

Environmental pressures

All issues relating to the control of natural river water and seawater have always been well managed by means of the network of canals, locks, and dykes, which was planned and built in the 17th century and has been well maintained ever since. Amsterdam has never been flooded.

Natural disasters

Fire is a risk, as in any city; but it is limited by the nature of the material used for the old buildings, which is brick in the vast majority of cases.

The Netherlands is in a low seismic risk zone.

Impact of climate change

If in the future the most negative forecasts for rising sea levels prove to be accurate, Amsterdam and a large part of urban Netherlands would be in danger. However, the expertise and know-how that the Dutch have acquired over the centuries in large-scale hydraulic works, the management of land subject to flooding, and defence systems against the invasion of the sea mean they have undeniable advantages in coping with the situation. However, the need for a concerted global policy to combat global warming is a pressing issue, here more than elsewhere.

ICOMOS considers that the main threats to the property are the development of large-scale urban buildings within its environment having a visual impact on its integrity and invasive advertising billboards. The lack of

a concerted global policy to combat climate change could endanger the property and the larger part of the coastline of The Netherlands.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and the buffer zone

The nominated property (see Description) has a surface area of 205ha and a population of 23,708 (2007).

The buffer zone has a surface area of 479ha and a population of 45,691 (2007). It surrounds the nominated property in a coherent manner, and mainly corresponds with the old city of Amsterdam, lying between the IJ and the 17th century defence canal, the Singelgracht, today registered as a national urban site. In this respect the buffer zone is subject to its own specific regulations.

ICOMOS suggested in its letter of 18 December 2009 to the State Party that it should reconsider certain aspects of the boundaries of the property. In a detailed reply, the State Party proposed changes. The State should confirm the surface areas and the population numbers of the areas finally adopted.

ICOMOS considers that the boundaries of the nominated property have been clarified in the State Party's 26 February 2010 reply.

ICOMOS considers that the revised boundaries of the nominated property and the buffer zone are adequate.

Ownership

Individual buildings along the canals are often privately owned and used as dwellings or shops.

Property companies also own many of the buildings within the nominated property; De Key (Key Living Foundation) controls over 200 listed buildings alone.

A certain number of buildings belong to commercial or industrial companies or banks that have generally converted them into offices or commercial premises.

Religious, philanthropic, or museum institutions own some buildings and dwellings. These are generally open to the public.

Semi-public or non-profit organizations, some of them long-standing, own some buildings. Their aim is to buy and restore threatened historic buildings. For example, the Hendrick de Keyser Society, founded in 1918, owns 85 buildings in old Amsterdam, many of which in the canal district.

The Municipality of Amsterdam (Central Borough) owns a large number of historic public buildings, churches in particular, and listed buildings used for public purposes.

The Government Buildings Agency of the Ministry of Housing, Spatial Planning and the Environment (*Rijksgebouwendienst*) owns and manages a certain number of listed historic buildings.

Protection

Legal protection

The entire site and its many historic monuments have been legally protected since the early 20th century. Many acts and regulations have subsequently been added to, strengthened, and detailed in respect of both the content of the protection and its method of application.

At the national level, the main texts applicable to the property are:

- *Cultural Heritage Act* (1984).
- *Monuments Act* (1988, revised in 2006) which introduces the individual protection of buildings listed for their historical value. This is the main tool, along with the previous text, used to define and apply heritage conservation policy. They are then detailed in framework texts regarding the management of national cultural heritage monuments and sites. Today these texts enable protection of the monuments and sites on two levels: the list of historic buildings and the list of preserved buildings.
- *Housing Act* (?).
- *Urban Regeneration Act* (2000).
- *Spatial Planning Act* (2006), *Spatial Development Act* (2006), and a series of documents about spatial management.
- *Certification of restoration architects*.
- *Water Boards Act* (?).

At the Municipal level some fifty byelaws and regulatory texts are applicable to the preservation of the property. They cover the definition of local policies for the overall preservation, conservation and management of the historic city, and the definition of the organisations in charge of implementing these policies, such as the Amsterdam Bureau of Monuments and Archaeology (BMA) and Municipal Historic Buildings and Sites Project (GMP).

The national inventories constitute an additional inventory level known as the Municipal Historic Buildings and Sites Inventory.

The Municipal byelaws covering the property include:

- The *Municipal Building Regulations* (2003, revised in 2006 and in 2008) are the administrative instrument that governs the issue

of building permits and issues directives about external restorations.

- *Amsterdam Monuments and Historic Buildings Byelaw* (2005).
- *Additional Heritage Byelaw* (2009).
- *Strategy for water in the city centre* (2005).
- *Port and Waterways Byelaw* (2006).

The spatial administration of the City of Amsterdam is decentralized with fourteen boroughs (byelaw updated in 2006), of which the Central Borough (Historic Centre) is directly in charge of the property.

The protection decisions applicable to the property and its components are the following:

- The City's Central Borough has been designated as the *Urban Conservation Area of Amsterdam situated within the Singelgracht*, under the Dutch Monuments and Historic Buildings Act of 1988, approved by the Municipality in 1997; this decision was published by the Government in 1999. It is a national decision for the protection of the entire urban fabric and its historic characteristics, the practical application of which falls to the Central Borough of Amsterdam.
- The property contains a total of 3,466 buildings protected under the National Inventory and 433 under the Municipal Inventory.

Protection of the buffer zone is almost entirely governed by the decision that created the *Urban Conservation Area of Amsterdam situated within the Singelgracht* managed by the City's Central Borough. The buffer zone includes 3,188 national monuments and 697 Municipal buildings.

ICOMOS considers that the body of protection regulations is the culmination of a long-standing, evolutionary process to take account of the numerous aspects of the protection of the property and the issues at stake, involving a heterogeneous group of owners (see Ownership), within both the property and its buffer zone. This has resulted in a complex regulatory structure, frequently updated, under the overarching control of the Municipality of Amsterdam. Recent trends in terms of regulations seem to focus on moving towards a simplification of these regulations and reinforcing the Municipality's executive powers, notably on the City's Central Borough.

ICOMOS considers that the harmonisation of the texts and coordination between the various departments responsible for its application should guide future protection actions under the Conservation Plan. The State Party is also invited to ensure that the necessary simplification of the regulations does not in fact become a deregulation in the name of arguments that have nothing to do with the protection of a property of outstanding and universal value.

Effectiveness of protection measures

The nominated property benefits from a very complex body of protection measures, implemented by the various relevant State and Municipal departments (City of Amsterdam and Central Borough). These legal instruments and measures are governed by the principle of an overall approach to historic sites adopted by the Dutch authorities. In this instance, it is applied to the entire old city, that is to say, the property and its buffer zone, without any particular distinction between the two.

Under this general approach, the Executive of the Central Borough of Amsterdam collects and processes all opinions put forward by the various relevant organisations involved in the building permit procedure.

In its letter of 18 December 2010 ICOMOS requested clarification from the State Party about the application procedure for works and building permits. The State Party replied, explaining that the Borough must comply with the opinions of the Amsterdam Bureau of Monuments and Archaeology, which produces a study of the relevant property. This regulation applies to all types of works. Conservation is a priority for restoration, in accordance with the Historic Monuments and Buildings Act. Conservation decisions are the result of a pragmatic approach to the issues raised and aim to find a consensus, on a case-by-case basis, a long-standing public practice in The Netherlands. Finally, a new Heritage Order is due to enter into effect in 2010; it will strengthen the ties between the protection of buildings and the protection of archaeological components.

ICOMOS considers that the legal protection of the property is appropriate and that it operates satisfactorily.

Conservation

Inventories, recording, research

The compilation of descriptive inventories of historic buildings is a long-standing practice in The Netherlands. It dates back to at least 1928 at the national level and to 1935 for the Municipality of Amsterdam. Work has continued steadily since that time on updating and detailing the descriptions, resulting in a very rich documentary and historical corpus of information. Additionally, thematic inventories have also been compiled since the 1950s. Compilation of the inventories is the scientific responsibility of the Ministry of Culture's National Service for Archaeology, Cultural Landscape and Monuments (RACM).

Several descriptive inventories and thematic illustrated albums have been published recently, in association with the nomination process for the property.

Most of the inventories have been digitised and they form databases that can be consulted at the Amsterdam Physical Planning Department.

The historic archives, maps and plans, and iconographic documentation concerning the property often form very extensive collections. These are held in both national and local archives departments, public and university libraries, and the various art and history museums.

The specific inventory documents used to guide technical restoration work are held by the Central Borough of Amsterdam, in particular by the Archives Department, Bureau of Monuments and Archaeology (BMA), Town Planning Department, and Lands Department.

Owners, and more particularly companies and foundations, have documentary collections relating to their own properties.

Hydraulic documentation for monitoring the conservation of the technical components of water management is under the responsibility of the Regional Water Boards which in the Netherlands are democratically managed independent organisations in accordance with a long-standing tradition.

The Amsterdam Bureau of Monuments and Archaeology (BMA) coordinates and publishes numerous studies on the conservation, works, and history of Amsterdam, most of which concern the nominated property directly or partially.

Present state of conservation

In the nomination dossier the State Party first examines the chronological evolution of the principles that have dictated the maintenance of the property's historic monuments and buildings, along with the history of its management. A Municipal department specialising in monitoring conservation was created between the two World Wars along with the Municipal inventory. It was expanded and developed in the 1950s. Today, it is the Bureau of Monuments and Archaeology (BMA), the main scientific and conservation coordination department.

The typological approach and the reporting of recent work reveals the approach adopted for the monuments and various public and private historic buildings. Numerous restorations have been carried out in recent years, under excellent conditions, in accordance with a flexible organisation system that factors in the diversity of the public or private situations of the buildings concerned (see Ownership).

ICOMOS considers that, despite the great number of buildings concerned by the conservation work and the institutional complexity of the administrative, financial, and technical parties involved, the overall present state of conservation of the property may be described as good.

Active conservation measures

The general framework is the Borough Built Heritage

Programme (2006–2010). Restoration, refurbishment, reallocation, and maintenance operations are scheduled each year, both by the authorities for their public buildings and by the private sector, with assistance when their building is listed on the inventories. These operations are carried out and the buildings are generally in a good state of conservation.

Buildings are restored under various programmes funded by the State, Municipality, or private institutions. The public–private partnerships that are implemented operate relatively well, and private owners are generally aware of their heritage duties and obligations.

In addition to the various inventory and conservation programmes already mentioned as the basis for conservation knowledge, the other public programmes regarding restoration are:

- Amsterdam Structural Plan: Opting for an Urban Environment, passed in 2005, that includes an Urban Development Council (2006) and an Urban Assessment and Advice Team (STAT) for spatial planning in Amsterdam (2005);
- The City Centre Cultural Policy Document (2005);
- The recommendations of the External Appearance and Historic Buildings Committee (CWM) (since 2005);
- The planned archaeological programme of the BMA (2008–2010).

In its reply of 26 February 2010 the State Party indicated that the Municipality of Amsterdam is examining a guidance document concerning the future development of large buildings within the agglomeration up to 2040. In particular, this document includes a detailed landscape study of the existing situation in order to specify potential visual scenarios within its area so as to assess the impact fully and define the rules to be applied. The conservation of the property's values will be a major concern under this process.

Effectiveness of conservation measures

ICOMOS considers that all the conservation measures function well and the general state of conservation is good.

ICOMOS considers that, despite the evident complexity of the property itself and the various forms of intervention, conservation has been effective to date.

Management

Management structures and processes, including traditional management processes

The main entities in charge of the nominated property's management are:

The City of Amsterdam, and especially the Central Borough of Amsterdam, which is responsible for general administration, public regulations, especially with regard to building permits, town planning, and safety. They operate through various technical departments, committees, and their elected decision-making bodies.

The Borough also manages the public thoroughfares, which implies maintenance of the streets, embankments, and bridges, and their repair under terms that are compatible with the property's value, and finally public planting, landscaped areas, and lighting.

The Ministry of Education, Culture and Science operates through the National Service for Archaeology, Cultural Landscape and Built Heritage (RACM).

The Municipal Bureau for Monuments and Archaeology (BMA) and the External Appearance and Historic Buildings Committee (CWM) are the entities responsible for conservation.

The overall hydraulic management is provided by the Amstel, Gooi, and Vecht Water Authority. It is responsible for maintaining the city's protection dykes and locks and the water levels in the canals and rivers, monitoring the aquifer, water quality, and waste-water treatment. Since 2006 it has also been responsible for the visual quality of water in the city.

Policy framework: management plans and arrangements, including visitor management and presentation

The Management Plan is based on grouping together and harmonising all the operational plans and sector actions. It is a very thorough and comprehensive document produced under the responsibility of the BMA. It begins by listing all the regulatory texts and programming and planning documents. Next it provides a general overview of the management of the property, focused on its protection conservation and outlook. Finally it focuses on the operational level by describing the tasks to be completed and the departments responsible for performing them. In particular, the Plan includes a thematic schedule and calendar of operations to be completed in the 2009–2010 transition period.

The management plan has been approved by the property's relevant authorities – the Municipality of Amsterdam and the Ministry of Education, Culture and Science.

In terms of coordinated management organisation, the Management Plan first reasserts the responsibility of each of the stakeholders in their relevant area of expertise as a *sine qua non* for sound overall operation. The Central Borough of Amsterdam is then presented as the main body responsible for and coordinator of the management of the property. Its tasks and missions are defined in accordance with the existing legislation and as an extension of its other Municipal management tasks

for the city centre. It is also tasked with external relations with the relevant authorities, the Municipality of Amsterdam and the Ministry of Education, Culture and Science.

Tourism raises no particular practical problems at present because of the broad and diverse range of services provided by the relevant professional sectors (transport, hotels, restaurants, shops, etc).

The range of cultural and museum activities is very broad in terms of the property's values, in particular the history of Amsterdam in the 17th century and classical Dutch culture and Flemish art in the modern era. There are 35 museums in the city centre, i.e. in the property and its buffer zone. The *Group of the Seven Canal Museums* is directly related to the property. All aspects of tourism are an important economic aspect of the growth of the city.

The BMA has installed an easily accessible digital information system that explains the historic buildings and monuments of Amsterdam.

ICOMOS considers that the proposed Management Plan is very thorough and that it is immediately operational. Nonetheless, in its letter of 18 December 2009 ICOMOS requested the State Party to clarify the method for its implementation. In its reply, the State Party details the long-standing operations within the Municipal authorities, and the Central Borough in particular. The World Heritage Bureau was established on 1 September 2009 in the Central Borough and is tasked with broadly coordinating the application of the management plan and monitoring the property.

Risk preparedness

Risks have been correctly analysed and the public services that have to handle them seem to be adequately organised and equipped with the necessary human and technical resources. The management of hydraulic risks is a case in point.

Implication of the local communities

Owner and citizen associations along with property conservation foundations are organised and active. There are also many cultural bodies directly involved with presenting the values of the property to visitors. The general sense of awareness of the property's value among the majority of the population is to be noted.

Resources, including staffing levels, expertise and training

The Management Plan includes a presentation of the public financial responsibilities with regard to the scheduled actions for the property's management and conservation from 2003 to 2011. There is no mention of private investment.

The authorities involved in the management process for historic heritage includes State departments, Central Borough and Municipal departments, the Bureau of Monuments and Archaeology (BMA), cultural and tourism associations, museums and university courses related to the property's values, etc. Then there are the private-sector professionals employed by owners, such as the Association of Architects, the many contractors and tradesmen specialised in building maintenance and restoration, etc. All have human and financial resources at their disposal for conservation and management.

In terms of the expertise required for the property's management, it would be difficult to quote any precise or reliable figures because of the diversity of stakeholders. However, the skills are clearly available in sufficient numbers and available for employment on specific financially consolidated projects. They are generally of an excellent scientific and professional level. They easily adopt international standards for conservation, and are indeed often involved in defining those standards.

Effectiveness of current management

The management system is established, it operates well, and everyone knows what is expected of them. The Management Plan is a serious and credible compilation of a coherent ensemble of measures and responsibilities.

ICOMOS considers that the management system for the property and the organisation of this management are adequate. However, the following should be confirmed: a preventive control of large building projects outside the property that may affect its visual value.

6. MONITORING

Monitoring is one of the most important tasks entrusted to the Central Borough of Amsterdam as the coordinating manager for the property. A specific unit for monitoring the property has been established.

The actions announced in the Management Plan will be assessed annually, in accordance with a series of key factors and with a programme referred to as the District's Measurable Policy Programme (2006–2010). The results will be compiled in an annual report and its conclusions will be used in drawing up the Central Borough's annual action plan; as a consequence these will be included in the budget.

A series of services and study programmes will be used to enhance the monitoring process, especially by the Bureau of Monuments and Archaeology (BMA) and the Borough's Construction and Housing Department.

A monitoring matrix has been devised on an annual basis; it includes nine thematic principles broken down into around fifty individual items. Management of the conservation of the built heritage, town planning, risk

prevention, and tourism are subjects given particular attention.

In its 26 February 2010 reply, the State Party detailed the list of monitoring indicators applied, their annual frequency, and the organizations responsible for them (Annex F).

ICOMOS considers that the general organization of the monitoring system is adequate.

7. CONCLUSIONS

ICOMOS recognises the Outstanding Universal Value of the seventeenth-century canal ring area of Amsterdam inside the Singelgracht.

Recommendations with respect to inscription

ICOMOS recommends that the seventeenth-century canal ring area of Amsterdam inside the Singelgracht, The Netherlands, be inscribed on the World Heritage List on the basis of ***criteria (i), (ii), and (iv)***.

Brief synthesis

The Amsterdam Canal District illustrates exemplary hydraulic and urban planning on a large scale through the entirely artificial creation of a large-scale port city. The gabled facades are characteristic of this middle-class environment, and the dwellings bear witness both to the city's enrichment through maritime trade and the development of a humanist and tolerant culture linked to the Calvinist Reformation. In the 17th and 18th centuries, Amsterdam was seen as the realization of the ideal city that was used as a reference urban model for numerous projects for new cities around the world.

Criterion (i): The Amsterdam Canal District is the design at the end of the 16th century and the construction in the 17th century of a new and entirely artificial 'port city.' It is a masterpiece of hydraulic engineering, town planning, and a rational programme of construction and bourgeois architecture. It is a unique and innovative, large-scale but homogeneous urban ensemble.

Criterion (ii): The Amsterdam Canal District bears witness to an exchange of considerable influences over almost two centuries, in terms not only of civil engineering, town planning, and architecture, but also of a series of technical, maritime, and cultural fields. In the 17th century Amsterdam was a crucial centre for international commercial trade and intellectual exchange, for the formation and the dissemination of humanist thought; it was the capital of the economy-world in its day.

Criterion (iv): The Amsterdam Canal District represents an outstanding example of a built urban ensemble that required and illustrates expertise in hydraulics, civil

engineering, town planning, and construction and architectural knowhow. In the 17th century, it established the model for the entirely artificial 'port city' as well as the type of Flemish single dwelling with its 'neck gable'. The city is testimony, at the highest level, to a significant period in the history of the modern world.

Integrity and authenticity

The network of canals in concentric arcs of a circle that forms the basis of the urban layout, along with the radial waterways and streets, survives in its entirety, with its old embankments and historic facade alignments. The majority of the houses erected in the 17th and 18th centuries are still present in a good general state of conservation. This basic situation, fundamentally healthy for an urban ensemble that is still alive and active, needs to be tempered in certain respects. Streets have sometimes been widened and the facade dwellings rebuilt, notably the current Weesperstraat arterial road. The old civil and hydraulic structures have generally been replaced, tall modern buildings affect some landscape perspectives, especially in the north of the property, and aggressive advertising pollutes the property's visual condition.

Management and protection measures

A very large number of buildings and structures are protected by national and municipal heritage listing. The situation with regard to protection seems to be complex, within the context of the operation of the Amsterdam Central Borough (the heart of the city), but the procedures that govern protection are complied with. Good awareness on the part of those responsible means that the excesses of urban growth that was at times difficult to control in the recent past seem to be increasingly better managed, notably advertising within the property and the visual impact of tall buildings on the urban landscapes of the property.

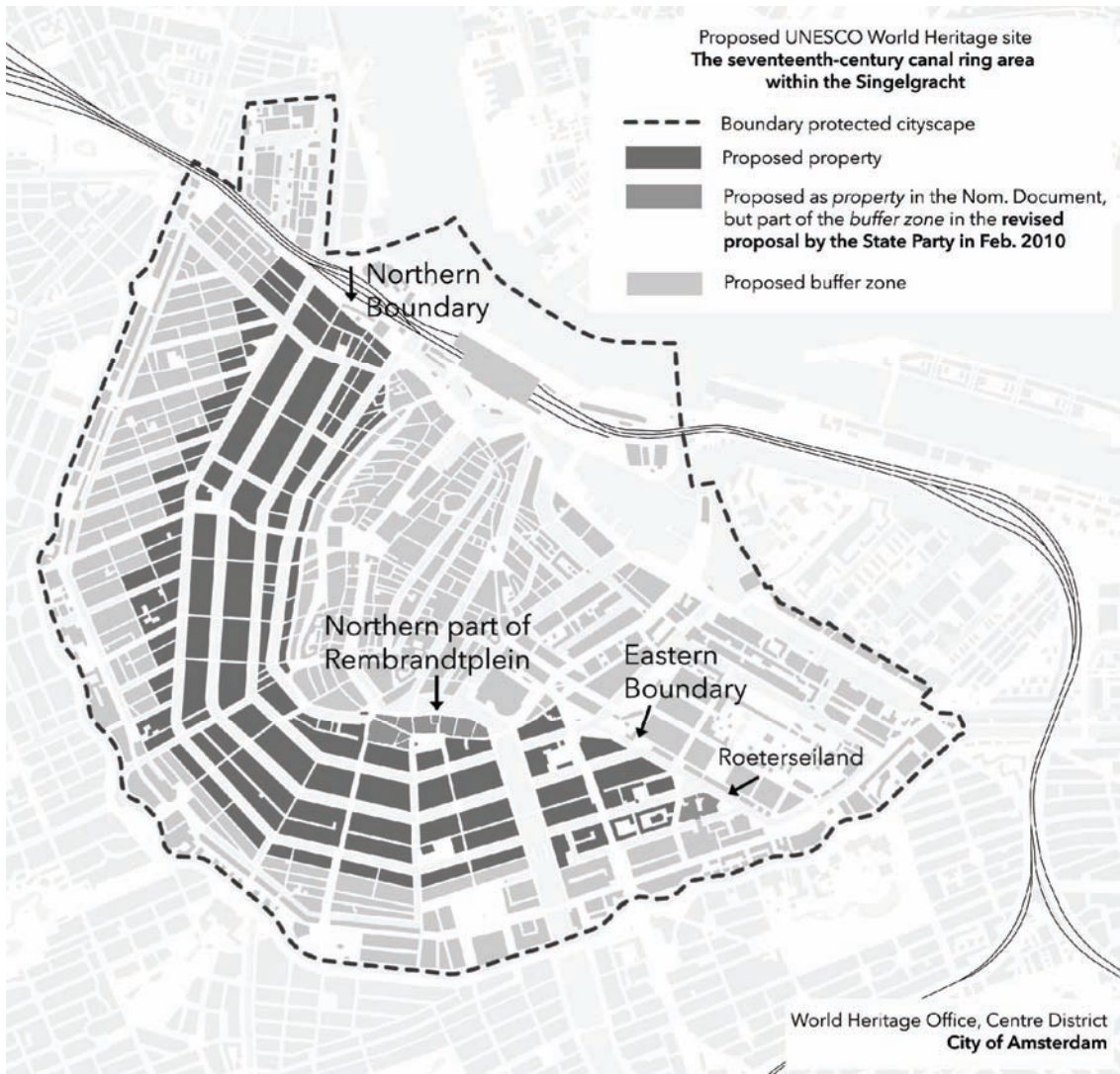
All the management measures form an effective and coherent system, within the orbit of the Central Borough of Amsterdam and with the guarantee of the Bureau of Monuments. A horizontal management and monitoring body for the property has now been implemented, the Amsterdam World Heritage Bureau.

ICOMOS recommends that the State Party give consideration to the following:

- Pursuing the application of measures to eradicate aggressive advertising hoardings and video screens on scaffolding and work-site fences inside the property and submit a detailed report on the situation of advertising displays within the property for examination at the 34th session of the World Heritage Committee (2011);
- Giving thought to a charter of good conduct between the city and the private commercial sector, defining what is and is not allowed with

regard to how buildings are treated, shop fronts, signage and lighting, the occupation of public space, urban furniture, terraces, etc.;

- Making sure that when the Amsterdam Central Borough examines building permits, conservation objectives remain paramount;
- Ensuring effective control over projects for tall buildings within the agglomeration to monitor their architectural quality and ensure that they are in harmony with the visual expression of the value of the property;
- Keeping the World Heritage Committee informed of any development project concerning the property, its buffer zone, and surroundings in conformity with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.
- Providing the number of inhabitants and the surface areas of the property and the buffer zone resulting from the newly configured boundaries.



Map showing the boundaries of the nominated property



Brouwersgracht radial canal



Prinsengracht annular canal



17th century buildings



Warehouse alignment

Darwin's Landscape Laboratory (United Kingdom) No 1247

Official name as proposed by the State Party:

Darwin's Landscape Laboratory

Location:

London Borough of Bromley
England
United Kingdom

Brief description:

The nominated property comprises the rural landscape encompassing Charles Darwin's property, near London. Following the observations performed during the travel on board the HMS *Beagle*, Downe was selected by Darwin as his home because of the biological and ecological diversity within its farmed and semi-natural landscapes. Darwin's theory of evolution of species through natural selection was elaborated and written while living and working at Downe. His theories have considerably influenced the natural sciences and medicine, as well as the understanding of the relations between humans and their living and natural environment.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47, it is also a *Cultural Landscape*.

1. BASIC DATA

Included in the Tentative List: 21 June 1999

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 28 January 2009

Background: This nomination, under a different name (Darwin at Downe) and within different boundaries, was assessed by ICOMOS in 2006-2007. It was withdrawn by the State Party before its examination by the 31st

session of the World Heritage Committee (Christchurch, 2007).

At that time, ICOMOS recommended not to inscribe the property for the following main reasons:

- The nominated areas did not display the requisite levels of integrity and authenticity;
- The Outstanding Universal Value had not been demonstrated: in particular, the application of criterion (iii) to scientific discoveries would be a new interpretation with far-reaching implications, especially since the nominated property does not itself possess the necessary quality in monumental or landscape terms for inscription on the World Heritage List;
- With regard to criterion (vi), ICOMOS considered that the significance of the intellectual ideas associated with the property and of Darwin's overall ideas were not in question, but the importance of the property lies in its educational rather than its heritage context.

ICOMOS further recalled that it has consciously avoided recommending inscription of places linked to famous men and women, when those places do have not Outstanding Universal Value in their own right; and this has also been the policy of the World Heritage Committee.

The re-nominated property is different from the property nominated in 2007 in terms of its boundaries and its justification for inscription:

- The nominated property is smaller, the two golf courses having been omitted.
- The State Party has described in greater detail the link between the features of the landscape and Darwin's observations.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Landscapes and several independent experts.

IUCN participated in the evaluation mission to this property and attended the ICOMOS World Heritage Panel in December 2009. Comments on the assessment of this cultural landscape were received from IUCN on 18 February 2010, including responses to questions raised by ICOMOS for IUCN to consider, and are related to the following issues:

- The context and relevance of Darwin's ideas for our understanding of the natural world, especially his theory of evolution by natural selection;
- Whether the species composition of the gardens and farmland in Darwin's time can be compared with those today;
- The possibility of establishing direct relations between species of vegetation or garden plots and specific aspects of Darwin's theories and writings;

- The adequacy of the management measures in place for the natural aspects of the nominated property and its buffer zone.

The information provided by IUCN was carefully considered by ICOMOS in reaching the final decision and recommendation.

Literature consulted (selection):

Bowler, P.J., *Charles Darwin: the man and his influence*, Oxford UK & Cambridge Mass., 1990.

Gayon, J., *Darwin et l'après-Darwin, une histoire de l'hypothèse de la sélection naturelle*, Paris, 1991.

World Heritage: Science and Technology, an expert workshop within the framework of the global strategy for a representative, balanced and credible World Heritage List, WHC-08/32.COM/INF.10A, May 2008.

UNESCO, *Cultural landscapes: the challenges of conservation*, World Heritage Centre/UNESCO, Paris, 2003.

Technical Evaluation Mission: An ICOMOS-IUCN joint mission has visited the property from 29 September to 2 October 2009.

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property is the rural landscape around the village of Downe, near which Charles Darwin lived from 1842 to 1882, and parts of its two adjacent valleys of Downe and Cudham. Darwin observed his local environment for 40 years to develop and demonstrate his theory of evolution through the study of plants and animals in the farmed landscape and in the semi-natural areas within and around it.

The nominated property (around 7km²) encompasses the village of Downe, Darwin's residence south of Downe (Down House), his gardens, and parts of the Downe and Cudham valleys. The views from the nominated property are included in two buffer zones, one to the north to the limits of the town of Orpington, and one to the east, to Biggin Hill airport.

Darwin was the originator of the theory of evolution by natural selection. His scientific writings form the basis of the modern understanding of the patterns of natural life, human and animal origins, biodiversity, and needs for nature conservation.

Darwin chose to live in this locality because of the diversity of the semi-natural and farmed landscapes. The

area consists of a triangular area of high ground between the two valleys of Downe and Cudham, with chalk slopes, and deposits of alluvium in their lower parts, where rich and acidic soils as well as clay terrains can be found. The diversified quality of the soils supports varied habitats that were studied by Darwin and that still survive: chalk and acid grasslands, acid bog, acid heathland, clay ponds, gravel streams, laid hedges, ancient and coppiced woodlands, plantations, ploughed land, pasture and hay meadows.

The nominated property includes the rural farmed landscape with its network of access paths and lanes and its variety of habitats, Darwin's house, his experimental garden and the grounds. These are places that he used for many of his scientific investigations after his early years on the round-the-world voyage of HMS *Beagle*, when his first ideas concerning his theory of the evolution of species were cautiously put forth in Darwin's diaries.

The nominated property contains elements of the landscape that Darwin observed for his analytical and conceptual work, building on the observations made during his travels. Darwin studied these to develop a global conception of life in nature and of the evolution of species through natural selection.

The nomination dossier contains a detailed table of the places forming the nominated property. These are precisely related to the observations carried out by Darwin in those places and to his works.

Components of the nominated property:

The villages of Downe and Cudham, except for two small areas of housing development since Darwin's time: a length of ribbon development on the road south from Downe and an early 20th century housing estate north of the village.

Down House, Darwin's residence: relevant places with regard to Darwin's research comprise:

- The Old Study and the Drawing Room that were used by Darwin as office, library and laboratory;
- The External Walls and the Verandah, with the trellises to support climbing plants that Darwin used for botanical research.

The Down Estate Grounds:

- Down House Gardens: the Flower Garden, the Orchard, the Kitchen Garden and the 'experimental beds' created for scientific purposes;
- The Greenhouse for the experiments on exotic plants and the orchids, and the Garden Laboratory for experiments on the effects of different light conditions on plant growth and movement;
- The Great House Meadow, used by Darwin for a long-term scientific experiment on the working of soil by earthworms;

- The Sand Walk Copse; created by Darwin on the south-western side of Great House Meadow, with his 'thinking path', the Sand Walk, for his daily walks and scientific reflection in the solitude of the Downe countryside.

The Rural Landscape:

- The Great Pucklands Meadow
- The Downe valley
- The Cudham School Pond
- Keston Common
- Estates
- The Cudham Valley
- Downe Bank

The present, revised nomination has excluded from the nominated property only two golf courses that have been created in the neighbourhood and has given more prominence to the landscape surrounding Down House and its grounds. The nomination dossier has linked the features of the landscape of the Downe and Cudham valleys with Darwin's observations and research and has grouped the landscape features as follows:

- The rural farmed landscape and access to parts of the Downe and Cudham valleys, which are formed of dispersed settlements and farmsteads surrounded by arable fields, pasture and woodland;
- The network of access, paths and lanes, in and around the neighbourhood and the farmed landscape;
- The Cudham Valley, with its wooded sides and its intricate pattern of fields enclosed by hedgerows;
- The Downe Valley, with extensive areas of semi-natural woods (i.e. the "Big Wood"), unimproved grassland slopes (i.e. Green Hill) and improved grassland flats;
- The Woodlands and Hedgerows (i.e., Hangrove). The former comprise high forests, plantations of beech and softwoods for timber production and landscaping, coppice with standard trees, secondary woodland; the latter include thin strips of woodland that remained after clearing to obtain arable land or that have been planted as boundary demarcations;
- The Grasslands and Meadows (i.e. Orchis Bank, Keston Common, Ravensbourne and Green Hill);
- The Wetlands, in particular the River Ravensbourne and Keston Bog, in addition to the Cudham School Pond;
- High Elms Estate which forms a diversified rural landscape of meadows, arable lands, natural and artificial woods. Already in Darwin's times, this was a recreational place. Today it hosts a golf club (in the buffer zone) and a conservation area for native species of orchids studied by Darwin;
- Holwood Park with the mansion. This is a historic park designed at the end of the 18th century and, together with the House (outside the nominated area), is one of the most prominent features in the landscape that Darwin knew.

At the junction of a maintained rural agricultural world and preserved natural spaces, Downe, although limited in size, offered a great diversity of possible observations.

The ensemble is completed by Down House and its Grounds with the gardens and the greenhouses, which have been the main focus of the previous nomination, as well as by the vast network of exchanges and scientific correspondence that Darwin maintained along his life.

The nominated property comprises also the houses in Downe village and some houses along the path towards the south-west, near Down House as well as a few houses along the road northwards and close to Cudham village. The two villages were originally inhabited by agricultural workers. They haven't changed much since the 19th century. There are only a few new constructions, and some extensions and modifications to existing buildings. The core of the village is medieval and the main buildings already existing or built in Darwin's times are:

- Downe Parish Church
- George and Dragon Hotel in Downe
- City Hall of Downe
- Walnut Tree House in Downe
- Holwood House (in the buffer zone)
- High Elms of the Lubbock family, who were among Darwin's friends (in the buffer zone: the house no longer exists and the estate is a golf course)

According to the State Party, these elements contribute to the depiction of the environment in which the theory of evolution was elaborated and written.

History and development

The rural landscape

Modern humans were present in the area since 35,000 years ago, although, due to prohibitive climatic conditions, the presence of groups of hunter-gatherers dates back only to 9,000 years ago. The development of farming occurred around 6,000 years ago, with much and repeated change during the Iron Age, the Roman occupation and the Saxon period.

The landscape features of the nominated property exhibit the character of the ancient countryside of lowland England and its patterns of land use. The area had been characterised by a mixed economy based on the cultivation of cereals - reserved to the best lands - as well as sheep-breeding and forestry from the Middle Age to Darwin's time.

Several changes occurred after the 14th century following the severe depopulation of the area due to famine and plague: the open fields of medieval agriculture north of Downe were enclosed with boundaries and hedges, some of which preserved the outlines of the medieval strip fields. Farms were built within the newly

consolidated land-holdings, creating the pattern of dispersed settlement that characterises the landscape today.

The forested elements and the wetlands have been a permanent feature of the region, due to the nature of soils and of local hydrology.

The period from 1700 to 1900 was one of general farming expansion which contributed significantly to the national economy. At the beginning of the 19th century, the woods covering the nominated property were a mixture of ancient semi-natural forest, coppice woods and artificial re-forestation.

When Darwin settled at Downe, the area was made up of a few relatively large rural private estates, with grazed commons between. The balance between the wetlands and the wooded areas, the arable fields and the meadows was modified with the decrease in cultivation and a progressive increase of pastures in the 19th century.

In the early 20th century, with the development of the London suburbs, cheap public transport, and more leisure time for working people, people from the South London suburbs and nearby towns made increasing use of the farmed landscape around Downe for walking and other leisure pursuits.

The general character of the landscape today is broadly similar to its character in Darwin's time in that it is still mainly based on mixed farming with hedges, wood banks, and woodland in a quiet rural setting. The two wooded valleys and the open high ground between that were the key features of the landscape for Darwin are still legible. The quiet character of the two valleys in Darwin's time is partially preserved.

In relation to the plant species present within the property, IUCN notes that: *"All but three of the plants that Darwin recorded can be found within the property today, and one of those currently missing is being reintroduced. However, it is not possible to compare all species, because we do not have complete baseline data from Darwin's time, but we do have an inventory of the species found on the site today."*

However, there have been several significant changes in the use of the land since Darwin's death and losses of historic features, even if the overall consequences have been limited. Since the early 1800s, the woodland in the property has been a mixture of semi-natural ancient woodland with coppicing and plantations. In general, the increasing amenity use of the whole landscape has favoured the retention and extension of the historic woodland.

However in addition, small scale farming has been reduced due to the introduction of mechanised agriculture. This has caused an enlargement of farm units and a loss of hay meadows and other elements of

traditional rural character, i.e. field hedges, wood banks, and woodland.

New houses have been built as well as transportation structures and facilities. The area provides a general sense of being at the edge of London.

Down House and Grounds

When Darwin acquired Down House in 1842 it was already a complex of multi-layered buildings with elements from different periods. Building analysis, archaeological investigation, documentary records, and cartographic research suggest that the first house was built in the mid-17th century. It appears to have been substantially rebuilt in the 1730s or 1740s and much of the fabric of the central block dates from that period. The building was changed to include a new kitchen and a service block on the southern end in the late 18th century and further modernised in the early 1800s. Shortly after moving to Down House, Darwin built a three-storey rear bay and made further minor extensions in later years for his growing family. In 1872, he added a verandah outside the drawing room.

There are few records of the gardens prior to the Darwins' occupation, but the existing elements, e.g. the pleasure garden to the west of the house and the kitchen garden beyond, were integrated and rearranged in the works carried out at the property after the Darwins arrived. Originally, the drive and turning circle was north of the house but, in 1843, this was moved to its present location. A new orchard was established in the area where the old drive had been. Paths were also improved and new ones made, and the kitchen garden was brought back into full production. In 1846 Darwin leased a strip of land adjacent to Great House Meadow, laid a path around it and planted it with woodland trees and native flowers. It became known as the Sand Walk. In 1855-56 Darwin built a greenhouse in the kitchen garden, adding two heated compartments in 1863 and 1864.

Following Darwin's death (1882), his wife Emma used Down House only as a summer retreat, but lived for the rest of the year in Cambridge. She maintained the garden and there is no documentation of any alterations in this period. After her death in 1896 Down House remained in the ownership of the family and the greenhouse was renovated in 1898. Furniture was removed in 1899 and from 1900 to 1906 the property was let to a tenant.

In 1907 the property housed Downe House School, and some changes took place. From 1922 to 1924 the property was empty and neglected. From 1924 to 1927 it was let to another school.

In 1927 Down House was presented to the British Association for the Advancement of Science to use it as a Darwin museum. The house was repaired; the old study was restored, and the Museum was opened in

1929. In 1953 the property was taken over by the Royal College of Surgeons. The garden was restored in 1959 by two of Darwin's granddaughters, according to their memories of visits to the house during their childhood in the 1890s.

English Heritage (a government agency) acquired the freehold of Down House in 1996 and took over the management of the property. English Heritage carried out documentary, cartographic, and pictorial research, archaeological investigations, and analysis of the building fabric and its elements, and undertook a major restoration of the property, including the old study and the drawing room. The garden and grounds were restored to their appearance in Darwin's time according to historic photographs, family documents, Darwin's scientific notes, and his published writings. Visitor facilities were provided in a new single-storey building next to the old coach house, and a car park was created on a plot of land adjoining Darwin's property.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

According to the State Party, there are twelve properties on the World Heritage List that have features directly or indirectly associated with the heritage of science. Six of them are associated to the observations and/or the theoretical conceptions of scholars and scientists. However not all had these associations recognised at the time of inscription:

- Galápagos Islands/ Charles Darwin (Ecuador, 1978);
- Piazza del Duomo, Pisa / Galileo Galilei (Italy, 1987);
- Lednice-Valtice Cultural Landscape/ Gregor Mendel (Czech Republic, 1996);
- Botanical Garden (Orto Botanico), Padua (Italy, 1997);
- Maritime Greenwich (UK, 1997);
- Classical Weimar (Germany, 1998);
- The Loire Valley/ Leonardo da Vinci (France, 2000);
- Alejandro de Humboldt National Park/ A. von Humboldt (Cuba, 2001);
- Dorset and East Devon Coast (UK, 2001);
- Royal Botanic Gardens, Kew (UK, 2003);
- Þingvellir National Park/ Alfred Wegner (Iceland, 2004);
- Struve Geodetic Arc (transnational serial site, 2005).

The comparative analysis carried out by the State Party has examined whether or not the justifications for inscription of the above mentioned properties refer to the scientific or technological achievements to which they are associated.

The comparison shows that, among the properties inscribed on the World Heritage List for their cultural values, only a few of them have been justified for inscription for their associations with scientific achievements or motivations.

According to the State Party, one of the clearest examples is the Struve Geodetic Arc: the statement of Outstanding Universal Value clearly refers to scientific achievement. Other examples are Maritime Greenwich, which refers to the scientific work carried out at the Observatory within the property; and the justification for inscription of the Botanical Garden (Orto Botanico) in Padua, which contains clear reference to the contribution it made to the advancement of several scientific disciplines.

The State Party claims that none of these properties have relation with Darwin's work. However ICOMOS notes that the Galápagos Islands and their unique biological diversity, a natural property include associations with Darwin's ideas in its justification for inscription on the World Heritage List. ICOMOS therefore considers that one property associated with Darwin's ideas is already represented on the List.

ICOMOS notes that the properties that have been inscribed on the World Heritage List primarily for their scientific merits (rather than scientific associations) express in their materiality the results of scientific and technological work and, through their use for research, have allowed expansion of scientific knowledge.

With regard to comparisons with other properties not inscribed in the World Heritage List, the State Party asserts that there are very few properties which still retain material evidence of the scientific work carried out there, due to the specific nature of scientific work and the modifications that have often occurred to places where such work was developed.

In the revised nomination, the State Party has increased the selection of properties to be compared with the nominated property. Several properties have been considered where work similar to the work of Darwin was carried out: Bear Island, Swalbard (Norway) where Charles Elton carried out ecological surveys and experiments in the 1920s; and the Smithsonian Tropical Research Institute's Barro Colorado Nature Monument in the Panama Canal. The State Party however concludes that these differ from the nominated property in that the scientific work was carried out for defined and limited periods of time only.

The State Party has also examined two other properties that may appear closer to the nominated one. These are the property of English naturalist Gilbert White at Selborne in Hampshire (UK), and the French entomologist Jean-Henri Fabre's living place at l'Harmas, Sérignan du Comtat (France). Nevertheless, the State Party concludes that none of these properties can be compared with Downe in terms of their global

significance because the observations made at these places were not used to draw general scientific conclusions.

Other properties that have been selected for comparison include Reverend Stephen Hales' garden at Teddington, Carolus Linnaeus's garden at Hammarby (on Sweden's Tentative List), the Jardin des Plantes, Paris, the Duke of Bedford's Hortus Gramineus at Woburn Abbey, Thomas Andrew Knight's garden at Downton Castle, Shropshire, Gregor Mendel's garden at St. Thomas Abbey in Brno and Professor Julius Sachs' botanic garden at the University of Wurzburg. These gardens were used by the scientists for their research but they are reputed not to survive well compared to Downe.

Similarly, the State Party has mentioned a number of laboratories (i.e. the Cavendish Laboratory in Cambridge, Louis Pasteur's and Pierre and Marie Curie's laboratories in Paris among others) little of which survive. In other cases, i.e., Michael Faraday's laboratory at the Royal Institution in London, these structures have been reconstructed later.

The State Party concludes that the nominated property stands out from others because it was Darwin's daily place of observations and experimentations through which he could elaborate his theory, and because much of it still survives.

While ICOMOS agrees that there are few other properties that might be nominated that could reflect scientific ideas of world importance, it does not consider that there are no other properties if one considers properties where the link between science and the property is only an association.

In conclusion, ICOMOS notes that the nominated property is for the most part not the result of Darwin's work, in that Darwin used the surroundings of his house to observe the species and their intrinsic features drawing from his ability of observation and reflection the ideas at the base of his theories. Only the kitchen garden, the flower beds, the orchard, and the greenhouses tangibly reflected his scientific experimentations that allowed him develop and test his theories.

ICOMOS further observes that, differently from other sites - i.e., Uluru-Kata Tjuta National Park (Australia) and Tongariro National Park (New Zealand) - which have been inscribed first as natural sites and subsequently reconsidered as cultural places because they are indisputably prominent religious or spiritual centres of a whole culture, in the case of this nomination, the value of the property derives specifically and solely from the association with Darwin's merits.

Undoubtedly Darwin's work has contributed greatly to the development of 'European' or 'western' culture and even to the global culture of the modern world. However, there are many other scientists and artists that may have

had a comparable influence on our contemporary culture, whose life and work may be associated to specific places.

ICOMOS observes that inscription of a property on the World Heritage List on the basis of such an association may result, firstly, in the uncontrolled expansion of the List; and, secondly, in a shift of the comparison from the level of the property associated with the scientific or artistic contribution, to the contribution itself, implying a sort of 'ranking' among intangible cultural influences that it is not the focus or purpose of the World Heritage Convention.

With specific respect to the nominated property, ICOMOS considers that the analysis could have been deepened with reference to the Galápagos Islands and other properties throughout the world used by Darwin to develop his theories, especially those associated with the voyage of the *Beagle*, during which most of his ideas that he subsequently fully developed into structured theories first came to his mind.

There are several properties that have been inscribed on the World Heritage List as natural or mixed properties and are located in regions that have been visited by Darwin during his travel on the *Beagle*. i.e. the Brazilian Atlantic Islands: Fernando de Noronha and Atol das Rocas Reserves (Brazil, (vii), (ix), (x), 2001), the Discovery Coast Atlantic Forest Reserves (Brazil, (ix), (x), 1999), Península Valdés (Argentina, (x), 1999), Los Glaciares (Argentina, (vii), (viii), 1981), Tasmanian Wilderness (Australia, (iii), (iv), (vi), (vii), (viii), (ix), (x), 1982). These may reveal the potential to be associated with his observations, following deepened investigations on Darwin's research activity in each spot that he visited during the voyage.

ICOMOS does not consider that the comparative analysis allows consideration of this property on its own for the World Heritage List – first because there is already one property inscribed on the List that is associated with Darwin; and secondly, because for properties to be inscribed on the World Heritage List primarily for scientific links, there is a need for the properties to demonstrate those links. ICOMOS further considers that there could be a case for recognising Darwin's ideas through natural properties already inscribed on the World Heritage List that were surveyed and observed by Darwin during his travels.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value for the following reasons:

- It is the landscape laboratory where the theory of evolution of species through natural selection was elaborated and developed in the 19th century. It

consists of Charles Darwin's property, where he lived for 40 years and made observations and experiments in the surrounding rural and natural environment.

- After the five-year voyage on the *Beagle*, the surroundings of Downe, with their natural diversity in terms of geology, soil types, vegetation and land use, offered Darwin the material that was necessary for his observations and experiments.
- The nominated property thus became Darwin's landscape laboratory and the centre of a scientific correspondence that was fundamental for the advance of his theory.
- Since the period when Darwin used the landscape laboratory, the property has maintained its natural and biological diversity in the same forms it exhibited in the 19th century. It bears unique and authentic witness to the conditions in which Darwin's theory was conceived and written.
- The nominated property attests to a crucial moment in the history of science, since it provided the experimental basis for the development of a theory which is fundamental to the understanding of plant and animal life. This had a considerable influence on the development of natural sciences, medicine and agriculture, but also on philosophical and religious concepts regarding the relations between human beings and their environment.

ICOMOS considers that the value of Darwin's theory of evolution through natural selection is not under discussion. ICOMOS recalls that the World Heritage Convention is a property or site-based convention, so Darwin's scientific work itself is not eligible for inscription on the World Heritage List. What could be inscribed is the physical setting related to his work, provided that its Outstanding Universal Value has been demonstrated. This is therefore the focus of the evaluation conducted by ICOMOS.

The Expert Workshop on *World Heritage: Science and Technology* who met in London on 21-23 January 2008 came to similar conclusions (WHC-08/32.COM/INF.10A):

13. The EWG was of the opinion that there is often a strong link between the tangible and intangible heritage of scientific and/or technological sites of possible OUV. This is particularly so with scientific heritage, where the link to the intangible nature of 'great ideas' may be particularly strong.

14. Nevertheless, for the World Heritage Convention, the focus should be upon the physical sites, which are the tangible heritage, where great achievements of universal value were manifested, and, to an extent, remain. Tangible evidence needs to survive and this can be in the form of landscape and natural features, buildings and objects.

15. The tangible context for the original scientific insight is also important.

16. The EWG noted that the WHC List is not primarily a means to commemorate famous individuals, and alternative means should be considered for recognition in most cases.

17. Although each nomination should be examined on a case-by-case basis, the focus should be upon the place, or a collection of places, where the most important fundamental developments, of universal significance, occurred.

18. The EWG recognised that the principles of authenticity and integrity are fundamental to the World Heritage Convention. In the case of scientific and technological heritage, the EWG suggested that it is possible to have elements of faithful reconstruction on a site, in exceptional circumstances.

The critical question for this nomination is thus not related to the contribution of Charles Darwin to the history of science, but the extent to which the nominated property tangibly conveys the discoveries and advances made by Charles Darwin.

ICOMOS considers that the landscape at Downe presented in this nomination is part of the "laboratories" used by Darwin and it cannot be disconnected from the other places Darwin used to develop his theory. The value of this landscape can only be seen in relation to the values of the other places.

Additionally, the notion of 'landscape laboratory' includes not only the landscape where Darwin carried out his observations and his experiments but also the exchanges and scientific correspondence through which Darwin could verify his ideas and keep informed on the research of his colleagues.

As already mentioned above in the section on the Comparative Analysis, ICOMOS considers that only part of the nominated property can be seen to accord with the notion of "landscape laboratory" introduced by the State Party, having been intentionally modified by Darwin through his scientific experimentation to test his ideas.

ICOMOS notes that the nominated landscape itself has no particular features that could not be found in other places. The farmed landscape around Downe that has been included in the nominated property does not show intrinsic features that allow consideration for inscription on the World Heritage List.

The question that arises from this analysis could have far reaching implications: to what extent does a property have potential outstanding value because an important scientist has observed it for a period of time? Should the same reasoning be applied to artists? If so, the list of properties that could be considered for World Heritage listing could grow exponentially. As for the arts, it has always to be considered that a property must have value

on its own and not derive its value only from the person who used it as a study object.

ICOMOS therefore draws the attention to the fact that the nominated property is not the result of Darwin's theory or discoveries, but is instead a study object and an object that does not have intrinsic merit.

Integrity and Authenticity

Integrity

According to the State Party, the nominated property includes all the attributes that are necessary to convey its value as "Darwin's landscape laboratory". It is also a complete witness to the way in which Darwin has used the landscape for his observations and experimentations.

ICOMOS considers that the nominated property is only part of the landscapes and natural areas that Darwin used throughout his life to develop his theories and cannot be considered separately from other places he studied, i.e., during his travel on the *Beagle*.

The Downe landscape has been more or less conserved since Darwin's time, with the exception of the Big Wood, which is today separated from the nominated property by the golf course.

ICOMOS notes that much of the focus of the nomination lies on the species contained in the landscape.

IUCN states that: *"All the habitats studied by Darwin are still evident and many of Darwin's experiments could be repeated today. It is possible to compare the natural values of specific locations of the rural landscape, and there are many where the wildlife and plants that Darwin studied are still present [...]. IUCN suggests that it would be useful to request that these sites be mapped to show where specific experiments were undertaken. Thus there are tangible natural attributes that can be directly related to the interaction of Darwin with the landscape in which he lived."*

The integrity of the property is affected by the visual intrusion and noise of the electric high voltage pylons, by car parking problems along the path to Down House, by the rather intense traffic of Biggin Hill Airport, south-west of the nominated property and by the intense car traffic to the north. In addition, the modification of the farming methods, which sustained the retention of the species diversity in the region, a feature that convinced Darwin to settle at Downe, may threaten the surviving biodiversity of the area in the future.

Authenticity

According to the State Party, the point of departure for the analysis of authenticity of the nominated property resides in the scientific notes and documentation elaborated by Darwin himself, and in particular his hand-

written notes, drawings and photographs. These testimonies establish the authenticity of the material elements: the sites, landscapes, places of observation, natural elements, gardens, etc.

The authenticity of the landscape is further verified by the 1840 cadastral documentation (Tithe Apportionment Survey) and by the 1896 cartography of the United Kingdom (UK Ordinance Survey), which show that the main structural elements survive.

ICOMOS observes that some aspects of the landscape where Darwin made his observations, and portions of Darwin's grounds, i.e. the Sand-Walk, have been largely preserved.

ICOMOS observes that, to ensure a thorough understanding of Darwin's research process, which appears to be the centre of the present nomination, it would be necessary that the spirit and feeling of what this landscape was at Darwin's time be retained at a highest degree, and for the landscape to reflect in some way Darwin's ideas. But although the structure of the landscape has remained more or less intact, the farming methods have changed considerably (i.e., mechanised agriculture has been introduced, some meadows are managed by volunteers and woodlands are maintained for conservation reasons) and there has been a gradual erosion of detail (i.e., 80% of the open heathland and bog at Keston Common has been lost) which is likely to continue. Further the visual and sound intrusions caused by the airport, the traffic roads and the electric facilities have eroded the sense of place.

IUCN states that: *"The importance of Darwin's ideas to humanity cannot be overstated – they are fundamental to our understanding of the natural world and are of universal relevance especially the origin of species by natural selection (evolution); the diversity of life as a fundamental principle of the natural world (biodiversity); and the interdependence of all life (ecology). The ramifications of these ideas have been significant with respect to science, religion, politics, and social movements, and are still provocative and relevant today. [...] As regards the assessment of the significance of Down House to the development of these ideas, including the association with a particular place or places, [...] IUCN notes that Darwin lived at Down House from 1842 to 1883, which is throughout the period of his great writings (including the publication of "On the Origin of Species" in 1859)."*

It should be noted that the landscape cannot be said to be a manifestations of Darwin's ideas, as he only observed the landscape rather than modifying it.

Down House has changed use several times before being transformed into the Darwin museum. ICOMOS considers that many elements of Down House, its gardens and greenhouses have been extensively restored following the abandonment and transformations, on the basis of detailed research of the

abundant written, photographic and direct sources of information, and with as much original material as possible. The objective of the restoration work at Down House and Gardens has been to present everything as seen through Darwin's eyes: even experiments are recreated there.

For example, the interiors of a number of rooms have been re-created to conform to how they would have looked during the occupancy of Down House by Darwin and his family.

The same caveat applies to much of the grounds and subsidiary buildings. The landscape around the house has undergone substantial changes in use and appearance since the second half of the 19th century, and so, not the actual landscape that aided Darwin in his studies.

However, the two villages included in the nominated property have generally maintained the urban and built fabric they had in Darwin's time, although some buildings have been altered and the presence of parked cars alter the spirit of the settlements.

To an extent, these changes have undermined the authenticity of the nominated property.

If authenticity is about the way the property conveys its Outstanding Universal Value, then ICOMOS considers that the area has undergone considerable changes since Darwin's time; and that the landscape cannot be said to convey in a meaningful way Darwin's theory of evolution. The link between the landscape and the theory is in observation, rather than intervention.

ICOMOS considers that the condition of integrity has been partly met in that all the elements that are related to the Outstanding Universal Value as put forward by the State Party are in place although some are under threat. ICOMOS considers the condition of authenticity has not been met. In particular, the changes in the farming methods have caused a gradual erosion of detail, and the modern facilities, intrusions and the traffic at the edge of the nominated property have diminished the possibility of experiencing the landscape of Darwin's time. However, more pertinently, the landscape does not convey in a physical way Darwin's ideas.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii) and (vi).

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the nominated property, in its multiple components as a landscape laboratory, allowed Darwin to observe, experiment and compare several animal and

plant species, through the forty years of his life at Downe. The diversity of the cultivated areas, the gardens and greenhouses, the meadows, pastures and woodlands, and the wetlands and bogs in the Downe region illustrate the practice of experimental science through observation and its use to build a major theoretical conception on the evolution of species through natural selection. The nominated property also illustrates the creation of experimental botanic gardens and greenhouses which were used by one of the major 19th century scientists to carry out his research.

ICOMOS considers that this landscape is not a unique nor an exceptional testimony related to Darwin's work: as mentioned before, Darwin's work or his "observatory" cannot be reduced to this landscape alone but needs to be connected to the Galápagos Islands and the other sites throughout the world that he visited.

Criterion (iii) is used when properties bear testimony to a cultural tradition or a civilisation. The Downe landscape does not 'bear' testimony to Darwin's thoughts in tangible ways: for the most part, he observed it rather than modifying it. ICOMOS considers that extending the use of this criterion to landscapes associated with scientific discoveries or artistic achievements would have far-reaching implications and open an interpretation that the World Heritage Committee has not allowed for criterion (vi) that also requires direct or tangible associations.

ICOMOS further considers that criterion (iii) has been mostly used to acknowledge the value of properties that bear witness to a cultural tradition or a civilisation through their materiality, as modified by humans: that is, the property as the tangible result of the knowledge of a cultural tradition or civilisation, and not because of the association of the property with a well known person in the fields of science, history, art, ethnology or anthropology, because criterion (vi) is used for such associations. Additionally, in this case, only a fraction of the nominated property was modified by Darwin following his experiments, i.e., the gardens, the experimental beds and the contents of the greenhouses all of which have undergone major changes and 'reconstructions' and are not representative of Darwin's wider observations. Furthermore, the extant part of the nominated property was in fact extensively observed and studied by Darwin under evolving conditions that were not determined by him, and the nominated property cannot be said to be the output of Darwin's work.

ICOMOS considers that this criterion has not been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

The State Party justifies this criterion on the basis that the nominated property is directly and tangibly

associated with Darwin's theory of evolution by natural selection, his explanation of global biodiversity as a fundamental principle of the natural world, and his demonstration of the ecological interdependence of all life forms. These three insights are closely intertwined and together provide the central principles for the present scientific understanding of the history of life on earth, the web of inter-relations between organisms in ecosystems, the influence of human pressures on the natural world, and global needs for survival.

ICOMOS observes that undoubtedly Darwin's ideas are of universal significance and that several semi-natural and farmed features of the nominated property are part of Darwin's "observatory" and thus linked with his ideas and conceptual work. However, on their own, they cannot explain the full extent of Darwin's theory and work. Furthermore the landscape is not tangibly associated with Darwin's work in terms of the imprint of his ideas being visible in the landscape.

Criterion (vi) has been generally used to express the association of a property with ideas or beliefs that are shared by a large group of people and this association is often reflected by the continual use of the property for purposes confirming such an association and as a result has come to have global meaning.

In this case, the nominated property has not become a centre that convened other scholars or researchers to continue Darwin's work or to pursue their own scientific goals. Nor has it developed as a shrine to Darwin's ideas visited by millions of followers that have generated pressure to preserve it as it was in his time. Therefore the type of association expressed by the property has a prevalent biographical character, which by its very nature cannot be shared by others, although it sheds light on Darwin's methodology of work.

As has been underlined by the Expert Workshop on *World Heritage: Science and Technology*: "for the World Heritage Convention the focus should be upon the physical sites"; and "the World Heritage List is not primarily a means to commemorate famous individuals, and alternative means should be considered for recognition in most cases" (WHC-08/32.COM/INF.10A).

Finally, concerning Down House and the experimental gardens and greenhouses, ICOMOS considers that their importance lies in their educational rather than their heritage context.

The conclusions drawn by ICOMOS on this criterion are an assessment of the nominated property: the significance of Charles Darwin's work is not in question and is of universal significance. In terms of the property, ICOMOS does not consider that the landscape can be said to be a tangible and direct reflection of those ideas nor can it be said to be revered as a shrine to Charles Darwin's ideas and preserved exactly as it was in his lifetime for the benefit of large numbers of his followers.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the condition of integrity has only been partially met, while the condition of authenticity has not been met, criteria (iii) and (vi) have not been justified, therefore the Outstanding Universal Value has not been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The nominated property is located on the urban fringes of Greater London, in the vicinity of the town of Orpington and of Biggin Hill Airport. The property is also included in the London Green Belt and the area suffers from some threats related to this situation.

Changes to agricultural land:

There are threats from the use of agricultural land and premises for purposes not associated with agriculture or forestry; the sale and subdivision of agricultural land and premises and related urbanisation proposals; the subdivision of agricultural land into recreational plots and the construction of small ancillary buildings; and inappropriate leisure uses, i.e. unauthorised camping.

Another pressure is the increase in industrial large-scale agriculture in Cudham Valley. It forms a contrast to the small landscape spaces in other parts of the property. In its southern part a re-conversion in woodland is going on and a portion of arable land is today used as meadows.

Local policies included in the London Borough of Bromley's Unitary Development Plan ensure that major changes are controlled. Further reduction of the pressures may be guaranteed by the designation of the nominated property as Green Belt land and of significant areas within the property for their environmental importance. However neither of these will stop the gradual erosion of detail in relation to the way the landscape reflects the type of mixed farming and upkeep that persisted in Darwin's time when there were more people farming the land. In addition the large estates that Darwin knew no longer exist and some of their land is now golf courses.

The amount of the landscape under direct management is very small. The farm land owned by Bromley Council (40%) is tenanted and the remaining farm land (55%) is in private ownership. These tenants and private owners are not constrained to keep their landscapes as they were in Darwin's time.

New Houses:

The London Plan 2004, produced by the Greater London Authority, states that Bromley must achieve 573 housing completions per year between 1997 and 2016. Due to the character of the Borough and the large proportion of

Green Belt land, this target has not been achieved. Suitable sites are limited, and this potentially puts Green Belt land under pressure. Downe and Cudham villages are Conservation Areas, so any new development or change to the existing infrastructure must respect the current state of the built environment.

Airport:

Biggin Hill Airport, at the south-western boundary of the nominated property, although not visible from it, also causes considerable disturbance due to the volume of air traffic.

Golf courses:

Two golf courses in the buffer zone cause a degree of impact on the ambience of the nominated property, especially in areas that were important to Darwin's life and work.

Power lines:

Another element with a greater impact is the high voltage power line which crosses the nominated property and is visible from many positions within it. Beyond its visual impact on the property, there are also noise issues which are undesirable.

A further disturbance is caused by motor vehicle traffic, which is heavy on the road north of the nominated property. Although the road is outside the boundaries, the traffic disturbs the quietness of the nominated property.

ICOMOS considers that the possibilities to reduce these disturbances seem limited.

Tourism pressures

The use of private or public properties for leisure dates back to Darwin's times and includes horse riding, golf playing and walking.

The countryside within and around the nominated property is popular for day excursions by Londoners for walking and riding. If mismanaged, these activities could damage the natural habitats and biodiversity.

ICOMOS considers that where practiced within a controlled framework, these activities are compatible with the conservation of the nominated property. These activities utilise the network of rural lanes and paths, which have existed since Darwin's time. However, their over-exploitation could alter the meadows and the hedgerows, disturbing the natural habitat of the species studied by Darwin.

Sport over-fishing in Keston Bogs has caused a localised degradation of the banks and their erosion.

The unregulated car parking by visitors to Down House Museum along the road to Downe has a negative visual impact on the landscape.

Environmental pressures

There are no environmental pressures noted by ICOMOS. Bromley District is characterised by good air quality, among the best within the London districts.

Natural disasters

South-west England has experienced exceptional storms in recent years (1987 and 1990) with consequences for isolated trees and forests. While these are natural phenomena and can regenerate with time, the economic consequences of these disasters on farmers may accelerate the change of farming patterns, thus influencing the species diversity which depends upon the management provided by farmers for centuries.

Floods represent a limited threat for the wetlands of the nominated property.

Fire threat is limited to the buildings.

Impact of climate change

Climate change is a potential threat to the natural habitats and biodiversity of the nominated property. It may result in milder and more humid winters and hotter and drier summers. Although, the species forming the biotope of Downe appear to be very strong and able to adapt to limited climate change, the modifications of climate parameters may influence the farming methods, thus leading to unpredictable changes to the biodiversity of the area and significantly altering the landscape from how it was in Darwin's time.

ICOMOS considers that the major threats to the property derive from the overall urban development of Greater London and the pressure for change to the farming landscape that this brings, which could significantly change the landscape so that it no longer reflected the features that Darwin knew. There is also the potential for an over-exploitation of the area for leisure purposes.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property correspond to most of the territorial elements which served as Darwin's landscape laboratory. They have been defined on the basis of cadastral parcel maps and of their visual values.

The surface of the nominated property is 721 hectares and the estimated population is 450 inhabitants (2001).

The buffer zone (567 hectares) includes two portions of land, now used as golf courses, which have been excluded from what was previously nominated, due to their lesser integrity and authenticity. The buffer zone

corresponds to the visual limits from Downe and Down House.

ICOMOS considers that the boundaries of the nominated property are adequate, although it may be helpful to increase the buffer zone to improve the protection from development pressures that may cause disturbance to the integrity of the property.

Ownership

Around 40% of the land is in public ownership, namely the municipalities of Downe and Cudham and the Bromley district.

English Heritage owns Down House and its grounds and has responsibilities for their management.

The protected natural spaces of wetlands and woodlands are managed by three specialised foundations: Kent Wildlife Trust, Woodland Trust and London Wildlife Trust.

Other land included in the property – around 55% of the nominated property - is privately owned.

Protection

Legal Protection

The nominated property's cultural and natural heritage is safeguarded through a wide range of overlapping protective measures provided under established planning legislation, policies, and practice. Much of the flora and fauna is protected under the Wildlife and Countryside Act.

Principal national statutes providing protective measures include the *Town and County Planning Act 1990*, the *Planning and Compulsory Purchase Act 2004*, the *Planning Act for Listed Buildings and Conservation Areas 1990*, the *Greater London Authority Act 1999*, the *Wildlife and Countryside Act 1981*, the *Countryside and Right of Way Act 2000*, the *Ancient Monuments and Archaeological Areas Act 1979*, the *Town and Planning EIA Regulations for England and Wales 1999*, the *Hedgerows Regulations 1997*.

There is currently no national protection for World Heritage sites. The majority of these protection measures are put in place by local authorities. In order to assist them, the government of United Kingdom regularly produces specifically dedicated notes (Planning Policy Guidance Notes). These are given great weight in the determination of planning applications and listed building consent.

Urban pressure is controlled by the London Plan. New construction is limited to zones for this purpose. The nominated property and its buffer zone are not included

in these zones, although the provisions for housing of the London Plan 2004 for Bromley potentially put Green Belt land under pressure.

Projects for new construction or other works within the nominated property require specific authorisation and should be in harmony with the existing rural landscape.

The two villages of Downe and Cudham are protected under the Conservation Areas Act. Their municipal territory is included in the Green Belt, which is governed by the London Plan (2004, revised 2008) and by the *Council's Unitary Development Plan (2005)*.

The settlement close to Biggin Hill is a Major Developed Site, but this is not the case for Downe and Cudham.

The Department for Culture, Media and Sport elaborated in 2007 a draft Heritage Protection Bill which would introduce a unified statutory Heritage Register. This would recognise also World Heritage Sites within the categories of registered properties, which however would continue to be protected primarily through the spatial planning instruments. The Act however has not been discussed by the Parliament.

Effectiveness of protection measures

Altogether the measures for the protection of the nominated property are adequate, in terms of threats from major developments. There is however no direct protection for the features of the agricultural landscape.

ICOMOS considers that the overall legal protection in place is adequate.

Conservation

Inventories, recording, research

The archival and documentation sources are contained in Darwin's collection of documents at Down House, the Darwin archives at the Library of Cambridge University and the archives of the Museum of Natural History.

English Heritage and the various foundations involved in the conservation and management of the property conduct studies and scientific monitoring of the nominated property as a landscape laboratory, in connection with specialised university institutions.

English Heritage with the Charles Darwin Foundation is responsible for the historic studies and the monitoring of Down House.

Active Conservation measures

The balance of the different components of the property is still rather similar to that in Darwin's time.

The works undertaken by English Heritage in the house and gardens of Down House intend to present the property as it was in 1877, which is well documented. They also manage the collections (instruments, scientific documentations, archives, etc.).

However in the landscape, apart from in the nature reserves, the conservation responsibility lies with owners and tenants. ICOMOS strongly supports observations received from IUCN that the London Borough of Bromley should seek agreements with private owners to promote continued conservation and maintenance of the natural attributes of the landscape that are associated with its cultural values.

Maintenance

Maintenance is carried out by the various owners, tenants and institutions in charge of the multiple management aspects: landscape balance, conservation of biotopes, management of the agricultural, leisure and natural spaces, management of the gardens and greenhouses, of the built heritage in general and of Down House. There is little direct control of maintenance of landscape features such as hedges, woodland, arable fields, meadows etc as this relies on owners and tenants.

Maintenance measures are included in the Management Plan and in the Development Plan of Bromley district.

Effectiveness of conservation measures

The conservation measures appear adequate although they rely to very large amounts on the owners and tenants of land that do not have any formal agreements to maintain their land in a particular way. Such agreements should be put in place where possible.

ICOMOS considers that the level of present conservation of the property is adequate, although the State Party should ensure the careful and continued conservation and maintenance of the natural attributes of the property, through structured agreements with those who manage the land.

Management

Management structures and processes, including traditional management processes

The following main organisms are involved in the management of the nominated property:

- Bromley District, in particular its rural office, employs the staff working on the World Heritage nomination of the property;
- English Heritage manages the buildings and the mansion of Down House;
- Natural England provides the funds to support the nature conservation programmes;

- the Department of DEFRA (Department of Environment, Food and Rural Affairs);
- the Charles Darwin Trust;
- the London Transportation Department;
- the private partners.

The actions of the various partners are coordinated by a Steering Committee established for the property, in the framework of the management plan.

Policy framework: management plans and arrangements, including visitor management and presentation

The direct management actions are organised and harmonised within the Management Plan (2006, revised in 2009).

The major part of the management actions is involved in the framework of the *Green Belt*, within the *London Plan*, in which the nominated property forms a protected site. The management measures are contained in particular at the district level through *Bromley's Unitary Development Plan* (2006).

The agricultural development depends also on *Bromley's Unitary Development Plan*, in that the plan sets out the land use policy framework which is used for planning permission.

The nominated property is estimated to receive around 200,000 visitors per year. Of these 25,000 visit Down House and 20,000 visit High Elms Mansion. The remainder visit Down village or the country park. The peak can reach 5,000 persons per day, including children. The vehicle parking capacity is sufficient, although parking is limited for Down House. Currently few visitors visit the farmed landscape part of the property.

In general, the leisure activity within the property and the visitor numbers for Down House may face a moderate future increase, without notable impact on their qualities, except for Down Bank, which is considered fragile and therefore its use should be strictly controlled.

An access and circulation plan for the nominated property is under development (*Bromley Rural Access Plan*), aiming at creating an access plan to the wider landscape which is sustainable and respectful of its values. It envisions the promotion of public transportation, limitations to private vehicle circulation and parking, and the encouragement of pedestrian or bike circulation.

The general policy for visitors and tourism is an action coordinated among the different partners of management within the *Visitor Management Strategy and Action Plan* (2007). The strategy envisions a five-year management plan for tourism: the *World Heritage Property Sustainable Visitor Management* (2009) as well

as a strategy of education and information for visitors (2008).

Risk preparedness

In case of fire, a plan exists to assist firemen.

Involvement of the local communities

The local communities are involved through the representatives elected at the local level (municipalities of Downe, Cudham and Bromley district). Citizens also participate through the several NGOs connected to the nominated property.

Resources, including staffing levels, expertise and training

The necessary funds for the conservation and management of aspects of the nominated property that can be directly managed are directly granted by the main owners and the management partners, such as English Heritage and Bromley Council (see Ownership and The property).

The Bromley District employs staff specifically dedicated to the nominated property, as well as specialised staff for advice on the management of the landscape and rural spaces, for culture, tourism, etc.

English Heritage has staff trained in the conservation of heritage sites of national and international importance. It manages the staff in charge of the reception and the conservation of Down House and garden.

Effectiveness of current management

ICOMOS considers that the management system of the nominated property is adequate where it is directly managed. The vulnerability lies on the farmed landscape that is not directly managed.

ICOMOS considers that the management system of the nominated property is adequate.

6. MONITORING

The main indicators to measure the state of conservation of the nominated property have been determined by the management plan and concern the different rural and natural components of the landscape laboratory, Down House and its grounds, the built heritage of the farms and of the houses of Downe and Cudham.

They aim at ensuring:

- the conservation and improvement of the natural spaces, on the basis of a five-year detailed monitoring plan;
- the preservation of the built environment, on an annual basis;

- the education and interpretation of the nominated property.

Indicators are organised in eight sub-groups, the application of which is the responsibility of Bromley District and English Heritage.

Indicators are quantitative and qualitative and will be used to assess the implementation of the strategic action plans which are detailed in the Management Plan.

ICOMOS considers that the proposed monitoring system is adequate and should be implemented as soon as possible.

7. CONCLUSIONS

The present nomination has been submitted by the State Party as an example of a property of significance because of its associations with globally important scientific achievement.

There are not many properties relating to the history of science on the World Heritage List, and in 2005 the World Heritage Committee in recognising this gap, requested the “*Director of the World Heritage Centre [...] to promote [...] nominations which recognise and celebrate achievements in science*” (Decision 29COM 5B). In 2007 the Committee considered the opportunity of further exploring the issues related to nominations recognising scientific achievements and accepted “*the offer of United Kingdom to host an expert meeting on the recognition of the heritage of science and technology in the World Heritage Convention*” (Decision 31COM 9).

The Expert Workshop on *World Heritage: Science and Technology* met in London on 21-23 January 2008, and the results of this meeting have been used as a reference to elaborate the present evaluation.

This property is nominated by the State Party as a prime example for the life sciences.

ICOMOS recognises the significant effort made by the State Party to contribute to achieve a better representation of the cultural heritage of the world in the World Heritage List.

This nomination however, raises a number of questions that have been addressed by ICOMOS in the relevant sections of this document and are further summarised in the conclusions section.

First ICOMOS observes that the value of Darwin's theory of evolution through natural selection is not under discussion, but also recalls that the World Heritage Convention is a property or site-based convention, so Darwin's scientific work itself is not eligible for inscription on the World Heritage List. What could be inscribed is the physical setting related to his work, provided that its Outstanding Universal Value has been demonstrated.

This is therefore the focus of the evaluation conducted by ICOMOS.

The association with a scientific idea needs to be reflected by physical and/or direct evidence. The critical question for this nomination is thus not related to the contribution of Charles Darwin to the sciences, but the extent to which the nominated property tangibly conveys the discoveries and advances made by Charles Darwin. In other words, the key issue, in this case, is how far the landscape retains evidence of Darwin's interventions and whether the landscape can be said to evoke the diverse farming landscape that existed in Darwin's time and his involvement with it, in a way that allows people today to understand why Darwin chose this landscape to live and work in and its importance to him.

ICOMOS notes that the properties that have been inscribed on the World Heritage List for their scientific merits express in their materiality the results of scientific and technological work and, through their use for research, have allowed expansion of scientific knowledge. In the nominated property only a small part of it is in accord with the notion of "landscape laboratory" introduced by the State Party, having been intentionally modified by Darwin through his scientific experimentations to test his ideas. Most of the nominated property is not the result of Darwin's work, in that Darwin used the landscape surroundings of his house to observe the species and their intrinsic features, drawing from his ability of observation and reflection the ideas at the base of his theories. Only the kitchen garden, the flower beds, the orchard, and the greenhouses tangibly reflected the scientific experimentations that allowed him develop and test his theories. The rest of the landscape was used for observations only.

ICOMOS further considers that the "landscape laboratory" at Downe presented in this nomination is only part of the "laboratories" used by Darwin and it cannot be disconnected from the other places Darwin used to develop his theory. The value of this landscape can only be seen in relation to the values of the other places.

Additionally, the notion of 'laboratory' for Darwin includes not only the landscape where Darwin carried out his observations and his experiments but also the exchanges and scientific correspondence through which Darwin could verify his ideas and keep informed on the research of his colleagues. In case the nominated property is inscribed, this would imply the inscription also of Darwin's written material, which would not be possible.

The nominated landscape itself has no particular features that could not be found in other places. The farmed landscape around Downe that has been included in the nominated property does not show intrinsic features that allow consideration for inscription on the World Heritage List nor does it retain sufficient overall

character that was known and experienced by Darwin, although species that he studied have persisted.

The questions that these issues raise could have far reaching implications: to what extent does a property have potential Outstanding Universal Value because an important scientist has observed it for a period of time? Should the same reasoning be applied to artists? If so, the list of properties that could be considered for World Heritage listing could grow exponentially. As for the arts, it has always to be considered that a property must have value on its own and not derive its value only from the person who used it as a study object.

ICOMOS therefore draws the attention to the fact that the nominated property is not the result of Darwin's theory or discoveries, but is instead a study object and an object that is not seen by society nationally or globally to have intrinsic merit.

The Expert Workshop underlined that "*for the World Heritage Convention the focus should be upon the physical sites*" and that "*the World Heritage List is not primarily a means to commemorate famous individuals, and alternative means should be considered for recognition in most cases*" (WHC-08/32.COM/INF.10A).

In summary, ICOMOS considers that the intangible scientific heritage represented by Darwin's theory of evolution through natural selection is not questioned, and clearly is of outstanding significance, but the nominated property does not respond to the criteria and requirements of the World Heritage Convention in terms of bearing witness to those scientific ideas tangibly and directly.

Recommendations with respect to inscription

ICOMOS recommends that Darwin's Landscape laboratory, United Kingdom, ***should not be inscribed*** on the World Heritage List.



Map showing the boundaries of the nominated property



Down House and its surrounding landscape



Hangrove Wood



Down House



Down House, the Old Study today

Mount Vernon (United States of America)

No 1327

Official name as proposed by the State Party:

Mount Vernon

Location:

State of Virginia, Fairfax County,
United States of America

Brief description:

The nominated property is a portion of the Mount Vernon Estate, which is located along the Potomac River and consists of fourteen original buildings, together with the lanes, gardens, walls, and other features, landforms, and viewsheds. The area proposed for inscription is contained within a larger area that is a remnant of the plantation owned by George Washington.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008) paragraph 47 and annex 3, it is also nominated as a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 30 January 2008

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 21 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Landscapes and several independent experts.

Literature consulted (selection):

Armstrong, D. V., and Reitz E. J., *The Old Village and the Great House: An Archaeological and Historical Examination of Drax Hall Plantation St Ann's Bay, Jamaica*, USA: Board of Trustees of the University of Illinois, 1990.

Binney, M., *et al.*, *Jamaica's Heritage: an Untapped Resource*, Kingston, Jamaica, The Mill Press, 1991.

Higman, B. W., *Jamaica Surveyed: Plantation Maps and Plans of the Eighteenth and Nineteenth Centuries*. Kingston: University of the West Indies Press, 2001.

Information Document on the *Regional Experts Meeting on Plantation Systems in the Caribbean*, (Paramaribo, Suriname, 17–19.7.2001).

Macdougall, E. B; ICOMOS-IFLA. 'Historic garden preservation in the United States. Its history and present state.' ICOMOS, Paris, 1975. pp.155-166. In: *Proceedings of the 3rd International Symposium on Protection and Restoration of Historic Gardens, Zeist, Netherlands, 8-13 September 1975*.

Van Hooff, H., *The Cultural Heritage of the Caribbean and the World Heritage Convention*, Paris: Éditions du CTHS, UNESCO, 2000.

Technical Evaluation Mission: 14-17 September 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property is located along the Potomac River and consists of the main locus of occupation at George Washington's Mansion House Farm. The nominated property covers 13ha and includes the Mount Vernon Mansion, its outbuildings, and the associated landscape features, comprising the lawns, the bowling green, the gardens, and the walls, as well as the vistas from the Mansion to the Potomac shoreline and to the entrance gate. The nominated property is surrounded on one side by the Potomac river and on the other three sides by the property owned by the Mount Vernon Ladies' Association that was the remaining portion of Washington's Plantation Estate. This land is used for several operational functions for the maintenance of the historic site and its operation as a place for visits.

At its peak the estate, which included more than 8000ha, was divided into five separate 'farms.' One was the Mansion House Farm, which served as the plantation hub, or service centre, rather than as an agricultural unit. In the four farms Washington's crops were grown and groups of enslaved labourers (316 in 1799) lived, under the direction of resident overseers. None of the farms that made up the vast majority of the plantation survive. For that reason the fields where the crops were grown, the barns and other agricultural buildings, as well as the quarters for the enslaved field workers and their overseers, are not included in the nominated property.

The Mansion is the result of George Washington's expansion of the house and is featured on its eastern

side by a long two-storey porch, the 'Piazza,' which served as a transitional area from the interior to the external space. On the western front, a pediment regularizes and re-proportions a facade that is otherwise too long and irregular. The Kitchen and the Servant Hall are connected to the main building through two open porches, a feature peculiar to Mount Vernon.

The Mansion is flanked on the west by four dependencies (Kitchen, Servant Hall, Store House, Gardener's House) that front on an elliptical courtyard, which is visually bounded by clumps of trees planted along the edges of a bowling green. This connects the layout of the Washington residence with the expanding landscape and the entrance gate westwards. The other service buildings (Salt House, Spinning House, Blacksmith Shop, Smoke House, Wash House, Coach House, Dung Repository) are situated outside this viewshed. They extend parallel to the facade of the mansion on both sides of the courtyard. Two formal walled gardens and additional service buildings flank the bowling green. Brick ha-ha walls encircle the lawn east of the Mansion and the western edge of the bowling green. A formal vista from the east front of the Mansion to the Potomac River is framed by a sunken lawn and a decorative 'hanging wood,' while to the west a 1,200m vista extends from the Mansion towards the historic entrance gate.

The buffer zone covers 159ha and comprises property owned by the Mount Vernon Ladies' Association, which is used for a variety of functions related to the mission of the organization, *i.e.* passive use as a forested buffer between the historic area and adjoining residential developments, meadows and fields for livestock grazing, and areas that have been set aside for operational and visitor-related functions. Structures accommodating modern pursuits are positioned out of sight from the property's historic core.

History and development

The core of the Mount Vernon estate entered in Washington's family ownership in 1674 and passed to George in 1758-61. At that time the dimensions and shape of the Mansion Farm were smaller and different. Washington expanded the house, replaced the outbuildings, and reorganized the surrounding gardens and grounds during two major campaigns of construction. The work included raising the structure to two and one-half storeys, adding exterior closets to the gable ends, giving the facades the appearance of rusticated stone by incorporating worked pine boards, and extensively redecorating the interior spaces. Contemporary with the remodelling of the buildings according to Neo-Classical precedents is the redesign of the surrounding gardens and grounds following the tenets of Picturesque landscape design.

After the American Revolution, Washington extended the property, reinvented the overall Mount Vernon economic

system, adopted enlightenment based ideas on agricultural practices, and explored alternatives to traditional farming-based commercial activities. Washington made significant efforts to maintain an efficient enterprise that could also serve as a model for other American farmers to follow.

After Washington's death, although steadily diminishing in size, the core of the property, including the Mansion, remained in the possession of three successive generations of the Washington family. Finally, in 1858, the Mansion and 81ha of land were sold to the Mount Vernon Ladies' Association of the Union, which sought to acquire and preserve Washington's home for the benefit of all. The Ladies' Association (1853) is the first national historic preservation organization in the USA and one of the first to be run solely by women.

After Washington's death, and before 1858, relatively few changes were made to the Mansion and the surrounding outbuildings and grounds. Over the years the Ladies worked to return elements of the site to their 18th century appearance and added several visitor amenities outside the nominated property.

The first period of restoration campaigns (1859-85) included emergency repair, maintenance work, and the rebuilding of two gardens and the deteriorated Piazza. The conservation efforts also concerned from the start the service buildings and not only the Mansion, contrary to what was suggested to the Ladies.

The second period of intervention (1885-1937) included structural reinforcement, reconstructing the Coach House, expanding the greenhouse and erecting administrative buildings, repairing/ rebuilding the ha-ha walls, and building a formal gate entrance to the Mansion. In the 1930s the National Park Service completed the George Washington Memorial Parkway, one of the earliest scenic landscape highways in the USA, built as a panoramic approach to Mount Vernon.

The Ladies' Association began in 1901 to codify their restoration approach for the landscape, which was to be managed with the aim of restoring it according to the layout that Washington had planned and built. In the same period archaeological excavations were carried out and several revisions were made to previous restoration works, such as the lateral porch and the balustrade on the reconstructed Piazza as well as the summer house rebuilt by the Ladies on the foundations of the ice house were removed. The Lower Garden was re-established and structural investigations and repair works were carried out. In the subsequent period (1940-78) the outbuildings were restored to their 18th century appearance, while the greenhouse and slave quarters were rebuilt in the 1950s. In the same decade the Ladies also triggered a broadly based preservation movement that succeeded in retaining much of the viewshed across the Potomac, which was threatened by plans for industrial facilities. This marks one of the first successful attempts in the country to protect the viewsheds from an

historic site. The last period of restoration efforts (1979-present) was marked by the decision to determine and to reproduce the colours of the rooms at the time of Washington's death. This led to extensive analytical investigations which subsequently became the norm in restoration projects. In the 1980s and 1990s the Ladies' Association established a permanent programme of archaeological research. The results of intensive research programmes made it possible to develop projects to enhance interpretation, while most of the structures were returned to their interpretive role, all the administrative and service functions (such as the Ford Orientation Centre and the Reynolds Education Centre) being moved to other new buildings.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The nomination dossier defines the references used for the comparison: the impact of British colonization, the architectural and landscape conception for the Mansion House Farm, and the specificity of the plantation phenomenon in the Chesapeake area in respect to the wider relevant region (the American South and the Caribbean). In this regard, identified differences are the size of the estates, which usually were smaller in the Chesapeake, the fact that the planters usually did not reside on their plantations in the Caribbean, the types of cultivated crops, the number of slaves needed to make the plantation work, and the attention to the design of the landscape surrounding the plantation mansions in the Chesapeake area.

The World Heritage sites selected for comparison are: Brimstone Hill Fortress National Park, Saint Kitts and Nevis (1999, criteria (iii), (iv)); Old Town Lunenburg (1995, criteria (iv), (v)) and Historic District of Old Québec (1985, criteria (iv), (vi)), Canada, in relation to the impact of British colonization; City of Vicenza and the Palladian villas in the Veneto, Italy (1994, criteria (i), (ii)), and Monticello and the University of Virginia in Charlottesville, USA (1987, criteria (i), (iv), (vi)) with regard to the design influences - Monticello also being compared for the plantation dimension of the nominated property - and Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba, Cuba (2000, criteria (iii), (iv)).

Although Monticello, the only other property on the World Heritage List among those cited above that is fully comparable with Mount Vernon, is acknowledged to be a unique example of precocious Neo-Palladian architecture in United States, the nomination dossier asserts that Monticello has only limited potential for consideration as an expression of British plantation landscapes because of its lesser completeness as a plantation farm.

The Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba has been considered to be different from Mount Vernon because of its archaeological nature, its later age (19th century), and its Spanish origin.

Mount Vernon has also been compared with a number of plantation houses in the United States (Prestwold, Shirley, Stratford Hall, Wye Mansion, Tuckahoe, Sully) for their physical substance, period, and cultural background. The nomination dossier concludes that Mount Vernon possesses a much higher degree of integrity and completeness than the other properties examined.

ICOMOS considers that the Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba unquestionably stands as a major case for any comparative analysis of plantations, plantation systems, and plantation cultural landscapes. However, the nomination dossier dismisses the Cuban Plantations World Heritage site as "different".

ICOMOS holds that, despite the existence of variations, the plantation system has been marked by features that transcended local and regional differences and allow comparison among examples from within the American South and the Caribbean area. The Expert Meeting on Plantations in the Caribbean held in 2001 produced a list of properties, among which the following might have been selected for examination in the dossier: Betty's Hope (Antigua), Angerona (Cuba), Zuurzak and Lanhuis Knip (Curaçao), Boca del Negra and Engombe (Dominican Republic), Douglaston (Grenada), and Joden Savanne and Marienburg (Suriname).

The Tentative Lists also offer useful examples for comparison, such as The Industrial Heritage of Barbados: the Story of Sugar (Barbados), Ruta de Los Ingenios (Dominican Republic), Seville Heritage Park (Jamaica), The Cultural Landscape of the Hacienda Chuao (Venezuela), and the Coffee Cultural Landscape (Colombia). All of these exhibit substantial traces of the whole plantation system and landscape of which they were part and would have been valid references for the analysis.

The nomination dossier, however, does not even cite these properties as being relevant for comparison with Mount Vernon. The Caribbean plantations in general are dismissed because they are considered to lack integrity, although many retain several features that express their significance as plantation cultural landscapes and some are still living landscapes (e.g. Chuao Plantations).

In the case of Mount Vernon, ICOMOS considers that it is more accurate to describe it as an example of a 'plantation house' or 'home', *i.e.* the planter's residence, where a number of what were often more domestic activities took place. The nature of the property is reflected in the selection of cases within the USA, which in fact exemplify plantation homes rather than

plantations. In this case, the comparison made in the nomination dossier appears to be relevant, although limited to the USA, whilst some examples from the region could also have been cited, such as Good Hope (Jamaica).

Within the USA, the Hammond-Harwood House might also have been added as one of the most significant examples of a Neo-Palladian plantation home in the country.

The State Party claims that the property has values as a plantation or a plantation house, but the comparative analysis was confined to properties with values solely as plantation houses/homesteads, with the exception of the First Coffee Plantations in the South-East of Cuba. This, however, was dismissed simply as 'different.'

ICOMOS considers that the comparative analysis does not justify consideration of this property for the inscription on the World Heritage List.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of outstanding universal value as a cultural property for the following reasons:

- Mount Vernon is a pre-eminent expression of the slave-based plantations that developed in the British Southern American and Caribbean colonies over the course of the 18th century;
- With fourteen original 18th century buildings, the lanes, gardens, walls, and other associated landscape features, the site uniquely represents the distinctive character of an elite home plantation of the era and from the region in which it was created.

ICOMOS notes that the dossier is not clear in its definition of the property: in the first paragraph Mount Vernon is said to be an example of a slave-based plantation, whilst in the second it is said to uniquely represent an elite home plantation, which is only one part of a plantation.

ICOMOS recalls that in 2001 an Expert Meeting was held in Suriname on Plantations in the Caribbean. The meeting suggested some useful definitions for the terms *plantation*, such as 'the physical boundaries/ground of production of a mono-crop, with its internal system [...] i.e. slave hospital, provision ground, works, etc.' and *plantation system* as 'the tentacles of activity that fed into the plantations, markets, warehouses, trading houses, etc.' These might be considered to be reference definitions.

ICOMOS considers that the Mount Vernon nomination gives insufficient recognition to some of the decisive elements that convey the meaning of a plantation, which

would be critical in fulfilling the outstanding universal value of any property designated as a plantation, plantation system, or plantation cultural landscape. The nominated property is in fact the only surviving element of the much larger Mount Vernon plantation, which included five farms with several functions carried out on the site (only 172ha remain out of the former 8,000ha that constituted the Washington Estate) and therefore does not appear sufficient to represent the entire functioning of a plantation complex.

Aspects such as the agricultural activities and associated industry, industrial archaeology, and the social relevance of the plantation owners' house to that of the plantation activities appear to be peripheral in the Mount Vernon nomination. The nomination dossier recognizes solely the domestic life and associated activities of the mansion grouping within the historic Mount Vernon plantation, and as such it does not meet the definitions that have been adopted for this category relating to any submission that would be designated as a plantation.

Integrity and Authenticity

Integrity

In the nomination dossier it is stated that the nominated area (the Mansion House Farm, which served as the plantation's administrative and service hub) contains all the elements needed to express its heritage value as the core of the plantation system and includes the work buildings where the many plantation activities were carried out by the hired supervisors and the more than 90 enslaved Africans who lived and worked on this portion of the estate.

All the essential elements of the core of the plantation landscape are said to be contained within the nominated area, including the vistas focusing on the Mansion, as well as the fourteen original structures and the associated landscape features. There are no significant adverse impacts on the property as a consequence either of development or of neglect. The portion of the property proposed for inscription is effectively buffered against any and all modern intrusions, including provisions to preserve the viewsheds which may be unique.

ICOMOS considers that the elements included in the nominated property are not sufficient to express the significance and to represent the functioning of the Mount Vernon plantation, which was an extensive operation that was sub-divided into five farms where the field crops were grown and processed. The service buildings included within the boundaries of the nominated property relate mostly to domestic activities. Nominated as a plantation, the property should include at least a portion of land of one or more of the other four farms that the Mount Vernon plantation Estate comprised and which still exhibit traces of past plantation activities.

The inclusion of the proposed buffer zone in the nominated property might be a way to reinforce the understanding of the mansion farm as one component of a much larger plantation landscape. However, at this stage the features of this area seem to possess a limited degree of authenticity and integrity, owing to transformations for the purpose of interpretation.

When considering the nominated property as a plantation home, ICOMOS considers that its key elements – the manor house with its gardens and dependencies – are comprised within the nominated property. Nevertheless, ICOMOS considers that it would be beneficial for two areas to be included in the nominated property: the Vineyard Inclosure and the Hanging Wood. These have been excluded because they were considered to be recreated features without sufficient integrity. However, ICOMOS considers that they are visually connected to the mansion area and form important visual boundaries for the nominated property. Even if they are recreations, they reflect historical and archaeological evidence and do not threaten the overall level of integrity and authenticity of the property.

The remaining boundaries of the nominated property, defined by continuous lines of trees or dense planting, appear to reach their limits, suggesting that the trees are outside the nominated property. It would be beneficial for the nominated property to include part of the wooded area, thus ensuring that this boundary condition is part of the inscribed property. Finally, in certain areas the boundary is loosely defined visually (the western side of the north field area and the northern boundary of the west field beyond the bowling green), and in both cases facilities incompatible with the historic core are visible. Planting along these boundaries would improve the distinction between these areas.

There are almost no intrusions into the physical cohesiveness of the site. The good state of conservation of Mount Vernon reflects its treatment over time as a significant mansion homestead. The buildings have been regarded as elements within its closely associated designed landscape rather than isolated objects and this has been very beneficial in sustaining the integrity of the whole.

Authenticity

According to the State Party, the Mount Vernon Estate and Gardens possesses an extremely high level of authenticity as a consequence of the survival of an unprecedented number of original 18th century structures and landscape features that are preserved within a protected viewshed which is virtually identical to that of 200 years ago. The structures, the gardens and lawns, trees, lanes and walkways and other features form a cohesive Picturesque designed landscape for a home plantation complex according to a plan implemented by George Washington in the 1770s and 1780s. An extraordinarily high percentage of original building fabric

has survived both in the mansion and in the outbuildings. The essential form and design of the nominated property is unchanged from the conditions in the 18th century. As an historic site that has been preserved for the educational benefit of the general public, the use and function of the nominated property are quite different from the 18th century plantation complex. However, all the essential elements of the site retain the appearance and character of their original purposes. The location and setting of the Mount Vernon Estate are unchanged from the conditions that contribute to its significance.

ICOMOS considers that the authenticity of the nominated property is not without concerns. According to the nomination dossier, the site is being proposed as a rare survival of an 18th century cultural landscape that reflects the worldwide importance of slave-based plantation systems. However, the full extent and complex interrelationships of a large plantation system have been reduced to a fraction of their 18th century area, and the uses and functions that animated this landscape were converted 150 years ago into those of a historic house museum.

Some elements of the property, however, still convey the sense of an isolated estate within a pioneer rural landscape, which is part of the nature of the plantation system. The viewsheds from the Mansion have survived relatively unchanged across the Potomac River to the forested hills of the Maryland shore. The main house, with its traces of subsequent transformations, carries the sense of a true survivor of the period. Many of the outbuildings contain the evidence of years of history, whilst the central bowling green with its slightly romanticized plantings accurately reflects the 18th century aesthetics.

Less successful in this regard are the reconstructions, which take away some of the sense of an important relict landscape. They tend to reflect a contemporary view of the interpretive mandate of the site, which leaves less to the imagination and seems to devalue the importance of memory and narrative. The site does not seem to be about its intrinsic value as 18th century remains but rather to be about its associative values, with Washington in particular.

The question of authenticity is further complicated by the fact that the site has been an historic house museum for 150 years, and therefore reflects another set of intrinsic and associative values entirely unrelated to slave-based plantation systems and British colonization, namely the history of self-conscious historic sites which present and interpret local and national identities.

As for authenticity, the association of the property with Washington and the fact that the site has been preserved and maintained as a museum because it was Washington's residence prevails and makes the fact that Mount Vernon also exemplifies a plantation Mansion House Farm peripheral.

ICOMOS considers that the conditions of integrity and authenticity have not been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criterion (iv).

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Mount Vernon Mansion and its associated outbuildings, gardens, and grounds represent a surviving example of an 18th century cultural landscape, which shows the international importance of slave-based plantation systems and of British colonization. Mount Vernon reflects the development of elite American plantations during the 18th century from the economic, aesthetic, and social points of view. The buildings and the associated grounds and working areas included in the nominated property accommodated the activities of the enslaved African-American workers that made possible the success of the plantation.

ICOMOS considers that, whilst the criterion appears valid for Mount Vernon as a property within the full context of its historical achievement and development, those vestiges that are put forward in this nomination would need additional physical resources to fulfil criterion (iv) as a plantation or a plantation landscape.

ICOMOS considers that this criterion has not been justified.

ICOMOS does not consider that the criterion and Outstanding Universal Value have been demonstrated at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The State Party states that no development pressures directly affect Mount Vernon. The nominated property is effectively buffered on three sides from any potential visual impact within the 172ha. The Potomac River acts as the fourth boundary for the property and the viewshed is protected by a number of legal restrictions. The Ladies' Association works with the Federal Government and various private and public entities to ensure that protection is enforced.

ICOMOS considers that the property is well protected from adjacent development, thanks to the protective measures put in place to safeguard the viewshed across the Potomac.

Tourism pressures

The State Party reports that Mount Vernon is visited by an average of one million visitors annually, a number which is likely to remain the same for the foreseeable future. Numerous measures have been implemented to ensure the protection of the historic resources from any potentially damaging impacts and professional staff are employed to monitor and address any negative effects.

ICOMOS considers that pressures from tourism are well controlled and that the construction of support facilities away from the nominated property has been beneficial for the enjoyment of the historic area. The Ford Interpretation Centre, although large in scale, has been located in a small valley and is essentially invisible from the nominated property.

Environmental pressures

The State Party holds that no environmental pressures directly impact Mount Vernon. The fabric of the buildings and the condition of the trees and other living resources are closely monitored and there is no evidence of impending pressures.

ICOMOS considers that the property is well protected from environmental pressures, apart from some questions of erosion and drainage pattern on the river slope which, however, are not visible from the nominated property.

Natural disasters

Mount Vernon is not considered by the State Party to be prone to unusually high risk from natural disaster. Wind and water damage from tornadoes and/or hurricanes or lightning strikes constitute the most likely threats. However, a Disaster and Emergency Preparedness Plan has been developed for the property.

Impact of climate change

ICOMOS considers that climate change in the area may result in an increased frequency of floods and in possible pest attacks on the wooden structures, owing to the increase of temperature and humidity.

ICOMOS considers that the main threats to the property appear to be fire and tornadoes or hurricanes. ICOMOS recommends that the problems of erosion along the river should be monitored.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property enclose the Mount Vernon Mansion, its outbuildings, and the

associated landscape, the features of which comprise the lawns, the bowling green, the gardens, and the walls, as well as the vistas from the Mansion to the Potomac shoreline and to the entrance gate.

As discussed in the Outstanding Universal Value and Integrity sections, ICOMOS considers that, since the property is nominated as a plantation, it should include at least a portion of land that formed part of Mount Vernon Plantation Estate at the time of its highest peak and which still exhibits traces of past plantation activities.

When considering the property as an example of a plantation house, the boundaries require to be modified as described in the Integrity section to include the Vineyards Enclosure, the Hanging Wood, and a portion of the wooded area along the remaining edges. Additionally, ICOMOS suggests that trees should be planted so as to hide the support facilities.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are not sufficient to express the significance of Mount Vernon as a plantation.

Ownership

The nominated property is owned by The Mount Vernon Ladies' Association of the Union, a private, non-profit corporation chartered by the Commonwealth of Virginia.

Protection

Legal Protection

The Mount Vernon Ladies' Association of the Union was originally chartered by an Act of the Virginia General Assembly passed in 1856 (the '1856 Act'). The stated purpose of the Association was to raise money to purchase and to maintain Mount Vernon. In 1858 another act laid down that the Association could not alienate the property or any part of it. Should the Association cease to exist, the property reverts to the State.

Mount Vernon was one of the original properties designated by the Secretary of the Interior in 1960 as a National Historic Landmark.

The viewsheds from the Mansion across the river towards the opposite shore of the river are protected by Piscataway Park, which was created along the Maryland shoreline in 1961 for this purpose. The Park currently consists of land that is owned by the Federal Government (36%), along with other privately owned parcels that are protected by scenic easements deeded to the Government.

ICOMOS considers that Mount Vernon is endowed with considerable protection from a number of effective legal provisions.

Effectiveness of protection measures

The 1856 Act requires the Estate to be safeguarded against any injury and held in the memory of George Washington and a Board of Visitors to be established to monitor the effectiveness of the Association's activities. In case this fails to keep the Estate in a proper state of repair, the State would become responsible for its improvement and maintenance. The National Historic Landmark designation implies that any Federal, Federally licensed, or Federally assisted projects that might adversely affect Mount Vernon must include in their impact assessments an analysis of the project's potential impact on the property, and that this analysis must be submitted to the Advisory Council on Historic Preservation for comment.

National Historic Landmark designation mandates the National Park Service with the obligation to inspect the property and to report any threats to its integrity to the United States Congress. In addition, no Federal funds may be expended or Federal licences extended to projects that have the potential to negatively affect any National Historic Landmark without the review of the project in accordance with Federal law.

The Heritage Resources section of the Fairfax County Comprehensive Plan recognizes Mount Vernon as an important historic asset in the county.

The properties that adjoin Mount Vernon consist of publicly accessible lands owned by the Federal Government and administered by the National Park Service, along with residential lots owned by private individuals. The residential tracts are zoned R-2 in the county planning, which restricts construction and uses to those that are compatible with the low-density residential character of the district.

ICOMOS considers that the legislative control of development in Mount Vernon area is based to a large extent on a long-standing process of mutual discussions and agreements between the various levels of government about protecting the values of Mount Vernon. The public strongly support this control.

ICOMOS considers that the legal protection in place is adequate. ICOMOS considers that the protective measures for the property are adequate and have ensured the safeguard of the property and its surroundings up to the present day.

Conservation

Inventories, recording, research

The property has been the object of study since it entered in the ownership of the Ladies' Association and the wealth of information acquired has been the basis for the extensive restoration of the Estate and for a number of interpretive programmes.

ICOMOS encourages the State Party to maintain this high level of commitment to research.

Present state of conservation

The condition of the structures, gardens, grounds, and other features that make up George Washington's Mount Vernon Estate and Gardens is excellent. Under the 150-year stewardship of the Mount Vernon Ladies' Association, the property has been and continues to be maintained according to the high standards established by various preservation organizations.

ICOMOS considers that the property is well maintained and conserved.

However, ICOMOS recommends that reconstruction should remain the last option for interpretive purposes of the heritage values of the property, relying also on other forms of interpretive means that focus on individual imagination as an element for understanding and interpretation and that the cautious approach established by the founders of the Association should be maintained

Active conservation measures

A number of conservation goals and measures are in place within the framework of the Cultural Landscape Study, which has established the principles for the treatment approach for Mount Vernon.

ICOMOS considers that the conservation measures are appropriate to address the issues of the property.

Maintenance

Maintenance is ensured on a continuous basis for all the components of the property.

Effectiveness of conservation measures

The efforts of the Ladies' Association to preserve Mount Vernon for over 150 years have been highly successful in carrying out their mission. Today the nominated property is well maintained.

ICOMOS considers that the state of conservation and the measures in place are adequate. ICOMOS recommends, however, that reconstruction for interpretive purposes should be reduced to the minimum.

Management

Management structures and processes, including traditional management processes

The Mount Vernon Ladies' Association owns the Estate and is responsible for its conservation and management. A Board of Visitors, the members of which are appointed by the Governor of Virginia, is charged with overseeing the operations of the Association and ensuring that these tasks are met. In the event that the Association should fail to carry out its responsibility, the possession of the property reverts to the State.

ICOMOS considers that the property is well managed in a suitable interdisciplinary manner, with a management committee that allows for interchange between perspectives and interests.

Policy framework: management plans and arrangements, including visitor management and presentation

The management of the property is based on the mission statement of the Ladies' Association and has been upheld through several institutional programmes, established procedures and studies, and internal planning documents. The Cultural Landscape Study, completed in 2004, and the Site and Facilities Master Plan, revised and adopted by the Board in April 2008, are the pillars of the management framework. Together these documents outline general preservation goals for the Association and present a coordinated plan for land use.

For the purposes of long-term planning, the Mount Vernon property was divided into six 'management zones,' defined according to a matrix of features related to their historical significance, level of preservation, and modern functions. The 'Primary Washington Area' was identified as retaining the highest degree of integrity and is the focus of visitor use and interpretation most closely relating to the organization's mission.

ICOMOS considers that the Cultural Landscape Study and the Site and Facilities Master Plan constitute the base for management and that the possibilities opened by these plans are discussed, funded, and implemented under the direction of the Ladies' Association and its professional staff, who are the key managers of the values of the site.

Risk preparedness

Mount Vernon has a Disaster and Emergency Preparedness Plan that addresses these and other potential natural and man-made sources of impact.

Involvement of the local communities

The protection that has been ensured over the last 150 years could have not been possible without the ability of

the Association to sensitize the public opinion at the local and national level.

Resources, including staffing levels, expertise, and training

The Mount Vernon Ladies' Association is a private non-profit corporation that is self-supporting, *i.e.* it does not receive funding from any government agency. The annual budget (as of 2007) is 30 million USD, of which 13 million derives from ticket sales and the remainder from other sources, such as donations, endowments, and other earned income.

The Mount Vernon Ladies' Association employs several key staff members who are professional preservationists. The Collections Department staff includes professional curators and conservators, who hold academic degrees and other training appropriate for their areas of expertise and levels of responsibility. The staff of the Restoration Department is made up of trained professionals in the fields of archaeology, history, historic preservation, and architectural conservation.

Effectiveness of current management

The management is effective in achieving its goals. The staff works effectively with a wide range of partners at the local and national level.

ICOMOS considers that the management system for the property is adequate, well thought out, and effective in achieving its goals.

6. MONITORING

The monitoring of the property focuses on the condition of extant 18th century buildings and the associated landscape features, including trees, vistas, and the integrity of the viewshed, and identifies a number of indicators for each area of interest. The periodicity of monitoring the selected indicators is annual, apart from the integrity of the viewshed, for which the baseline data date back to 2007. The Mount Vernon Ladies' Association staff, coupled with external consultants for landscape features, is responsible for monitoring.

ICOMOS considers that monitoring rationale and indicators are adequate for their established goals.

7. CONCLUSIONS

From the nomination dossier, it appears that the perspective from which Mount Vernon is presented is not fully clear. This lack of clarity can be perceived throughout the entire dossier. ICOMOS therefore considers that it is necessary for the State Party to reconsider the nomination in order to clarify the values upon which the nomination is based.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Mount Vernon, United States of America, to the World Heritage List be **deferred** in order to allow the State Party to reconsider the scope of the nomination.

ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

ICOMOS further recommends that the State Party give consideration to the following points:

- The problems of erosion along the river should be monitored;
- Reconstruction for interpretive purposes should be reduced to the minimum, reliance being placed on other means of interpreting the heritage values of the property, and that the cautious approach established by the founders of the Association should be followed in all management and conservation activities;
- Trees should be planted in order to screen the support facilities from the core of the nominated property.



Map showing the boundaries of the nominated property



Aerial view of the Mansion with its outbuildings, lanes, gardens and orchards



Aerial view of the Mansion courtyard, with Potomac River in the background



The Upper Garden



Interior view of the Mansion

Extensions

Upper Harz Water Management System (Germany) No 623ter

Official name as proposed by the State Party:

Upper Harz Water Management System

Location:

State of Lower Saxony,
Districts of Goslar and Osterode am Harz
Germany

Brief description:

The Upper Harz mining water management system, which lies south of the Rammelsberg mines and the town of Goslar, has been developed over a period of some 800 years to assist in the process of extracting ore for the production of non-ferrous metals. Its construction was first undertaken in the Middle Ages by Cistercian monks, and it was then developed on a vast scale from the end of the 16th century until the 19th century. It is made up of an extremely complex but perfectly coherent system of artificial ponds, small channels, tunnels, and underground drains. It enabled the development of water power for use in mining and metallurgical processes. It is a major site for mining innovation in the western world.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, the proposed extension forms a *group of buildings*.

Furthermore, the property and its extension form a series of five main *groups of buildings* (Mines of Rammelsberg, Historic town of Goslar, Upper Harz Water Management System, Upper Harz mining remains, Walkenried Monastery).

1. BASIC DATA

Included in the Tentative List: 20 September 1999

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 22 January 2008

Background: This is an application for an extension of the Mines of Rammelsberg and Historic Town of Goslar site inscribed on the World Heritage List at the 16th session of the World Heritage Committee (Santa Fe,

1992) on the basis of criteria (i) and (iv).

Consultations: ICOMOS consulted TICCIH and several independent experts.

Literature consulted (selection):

Agricola, G., *De re metallica*, Basel, 1557.

Beddies, Th., *Becken und Geschütze: der Harz und sein nördliches Vorland als Metallgewerbelandschaft in Mittelalter und früherer Neuzeit* Frankfurt am Main, 1996.

Hughes, S., *The International Collieries Study, a Joint Publication of ICOMOS and TICCIH*, 2003.

Technical Evaluation Mission: 7-11 September 2009

Additional information requested and received from the State Party:

ICOMOS sent an initial letter to the State Party on 23 September 2009 concerning the following points:

- Justification for the serial approach of the proposed extension and with regard to the property already inscribed on the World Heritage List;
- Selection of the chosen sites;
- A declaration of Outstanding Universal Value for the whole property;
- A more thorough comparative analysis to justify the selection of the sites;
- A common management structure for the whole of the property.

The State Party replied on 19 November 2009.

ICOMOS sent a second letter to the State Party on 16 December 2009 concerning the following points:

- Making the comparative analysis more thorough;
- Changing the name of the property to "The historic mining system and its associated landscapes of Rammelsberg, the town of Goslar, and the Upper Harz";
- Giving details of the common management system for the whole property.

The State Party answered on 19 February 2010, sending a large amount of additional documentation. An analysis of this documentation is included in this evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The property is a set of hydraulic and civil-engineering installations, some of which are underground. The hydraulic installations on the surface have given rise,

together with their natural environment, to the formation of a characteristic landscape. It also includes mining and architectural remains.

The functions of the water management system

This is a vast historic water-management system with many technical components. It is located in a highland area which is relatively complex in geographical and geological terms. It had two main purposes.

The first objective was to control and channel the water of the Upper Harz mountains in order to provide the power needed for mining. The system includes series of artificial ponds used as reservoirs. They are interconnected by a vast system of small channels, and include many hydraulic regulation devices. The hydraulic energy was initially intended to provide the power for vein ore mining and to drive the bellows of smelting works. The energy requirement increased sharply with the exploitation of ever deeper veins, and the need to install continuously operating drainage pumps. Some of the veins were mined at great depths, exceeding 800m at Grube Samson, which at the start of the 19th century was for a considerable time the deepest mine in the world. The energy was produced by the early use of large water-wheels, sometimes installed in underground chambers.

The second dimension of the hydraulic system is to form a set of underground drainage galleries to evacuate water from the mines by gravity flow to low points in the valleys. These galleries were particularly difficult to establish in the rock, especially in the 16th and 17th centuries when gunpowder was not yet used in mining. The galleries today form vast underground systems with many interconnections.

The surface system and the underground system form a series of subsystems which were directly and functionally linked over a long period to historic mine workings, with a dozen main shafts. The veins consist of a fairly wide variety of non-ferrous metal ores. They enabled the Upper Harz mining area to produce silver, copper, lead, and zinc from the Middle Ages until the 20th century. The oldest remains of the hydraulic system date from the 12th and 13th centuries. Initially created by Cistercian monks, the system was for the most part established between the 16th and the 19th centuries.

A large proportion of this complex system is still used for water management today, following the closure of the mines, to provide regional drinking water needs and to regulate water catchment.

Geographical location

The property is located in the western part of the State of Lower Saxony, in the heart of the highest region of the Harz mountains, the Upper Harz. This region consists of a complex set of hills, plateaux, and steep-sided valleys.

The property and its buffer zone extend over a central quadrangular area, the Clausthal plateau, which is approximately 8km by 8km. It forms a dense hydraulic network whose visible part is a tight-knit set of ponds and small connecting channels. The extent of the property is determined by the land occupied by the hydraulic parts, the dams, and the artificial dykes. This central part surrounds the town of Zellerfeld; however, Zellerfeld does not form part of the nominated extension. The Clausthal plateau is roughly 10km south-west of the historic town of Goslar and the Rammelsberg mines, the property already inscribed.

The property also includes several large hydraulic extensions:

- The first extends over roughly 12km to the east and south-east of the Clausthal plateau, and is also made up of networks of channels and ponds, but these are less tightly knit than in the central part.
- An isolated hydraulic extension to the south, more than 25km away, close to the town of Bad Lauterberg.
- A very early hydraulic system to the west of the plateau, known as the Valley of Pandelbach.

Finally, the property includes two sets of buildings: the metallurgical site of Grube Samson, some 20km south-east of Clausthal-Zellerfeld, and the group of monastic buildings of Walkenried some 30km south-east of Clausthal-Zellerfeld.

The mining and metallurgical elements

The property nominated for the extension includes remains which bear witness to historic mining and metallurgy in the Upper Harz.

In the southern and south-eastern parts of the Clausthal plateau they consist of:

- The Rosenhöfer site, which has the two most spectacular underground water-wheel chambers of the property, one of which is oval and 15m high, while the other is in a cylindrical shaft 24m deep; they are linked to a system of underground channels.
- The Knesebeck shaft consists of a main building, a pithead frame, two water-wheel chambers, and the associated mining drainage system.
- The Ottiliae shaft comprises a main building, an annex, a pithead frame, and an underground drainage system.
- The Kaiser Wilhelm II shaft has a main building, a large pithead frame and annexes, and an underground drain.

To the south-east, the property includes the remains of the mine and metallurgical site of Grube Samson, consisting of a huge building in three parts, functional annexes, and an artificial pond.

Basic elements of the water management system

The property includes 719 basic hydraulic elements. They are grouped together on the basis of technical complementarity, depending on topographic and hydrological conditions, around the twelve historic mining sites of the Upper Harz.

According to the State Party, the component parts of the water-management system can be divided up as follows:

- The 63 historic artificial ponds included in the property are formed by a dam which is mostly of masonry. They are still in a functional condition. One of them dates back at least to the 8th century; nine are pre-1650; the great majority, however (41) were built between 1650 and 1700, and the others at later dates.
- The property also includes the remains of 44 ancient dams which are now abandoned.
- It has 39 main surface ditches in an operational condition, representing a length of around 70km; in some cases, they are edged with masonry walls.
- It has 513 remains of secondary ditches, with a length of some 240km;
- 34 mining tunnels in operational condition, with a length of just over 21km;
- 18 remains of disused tunnels, with a length of just over 9km;
- 2 mine drainage galleries in operational condition, with a length of 4.5km;
- 6 remains of drainage galleries, with a length of around 88km.

Depending on their location, topography, and mining conditions, the Upper Harz mining water-management subsystems exhibit significant technical differences, illustrating the variety of solutions and the innovations introduced at the various periods of operation. Innovative tests of hydraulic and mining machines, sometimes at very early dates, were carried out in the Upper Harz.

The Cistercian Monastery of Walkenried

The property also includes the Cistercian Monastery of Walkenried, which dates from the 12th and 13th centuries. It is put forward as the place that gave rise to the mining works of the Upper Harz and its water-management system, and also as a centre for metallurgical innovation in Europe.

It has a set of buildings with a square plan, around a central Gothic cloister. Its layout and style are similar to the Order's first establishments in Burgundy, with short wings to the south and east, and it includes small built annexes, one of which is located on a separate plot of land, 200m to the north-west of the monastery. The abbey church, built between the 13th and 15th centuries and now in ruins, is located to the north of the cloister. It is the oldest Gothic church in central and northern Germany.

With a few exceptions, including the monasteries, the elements of the property are situated in hilly forested areas forming part of the Upper Harz Natural Park.

Rammelsberg Mines and Historic town of Goslar

The metal ore mines of Rammelsberg were worked continuously in the Middle Ages and the modern period. The nearby historic town of Goslar played an important role in the Hanseatic League because of the wealth of the Rammelsberg ore deposits.

History and development

The surface metal-bearing veins, both at Rammelsberg and in the Upper Harz, were known and worked during the Bronze Age. They were also known and again worked during the Early Middle Ages, generating the wealth of the princes who controlled them.

The metallurgical history of the Harz was reborn with the construction of Walkenried Monastery, undertaken in 1127 by Cistercian monks who came from France. The Cistercian Order was closely connected with mining and played an important role in the development of metallurgy in medieval Europe. The use of water-wheels to improve the output of ore-smelting furnaces seems to have been introduced in the early 13th century by monks in the Harz. Amongst the hydraulic remains from this period is the set of four small ponds in the Pandelbach Valley, to the west of the property. A medieval underground hydraulic installation is mentioned, the Aghetucht drain, which dates back to the 12th century. The Banedik pond in the Clausthal is also said to date from the 13th century. Draining by galleries and the use of water-wheels for removing water also seem to have been introduced by the monks at this period.

The apogee of the monastery came at the end of the 13th century. It was then inhabited by 80 monks and 180 lay brothers. They controlled and directed the mine workings of the region, up to the crisis in the medieval world in the mid-14th century. It caused a sudden and lasting disruption of mining activities in the Harz, resulting in an irreversible decline in the Cistercian presence.

Stemming originally for the need for silver coins, the renewal of mining in the Harz took place at the start of the 16th century. It led to the opening of new mines and the gradual introduction of water-management systems, as at Grube Samson from 1521, in the Clausthal in 1554, etc. Mining privileges were thus granted by the various sovereign princes of the region to miners living in the mountains (*Bergfreiheiten*). These were confirmed in the 17th century by their successors. Regional mining development then assumed very significant proportions. Water-management systems were systematically installed and deep shafts were sunk. For example, seventeen drainage galleries were constructed from 1524 to 1561.

The Harz became the major region in Europe for the exploitation of non-ferrous metals. It was one of the major centres for the development and control of the European copper market, particularly through the Fugger dynasty of merchants and financiers. It is mentioned in several examples given by Agricola, and was the inspiration for his *De re metallica*, the authoritative work on metallurgy and mining in the Renaissance (1556).

Many improvements were regularly made to the mining facilities and its hydraulic system. For example, from the 17th century the degree of expertise permitted the use of horses for the energy needs of the mine to be abandoned. Technical innovation made possible empirical improvements in metallurgical processes and the exploitation of new ores, contributing to the significant increase in production.

The social and administrative rules that were introduced, particularly by the princes of the von Braunschweig family, Herzog Julius and Herzog Heinrich, provided stability for the mining operators and facilitated the long-term investment necessary for the often very laborious construction of the mining and water-management system of the Upper Harz. For example, the main drain of the Clausthal plateau, in the 16th and 17th centuries, near the Innerste valley, needed 120 years of works. The investment involved financial shares (*Küxen*) of a very modern type, acquired by aristocrats, rich merchants, and towns (for example those of the Hanseatic League).

Regional mining reached its high point in the 17th and 18th centuries, as extension of the water-management system and deepening of the shafts were systematically continued. The main innovations were the water engine of G. Winterschmidt (c 1750) and the great Tiefer-Georg-Stollen underground drainage system. Constructed during the second half of the 18th century by the mining administrative coordination office (*Berghauptmann*), this system was at that time the most extensive in the world (18.5km).

In the 19th century the Upper Harz was still fully operating, and still one of the main sources of mining knowhow in Europe, at a time when the major technical innovations of the industrial revolution in Britain were beginning to appear. The excellence achieved in hydraulics and the specific character of the very deep veins in the Harz were such that it was not immediately necessary to adopt foreign techniques. The steam engine, for example, only had a role at a later stage, and remained of secondary importance for a long time, the hydraulic compressor being preferred.

Several important innovations took place during this period: a vertical lift driven by water power and capable of reaching depths of 500-700m (G.L.W. Dörell, 1833); the invention of wire cable (W.A.J. Albert, 1834); and an early version of the blasting cartridge (F. Schell, 1866).

A mighty underground drainage system, 400m below the Clausthal, was once again begun in the late 1840s as ore extraction went deeper. The Ernst-August-Stollen was completed in 1864 (32.7km).

New shafts came into operation in the mid-19th century, while others, such as the Knesebeck, which was in use up to 1974, were modernized. The Otiliae and Kaiser Wilhelm II shafts were equipped with the first steel headframes to be built in Germany, in the 1880s. The first large German hydraulic compressors were developed in the Harz, in the 1900s.

However, from this period onwards, and as the demand for non-ferrous metals increased sharply on the markets, the ore mines of the Harz, already substantially exploited, faced competition from the emerging production of other continents. The great Grube Samson mine closed in 1910. Many of the Clausthal mines closed as a result of the economic crisis in the 1930s. Efforts were then made to convert the water-management system of the Upper Harz for the generation of electricity, and turbines were fitted in the Otiliae and Kaiser Wilhelm II shafts.

A major change in the water-management system and its objectives took place in the 1960s and 1970s when the last working mines were shut down (the last one, Hilfe Gottes, was closed down in 1992). The equipment of the shafts for electricity generation continued, particularly outside the historic mining zone, but the Upper Harz was perceived at that time above all as a major reserve of good-quality drinking water in the heart of Germany. Its landscapes, with artificial ponds and lakes, were recognized as having great value, and it became a popular tourist destination. The State of Lower Saxony gradually acquired ownership of the water-management system between 1972 and 1981, and a public ownership system was introduced. Protection against flooding is also a key objective of the present water-management system.

The additional documentation of 19 November 2009 focuses on the results of recent historical and archaeological research, which demonstrates the major role in mining played by the Cistercian order throughout the Harz region, and the pioneering nature of this role in Europe. The research also demonstrates links between the various mining sites of the Harz in their international influence in the modern and contemporary periods.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The nomination dossier for the Mines of Rammelsberg and Historic Town of Goslar justifies their inscription by referring to “*the best preserved and most extensive underground water power system in Germany.*”

The comparative analysis in the present extension application focuses on water-management sites with similar mining functions, the installation of which dates back to the pre-industrial period and to the first tests of water-powered machines. Only European states would seem to have attained a sufficient level of technical innovation to have comparable mining sites incorporating the use of water power. Interchanges between different European mining regions have been considerable over the course of history, particularly through the migration of skilled workers.

Three sites were finally judged to be the most comparable to the Upper Harz water management system:

- The industrial gold and silver mines of Banská Štiavnica, Slovakia (1993, criteria (iv), (v)), were first developed in the 13th and 14th centuries; some of the mines are deep and there is a water-power system that is very similar to that of the Upper Harz, but less extensive. One of the specific features of this system is the high dams built in the 18th century.
- The mining district of Freiberg (Germany, Tentative List) has a mining water-management system similar to that of the Upper Harz, built between the 16th and 19th centuries.
- The silver mines of Kongsberg (Norway) were first developed by mining engineers who came from the Upper Harz at the end of the 18th century, and the principles of their water-management system are similar.

Other sites are only briefly examined, as their characteristics are considered to be too different from those of the Upper Harz: Eastern Harz, which is located close to the Upper Harz, the Mining Area of the Great Copper Mountain in Falun, Sweden (2001, criteria (ii), (iii), (v)), and the Příbram mines in the Czech Republic.

Following the request made by ICOMOS on 16 December 2009, the State Party has provided a thorough additional analysis, comparing the property nominated for the extension with:

- Properties already inscribed on the World Heritage List, including major water-management systems such as, in Europe, the Pont du Gard (France, 1985), Segovia (Spain, 1985), Las Médulas (Spain, 1997), Kinderdijk-Elshout (Netherlands, 1997), Mérida (Spain, 1993), Banská Štiavnica (Slovakia, 1993), and on other continents, Machu Picchu (Peru, 1983), Potosí (Bolivia, 1987), Rice Terraces of the Cordilleras (Philippines, 1995), Lijiang (China, 1997), Xidi and Hongcun (China, 2000), Dujiangyan Irrigation System (China, 2000), Xochicalco (Mexico, 1999), the *aflaj* (Oman, 2006), Kuk (Papua New Guinea, 2008), and Shushtar (Iran, 2009);
- Other properties with major water-management

systems, particularly in Europe;

- Non-ferrous mining sites already inscribed on the World Heritage List such as, in Europe, Røros (Norway, 1980), Falun (Sweden, 2001), Cornwall and West Devon (United Kingdom, 2006), Banská Štiavnica (Slovakia, 1993), Kutná Hora (Czech Republic, 1995), Las Médulas (Spain, 1997), and on other continents Potosí (Bolivia, 1987), Guanajuato (Mexico, 1988), Zacatecas (Mexico, 1993), and Iwami Ginzan (Japan, 2007);
- Cistercian monasteries already inscribed on the World Heritage List: Fontenay (France, 1981), Studley Royal (United Kingdom, 1986), Alcobaça (Portugal, 1989), Poblet (Spain, 1991), Maulbronn (Germany, 1993), and Kutná Hora (Czech Republic, 1995).

This comparative analysis shows the large number of properties already inscribed for these various attributes on the World Heritage List. However, the Upper Harz water-management system emerges firstly as a highly original and pioneering ensemble, and secondly by virtue of its exceptional scale and complexity. Cistercian monasteries are also well represented on the World Heritage List, and with integrity and architectural and structural richness that are far superior; however, Walkenried appears to be one of the very first to have been built to the same model as Fontenay and, above all, its pioneering role in metallurgy for more than three centuries is remarkable and on a very large scale, and it is intimately linked with the other elements on which the value of the property nominated for the extension is based.

ICOMOS considers that the comparative analysis, including the additional study of February 2010, adequately justifies all the elements of the series, particularly in terms of their overall hydraulic significance, for the mining values of the property, and for the value of the Cistercian monastery.

ICOMOS considers that the State Party has provided sufficient information in its additional documentation of 19 November 2009 to express the link between the proposed extension and the property of the Mines of Rammelsberg and Historic Town of Goslar, which has already been inscribed on the List. These are facets of the same set of mining installations, based on a social and technical system that is specific to the region, from the Middle Ages to the modern and contemporary period.

ICOMOS considers that the comparative analysis justifies consideration of the approval of the proposed extension.

Justification of Outstanding Universal Value

The property proposed for the extension is considered by the State Party to be of Outstanding Universal Value

as a cultural property for the following reasons:

- The Upper Harz Water Management System is the largest of its type in the world. The perfected system of artificial storage of water made it possible to use water for mining purposes, to provide both power and underground drainage.
- The mining industry of the Upper Harz has played a pioneering role in the development of technical innovations for the extraction of metal ores at great depths, and particularly in the management of water and its use for power. Over a long period it was a fertile source of inspiration in Europe.
- The installations bear testimony to the development of water management in the mining industry, from the Middle Ages to the present day. In fully operational conditions, they demonstrate the coordination of an exceptionally large number of complementary hydraulic elements.

Outstanding Universal Value of property already inscribed:

The Goslar-Rammelsberg ensemble is one of the oldest mining and metallurgical complexes in the world, and unquestionably the one whose industrial activities continued over the longest period of time without interruption. The Rammelsberg complex is remarkable for the wealth of its industrial remains from all periods.

Goslar has retained practically intact its original layout and structures. Located close to the Rammelsberg mines, the town of Goslar played an important part in the Hanseatic League because of the richness of the Rammelsberg metal-ore veins. From the 10th to the 12th century it became one of the seats of the Holy Roman Empire. Its historic centre, which dates back to the Middle Ages, is perfectly preserved, and includes some 1,500 timber-framed houses dating from the 15th-19th centuries.

ICOMOS considers that the State Party, in its additional document of 19 November 2009, has satisfactorily analysed the overall coherence and value of the property already inscribed on the World Heritage List (Mines of Rammelsberg and Historic Town of Goslar) in historical, technological, and heritage terms. For more than a thousand years, Rammelsberg and the Upper Harz formed a coherent mining region in which the same protagonists were involved, both in running the mining operations and in pursuing economic interests, with a socio-technical system to which the property already inscribed and the proposed extension belong.

ICOMOS considers that the justification is satisfactory as regards both the property covered by the extension and the new ensemble thereby formed.

ICOMOS suggested in its letter of 16 December 2009 that a new name should be considered for the new

ensemble, expressing its various constituent parts. In its reply of 19 February 2010, the State Party accepted this suggestion, and proposed the following name: "The historic mining network of the Rammelsberg mine, the historic town of Goslar, and the Upper Harz water-management system".

Integrity and authenticity

Integrity

The functional integrity of the water-management system is fully maintained for a very significant proportion of hydraulic elements, as regards both the number and the geographical distribution inside the property nominated for the extension. All types of functional elements are represented. The other elements, which are archaeological monuments, are sufficiently visible in the landscapes to give an accurate idea of the maximum extent attained by the system.

The mining installations are no longer in operation, and they constitute remains that testify to a past technical function that is visible (see Conservation).

The integrity of the historic testimony provided by the nominated hydraulic installations over a period of 800 years is, however, rather weak. In fact, the heritage of the hydraulic system, which in fact goes back to the medieval monastic period, is extremely scanty: it consists only of the four small ponds of the Pandelbach Valley, to the west of the property, 40km from the monastery as the crow flies, and one pond in the Clausthal. One medieval underground hydraulic installation is mentioned in the dossier (the Aghetucht drain, 12th century), but it does not seem to be included in the archaeological inventory. The water-management system included in the extension proposal bears witness essentially to the development of such mining water systems from the 16th to the 19th century. The technical values attributed to the medieval period are more of a general documentary nature, particularly with regard to the Cistercian monks, rather than of a heritage-related nature.

The visual and landscape integrity of the property proposed for the extension is of good quality, both as regards the water-system landscapes and mining and industrial remains, and also the Walkenried monastery.

The choice of the constituent parts of the property proposed for the extension is extremely comprehensive. It draws appropriate distinctions between elements that are still operational and the others. The ensemble thus formed is coherent and is capable of adequately expressing and significantly strengthening the functional, historic, and landscape value of the property proposed for the extension. The understanding of the socio-technical system of the Upper Harz emerges as a coherent and complete whole, which provides a good explanation of how it came to be one of the major sources of inspiration for mining techniques in Europe,

from the Middle Ages to the 19th century.

Authenticity

The development of the *water-management system* has followed extensions of the needs of the mining system in its different component parts, and it has always been operational and under control. Each of the technical elements - dykes, ditches, dams, etc. - has required maintenance and repairs, and sometimes rebuilding, over the years, but within a context of great morphological and functional continuity. This was dictated by topographical and hydrogeological factors, and by the continuity of technical practices. However, in order to make better management possible, some hydraulic subsystems were restructured, and dams were equipped with special features in order to cope with rises in water level. Traditional materials were reused up to the 20th century. The decline of mining in the 1930s restricted the visible use of new materials such as concrete and steel. The main change was the fitting of hydroelectric turbines in two of the shafts. This was, however, an adaptation that remained fully consistent with the earlier functions of providing power. These are, moreover, essentially underground items of equipment whose visual impact is limited. Furthermore, the traditional management of the ponds was carried out using a specific *Teich-Striegel* system, only two examples of which are apparently extant today, the others having been destroyed and then replaced by contemporary systems by the company responsible for management in the second half of the 20th century.

The authenticity of the *mining elements* and the industrial elements is unquestionable. However, these are quite often recent elements, i.e. the remains of mining operations from the end of the 19th century and the 20th century. The water-wheel chambers have been carefully restored and satisfactorily meet the required conditions of authenticity.

The situation of *Walkenried Monastery* has changed over time. Initially located in the countryside, it is today at the centre of a village. The cloister has been restored, and is now reused as a museum and cultural centre.

ICOMOS considers that, despite occasional shortcomings, the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), (iii), and (iv).

The Mines of Rammelsberg and Historic Town of Goslar are inscribed on the World Heritage List on the basis of criteria (i) and (iv).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that the Upper Harz Water Management System represents a unique masterpiece of human creative genius which documents the utilization of natural water resources for mining over more than 800 years. In particular it bears witness to power and shaft drainage solutions which were regularly adapted to the needs of mining.

These characteristics reinforce the unique and outstanding technical and urban values already recognized over the long history of European mining history for the property already inscribed.

ICOMOS considers that the Upper Harz Water Management System significantly reinforces the dimension of representing a masterpiece of human creative genius which has already been recognized for the Mines of Rammelsberg and Historic Town of Goslar.

ICOMOS considers that this criterion has been justified.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the pre-industrial energy supply system of the Upper Harz set an example for the highest technological state of the art in European mining areas over many centuries. It is a tangible example of constant technical innovation to foster lasting economic and industrial development.

Recent historical and archaeological research shows the major role played by the Cistercian order throughout the Harz region and its pioneering dimension in Europe. It also shows the links between the various mining sites of the Harz in their international influence in the modern and contemporary periods.

ICOMOS considers that the information provided by the nomination dossier and by the additional document of 18 November 2009 is relevant. The documents set out new historical knowledge. The property already inscribed and the proposed extension together bear testimony to an important interchange of human values in the field of mining and hydraulic techniques, from the Middle Ages to the modern and contemporary periods in the European sphere.

ICOMOS considers that this criterion has been justified for the whole property. It is added to the criteria previously recognized for the Mines of Rammelsberg and Historic Town of Goslar.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the Upper Harz Water Management System represents an exceptional testimony to a tradition of water utilization as a primary energy source in mining which has all but died out. This regional tradition aimed at achieving continuous adaptation to an environment that was unfavourable for transport, by the creative use of local materials.

ICOMOS considers that the traditional use of regional materials and adaptation are factors common to all mining sites. Furthermore, the other aspects referred to for this criterion are already recognized, particularly under criteria (i) and (iv).

ICOMOS considers that this criterion has not been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Upper Harz Water Management System is the largest and most important mining water-management system in the world. It is outstanding testimony to the development of hydraulic power generation as a reaction to rising demand for energy for mining, from the medieval period until the industrial period. Its technical and architectural characteristics have been well preserved. Today it constitutes a set of installations that is both comprehensible and operational.

ICOMOS considers that the proposed extension significantly reinforces the attributes of Outstanding Universal Value already recognized for this criterion for the Mines of Rammelsberg and Historic Town of Goslar.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the proposed extension and the property already inscribed form a series which has been justified by the State Party.

ICOMOS considers that the property proposed for the extension of the property already inscribed meets the conditions of integrity and authenticity, that it reinforces the criteria (i) and (iv), which have already been recognized, and that the new criterion (ii) has been justified for the property with the extension through the contribution of new historic and archaeological research.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

Urbanization, agriculture, and industry now have only a minor role in this region. The only important issue is that

of forestry in the Upper Harz, as the machines used in this activity could damage the archaeological remains. These factors are dealt with by the heritage management organization.

ICOMOS considers there is no significant development pressure.

Tourism pressures

The property proposed for extension is located within the Upper Harz Park area. This is a tourist destination frequented by visitors in large numbers (14.6 million a year) but scattered over a large geographical area. Visitors are informed and guided by the Harz Tourism Association. To date there has been no perceptible impact on the conservation of the property. Regional tourism capacities are not saturated, and they can deal with an increase in the number of visitors, particularly with regard to the property proposed for the extension.

ICOMOS considers, however, that a long-term vision is necessary in view of the expansion of tourism.

Environmental pressures

The State Party does not indicate that there is any environmental pressure on the property proposed for the extension.

ICOMOS considers that there is no environmental pressure.

Natural disasters

Water engineering structures are sensitive to high rises in water level. The dams are normally equipped with weirs to deal with such events. The banks of ditches and channels may occasionally suffer damage. The management system requires constant surveillance, and repairs are carried out immediately in the event of accidental damage, so as to prevent any domino effects.

ICOMOS considers that the State Party is in control of natural disaster risks.

Impact of climate change

The State Party does not indicate that there is any visible effect from climate change on the property proposed for the extension.

ICOMOS considers that at present there is no pressure from climate change.

ICOMOS considers that there is no notable threat to the property in the short to medium term. A long-term vision of tourism expansion would however be necessary.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The property proposed for the extension has a total surface area of 1,009.9ha. There are no inhabitants.

ICOMOS notes that the underground elements of the property mentioned in the nomination dossier for the extension inventory are included in their own right as elements of the property proposed for extension.

The buffer zone area is 5,654.7ha. The standard buffer zone is a strip 65m wide measured from the water limit. This corresponds to the hydraulic and environmental protection conditions currently in place. At certain points the buffer zone is widened to allow for a specific heritage feature - a mine shaft, a water-wheel chamber, or a mining or monastery building. It then follows the land register plot boundaries.

There are 460 inhabitants in the buffer zone.

The zone outside the buffer zone that protects the hydraulic elements of the property proposed for the extension is controlled by the regulations of the Upper Harz Natural Park.

ICOMOS considers that the boundaries of the property proposed for the extension are satisfactory, and that the proposed buffer zone ensures adequate technical protection of the property.

Ownership

The Upper Harz Water Management System is the property of the State of Lower Saxony (*Land Niedersachsen*). The acquisitions from the former mining companies were completed in 1981. The property is currently owned by the following public bodies: the waterworks company (*Harzwasserwerke GmbH*) and the Lower Saxony State Forestry Service (*Niedersächsische Landesforsten*).

The Grube Samson mine is the property of the town administration (*Bergstadt St. Andreasberg*).

The Kaiser-Wilhelm II shaft is the property of the waterworks company (*Harzwasserwerke*).

The Ottiliae-Schacht shaft is the property of the town administration (*Bergstadt Clausthal-Zellerfeld*), which has entrusted its management to the Upper Harz History and Museum Association.

The Knesebeck shaft is the property of the town administration (*Bergstadt Bad Grund*).

The Rosenhöfer Radstuben mining site is the property of the Upper Harz History and Museum Association.

The Walkenried monastery is the property of a foundation (*Stiftung Braunschweigischer Kulturbesitz*) acting on behalf of the district of Osterode am Harz.

Protection

Legal Protection

In 1977 the Upper Harz Water Management System was classified as a *technical monument* by the State of Lower Saxony. This classification, introduced only shortly before this date, involved redefining its public functions and the current perimeter of its operational hydraulic installations that demonstrate continuity with earlier uses.

The Monument Protection Act (*Niedersächsischen Denkmalschutzgesetz*) of 1978 protects all the architectural elements and industrial structures of the property proposed for the extension.

The constitution of the State of Lower Saxony (1993) entrusts the administrations of the towns and districts with the protection of cultural properties.

The 1994 state development programme (*Landesraumordnungsprogramm*) regulates interventions on monuments and archaeological sites.

The property is covered by the 1998 Water Act of the State of Lower Saxony.

The property is covered by the development plans of the district of Osterode am Harz (1998) and of the district of Goslar (2006).

The environmental and landscape aspects are protected by the district Acts of 21 December 2000 (Osterode am Harz) and 7 May 2001 (Goslar).

The Upper Harz region was made a national park of the State of Lower Saxony in 2005.

Traditional Protection

The organization of the control of the water-management system since the Middle Ages, its progressive modernization, and the changes made in its technical functions (water supply, flood control, and hydroelectric power) may be considered to constitute a guarantee of traditional protection linked with the uses of the water.

Effectiveness of protection measures

The protective measures are adequate and are effectively applied.

ICOMOS considers that the legal protection in place is adequate.

Conservation

Inventories, recording, research

The historic and mining documents are in the charge of various specialized departments of the regional authority, particularly public archives and libraries. The museums associated with the site also have significant documentary and iconographic material.

Various thorough inventories of the hydraulic elements were drawn up in the course of the management of the property, particularly in 1868 and 1989. In 2008 a new detailed survey was carried out, in conjunction with mapping.

A very substantial amount of documentation exists concerning the management and hydraulic maintenance of the property. These documents are managed by the waterworks company *Harzwasserwerke GmbH*.

A detailed inventory of the shafts and mining sites was carried out in 1983.

Inventories and architectural studies of Walkenried Monastery were carried out in 1922, in 1992, and in 2004-2005.

Present state of conservation

The present state of conservation of the property is generally good, from the hydraulic, mining, architectural, and landscape points of view. However, many ditches that have been abandoned in the contemporary management of the hydraulic system have been poorly maintained.

A large-scale and necessary intervention on the Walkenried Monastery in accordance with international conservation standards was scheduled in 2008-2009.

ICOMOS considers that a particular effort should be made to conserve the remains of the old method of operating the hydraulic system, particularly the abandoned ditches and the two surviving pond management systems (*Teich-Striegel*).

Active conservation measures

The maintenance and technical conservation of the water-management system are carried out on a regular basis by the management authority in charge of its operation (*Harzwasserwerke*).

Maintenance

The maintenance of the monastery buildings is carried out on a regular basis by the foundation (*Braunschweig*

Stiftung) which since 2006 has been in charge of this property and of the Cistercian museum.

A maintenance schedule is drawn up annually in the light of the findings during the property monitoring operations.

Effectiveness of conservation measures

The conservation measures in place are effective.

ICOMOS considers that the conservation system for the property proposed for the extension is adequate.

Management

Management structures and processes, including traditional management processes

The management system for the hydraulic system was defined in its public form in 1977 (see Protection). It was revised in 1991 in conjunction with the drinking-water management agency (*Harzwasserwerken*). It is still operating on the same basis.

The Grube Samson mine, along with the various shafts and mining sites, are managed by the Upper Harz Museum Association, in conjunction with the town authorities concerned.

Walkenried Monastery and its museum are managed by the foundation which owns them (*Stiftung Braunschweigischer Kulturbesitz*).

The heritage and museum management structures are under the control of the Historic Monuments Office of the State of Lower Saxony and the Historic Monuments Protection Agency of the districts of Osterode am Harz and Goslar.

ICOMOS considers that an overarching management body for the serial property is essential, as called for in Paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*. This body must bring together all the partners engaged in the management of the extended property, include an overarching management authority, have significant human and material resources at its disposal, and be in charge of the coordinated application of a management plan for the new serial property. ICOMOS made a request to the State Party concerning this point in its letter dated 16 December 2009.

In its reply dated 19 February 2010, the State Party refers to an agreement in principle between the Ministry of Culture of Lower Saxony and the various administrative entities in charge of the property (town of Goslar, districts of Goslar and Osterode am Harz and the waterworks company *Harzwasserwerke*), for the establishment of a structure to coordinate the various parts of the property, including its proposed extension. Its purpose is to set up a joint working structure for the

coordination of management (entrances, communication, tourism, etc.) and the coordination of general policies. The State Party is proposing a provisional structure to begin this coordination task immediately, pending the institutionalization of the overarching authority. The task would be entrusted to the foundation *Stiftung Braunschweiger Kulturbesitz* (SBK), a major regional cultural partner and stakeholder, which is already in charge of Walkenried Monastery. The foundation has indicated its agreement in principle to playing this interim role and helping in the setting-up of the definitive authority. Two interim phases are proposed for this purpose. The State of Lower Saxony has moreover promised financial aid.

ICOMOS is aware of the fact that it is difficult to create and approve a management authority in the space of a few weeks, and to coordinate the individual management systems that are in place and in operation. It considers that proposing a provisional overarching authority for the management of the whole of the property, extended to include the Upper Harz water-management system, is an initiative that is being taken too late to be effective. For the moment it is more a declaration of intent following the ICOMOS letter, than a viable project. No timetable has been established, no organization has been proposed for the long term, and no real guarantee of financing has been given.

Policy framework: management plans and arrangements, including visitor management and presentation

The property proposed for the extension is covered by a set of territorial management plans and measures that are the responsibility of the district and town authorities and of the National Park of the Upper Harz, by landscape conservation plans, and by the programmes of the various museums.

The water-system management plan, which is linked with the public service missions of the waterworks company (*Harzwasserwerke*), is an essential technical component of the management system.

The property management plan (Appendix C to the nomination dossier) covers the mining, technological, and architectural heritage of the property proposed for the extension. It sets out details of responsibilities, coordination, preventive initiatives to be scheduled, risk prevention, museum coordination initiatives, and the monitoring of the property.

Various measures have been taken to present the site to visitors, particularly by the network of four museums (the Clausthal-Zellerfeld mining museum, the Walkenried museum, the Grube Samson museum, and the Knesebeck shaft museum). The museums act as a decentralized interpretation unit, backed up by the presence of guides, a large number of visitor information initiatives, and signage. An individual electronic guide system is also in place.

ICOMOS considers that a permanent management system must be proposed for the whole property, including the extension. It must include a management plan for the whole extended property. Its management and coordination authority must be permanently defined as regards composition, structures, and missions; it must be provided with guaranteed human and financial resources.

Risk preparedness

The *Harzwasserwerke* is an organization whose staff are well prepared for the management of water-management system risks. It has various plans to be applied in the event of predictable high water-levels, and the human and technical resources required to deal with them.

Involvement of the local communities

The town authorities are closely involved in the management of the property and in the control of the management process. Local inhabitants in the region are actively involved in the museums association and in the reception of tourists.

Resources, including staffing levels, expertise and training

At the present time satisfactory financial resources are guaranteed for the various aspects of the property proposed for the extension: management, conservation and maintenance of the hydraulic installations, conservation of the mining elements and museums, and conservation of the monastery.

The State Office for Historic Monuments of Lower Saxony and the district authorities of Goslar and Osterode am Harz have sufficient scientific and technical staff at their disposal - conservation professionals, restorers, archaeologists, architects, and engineers of various kinds.

The *Harzwasserwerke* has at its disposal technical departments managed by specialized engineers, earth-moving and other equipment, and workshops for the hydraulic maintenance of the Upper Harz water-management system. Its staff are competent.

Effectiveness of current management

The management system of the property proposed for the extension is coherent, well coordinated, and effective. It is, however, necessary to extend it by means of an overarching structure covering the whole property, i.e. both the part that is already inscribed and the extension.

ICOMOS considers that the management system for the property proposed as an extension is adequate. ICOMOS considers that it is essential to institute a common management and coordination authority with that of the Mines of Rammelsberg and Historic Town of Goslar.

6. MONITORING

The State Office for Historic Monuments of Lower Saxony coordinates the monitoring of the property. For the last twenty years or so, all construction or reconstruction work has been carefully designed after discussions. Depending on the indicator concerned, the monitoring is carried out by the various partners involved in the management process: *Harzwasserwerke*, the district authorities of Goslar and Osterode am Harz, and the Upper Harz Museums Office.

The indicators are divided into four categories:

- The first is a check on the completeness of the property in all parts of the installations, which is carried out every five years.
- The second is monitoring of the state of preservation of the property with regard to its technical and architectural dimensions. The review is monthly in some cases. A maintenance plan is drawn up on the basis of these checks.
- The third concerns the state of preservation of the buffer zone, with monitoring carried out when necessary.
- The fourth is the monitoring of the number of visitors.

ICOMOS considers that the monitoring of the property is satisfactory. However, it is necessary to establish regular intervals for the monitoring of the buffer zone, along with a standard methodology for this purpose.

7. CONCLUSIONS

ICOMOS recognizes the possibility of significantly reinforcing the Outstanding Universal Value of the Mines of Rammelsberg and Historic Town of Goslar by the addition of the Upper Harz Water Management System, together with its own mining remains and the Cistercian monastery of Walkenried.

ICOMOS considers that the new property forms a series, and that this series is now completed.

Recommendations with respect to inscription

ICOMOS recommends that the extension of the Mines of Rammelsberg and Historic Town of Goslar to include the Upper Harz water management system, Germany, be ***referred back*** to the State Party to allow it to:

- Put in place a management system for the whole property, including its extension, and to group together and harmonize the management documents to form a management plan for the serial property.
- Institute a permanent overarching management and coordination authority in charge of the management plan, with guaranteed human and material resources, as called for in Paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*; this authority must include all the partners involved in the management of the property, must be officially approved, and must be put in place.

ICOMOS also recommends that the State Party give consideration to the following:

- Take care to conserve the remains of the old modes of hydraulic operation, particularly the abandoned ditches, and the two surviving pond management systems (Teich-Striegel);
- Develop a long-term plan for the expansion of tourism.
- Establish a regular time interval for the monitoring of the buffer zone and a standard methodology for such monitoring.



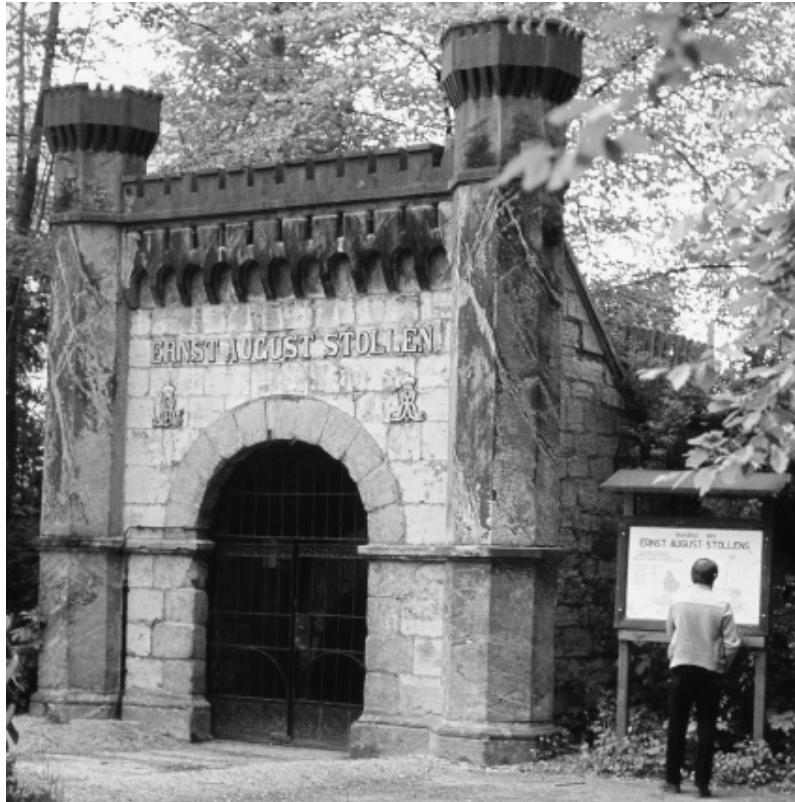
Map showing the boundaries of the nominated properties



Series of ponds (Hirschler Teich / Pfauen Teiche)



Hutthaler Widerwaage



Ernst-August-Stollen underground drainage gallery



Kaiser Wilhelm II shaft

Røros Mining Town and the Circumference (Norway) No 55bis

Official name as proposed by the State Party:

Røros Mining Town and the Circumference

Location:

Counties of Sør-Trøndelag and of Hedmark
Norway

Brief description:

The history of Røros and the Circumference is linked to the copper mines. Established in the 17th century, they were exploited for 333 years until 1977. The proposed extension is a serial site and comprises the Town and its industrial-rural cultural landscapes; Femundshytta, a smelter with its associated area; and the Winter Transport Route. Surrounded by a buffer zone, coincident with the area of privileges (The Circumference) granted to the mining enterprise by the Danish-Norwegian Crown (1646), the property illustrates the establishment and flourishing of a lasting culture based on copper mining in a remote region with a harsh climate.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of three *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), paragraph 47 and Annex 3, it is an *historic town* and its related *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 15 February 2008

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 30 January 2009

Background: This is a proposal for the extension of Røros Mining Town, inscribed at the 4th session of the World Heritage Committee (Paris, 1980) on the basis of criteria (iii), (iv), and (v).

Consultations: ICOMOS has consulted its International

Scientific Committee on Cultural Landscapes, several independent experts, and TICCIH.

Comments on the assessment of this cultural landscape were received from IUCN on 18 February 2010 and are related to the following issues:

- The significance of natural values within the nominated property and the buffer zone, in relation to the surrounding areas;
- The management needs related to mining pollution.

The information was carefully considered by ICOMOS in reaching the final decision and recommendation in March 2010, and IUCN has also reviewed the presentation of its comments as included in this report by ICOMOS.

Literature consulted (selection):

Anken, L., Snitt, I., Tschudi-Madsen, S. (ed.), *Our Nordic Heritage: World Heritage sites in the Nordic Countries*, Kristiansund N, Kom Forlag, 1997.

Center for Advanced Research Technology in the Arts and Humanities (CARTAH), *The Uthusprosjektet. Preservation of Wooden Buildings in World Heritage Site of Røros 1995-1999: lessons learned*, CARTAH, Seattle, 1999.

Olsen, O.D., *Røros: yesterday, today and tomorrow; an architectural analysis dissertation presented to the Scott Sutherland School of Architecture*, Scott Sutherland School of Architecture, sl, 1976.

Prosch, F., Ways of looking at the Røros Landscapes, OVP, Québec, 1996, pp. 69–71, In *Proceedings of the 3rd International Symposium of World Heritage Cities*, Bergen, 28–30 June, 1995.

Technical Evaluation Mission: 17–22 August 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 14 December 2009 concerning the following issues:

- Assessment of the consequences that the envisioned extension of the runway of the airport may have;
- The planned timeframe for the development and implementation of the envisioned joint regional plan for Hedmark and Sør-Trøndelag counties;
- Strengthening of the protection of Femundshytta and its cultural features in order to ensure their adequate protection over time;
- The establishment of the Cooperation Council mentioned in the Statement of Intent;
- The planned timeframe to finalize the Management Plan.

The State Party replied on 23 February 2010. The analysis of this information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The proposed extension of the World Heritage Site includes both an extension to Røros Mining Town covering 16,510ha in total and the establishment of a buffer zone, covering 481,240ha, coincident with the area of privileges conceded by the Danish–Norwegian King Christian IV to the mining company since 1646, the Circumference.

The region has resulted from post-glacial transformations featuring the landscape with long ridges, eskers, moraine hillsides, lakes, dead-ice hollows, and white sand dunes.

The Circumference comprises mountainous and forested areas and includes two national parks and numerous nature conservation areas.

Owing to intensive exploitation, the landscape of the Circumference was substantially altered in a short period of time and left with a denuded imprint due to the severe exploitation of forestry resources in the copper ore processing.

The landscape

The largest site of this serial proposed extension (14,000ha), named the 'Town and Cultural Landscapes' by the State Party, comprises Røros Mining Town, the landscape surrounding it and the area where the main mining fields are located: the Storwartz and the Nordgruvefeltet. Along with the mining town and the industrial and the urban agricultural landscapes, the rural landscape immediately outside the town, with summer grazing farms, the railways and the power station may be found in this nominated area.

The landscape of urban agriculture comprises a number of rural districts (Småsetran, Østerhaga, Djupdalshaga, Stormohaga, Kvitsandshaga, and Kjerkghardsahaga) in the immediate surroundings of the mining town made up of small plots of land and forming a sort of green belt. The plots were used for grazing and haymaking and were dotted by hay barns. These rural districts have undergone various transformations since the end of the 19th century, but on the east and west sides of Røros they have maintained to a greater or lesser extent the pattern of subdivisions and their function, whilst the hay barns are still features in the landscape.

The mines

The Storwartz field lies in a deforested hilly landscape. The whole area shows good examples and traces of mining activities from all stages of the history of Røros Copper Works: mineshafts, rock-piles, remains of aqueducts, dams, footpaths, cart tracks connecting the mines and Røros, power transmission lines, cableways, as well as several buildings and technical installations.

Old Storwartz is the oldest mine of the copper works and is also the centre of the Circumference, the area of privileges granted by the Danish-Norwegian Crown to the mining company. Other relevant mines are Lower Storwartz (early 18th century onwards), the main mine of the copper works, where a flotation plant was built in 1926 that operated until 1972; Olavsgruva mine (1937–72), today a demonstration site for visitors, where an electric cableway (1899) transported the copper ore to the flotation plant.

The Nordgruvefeltet field contains several mines and bears traces of three centuries of mining operations. Arvedalsbruddet (1657), the King's Mine (1736), the Christianus Sextus, the Muggruva, and the Lergrubbakken mines are the most important in this area. The King's Mine was the first copper mine to be equipped with a waterwheel and power transmission rods for mining operations; a steam engine was installed in 1841. Here the ore was rich in iron pyrites and, when its exploitation became profitable, it allowed a family community to be established, with a school, a shop, and a post-office.

The Christianus Sextus mine (1723–63) was provided with electricity and with a cableway to the King's Mine and subsequently to Røros railroad.

At the Muggruva mine (1770–1919) operations were carried out powered first by horse-driven pumps and then by a waterwheel. Several dams provided the water for the machinery. In 1899 the mine was supplied with electricity and the first electric cableway was erected connecting Muggruva to Tyvoll station on the Røros railroad.

The introduction of electricity was a major technological advancement in Røros copper works. The Kuråsfossen power station supplied the King's Mine, the Muggruva, and the Storwartz mines. Electricity was produced exploiting the water power of the lake, and a dam and diverting channels were built for this purpose. Power was transferred by 24km long high-voltage lines, making this station a highly advanced technological installation and the first of its type in Norway.

Femundshytta

This element of the proposed extension (950ha) consists of bare hillsides around the lake and comprises the ruins of the smelter and of the associated settlement. Femundshytta exemplifies the industrial cultural landscape associated with the smelting activity of Røros Copper Works. Smelters needed a large amount of wood and charcoal to enable them to function and forests around Røros were rapidly depleted. New smelters were built in densely forested areas. As soon as the wood became scarce, the smelters were moved further away. The ore was transported at the smelter by sledge during winter and by barge over lake Femunden in summer. At Femundshytta is to be found an unusual relic: the so-called 'play town,' a miniature town layout resembling

Røros, which indicates the importance of Røros for Femundshytta settlers.

The Winter Transport Route

This element of the proposed extension (1,560ha), running from Tufsingdal to Røros, exemplifies the form of transport that mainly characterized the Røros mining landscape before the roads and the railway were built. Mining operations and their associated communities needed to transport enormous amount of timber, ore, and goods over considerable distances, and until 1880 most of the transport used horses or oxen and sledges during winter. The transport season began around New Year, when the ice on the lakes was sufficiently thick and there was enough snow for the sledges. There are few physical traces of the path of these routes, and only large farms along them with stables and overnight accommodation testify to the existence of this form of transport. The Winter Transport Route crosses an almost untouched landscape and provides a vivid picture of this transport system.

The buffer zone

The buffer zone is constituted by the Circumference, which covers the area of the privileges granted to the mining company by King Christian IV. Its centre was Old Storwartz and the radius measured 4 Norwegian miles (equivalent to 45km). The area includes more or less continuously exploited mining areas, smelters, charcoal production areas, transportation routes, and an agricultural landscape associated with the miners. All these demonstrate how the mining town functioned and developed over 333 years of activity.

Dragas, Eidet, Tolga, and Feragen are among the smelting areas where prominent remains of activities carried out there are preserved.

The agrarian landscape in the Circumference is associated with both mining and rural activities. In certain areas agrarian practices have resulted in the enrichment of vegetal biodiversity; for example, Solendet was listed as a nature reserve for this reason.

Old paths and transport roads criss-cross the entire Circumference.

Røros Mining Town

The present World Heritage Site, Røros Mining Town, covers 51.4ha. The town lies in a post-glacial hilly setting. Mining and copper works were the reasons for the development of the town. Following the discovery of copper ore in 1644, mines were developed in 1646 and exploited for 333 years until 1977. Completely rebuilt after its destruction by Swedish troops in 1679, Røros contains some 80 wooden one- and two-storey houses and a smelting house. The Baroque church with its white-washed walls and the black slagheaps complete the picture of the existing World Heritage Site.

History and development

When the copper ore was discovered and the first mining activity began there were scattered farms in the region and the areas near Røros were used for summer grazing, haymaking, hunting, and fishing. Sami people lived there and in the 17th century, with the start of copper mining, they changed from hunting and fishing to nomadic reindeer husbandry.

Mining activity was encouraged by the Danish–Norwegian king Christian IV who needed the income and the metal to enable him to wage his wars of expansion. Silver works were established in Kongsberg (1623), while copper mining began in Kvikne (1630), Røros (1644), Løkken (1654), Selbu (1717), and Follidal (1748).

The first mine where copper ore was found proved not to be commercially exploitable but mining activities started at Storwartz.

In 1646 the king established an area of privileges to be granted to the mining company. Inside the Circumference Røros Copper Works had the monopoly for exploiting the natural resources, and the farmers living there were obliged to work for the company, in return for some form of payment. Farming activities were encouraged and the working timetable of the copper works included one day per week and one month per year free to allow employees to carry out farming work.

The company was organised as a 'partnership': the copper was distributed among the owners according to the size of their share and they had to make independent arrangements for selling their metal. Operating capital had to be advanced every year, and the company was obliged to provide food supplies and educational and health services to the mining town and its related communities.

The golden age of Røros mining town was between the 1740s and 1814, the date of the end of the privileges when Norway secured its independence.

The operation of copper works remained profitable until the 1860s, when the price of copper fell and operating costs increased. Major technological advances in mining operations were introduced in this period: the construction of the railway (1877), the use of the adapted Bessemer iron-refining process (1887), and the introduction of electricity (1897). All this ensured a further period of prosperity that declined after World War I until the company's bankruptcy in 1977.

Until the 1880s the technology of mining and smelting underwent only occasional and gradual changes and was carried out thanks to animal and water power. To obtain the intermediate product known as copper matte a five-step roasting and smelting process was developed to separate sulphur and iron from copper, which required several days to produce the copper. The introduction of the Bessemer process drastically reduced the

processing time. This equipment had to operate continuously and this led to the definite closure of smelters outside Røros.

After the construction of the railway, the old transport system was abandoned, and the need for timber fell drastically as coke replaced wood as fuel for furnaces. Remote smelters were closed and smelting took place at the main smelter in Røros. Finally, electric power was introduced: electric light, electric pumps and lifts in the mines, and locomotive to transport ore and rock out of the mine.

Technological advancements in copper works also led to changes in the agriculture; with the farmers working full-time in the copper mines and works farming became more specialized. The miner-farmers typical of the economy of Røros almost disappeared.

After the abolition of the monopoly in 1818, a few merchants were allowed to set up businesses in the area; in 1854 Røros Fair was officially inaugurated and remains a lively event. After the closure of the copper works, other industries and tourism have become the economic basis of the town.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The nomination dossier of Røros Mining Town did not include a comparative analysis as this was required at the time (1980).

The comparative analysis in the present nomination dossier includes mining towns where components of the associated cultural landscape are considered as part of the cultural significance of the sites.

Properties considered in the analysis include Kongsberg and the Silver Mines (Norway) and the following World Heritage Sites: Mining Area of the Great Copper Mountain in Falun, Sweden (2001, (ii), (iii), (v)); Mines of Rammelsberg and Historic Town of Goslar, Germany (1992, (i), (iv)); Blaenavon Industrial Landscape, UK (2000, (iii), (iv)), Cornwall and West Devon Mining Landscape, UK (2006, (ii), (iii), (iv)), Historic Town of Banská Štiavnica and the Technical Monuments in its Vicinity, Slovakia (1993, (iv), (v)); City of Potosí, Bolivia (1987, (ii), (iv), (vi)); Historic Town of Guanajuato and Adjacent Mines, Mexico (1988, (i), (ii), (iv), (vi)); and Iwami Ginzan Silver Mine and its Cultural Landscape, Japan (2007, (ii), (iii), (v)).

The rationale for the comparative analysis is based on the remoteness and harshness of the environment, the type of economic enterprise, age, technological achievements, and interrelation with the landscape.

ICOMOS considers that the nomination dossier has selected appropriate World Heritage Sites and properties for comparison and clearly identifies the differences lying among them. Kongsberg and the properties in Latin America differ from Røros: the first was a royal enterprise whilst the second had a colonial base, while Røros was a 'partnership,' run within a monopoly regime.

The nomination dossier persuasively demonstrates that, despite its lesser technological achievements and its smaller area of wooden housing by comparison with Falun and Rammelsberg, the sites most similar to Røros, Røros and its associated cultural landscapes reflect human endeavour and endurance as well as technical capability in developing a productive settlement in such a remote and severe climatic zone by skilfully exploiting all available resources.

ICOMOS notes that the comparative analysis has been undertaken with properties bearing similar values, inscribed or not on the World Heritage List and at national, regional, and international level.

ICOMOS considers that the comparative analysis justifies the selection of the sites included in the proposed serial extension in that they comprehensively reflect the wide spectrum of activities that sustained the economy and the way of life of the inhabitants of Røros and the Circumference.

ICOMOS considers that the comparative analysis justifies consideration of this extension for approval on the World Heritage List.

Justification of Outstanding Universal Value

Røros Mining Town and the Circumference is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Røros Mining Town and the Circumference comprise a unique mining town, established in 1646, built entirely of wood;
- Røros is surrounded by a cultural landscape that shows in an outstanding and almost complete manner how the mining operations, transport, and way of life had to be adapted to the requirements of the natural environment – the mountain plains, the cold climate, the remote location without roads and with marginal growth conditions for forests and agriculture;
- On this basis a unique culture developed that has disappeared in part, but outstanding testimony of the existence of which has been preserved.

The proposed Outstanding Universal Value is defined by the interconnection of the existing World Heritage Site into the wider natural, cultural, social, and economic framework with which it is intimately intertwined. This profound interrelationship is implicit in the wording of the

original inscription and the current extension application as a consequence serves to make explicit what was previously implicit. The application is thus congruent with and complementary to the original inscription, thereby serving to underpin and reinforce the already established Outstanding Universal Value.

Justification for the inscription of Røros Mining Town:

Røros is an extensive mining settlement dating from 1644, when the development of the copper works began. Its physical history has continued without interruption since the town was burned in 1679. Thus the numerous surviving buildings represent the Norwegian tradition of wooden construction that flourished in the 18th and 19th centuries. The buildings reflect the dual occupations of the inhabitants, mining and farming, the domestic groups being arranged as compact farmyards. These groups are disposed on a regular urban pattern adapted to the mountain terrain, reflecting the particular kind of industrial planning introduced by the Danish kings of Norway in the 16th and 17th centuries. Røros is a characteristic example of this type of technological and industrial development, as well as being an outstanding survivor of a traditional type of human settlement built using traditional methods of construction. It has, moreover, become vulnerable under the impact of economic change since copper mining recently came to an end after 333 years of continuous activity. Lastly, Røros embodies a strong degree of rarity because of its location. It was built as an industrial community in the mountains (650m above sea level) at very northern latitude (62° 35' N) subject to extremely long winters and low temperatures.

Integrity and Authenticity

Integrity

The extent of the urban agricultural landscape surrounding the town has been reduced over the 20th century and the plot subdivision has been weakened but the function and structure of the area are still legible.

Storwartz, Nordgruvefeltet, and Femundshytta today are relict industrial cultural landscapes that have remained almost unchanged since the closure of the copper works and they retain buildings, technical installations, and traces of mining activity, transport, and associated communities.

Although the Winter Transport Route has left few traces on the ground, it has been retained in its entirety and passes through areas that have been subject to minor encroachments.

The buffer zone contains cultural landscapes and a wealth of remains that attest to the long-lasting copper mining activity, although the degree of its integrity may vary from place to place.

The elements included in the proposed extension ensure a complete depiction of the unity of this human working presence in such extreme conditions has been preserved. ICOMOS considers that this has necessitated a considerable enlargement of the nomination, which is now adequate to make this cultural landscape fully understandable.

The serial nature of this extension is justified by the State Party on the grounds that the Circumference cannot be nominated in its entirety because certain areas within it would not meet the requirements for integrity. The State Party has therefore selected for nomination those areas that best illustrate how the mining town came into being, developed, and functioned and has adopted the Circumference as the buffer zone.

ICOMOS considers that the justification provided by the State Party is appropriate because the selection of sites proposed as a serial extension to Røros Mining Town comprehensively covers the wide spectrum of operations carried out over the 333 years of copper mining and working which allowed the mining communities to survive in a hostile region and to develop an enduring technological venture.

No adverse effects or evidence of neglect could be observed at the proposed extension.

The integrity of Røros is also shown by its economic and cultural vitality and by the ability to recover rapidly from the bankruptcy of the copper works.

There is no latter-day interference within the visual scope of the proposed extension and so this aspect of integrity is also retained. The roads that access each element have little development along them and therefore complete the ambience of a very low-density human settlement.

In some smelters abandonment has caused deterioration of the mining accessories, and almost no wooden structures remain.

Authenticity

The elements of the proposed extension, the rural-urban landscape, the smelters and their surroundings, and the transportation routes demonstrate the intentional use of and adaptation to environmental features in order to achieve the goals that were defined.

Material remains of the components of the proposed extension bear credible witness to the history of the area. This also holds good for the buffer zone.

The mining sites are not used, with the exception of Storwartz, which is open to visitors, whilst part of the rural-urban landscape is still being used for the same purposes as it was at the time when Røros was a mining town.

The major activities in the town today are related to tourism (c 1 million visitors per year), although there are still some industrial, agricultural, and forestry activities. However, tourist-related activities have not so far adversely impacted the specific qualities of the place.

Røros was a 'company town' and the copper works were responsible for work, transport, and food supplies, schools, and a few social services. Today all this has come to an end. However, traditions have been maintained in the rural setting and reinterpreted in a contemporary way.

The location and setting of this extension of the Røros mining town have retained most of the features that distinguished the mining landscape and town at the time mining was still active. The deforested hillsides around the mining town and the smelters attest to the copper-ore mining and processing, while low birch trees are a natural regeneration.

The spirit of Røros as a mining town is recognizable even today, and this is also true of the surrounding landscape and the industrial relics, the remote character of which conveys the sense of the past life of Røros and the Circumference.

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

This extension is nominated on the basis of cultural criteria (iii), (iv), and (v), the same criteria under which Røros Mining Town was inscribed on the World Heritage List in 1980. However, the justification approved in 1980 by the Committee was not broken down into the individual criteria. The proposed extension aims at making the value of Røros Mining Town fully explicit.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that from the time copper ore was found in the mountains at Røros in 1644 until the copper works went bankrupt in 1977 a unique culture developed in this remote and sparsely inhabited area. This uniqueness resides in particular in the testimony preserved that shows how technology and people could adapt to the remoteness of the location and climatic extremes in order to extract the valuable copper.

Using German mining technology, German, Danish, Swedish, and Norwegian immigrants created a mining community under extreme conditions. The urban agriculture with its specialized system shows in a coherent way how people were forced to exploit all the available natural resources in order to survive and established a community in an ungenerous and hostile area. Transport was mainly on frozen lakes and rivers

during the winter. Evidence of this activity is revealed by the stables and buildings for overnight accommodation for those involved in transport.

ICOMOS considers that the Røros Mining Town and the Circumference complex and its culture are demonstrated by the successful, sustained, and essential integration of virtually all the sciences, professions, and socio-cultural contributions, with each requiring interdependence of one to the other so as to ensure productivity and survival. In such a remote location geological, biological, and meteorological factors dominated the way that architectural, planning, agricultural, industrial, and business needs were successfully addressed whilst at the same time overcoming severe hardships.

The proposed extension significantly reinforces this criterion in that it illustrates the organized range of activities and uses of the natural resources that made it possible for Røros Mining Town to exist and flourish.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that Røros is an outstanding example of a Nordic town constructed in wood. The original town structure is retained in its entirety with well preserved buildings that bear the stamp of the 1700s and 1800s. The town plan is an example of how European concepts of town planning were adopted and adjusted to local conditions and building traditions in this remote mountain town. Røros is also a well preserved and exceptional example of the town communities that arose in conjunction with the intensive activity in ore mining in the 1600s and 1700s in Europe and the 'New World' of Central and South America. By virtue of its climate and its location, Røros represents the most extreme limits of what was possible at that time, and this is reflected in the building tradition.

ICOMOS considers that the proposed extension significantly reinforces this criterion in that it provides a contextual background which explains that the structure of the town is the result of the conscious adaptation of the most updated European planning models for a town that was founded to be the headquarters of the Copper Works company, that fulfilled a strategic role for the Danish-Norwegian Kingdom, which in that period had undertaken a modernization programme of the urban structures of its capital cities, Copenhagen and Christiania (Oslo). In addition, the integration of farmhouses within the town structure reflects the objective of the mining company of ensuring a diversification/integration of the sources of income for the copper workers and their families through agricultural activity. The bare landscape included in the extension and its buffer zone also illustrate the intensive

exploitation of timber resources, used both for copper processing and the construction of houses and all technical facilities.

ICOMOS considers that the proposed extension contributes to the expression of this criterion.

Criterion (v): be an outstanding example of traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that Røros Mining Town and the Circumference constitute an entity that is an outstanding example of traditional settlement and land-use. The various activities that have been carried out in the area constitute a cohesive and interdependent unit. These activities have shaped a cultural landscape that provides a unique picture of how the mines and the mining town functioned as a complex and at times vulnerable system which verged on the limits of what was possible in an inhospitable landscape with a harsh climate. Today these cultural landscapes have been altered to some extent by the closure of the mines and by consequent changes in agriculture activities.

ICOMOS considers that the nature of the Røros townscape and its related cultural and rural landscapes, with its inter-related industrial activity, domestic and agricultural accommodation within an urban environment, illustrates how the people adapted to the extreme circumstances and how they used the available indigenous resources and their technological skills to create shelter, provide food for their sustenance, and contribute to the national wealth of the country.

ICOMOS considers that, taking all these points into consideration, the factors that made possible the development of the mining economy in the area create a remarkable and outstanding example of how traditions evolve in a community that was conditioned and dictated to by its environment.

ICOMOS considers that the proposed extension significantly reinforces this criterion.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the serial approach is justified and that the selection of sites is appropriate.

ICOMOS considers that the proposed extension significantly reinforces criteria (iii) and (v) and contributes to the expression of criterion (iv) which had already been adopted for the original property and that conditions of authenticity and integrity are met.

Description of the attributes

- Røros Mining Town, already inscribed on the World Heritage List;
- The cultural landscape with traces of the urban agriculture system surrounding the town: Småsetran, Østerhaga, Djupdalshaga, Stormohaga, and Kvitsandshaga;
- The industrial cultural landscape with traces of all phases of mining and smelting operations: the Storwartz field, the Olavsgruva Mine, the Nordgruvefeltet field, and Femundshytta;
- The Winter Transport Route and the other traces of transport systems such as old roads, transport routes, and cableways;
- The Kuråsfossen power station and all other power and energy heritage, such as the cableway at Storwartz and at Christianus Sextus Mine.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The proposed extension to the airport is intended to adapt it so as to be able to receive larger charter flights. The Røros local authority expects and promotes an increase of tourism in the area. All this may imply a certain level of conflict which requires development and protection requirements to be carefully weighed.

ICOMOS raised the issue of the consequences of the proposed extension of the enlargement of the airport in the letter sent to the State Party on 14 December 2009. The State Party responded on 23 February 2010 and reported that no extension of the runway had been prioritized by either the State Party or the local authorities and that no funding had been allocated for that purpose. The State Party considers it unlikely that these plans will be implemented in the foreseeable future. In the remote case that this extension plan should take place, the State Party will guarantee that an exhaustive process will be initiated that will safeguard of the values of the property.

The construction of peripheral shopping centres is correctly seen as a weakening factor to the character of Røros.

ICOMOS considers that, while counteracting this trend may be difficult, correcting measures already being implemented should be continued.

Although agricultural activity in the area today is marginal, any definitive abandonment of farming is seen as a threat to the retention of the values of the property. Farming methods that facilitate the maintenance of the

cultural landscape around Røros have been developed and in the buffer zone extraordinary governmental funds have been granted for mowing uncultivated land in the Sølendet nature reserve.

ICOMOS recommends, however, that the measures undertaken to maintain and preserve the historic agricultural landscape, especially those areas that are closest to the town and therefore more subject to development pressure, should be continued and control over building permits ensured in order to retain the character and the historic features reflecting the role of farming activity in sustaining the life of mine workers.

Tourism pressures

Røros receives 1 million tourists per year, with peak seasons in July, Easter, and during the February winter fair. Tourists are lodged in small hotels in the old urban core or in smaller guesthouses. The number of tourists is currently not considered by the State Party to impact the cultural heritage, although in the main streets some change in trading patterns has been detected. The nomination dossier recognizes that Røros may in the future appear as a "touristified" place. However, there is a countermovement against this tendency that as a first step in taking action to sustain local retail shops.

Environmental pressures

Although mentioned in other sections of the nomination dossier, the pollution affecting the landscape associated with mining and smelting sites is not addressed in the appropriate section of the dossier.

ICOMOS notes that different approaches have been adopted to counteract pollution from materials emanating from mining activities, in order to seek a balance between the need for decontamination and the cultural values associated with polluted features. However, ICOMOS considers that further information would be helpful on the nature and consequences of pollution in the mining sites and on the future measures that may be undertaken to reduce pollution.

IUCN commented that the need for the management to mitigate mining-related pollution from heavy metals and acid mine drainage is a key issue. However, present and future priorities to reduce pollution have not been explained adequately in the nomination dossier. IUCN observes that there is tension between the presence of the testimony of mining operations and hence there is a need for continued interventions to reduce the impacts of mining pollution.

Natural disasters

The State Party mentions flood as the first threat to Røros mining town, based on the heavy effects of a flood that occurred in 1934. After that improvements were made to the banks of the river, but it is acknowledged that a severe flood might still be critical to the town.

Fire is the second threat mentioned by the State Party, which also documents the systematic efforts made to protect the mining town from fire. Technical measures have been accompanied by *ad hoc* information to the inhabitants.

ICOMOS considers that the State Party has identified natural disaster threats only for the town, while it would be useful to have a comprehensive understanding of the natural threats to the entire proposed extension.

Impact of climate change

Besides the increase of overgrowth in the uncultivated fields, it is considered that climate change is causing more attacks by pests on the woodwork.

ICOMOS considers that the main threats to the property come from development pressures. ICOMOS recommends that the State Party should closely monitor the impact of tourism within the boundaries of the nominated property. ICOMOS further recommends that the measures undertaken to maintain and preserve the industrial and the historic agricultural landscape, especially those areas closest to the town, should be continued, and that control over building permits should be ensured in order to retain the character and the historic features that reflect the role of farming activities in sustaining the way of life of the mine workers. ICOMOS finally recommends that the State Party provides a comprehensive assessment of the natural disasters to which the entire proposed extension may be prone.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The entire area comprising the proposed extension, the World Heritage Site and the buffer zone covers 497,750ha. The number of inhabitants of the five municipalities, part of which is included in the proposed extension or buffer zone, is around 13,000.

The boundaries of the proposed extension have been determined by identifying different elements (roads, power lines, mountain tops and ridges) as well as administrative boundaries. They have been drawn on a map by connecting 45 points and describing in detail the limits of each interval. These points and connecting lines are given material form on the ground by recognizable natural elements or infrastructures.

The limits of the buffer zone are represented by the Circumference, an abstract line defined on a map. Its centre, in Storzartz-gruva, has been given material form by an inscribed stone.

The boundaries of the three nominated sites (Town and Cultural Landscapes, Femundshytta, and Winter Transport Route) that form the series include all the elements that are needed to convey the value of the property as a whole.

Concerning the Winter Transport Route, ICOMOS notes that there is no physical expression of its exact course. Given the extreme conditions under which the route operated, it is possible that its course was very variable and included quite different paths. ICOMOS therefore considers that it would be beneficial to the nominated Route for areas with the potential to reveal traces of alternative paths to be identified and preserved so as to allow future research.

ICOMOS considers that the boundaries of the proposed extension and of its buffer zone are adequate.

Ownership

Most of the area in the Town and the Cultural Landscapes is privately owned. Some important sites are owned by the municipality or by the State (Malmplassen square with the smelting house, buildings, and the slagheaps and Storzartz mining field).

The industrial landscape of the Femundshytta smelter is privately owned, forming part of the only farm on the site.

The Winter Transport Route from Tufsingdal valley to Røros town passes mainly over lakes that are located on government-owned land and over some privately owned ground. The buffer zone comprises large mountain areas that are government-owned or locally owned common land. The other areas are mostly privately owned.

Protection

Legal Protection

According to the nomination dossier, there are several legislative instruments that help to protect and manage the proposed extension. The most prominent are the Cultural Heritage Act (1978) and the Planning and Building Act (1985). The objective of the former aims is to protect archaeological and architectural monuments, sites, and cultural environments. An automatic protection applies to all monuments and sites older than 1537, all buildings older than 1650, all Sami monuments, and sites older than 100 years.

The latter contains provisions by means of which the comprehensive protection of the outstanding universal value of the property as a whole may be ensured. The most relevant plans in force are:

- The Land Use plan for Røros town centre (in the dossier the 1994 Plan is cited, but since then the

new Plan was issued in June 2009).

- The Conservation Area Plan for Røros town centre (1976-1981) includes strict regulations for preserving the buildings and the street patterns; it has been used to conserve the property since the first inscription.
- The Conservation Area Plan for Småsetran is a governmental zoning plan for protecting cultural and natural heritage.
- The regulated recreational area along the Hitterelva River in the town centre forbids any construction except for facilities for recreational activities.
- Storzartz, Nordgruvefeltet, Femundshytta, and the Winter Transport Route, as well as other areas, are located inside areas set aside for agriculture, nature, and recreation (ANR areas), where there is a ban on new construction imposed by the land use plan of the responsible municipalities.

Under the terms of the Cultural Heritage Act (1978), following consultation procedures, the Directorate for Cultural Heritage may issue protection orders for monuments and sites, regardless their age, including a surrounding area, which ensures the conservation of protected monuments in the landscape. Specific provisions are established for each protection order. Before starting any kind of project, the proposer must clarify whether the project will impinge on automatically protected monuments.

Through the Nature Conservation Act (1970) cultural landscapes and cultural heritage sites can be protected against encroachment. The Act defines three categories of properties that are relevant for the proposed extension that can be protected for their natural and cultural aesthetic values or scientific interest: national parks, protected landscapes, and nature reserves.

The area named "Town and Cultural Landscapes" includes Kvitsanden protected landscape, while the Winter Transport Route crosses two nature reserves. There are two national parks, nine protected landscapes and 21 nature reserve in the buffer zone.

Other relevant acts are: the Pollution Control Act (1981), the Concession Act (1974); the Land Act (1995), which protects productive agricultural land; and the Royal Decree (2006), which obliges all sectors of the government that own properties of cultural importance to establish nationwide plans for their protection and management. In the proposed extension and its buffer zone, three national protection plans are in force: the 'Cultural heritage sites in Norwegian power supply,' by means of which the Kuråsfossen I power station is protected; the 'Norwegian State Railways' through which Glamos Station in the proposed extension and Håmålvoll, Reitan, and Stensli stations in the buffer zone are protected; and the 'Cultural Heritage in the railways' through which Røros station in the proposed extension and Tolga, Håmålvoll, Reitan, and Stensli stations in the

buffer zone are also protected.

ICOMOS raised the issue of the need for strengthening the protection of Femundshytta in the letter sent to the State Party on 14 December 2009. In its response, the State Party considers that at the present time, having regard to the remoteness of the area and the active presence of the farm owners, the protection of Femundshytta is adequate. However, in view of any potential alterations, which are unlikely in the near future, the State Party has undertaken to strengthen the protection of Femundshytta. The Directorate for Cultural Heritage in conjunction with the municipal and regional management offices has met the owners to explore their intentions and will carry out an assessment in order to identify the best means of strengthening the protection of the cultural heritage and landscape while ensuring the continued operation of the farm.

The nomination dossier also mentions that a joint regional plan for Hedmark and Sør-Trøndelag counties will be formulated for the proposed extension "Røros Mining Town and the Circumference," in conformity with the new Planning and Building Act.

In its letter of 14 December 2009 to the State Party ICOMOS requested further information on the timetable for developing and approving this plan.

The State Party has responded that the work on the regional plan had started in September 2009. The planning programme was sent to the municipalities and other relevant bodies on 20 November 2009 with a deadline for comments of 11 January 2010. The planning programme had been revised and adopted by the two County Councils. The planned schedule establishes that the first draft of the plan will be ready in June 2010 and will be sent for comment to the municipalities with a deadline that will permit the final edition of the plan to be sent to the County Councils for decision in December 2010.

ICOMOS recommends that the timetable for finalising the joint regional county plan should be respected, and that updated information on any progress made in strengthening the protection of Femundshytta and in finalizing the regional plan should be provided to the World Heritage Committee and ICOMOS.

Effectiveness of protection measures

The Directorate for Cultural Heritage is the professional advisory and executive body for the Ministry of Environment. It makes decisions on protection pursuant to the Cultural Heritage Act and can raise objections to municipal plans that threaten cultural heritage of national importance.

The central area of Røros around Malmplassen and the Storvartz mines are under the responsibility of the Directorate for Cultural Heritage.

Sør-Trøndelag and Hedmark Counties and the Sami Parliament act as advisors to the municipalities in matters pertaining to cultural heritage at the planning level, such as requests for changes to protected buildings, and are responsible for implementing the conservation plans. They manage protected areas and areas for outdoor recreation, monitor the natural environment, the compliance with environmental regulations and planning, the levels of pollution, agriculture and forestry activities, and the development of local agriculture.

Municipalities have general responsibility concerning planning matters within their geographical boundaries, provide advice and follow up maintenance in conservation areas, and process requests for proposed changes to buildings that are worthy of protection. Røros municipality is one of the few that has been granted the authority to issue orders for temporary protection, in accordance with the law in force.

Finally, in all Norwegian World Heritage Sites there is a World Heritage Council with representatives of all levels of public management. Røros Mining Town has its own World Heritage Council with the task of coordinating the management of the town as a world heritage site. If the extension of the property is approved, an expanded Council with representatives of the five municipalities, of the county authorities, and of the government will be established to ensure the coordination of the management of the extended World Heritage Site.

At present, an interim council has been established which will function until the nomination process is concluded.

ICOMOS considers that the overall legal protection in place is adequate.

Conservation

Inventories, recording, research

The nomination dossier provides an overall picture of carried out research and of research information resources. Detailed inventories with description of more than 400 buildings in Røros and of all cultural properties and landscape at Småsetran have been carried out. The Røros and the Nordøsterdal Museums conserve documentation of part of the buildings and works under their responsibility. The archival material on Røros Copper Works offers opportunities for the development of further research topics.

ICOMOS considers that future research on the proposed extension might consider the possible different paths followed by the Winter Transport Route and the summer transport systems.

Present state of conservation

The state of repair of the buildings scattered in the landscapes is variable, while the technical installations are generally in poor condition. Almost all the mining and smelting areas reveal pollution problems that appear to have been addressed, while also taking into account considerations for reducing the pollution and preserving cultural heritage.

Active Conservation measures

One of the most important active conservation programmes is the Outbuilding project through which the state of conservation of outbuildings within Røros and the proposed extension are assessed before and after restoration.

A Heritage Fund acting locally has been established to help owners (40% private) to keep their properties in good repair. The average subsidies paid to projects, which must be prepared and approved by technical staff, is around 50% of costs. Work on site is followed up.

Protected buildings within the World Heritage area receive full restoration support for projects and works, and the properties owned by the state are all included in national management programmes: for example, government-owned properties acquired by Røros Copper Works undergo constant repair and maintenance work supervised by Røros Museum.

Several plans and programmes have been launched dealing with tourism and agriculture for sustaining landscapes and rural communities. Other projects are the repair and maintenance programmes of the Røros Historical Society and of the Church and the agreements with local farmers for the maintenance of landscapes.

Maintenance

The condition of the buildings and remains scattered in the industrial and agricultural landscapes is uneven.

Effectiveness of conservation measures

Thirty years of continuous care for the existing World Heritage site demonstrate the effectiveness of the measures undertaken by the State Party to ensure the preservation of the features that show the value of Røros.

The existing programmes for the proposed extension appear to be regularly implemented.

ICOMOS considers that the level of conservation of the property is adequate. ICOMOS considers that it would be helpful for further information to be available about the nature of the pollution. It would also be helpful to have details of the measures undertaken for decontamination in relation to the balance sought with

respect to the nature of cultural features of certain polluted features.

Management

Management structures and processes, including traditional management processes

The management framework for Røros Mining Town and the Circumference is set out in a Statement of Intent that has been signed by all the responsible bodies for Røros and the proposed extension. It undertakes to commit itself to the preservation of the property and to base development of the area on the cultural values of the property. This framework created the guidelines for the future development of the Management Plan.

ICOMOS sent a letter to the State Party requesting updated information on the establishment of the Cooperation Council.

The State Party replied that an informal council had functioned throughout the entire period of work on the extension of the Røros World Heritage area. This council had been formalized by the creation of an interim council for World Heritage Røros Mining Town and the Circumference, which will function until the proposal for the extension of the World Heritage area has been formally approved by the World Heritage Committee, at which point the interim council will be replaced by a permanent one. The interim council has a political profile and includes the mayors of Røros, Holtalen, Os, Tolga, and Engerdal, and one representative from the Sør-Trøndelag county authority, the Hedmark county authority, and the Sami Parliament respectively. The Directorate for Cultural Heritage will provide funds to appoint a temporary secretary for the interim council.

Policy framework: management plans and arrangements, including visitor management and presentation

The basis for management relies on the existing Norwegian legal framework, the planning instruments in force, the administrative and private bodies responsible for the property and sources of funding for heritage conservation, agricultural activities in heritage areas, productive and marketing activities based on cultural and natural heritage, and sustainable tourism. The management framework contains an action programme including short- and long-term actions. The programme identifies the subject, the parties involved, and the body responsible for implementation and establishes a time-frame for all identified actions, the major part of which will take place in the next three years.

ICOMOS considers that it would be useful for the State Party to provide a document illustrating the amount and the source of funds that will cover the costs of these actions.

In its letter of 14 December 2009 to the State Party ICOMOS requested information about the timetable for the finalization and implementation of the management plan.

The State Party replied that work on the management plan for the proposed extension will start when the process to prepare the regional plan for the Hedmark and Sør-Trøndelag counties was near completion. The start of the process is scheduled for September 2010 and its completion in June 2011. A first proposal of a ten-year plan for the proposed extension was presented at the interim council meeting on 27 January 2010: this proposal will be the base for further work on a long-term plan for the property.

ICOMOS considers that the management system in place for the proposed extension and its buffer zone is adequate and recommends that the State Party provide update information on any progress made in the finalization of the management plan.

Risk preparedness

The major threat to the nominated property is fire, and the measures undertaken to prevent and counteract this threat appear adequate in that they combine technology with education and awareness.

However, ICOMOS notes that the measures implemented only relate to Røros. It is important to develop measures that ensure prevention and prompt reaction in case of fire, especially in uninhabited places.

Involvement of the local communities

The several programmes activated by the authorities responsible for the World Heritage Site and by NGOs demonstrate that local communities have been involved to a considerable extent in the protection of the property and that they are well aware of the implications of commitment required in case of approval of the extension.

Resources, including staffing levels, expertise and training

The nomination dossier documents in a detailed manner that Norway possesses several grant schemes that could be relevant for World Heritage Sites. The Ministry of Environment through the Directorate for Cultural Heritage has allocated funds for the buildings acquired by the government from Røros Copper Works in Storvartz mines and Malmplassen square; funds have also been given for the maintenance of Småsetran district. The county authorities receive funds from the Directorate for Cultural Heritage to maintain protected buildings. The Ministry of Agriculture and Food maintains grant programmes that help preserve cultural landscapes and has launched a separate World Heritage programme. In the event of inscription grants from this source may also be used for the proposed extension.

The sources of expertise have also been demonstrated to be varied and to exist at the national, regional, and local levels of administration, also including groups and associations active at the local level.

Effectiveness of current management

The nomination dossier provides very clear evidence of the competence and professionalism of State Party authorities at national, regional, and local levels in the management, protection, and conservation of the existing World Heritage Site.

ICOMOS considers that the existing protected areas and national parks that cover a large part of the buffer zone provide national and regional effective control over the landscape. The staffs of the responsible bodies are firmly committed to this course of action and current participatory management strategies for the site are working successfully at the local level.

ICOMOS considers that the management system for the property is adequate but recommends that the State Party provide update information on any progress made in the development of the regional plan for Hedmark and Sør-Trøndelag counties and the management plan for the proposed extension. ICOMOS also recommends that measures should be developed to ensure prevention and prompt reaction in case of fire in uninhabited areas.

6. MONITORING

The nomination dossier states that regular reporting on the condition of the proposed extension will be developed and includes a list of effective and measurable indicators (the number of historic and protected buildings or technical/industrial sites restored, the number of areas with maintenance contracts to prevent overgrowth, the number of old roads being tended, analysis of aerial photographs to monitor overgrowth, construction of holiday homes, and growth of urban settlements), each associated with the agencies responsible for the monitoring (municipalities, county authorities, Directorate for Cultural Heritage). Monitoring will be carried out every six years, linked with the Periodic Reporting exercise.

ICOMOS considers that the proposed monitoring system is adequate and should be implemented as soon as possible.

7. CONCLUSIONS

Since the Røros Mining Town was inscribed on the World Heritage List in 1980, conservation thinking and ideology has moved on considerably, and the shortcomings of the original Nomination are openly identified in this context. The extension proposal links logically and persuasively to the area already inscribed

on the World Heritage List, by creating an integrated expression of the original World Heritage Site within its wider socio-economic context. This provides a significantly enhanced record of the evolution of the mining-farming culture.

Recommendations with respect to inscription

ICOMOS recommends that the extension of Røros Mining Town to include the Circumference and become Røros Mining Town and the Circumference, Norway, be approved on the World Heritage List on the basis of **criteria (iii), (iv), and (v)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Røros Mining Town and the Circumference consist of three sites within the Circumference, i.e. the area of privileges awarded by the Danish-Norwegian King to Røros Copper Works in 1646.

The town and the cultural landscapes cover a large continuous area which includes the landscape surrounding the mining town, the urban agricultural areas, and the most important mining landscapes where agricultural practices and copper works operation were carried out.

Femundshytta is a largely relict landscape which includes the industrial cultural landscape with the remains of a smelter, water management systems, and the community that grew up around them. The Winter Transport Route is made up of a sequence of lakes, rivers, and creeks in an almost untouched landscape. It was used from November to May.

Røros Mining Town, established in 1646, is unique. It is built entirely of wood, and interlinked with a cultural landscape that shows in an outstanding and almost complete manner how mining operations, transportation, and the way of life had to be adapted to the requirements of the natural environment – the mountain plains, the cold climate, the remote location without roads and with marginal growth conditions for forests and agriculture. On this basis a unique culture developed that has partly disappeared, but an outstanding testimony of the existence of which has been preserved.

Criterion (iii): From the time copper ore was found in the mountains at Røros in 1644 until the copper works went bankrupt in 1977, with German mining technology as a starting point, employing German, Danish, Swedish, and Norwegian immigrants, a unique culture developed to extract the valuable copper in a remote and sparsely inhabited area. Today there is no mining in the area, but Røros Mining Town and the traces of mining, smelters, transport, and water management systems bear unique

witness to the adaptation of technology to the requirements of the natural environment and the remoteness of the situation.

Criterion (iv): Røros townscape and its related industrial and rural landscapes, with their interlinked industrial activity and domestic and agricultural accommodation within an urban environment, illustrate in an outstanding manner how people adapted to the extreme circumstances in which they had to live and how they used the available indigenous resources to provide shelter, produce food for their sustenance, and contribute to the national wealth of the country. Technologically, their buildings and installations evolved through the use of available indigenous materials to functionally satisfy the combined approach of mining and agrarian practices whilst at the same time accommodating the consequences of dealing with extreme climatic conditions.

Criterion (v): Røros Mining Town and the Circumference constitute a totality that is an outstanding example of traditional settlement and land-use. The various activities that have been carried out in the area constitute a cohesive and interdependent unit. These activities have shaped a cultural landscape that provides a unique picture of how the mines and the mining town functioned as a complex and at times vulnerable system that verged on the limits of what was possible in an inhospitable environment with a harsh climate.

Integrity and Authenticity

The nominated property contains all elements that convey the Outstanding Universal Value of the property and its most relevant features present a high or good level of integrity. The mining landscape is relict in nature, but almost no transformations or encroachment occurred after the closure of the copper workings.

The authenticity of the property is expressed in almost all its aspects and features. All the remains bear credible witness to the history and development of the site. This is also reinforced by the rich archive documenting the copper company's history.

Management and protection requirements

The most important legislative instruments that help to protect and manage Røros Mining Town and the Circumference are the Cultural Heritage Act (1978) and the Planning and Building Act (1985).

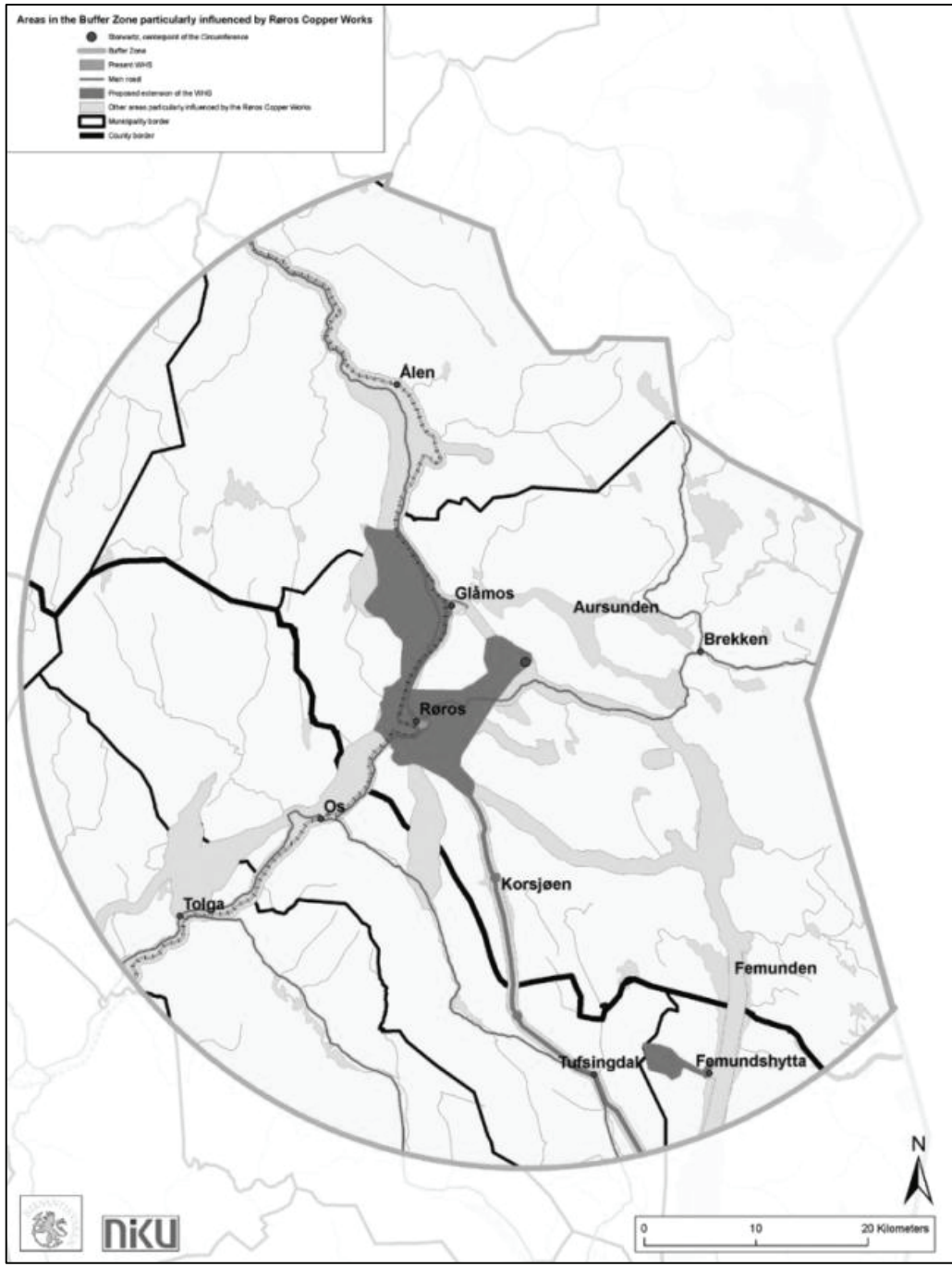
The management framework for Røros Mining Town and the Circumference is embodied in a Statement of Intent which has been signed by all responsible bodies for the nominated property.

The basis for management relies on the existing Norwegian legal framework, the planning instruments in force, the administrative and private bodies responsible for the property and sources of funding for heritage

conservation, agricultural activities in heritage areas, productive and marketing activities based on cultural and natural heritage, and sustainable tourism. The management framework contains an action programme including short- and long-term actions.

ICOMOS recommends that the State Party give consideration to the following:

- Providing the World Heritage Committee and ICOMOS with updated information about any progress made in the process under way for strengthening the legal protection of Femundshytta;
- Respecting the proposed timetable for the development of the regional plan for Hedmark and Sør-Trøndelag counties and for the management plan for the proposed extension and its buffer zone and providing the World Heritage Committee and ICOMOS with updated information on any progress made in this direction;
- Continuing to implement the measures undertaken to maintain and preserve the industrial and the historic agricultural landscape, especially those areas that are closest to the town and therefore more subject to development pressure, and guaranteeing control over building permits in order to retain the character and the historic features reflecting the role of farming activity in sustaining the way of life of mine workers;
- Monitoring the development of the tourism industry within the boundaries of the nominated property;
- Extending the assessment of the natural disaster threats to the entire proposed extension;
- Collecting and providing further information on the nature and consequences of pollution in the mining sites and on future measures that may be undertaken to reduce pollution;
- Ensuring the protection of a wider area surrounding the Winter Transport Route for purpose of research and possible future extension of the Route path;
- Developing measures to ensure prevention and prompt reaction in case of fire in uninhabited areas;
- Keeping the World Heritage Committee informed of the enlargement of the airport, should these plans be put into effect, in accordance with paragraph 172 of the *Operational Guidelines*.



Map showing the boundaries of the nominated property



Aerial view of Røros Mining Town and its surroundings



Lower Storzartz and the flotation plant



Kuráfossen power station



The Winter Transport Route

Siega Verde (Spain) No 866bis

Official name as proposed by the State Party:

Palaeolithic Rock Art Ensemble in Siega Verde

Location:

Region of Castilla y León
Province of Salamanca
Spain

Brief description:

The Palaeolithic Rock Art Ensemble in Siega Verde covers an area stretching 1.5km along the banks of the Águeda River, a tributary of the Duero River. The 645 engravings were made on an impressive cliff, the result of erosion by the river. They are mostly figurative, representing animals, although some schematic and geometric figures have also been identified. Different techniques were employed: most of those found were the result of percussion engraving, but incision and abrasion techniques were also used.

The group of rock engravings complements the nearby World Heritage Listed prehistoric rock-art sites of the Côa Valley in Portugal.

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

1. BASIC DATA

Included in the Tentative List: 27 April 2007

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 28 January 2009

Background: This is an extension to the Prehistoric Rock-Art Sites in the Côa Valley (Portugal), inscribed on the World Heritage List at the 22nd session of the World Heritage Committee (Kyoto, 1998) on the basis of criteria (i) and (iii).

Consultations: ICOMOS has consulted its International Scientific Committee on Rock Art and independent experts.

Literature consulted (selection):

Bednarik, R.: Fluvial erosion of inscriptions and petroglyphs at Siega Verde, Spain. *Journal of Archaeological Science*, July 2009, Vol. 36, No. 10.

Gonzalez, A., and Berhman, B.: *Arte paleolítico al aire libre. El yacimiento rupestre de Siega Verde, Salamanca*. Junta de Castilla y León, 2006.

Clottes, J.: *L'art rupestre : Une étude thématique et critères d'évaluation*, ICOMOS Thematic Study, 2002.

Martinho Batista, A.: *A paradigm lost. Côa valley and the open air Palaeolithic art in Portugal*. Edições Afrontamento e Parque Arqueológico do Côa, Vila Nova de Foz Côa, pp. 53-63, 2009.

Technical Evaluation Mission: 23-27 August 2009 (Spain and Portugal)

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 19 October 2009 requesting a joint statement of Outstanding Universal Value for the whole property.

The State Party replied on 16 November 2009.

ICOMOS sent a second letter to the State Party on 14 December 2009, requesting it to consider a single name for the proposed extension and the inscribed property of the Côa Valley in Portugal and detailed information on projects for the improvement of the Archaeological Area, with particular regard to the creation of new parking lots and extension of the visitor centre.

On 27 January 2010 the State Party sent a copy of the Protocol of Intent between the Junta de Castilla y León (Spain) and the Instituto de Gestão do Património Arquitectónico e Arqueológico, L. P. (Portugal) signed on 26 October 2009 to coordinate the management of the Côa and Siega Verde rock-art sites.

On the same date, the State Party also sent a copy of the Agreement among the Municipalities of Villar de la Yegua, Villar de Argañán, and Castillejo de Martín Viejo signed on 2 December 2009, which commits these municipalities to control urban planning and construction plans in areas in which building development might have a visual impact on the proposed extension and its buffer zone.

The State Party replied to ICOMOS letter of 14 December 2009 on 26 February 2010. The analysis of this information is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The Palaeolithic rock art of Siega Verde lies to the extreme west of Salamanca, close to the boundary

between the Autonomous Community of Castilla y León and Portugal, on rocky outcrops on the banks of the River Águeda beside the bridge that spans it. This is a tributary of the Douro in Spain, parallel to the River Côa, a Portuguese tributary of the Douro.

The nominated property covers both banks of the River Águeda and all the 645 engraved rock surfaces that have been identified, which rarely extend more than 15m beyond the river. It is about 1km long with a total area of less than 1ha. The buffer zone comprises the land immediately surrounding the river, covering in total some 45ha.

Physically, the essential characteristic of the site is the rocky substratum of iron-schist outcrops with relatively regular surfaces that were used for the engravings along the river banks and the ford. The surrounding agricultural landscape of the peneplain is rich in vegetation and bird life.

Varied engraving techniques were employed, the most typical being percussion-engraving, although incision and abrasion techniques were also used. The artistic and archaeological character of Siega Verde is illustrated by the subjects of the rock engravings, which cover a wide range of animal groups. Horses, bovids, and cervids are dominant themes; very occasionally human forms appear, as well as geometric patterns.

These are typical of representations in the cave art of the Upper Palaeolithic, including the way in which they are presented - as single animals or small groups, very rarely settings with ground lines or vegetation, and very few humans, usually with misshapen faces and fluid outlines. These groups appear in the southern, central, and northern sectors of Siega Verde - monumental horses and bulls, surrounded by smaller herbivores and a few exotic animals such as carnivores and bears, associated with geometrical signs.

Based on its morpho-stylistic characteristics, the find has been dated at 16,000 BC and most of the representations are typical of the transition period between styles III and IV established by Leroi-Gourhan in 1971 for European Palaeolithic art.

Extension

The justification for the World Heritage listing of the Prehistoric rock-art sites in the Côa Valley, Portugal, in 1998 was as 'an exceptional concentration of rock carvings from the Upper Palaeolithic (22,000–10,000 B.C.) that is the most outstanding example of early human artistic activity in this form anywhere in the world.

It was listed under Criterion (i) on the grounds that 'The Upper Palaeolithic rock-art of the Côa valley is an outstanding example of the sudden flowering of creative genius at the dawn of human cultural development,' and under Criterion (iii) because 'The Côa Valley rock art throws light on the social, economic, and spiritual life on

the life of the early ancestor of humankind in a wholly exceptional manner.'

The two sites of the Côa Valley and Siega Verde lie only some 60km apart as the crow flies, a three-day walk at the most. The Águeda valley runs parallel to the Côa valley and both flow into the Douro valley, making communication between the two very easy for both hunter and prey. It was always a significant travel route, an ecological corridor for the movement of plant and animal species. The rock engravings bear witness to ancient contacts. Both are spread along river banks and occur on the same type of rock, the techniques are the same, and the subjects and conventions are identical.

History and development

The open-air rock-art ensemble of Siega Verde was created in the Águeda river valley during the last part of the Würm glaciation, c 20,000 BCE.

The history of the site can be reconstructed by means of stylistic and chronological analysis based on comparing the engraved figures of the nominated property with those of Côa and of other Palaeolithic sites throughout Europe. This analysis shows that activity on the site lasted from the Gravettian (21,000 BCE) to the Magdalenian (12,000-11,000 BCE), with a peak between the Solutrean and the Magdalenian (16,000-13,000 BCE).

Human activity came to end in the area later, around 10,000-7,000 BCE, after the last glaciation. The less monumental and naturalistic carvings left by Epipalaeolithic groups date from this period.

Subsequent visits to and use of the area cannot be confirmed because of the absence of archaeological remains, although in historic periods the valley was inhabited and used, as attested by the ruins of a medieval mill (Pedrogordo) and the traces of long agricultural exploitation of the land, such as stone-revetted terraces.

The recent history of the area is one of abandonment following the progressive cessation of traditional agri-pastoral activities. The area is characterized by modest development, the most relevant of which is represented by a bridge built in the 1920s.

The engravings of Siega Verde were discovered in 1988, since when they have been extensively studied, legal protection has been established, and conservation work has been undertaken.

The engravings belong to the same chronological and cultural phase as those of Foz Côa. This is proven by the use of similar cutting techniques (cutting with hard resistant tools and pecking, through either direct or indirect percussion) that were used in two different periods, as well as the strong similarities in the engraved

drawings.

The evolution of the two sites was closely linked. Siega Verde chronologically completes the forms represented in the Côa sites, especially in the middle and later phases, which are poorly represented in the Portuguese site. Thus the two sites form a unity in terms of chronology, graphics, geology, and environment, and so considering them together enhance the understanding of the dynamics of their use.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party has based the comparative analysis for Siega Verde on a selection of sites from the Iberian Peninsula, which are deemed to be relevant examples for assessing the specificity of the proposed extension. Comparison is also made with Foz Côa itself, to highlight the complementary nature of Siega Verde to the Côa site.

Examples considered in the comparative analysis are El Castillo and La Pasiega in Cantabria and Tito Bustillo in Asturias, all of which are included in the World Heritage serial site of Cave of Altamira and Palaeolithic Cave Art of Northern Spain (1985 and 2008, criteria (i), (iii) and (iv)), and Font de Gaume and Combarelles, which are included in the Decorated Caves of the Valley of the Vézère World Heritage Site, France (1979, criteria (i) and (iii)).

The Siega Verde site in Spain is very similar to that of the Côa Valley (Portugal) in terms of chronology, iconography, and continuity from a territorial and geographical point of view. The Siega Verde engravings epitomize the artistic model of the late glacial age, while Foz Côa expresses the highest artistic achievements of the Upper Würm glacial.

Siega Verde is considered to be the iconographic parallel model of Palaeolithic caves in Castilla. The similarities with Los Casares, La Hoz, and El Reno highlight the fact that outdoor rock decorations represent a variation of the engraved cycles found in caves and illustrate the adaptation of artistic conceptions to a different space.

ICOMOS considers that, despite the fewer engravings and the smaller dimensions compared to Foz Côa, Siega Verde may be considered a satellite of Foz Côa, and this also holds true for other adjacent valleys. The proposed extension is nonetheless unique in Europe and, after Foz Côa, the most important example of Palaeolithic rock art in an outdoor environment. The site is remarkable for both its style and its age. Most of the engravings showing horses, bovines, and other rarer animals were made within a relatively short period toward the end of the Solutrean and, in particular, during

the Middle and Upper Magdalenian. The depictions therefore appear relatively homogenous. Apart from their engraving techniques, they clearly correspond with cave paintings from that epoch. Siega Verde is, as it were, a 'cave without a roof.'

ICOMOS considers that Foz Côa and Mazouco (Portugal) and Siega Verde and Domingo García (Spain) form part of a large region of Upper Palaeolithic rock art in which the entire development of the Ice Age art of the central and southern Iberian Peninsula can be traced. The significance of these sites in terms of cultural history is equal in importance to that of the famous caves in Cantabria and Asturias (Palaeolithic Cave Art of Northern Spain). Foz Côa and Siega Verde provide essential information for understanding a cultural region of ancient Europe, and without them our knowledge would be inadequate.

ICOMOS notes that, although the engravings of Siega Verde have always been exposed to wind and weather, they are in excellent condition. Differences in technique and the patina of the images make it possible to describe the development of this sanctuary. It may be assumed that there were many other rock art sites from the Upper Palaeolithic, but they would often have been situated on riverbanks and would today have disappeared as a result of the creation of the great reservoirs of the Iberian Peninsula. Siega Verde has thus remained a unique cultural monument.

ICOMOS considers that the comparative analysis, although based only on examples from the same region, has identified those examples that are relevant in demonstrating how the extension would best illustrate the cultural links between two exceptional sites and their millennial survival, thus shedding additional light on the way of life and customs of the prehistoric groups that inhabited Foz Côa, Siega Verde, and the Iberian Peninsula.

ICOMOS considers that the comparative analysis justifies consideration of this extension for approval on the World Heritage List.

Justification of Outstanding Universal Value

The proposed extension is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Siega Verde property represents the most remarkable open-air ensemble of Palaeolithic art on the Iberian Peninsula within the same geographical region as the World Heritage listed prehistoric rock-art sites of the Côa Valley.
- Siega Verde and the rock-art sites of the Côa Valley best illustrate the iconographic themes and organization of Palaeolithic rock art, which adopted the same modes in caves and in the

open air, thus contributing to a better understanding of this artistic phenomenon.

- Together they compose a unique site of the prehistoric era, rich in material evidence of Upper Palaeolithic occupation.

The justification for the inscription of the Côa Valley ensemble in 1998 was as an *'exceptional concentration of rock carvings from the Upper Palaeolithic (22,000–10,000 BCE) that is the most outstanding example of early human artistic activity in this form anywhere in the world.'*

ICOMOS observes that Siega Verde shares the same cultural values as the Côa sites. An extension of the Côa Valley World Heritage group to include the Siega Verde property therefore appears logical. The existence of the art of Siega Verde can only be explained by the documented presence of hunter groups in the Côa valley on the Portuguese side, and only the existence of Siega Verde in Spain can confirm their patterns of movement and way of life.

ICOMOS considers that the justification proposed for including the Palaeolithic rock art ensemble of Siega Verde as an extension of the Côa Valley rock-art sites is appropriate.

ICOMOS has requested the States Parties to consider a single name for the proposed extension and the existing World Heritage Site. The State Party has proposed the following single name: Prehistoric Rock Art sites in the Côa Valley and Siega Verde.

Integrity and Authenticity

Integrity

According to the State Party, the exact extent of the Siega Verde rock-art site in antiquity is unknown, and so it is not possible to assert that the site is complete in terms of its original distribution. However, it is both homogeneous and continuous in the way in which it develops within the spatial limits that have been discovered over c 1km. It can be assumed to be close to the conceptual content intended at the time of its creation.

The engravings follow a linear course along the bank of the River Águeda, perfectly reproducing the typical pattern adopted for prehistoric paintings inside caves and in this way thus confirming the case for the integrity of this outdoor ensemble.

The Siega Verde rock art was discovered in 1988 and is deemed not to have suffered any significant changes in form, content, or distribution since that time. It therefore remains in its original condition, at least from the moment of discovery.

ICOMOS considers that the engravings are all contained within the perimeter of the nominated property. They are

visible and mostly in good condition. A few, especially those carved into horizontal surfaces, are eroded and can only be seen in oblique light. Others are partially or totally covered with lichen. For a long time this part of the river was popular for bathing and attracted a few graffiti. Nevertheless, the great majority of the engravings remains intact.

ICOMOS also considers that the environment was clearly selected by prehistoric people because of the curving riverside with spectacular rocks along it, and that this has not undergone any modification over the ages. The landscape is for the most part intact, apart from one place a little downstream of the bridge, within the nominated area, where there are three modern structures used to study the water flow, with an electric line to service them. Because of their impact on the visual integrity of the site, ICOMOS recommends that the State Party should give consideration to the removal of these structures.

In its response of 26 February 2010, the State Party has informed that, at the moment, it would be complex to remove the water measurement stations which provide useful data for the management of the river. Nevertheless the agency responsible for the measuring stations has expressed its commitment to assess the consequences of the proposed removal and to find the best solution to reduce the impact of the infrastructures associated to the stations.

Apart from these particular intrusions, the integrity of the surroundings has been preserved.

Authenticity

Siega Verde is presented as an authentic demonstration of the graphic system of Palaeolithic man for several reasons:

- It illustrates the characteristic graphic symbols of the Palaeolithic style, which was not reproduced after the retreat of the Quaternary period ice.
- It can be located through formal parallels with contemporary caves within Styles III and IV of Leroi-Gourhan's classification of Palaeolithic European art.
- It is representative of the art for which the cultural context is the area of Côa, where the archaeological remains have been dated to the Upper Palaeolithic.
- It possesses an internal organization that perfectly matches Palaeolithic art forms, with the same central and lateral elements and the same interconnections and proportions of figures and species that can be found in dated Palaeolithic decorated caves.
- Its central zone includes a section on which the support for a road bridge was built in the early 20th century. That section dates back to a period before the bridge was built, when most people were unaware of the characteristics of

Palaeolithic art, so that the possibility of falsification can, with almost complete certainty, be ruled out. The techniques and weathering of the figures also demonstrate the antiquity of the ensemble.

Siega Verde forms part of the cultural environment of the River Côa, with places such as Fariseu, where recent archaeological excavations have confirmed the authenticity of these engravings.

ICOMOS considers that, whilst direct dating is not possible for engravings, all specialists (apart from one - R. Bednarik, see Literature consulted) have attributed the Siega Verde rock art to the Upper Palaeolithic period, i.e. from the Gravettian to the end of the Magdalenian/beginning of the Epipalaeolithic (Style V). These overwhelming supportive attributions are based on the subjects represented, the techniques (both picked and, later, finely engraved) and conventions used, together with existing knowledge from many open-air rock-art sites on the Iberian Peninsula (Domingo García and Piedras Blancas in Spain, and above all Foz Côa, but also Mazouco and half a dozen other sites in Portugal). The most important of these ensembles are at Foz Côa and Siega Verde.

The proposed extension includes representations of a wide range of fauna, some of which have long since disappeared. The State Party refers to woolly rhinoceros, bison, reindeer, *G. megaceros* stags, bears, and felines.

ICOMOS considers that all these data are not indispensable in establishing the antiquity of the site, but that they nonetheless add to the argument. Whilst ICOMOS has some doubts over the identification of some of the specific fauna named, such as the woolly rhinoceros or *megaceros* deer, the remainder are easily confirmed. The characteristic Palaeolithic style and subjects are obvious and correspond with those of contemporary decorated caves.

ICOMOS considers that the conditions of integrity and authenticity have been met. ICOMOS acknowledges the complexity of removing the measuring stations and appreciates the commitment manifested by the State Party in exploring the possibilities to reduce the impact of the related infrastructures. ICOMOS encourages the State Party to provide update information on any progress undertaken in this direction.

Criteria under which inscription is proposed

The nominated extension is proposed on the basis of the same criteria (i) and (iii) under which the Prehistoric Rock Art Sites of Côa Valley (Portugal) were inscribed on the World Heritage List.

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the

grounds that the Palaeolithic rock-art ensemble of Siega Verde offers exceptional evidence of the first examples of symbolic creative expression and the beginning of humanity's cultural development and that it complements the Côa ensemble.

ICOMOS supports the justification for this property as giving form to one of humanity's earliest expressions of creative genius in this region and, thanks to its slightly more recent chronology, provides additional information for understanding the evolution and variations of rock art during the Palaeolithic.

ICOMOS considers that the proposed extension significantly reinforces the case for applying this criterion.

ICOMOS considers that this criterion has been demonstrated.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the rock art of Siega Verde, and its relationship with that of its neighbouring Côa Valley, reveal in an exceptional way vital aspects of the social, economic, and spiritual relations of our earliest ancestors.

ICOMOS considers that the proposed extension is exceptional evidence of the magical and religious practices of the Palaeolithic peoples who inhabited the Iberian Peninsula, a cultural tradition that has long since disappeared, and that it contributes to a better understanding of the cultural and spiritual world of our ancestors.

ICOMOS considers that the proposed extension significantly reinforces this criterion.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the proposed extension significantly reinforces criteria (i) and (iii), already adopted for the original property, and that conditions of authenticity and integrity have been met.

Description of the attributes

- The entire system of engravings documented at Siega Verde and described in the nomination dossier;
- The different types of engraving technique (pecking and incision) which distinguish certain figures from others and which attest to the evolving artistic language of the site over the millennia, and which also demonstrate and clarify the connection with Foz Côa;

- The geomorphology of the area, with the bend in the river and the overhanging cliff, as well as the relationship of the engraved rock cliff with the river, which show the role given to water, and its surrounding landscape. This has remained almost intact without undergoing any major changes and so may give an indication of the environment favoured by Palaeolithic people.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The socio-economic characteristics of the region are such as not to create any pressure on the cultural and environmental heritage of the area. In fact, the population of the region is decreasing.

Neither the proposed extension nor its buffer zone is therefore threatened by development pressures, new construction, or vandalism.

ICOMOS recommends, however, that the State Party consider undertake steps to remove the three existing structures located in the nominated area downstream of the bridge used to study the water flow, along with the electric line servicing them.

Tourism pressures

Access is controlled and visitor numbers are modest. Groups of visitors, which are usually accompanied by guides, follow fixed circuits, so as to see certain of the principal rock-art areas, including selected animals and fine engravings. Surveillance cameras cover the area.

Environmental pressures

None have been detected. The risk of pollution is at a minimum since the uranium mine at Saelices was closed and the waste from urban centres is properly treated.

Natural disasters

The most likely threat is from fire, but the morphology of the terrain is said to be such as to minimize the threat of fire to the proposed extension. Most of the site is covered by Plan 42 of the Integrated Programme for the Prevention of Forest Fires in the Junta de Castilla y León.

Impact of climate change

This may result in increased flooding, but the property is protected from periodic river floods by the Iruena dam (Fuenteguinaldo, Salamanca).

ICOMOS considers that the main potential risks to the property would be uncontrolled visitor access and occasional flooding. However, both are well controlled and neither now pose any threat.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The well defined proposed extension covers the two riverbanks and all the identified engraved rock surfaces, rarely extending more than 15m beyond the river. It is about 1km in length with a total area of less than 1ha.

The buffer zone, which is also well defined, is large enough to protect the property, covering in total some 45ha.

The population density is extremely low, averaging 2.7 inhabitants per km².

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are appropriate.

Ownership

The ownership of the protected rock-art ensemble is divided between:

Parcels of land in public domain (Commune of Villar de la Yegua):

- 7 parcels within polygon 514 of Villar de la Yegua.

Parcels of land in private ownership:

- 23 parcels within polygon 501 of Villar de la Yegua;
- 5 parcels within polygon 002 of Villar de Argañán;
- 18 parcels within polygon 501 of Castillejo de Martín Viejo.

Protection

Legal Protection

All rock-art sites are protected under State Law 16/1985 for Spanish Historic Heritage.

In the Plan for Castilla y León (1989), both the proposed extension and the buffer zone of Siega Verde were declared BIC (*Bien de interés cultural* = properties of cultural interest), the highest level of protection for cultural property afforded under Spanish legislation.

Other legal instruments that ensure the protection of the proposed extension are Law 12/2002 for the Cultural Heritage of Castilla y León and its related by-law, which was approved in 2007 (Decree 37/2007).

The following also apply to the proposed extension and its buffer zone: the Law for the management of the Territory of Castilla y León (Law 10/1998 and Law 12/2003); Law 5/1999 for Urban Planning and its related

by-law (Decree 22/2004); Law 1/1998 on the municipal competences concerning the Historic Heritage; and Law 29/1985 and its subsequent modification (Royal Legislative Decree 1/2001) on the protection of the public hydraulic domain.

With reference to the European legal framework, the property and its buffer zone are included in the Nature 2000 Framework (Law 42/2007).

Other legal tools that apply to the area are the laws concerning agriculture and stock breeding, road development, and accessibility to public places.

After the discovery of the ensemble and as soon as its contents had been revealed, work began on protection and conservation, such as closure of the area of the engravings, control of access roads, and installation of protective panels and video-surveillance cameras.

The mayors of the three relevant local government areas (Villar de la Yegua, Villar de Arganan, and Castillejo de Martín Viejo) agreed in 2009 to prohibit development on the hill overlooking the site above the upper boundary of the buffer zone.

On 2 December 2009 an Agreement among the three municipalities was signed which commits the signatories to declare as areas of special protection those in which, because of their position and conformation, development may have an adverse visual impact on the proposed extension. As a consequence, any future development of the area will have to take into consideration the status of the proposed extension and enforce the preservation of its values.

Effectiveness of protection measures

The implementation of the legal instruments listed above is in the charge of various administrative bodies.

The implementation of the Law for the protection of cultural heritage is the responsibility of the Territorial Commission for Cultural Property of Castilla y León which is aided by the government security services in matters relating to compliance with the standards and to looting.

The Autonomous Community of Castilla y León has established a specific agreement for the protection of its cultural heritage between the *Delegación* of the Government of Spain and the Regional Council for Education and Culture. On this basis several initiatives have been undertaken, such as sensitization courses for civil servants with responsibilities in matters relating to cultural heritage.

Other bodies with responsibilities over the proposed extension and its buffer zone for specific matters are the municipalities (implementation of the planning standards concerning the protection of cultural heritage and urban environment), the Forest Guard (monitoring protection of

spaces included in the Nature 2000 framework), and the Territorial Commission for Environmental Impact Assessment (application of the legislation concerning EIA).

The ensemble of Siega Verde is adequately covered by legal measures to guarantee its protection under present conditions.

ICOMOS considers that the measures in place to protect the site are adequate and appropriate.

Conservation

Inventories, recording, research

Between 1989 and 2005 R. de Balbin Behrman and J. Alcolea González studied and prepared an inventory of rock art for the property. They endeavoured to make the descriptions as complete as possible. As mentioned under Authenticity, a few fauna species may be in doubt, but on the other hand, given the wealth of fine engravings, it is probable that research will reveal further examples.

ICOMOS considers that the inventory is detailed and it will be a useful basis for further research.

Present state of conservation

Although the engravings of Siega Verde have always been exposed to wind and weather, they are in very good condition. The patina on some images is non-destructive and makes it possible to describe the evolution of this sanctuary.

Active conservation measures

Since the Siega Verde prehistoric site was discovered several conservation measures have been undertaken to ensure that it retains its values, the most important of which have been prohibition of free access and the establishment of a surveillance system, which is to be supplemented in due course by a sensitization programme and guided visits.

The financial plan for the conservation and presentation of Siega Verde falls within the 2004-2012 Plan of the Junta of Castilla y León for historic heritage, for which 15 million euros have been allocated. A new museum of the Ministry for Culture near Vila Nova on the rock art and archaeology of the Cõa Valley is to open in 2010.

Other planned conservation measures in place include:

- Prohibition of bathing and casual visits and control of the proposed extension by means of a metal enclosure with an overhead permanent surveillance camera mounted above the bridge crossing the site which covers all the central part of the site.

- The employment of two permanent custodian /guides.

Future conservation projects include:

- Rehabilitation of the Mill at Pedrogordo and of a rural building nearby, in order to complete the interpretation programmes by providing information on the occupation of the area in historical times, as well as supplying services to visitors;
- Repair of the fishery, 200m upstream from the Siega Verde bridge, with the aim of reorganizing the bathing area and stabilizing the depth of the waters;
- Improvement of road access to the proposed extension, creation of new car parking, improvement of the track from the old car parking area to the fishery and the mill, construction of a bridge for access to the river and of a controlled bathing area for children.
- Improvement of access to the interpretation centre and reorganization of its surroundings (new parking area, new toilets, educational installations, etc), and a project for renovation of the museum layout.

ICOMOS considers that further information is needed about the construction of a new parking area and the enlargement of the interpretation centre. A letter was sent to the State Party on 14 December 2009 raising these issues.

The State Party has replied informing that the scheme approved for the upgrading of the information centre envisions the improvement of the internal distribution of spaces and functions. The construction of restrooms will imply a 35,80m² increase of the built surface.

The modification of the parking area and of the access to the information centre includes the reduction of the steepness of the path to the parking area and the improvement of the latter, the adaptation of the structures left by the old hotel to accommodate didactic activities and leisure, the construction of a pergola to shade this area. Other works comprise the maintenance and improvement of drainage and water installations.

On the base of the information provided, ICOMOS considers that the enlargement and upgrading works that are planned by the State Party on the visitor centre and its surrounding area appears to be moderate and necessary to improve the functioning conditions of this facility. Nevertheless, ICOMOS recommends that the State Party assesses the consequences before planning any future enlargement of the visitor centre in relation to the impact of any construction on the character of the area surrounding the nominated property and of an increased number of visitors to the proposed extension.

Maintenance

Maintenance is the responsibility of the Junta of Castilla y León and the Municipality of Villar de Yegua. ICOMOS

considers that it is competently carried out.

Effectiveness of conservation measures

ICOMOS considers that the ensemble of Siega Verde is adequately covered by physical protection so as to guarantee its conservation under present conditions.

ICOMOS considers that the rock engravings of Siega Verde are in very good condition and well studied and recorded, and that the ensemble is adequately covered by physical protection to guarantee its conservation. Although the planned works to the interpretation centre and its immediate surroundings are contained and do not affect the nominated property, ICOMOS recommends that the State Party assess the consequences before planning any future enlargement of the visitor centre in relation to the impact of any construction on the character of the area surrounding the property and of an increased number of visitor to the proposed extension.

Management

Management structures and processes, including traditional management processes

Management of the nominated property is delegated to the local action group ADECOCIR (Association for the Development of the Region of Ciudad Rodrigo), which includes, among others, all the municipalities of the area.

The director/manager of ADECOCIR is responsible for the overall management and maintenance of the property. Security is provided by the Junta de Castilla y León and by an outside contractor. The Junta is responsible for maintenance of the equipment, whilst the Municipality of Villar de la Yegua maintains paths, bridges, etc. Technical responsibility is in the hands of an archaeologist of the Territorial Service for Culture of the Junta.

ADECOCIR provides the human and material resources to accomplish management tasks in the following ways. There are: one person for the public, staff for the guided visits, and one person for educational activity and promotion employed on the site. The services supplied include guiding for visitors, surveillance of installations during opening hours, ticketing, serving in the shop, drawing up and implementation of sensitization and dissemination programmes and educational activities.

The Junta de Castilla y León has developed programmes and projects in collaboration with the Portuguese institutions IGESPAR (*Instituto de Gestão do Património Arquitectónico e Arqueológico* -- Institute for the Management of the Architectural and Archaeological Heritage) and the Archaeological Park of Côa. This enables the authorities to share and upgrade their knowledge about conservation programmes for and joint presentation of the open-air rock-art sites at Foz Côa

and Siega Verde. The close association already established between the authorities responsible for the two properties through a technical working group has been formalized in the form of a Framework Protocol of Intent signed on 26 October 2009, with the aim of coordinating future scientific research, conservation, and presentation and preparing specific joint programmes. The Protocol establishes a permanent coordination body and a Joint Monitoring Committee charged with the task of coordinating the management of the C6a and Siega Verde rock-art sites and implementing future joint programmes.

Policy framework: management plans and arrangements, including visitor management and presentation

Various municipal, regional, and European Community plans and projects affect the property and its management which contribute towards ensuring an overall management of the proposed extension and its buffer zone. The most relevant are:

- The 2004-2012 Plan for the Historic Heritage of Castilla y León and the sector plan for the World Heritage sites, concerning the properties included in the Tentative List for consideration of their inscription on the List.
- The Strategic Plan for the Historic Ensembles of the Provincial Administration, for the management of the tourist potential of the provincial heritage.
- The European Plan 'Network Nature 2000', which is integrated into the Network of the Natural Spaces of Castilla y León.
- European initiatives on trans-European cooperation for encouraging sustainable development (Interreg III).

This part of Spain is far from any major tourist centres. Despite the cultural interest of towns such as Ciudad Rodrigo, the number of visitors to Siega Verde is relatively small, on average fewer than 3,000 per year since 2000, when the Interpretation Centre was opened and numbers increased.

ICOMOS observes that in case the number of visitors increases, in the event of this extension being approved, there should be no adverse effect on the conservation of the property. However, the local authorities and the managers appear to be prepared to face such an eventuality by different means, i.e., the provision of more guides or upgrading the visitor centre.

ICOMOS sent a letter to the State Party on 14 December 2009, requesting additional information on this issue.

On the base of the information provided, ICOMOS considers that the current scheme for upgrading the visitor centre consists of moderate improvements that appear to be necessary for the best functioning of this facility. Nevertheless, ICOMOS recommends that an assessment of the consequences of the possible

increase of visitors be carried out and a comprehensive cultural tourism strategy be elaborated for the proposed extension.

Risk preparedness

The proposed extension is included in Plan 42 of the integrated Programme for Fire Prevention of the Junta of Castilla y León. The Archaeological Area is also included in the Salamanca Provincial Plan for Fire Prevention.

ICOMOS considers that, although the prevention measures established at a broader territorial level are the most appropriate for reducing risks, it would also be useful for the basics of disaster preparedness to be imparted to the site staff through training.

Involvement of the local communities

The management of the property is directed towards community participation by various local entities. Since 2005, visitor management has been the responsibility of the Association for the Development of the Region of Ciudad Rodrigo (ADECOCIR), which was appointed for a renewable five-year term.

Resources, including staffing levels, expertise and training

The major funding sources are from the Junta de Castilla y León, General Directorate for Cultural Heritage, through direct funding and co-funding from European programmes.

ADECOCIR manages financial resources from European funds (European Fund for Regional Development or Interreg programmes).

Currently, the professionals engaged in the protection and management of the proposed extension consist of the following: one archaeologist of the Territorial Service for Culture of the Junta Castilla y León based in Salamanca; the research team of the University of Alcalá de Henares, which has the scientific responsibility for the site; two guards, one from the permanent staff of the Junta and one hired from a private company; ADECOCIR personnel looking after visitors and specialized guides; and an archaeologist hired by ADECOCIR for educational activities.

Effectiveness of current management

ICOMOS considers that the current management appears to be effective in protecting, conserving, and presenting the property and its attributes.

ICOMOS considers that the management system for the property is adequate and that the collaborative arrangements in place with the Portuguese authorities are appropriate. ICOMOS suggests, however, that although the fire-prevention measures at the regional level are adequate and the most appropriate for reducing

risks, it would be useful to instruct the site staff in the basics of disaster preparedness. ICOMOS recommends that an assessment of the consequences of the possible increase of visitors be carried out and a comprehensive cultural tourism strategy be elaborated for the proposed extension.

6. MONITORING

The Junta of Castilla y León has made provision for specific plans to evaluate and conserve the property, with indicators of values and controls. It has also appointed a custodian responsible for the physical surveillance of the site and its conservation.

Key indicators have been adopted to measure the state of conservation of the engravings and of the site itself, with the frequency and responsible authorities named.

They include:

- For the *engravings*, comparative photographic documentation and monitoring of the engravings since their discovery with regard to erosion/natural degradation and the evolution of lichens and patina.
- For the *site*, evaluation of human intrusions and impacts on the site, monitoring the evolution of river flows, and analysis of the ecosystem environment of the banks of the River Águeda.

ICOMOS considers that the indicators and processes in place are appropriate for monitoring the condition of the property.

7. CONCLUSIONS

Recommendations with respect to inscription

ICOMOS recommends that the extension of Prehistoric Rock Art Sites in the Côa Valley, Portugal to include Palaeolithic Rock Art Ensemble in Siega Verde, Spain and become Prehistoric Rock Art Sites in the Côa Valley and Siega Verde, Portugal, Spain should be approved on the basis of ***criteria (i) and (iii)***.

Recommended statement of Outstanding Universal Value

Brief synthesis

The property includes the two Prehistoric Rock Art Sites in the Côa Valley (Portugal) and Siega Verde (Spain), consisting of rocky cliffs carved by fluvial erosion and embedded in an isolated rural landscape in which hundreds of panels with thousands of animal figures (5,000 in Foz Côa, around 440 in Siega Verde) have been engraved over several millennia.

The rock-art sites of Foz Côa and Siega Verde represent the most remarkable open-air ensemble of Palaeolithic art on the Iberian Peninsula within the same geographical region.

Foz Côa and Siega Verde provide the best illustration of the iconographic themes and organization of Palaeolithic rock art, which adopted the same modes in caves and in the open air, thus contributing to a greater understanding of this artistic phenomenon.

Together they form a unique place of the prehistoric era, rich in material evidence of Upper Palaeolithic occupation.

Criterion (i): The rock engravings in Foz Côa and Siega Verde, dating from the Upper Palaeolithic to the final Magdalenian/ Epipalaeolithic (22.000 – 8.000 BCE), represent a unique example of the first manifestations of human symbolic creation and of the beginnings of cultural development which reciprocally shed light upon one another and constitute an unrivalled source for understanding Palaeolithic art.

Criterion (iii): The rock art of Foz Côa and Siega Verde, when considered together, throws an exceptionally illuminating light on the social, economic, and spiritual life of our early ancestors.

Integrity and Authenticity

The integrity of the property is expressed primarily by the homogeneity and continuity in development within the spatial limits of the engraved rock surfaces as well as by the adoption of the typical patterns of prehistoric paintings inside caves, thus confirming the argument for the integrity of this outdoor ensemble.

The authenticity of the property is demonstrated by stylistic and comparative considerations, which also include the examination of artistic themes and organization of rock engravings in caves. The only doubts relate to the interpretation of certain animal figures (e.g. woolly rhinoceros, bison, *megaceros* deer, reindeer, and felines).

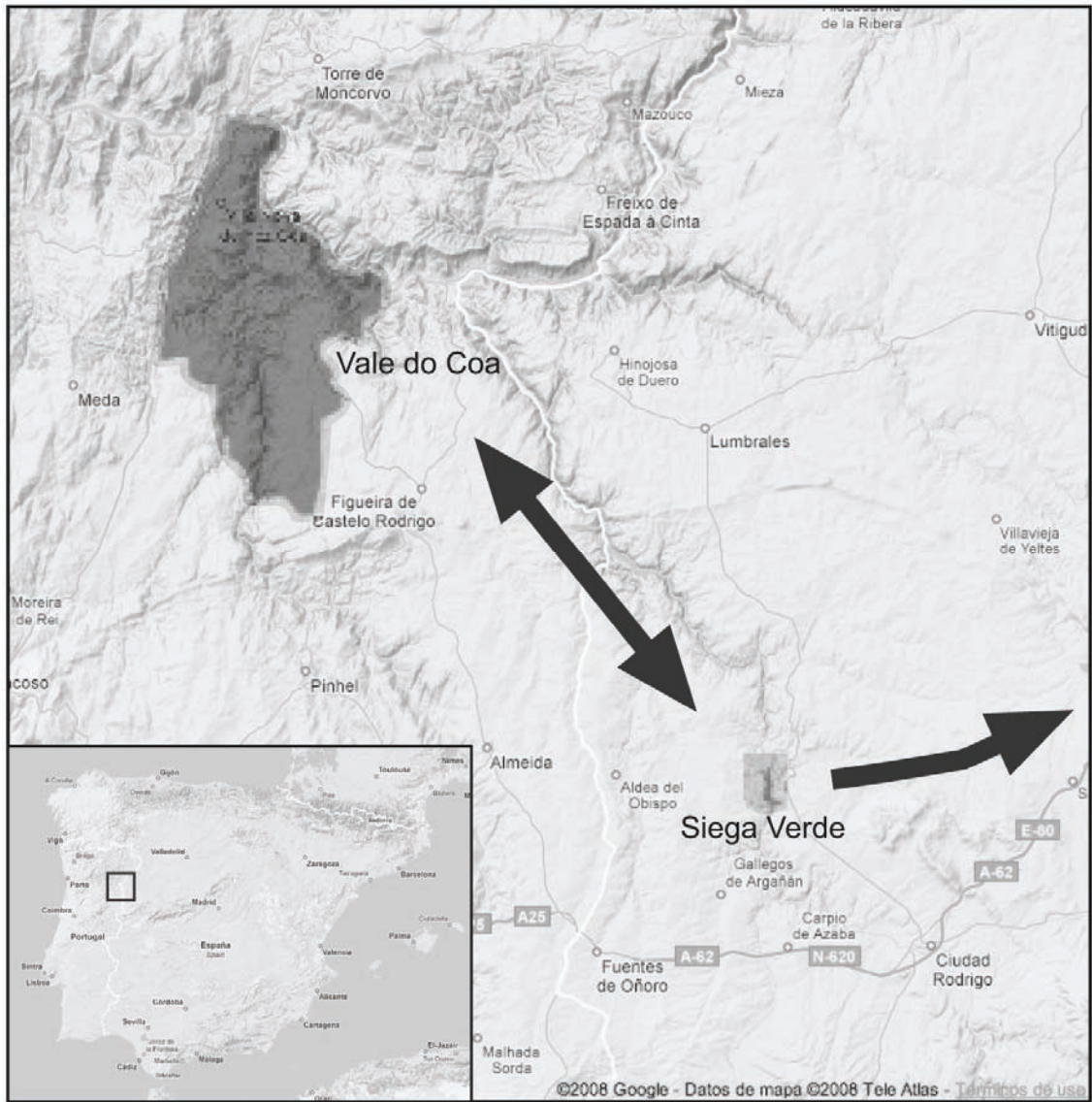
Management and protection requirements

Siega Verde is protected under various national laws for heritage protection and planning and has been declared a BIC (*Bien de interés cultural* – property of cultural interest). Protection has been implemented since the BIC designation. Management is delegated to the local action group ADECOCIR (Association for the Development of the Region in Ciudad Rodrigo). The ADECOCIR manager is responsible for the overall management and maintenance of Siega Verde, while security is provided by the Junta de Castilla y León, which is also responsible for the maintenance of equipment. The Junta de Castilla y León has developed joint programmes with the Portuguese institution of IGESPAR (*Instituto de Gestão do Património*

Arquitectónico e Arqueológico – Institute for the Management of the Architectural and Archaeological Heritage), which is responsible for the Côa Valley site, with the object of studying and presenting Siega Verde and Côa Valley together.

ICOMOS recommends that the State Party give consideration to the following:

- Continue the efforts that the State Parties have been initiated for the coordination of the protection and management of the inscribed property at Foz Côa and of the proposed extension, as well as of presentation and promotion activities for both properties;
- Ensure the full and prompt implementation of the agreement signed on 2 December 2009 by the relevant municipalities to prohibit building development on the hill overlooking Siega Verde and to designate as special protection areas those in which development might have an adverse visual impact on the property;
- Develop a comprehensive cultural tourism strategy for the proposed extension and provide the World Heritage Committee and ICOMOS with detailed information on any progress made in this direction;
- Assess the interrelated consequences before any possible future enlargement of the visitor centre and its parking area be planned;
- Keep the World Heritage Committee informed on the progress made on the removal of the measuring stations and related infrastructures in accordance with paragraph 172 of the *Operational Guidelines*.



Map showing the location of Siega Verde and Côa Valley with their connecting corridors



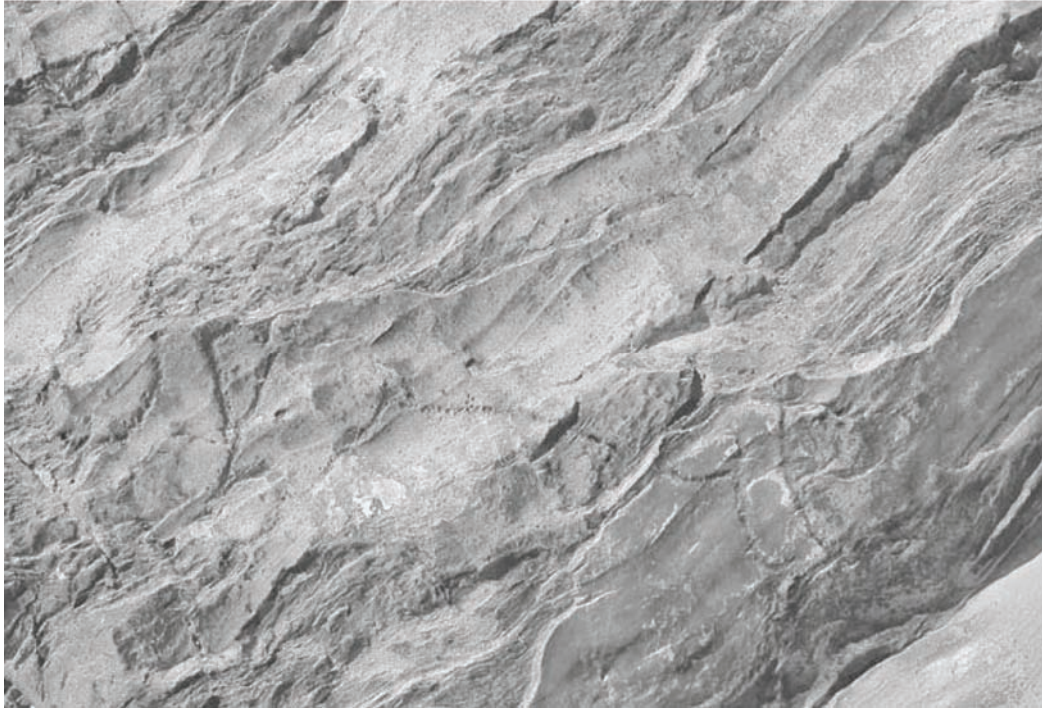
Map showing the boundaries of the nominated property



General view of the nominated property



Panel 8



Panel 46



Section of the visitors trail

Kiev: Saint Cyril's and Saint Andrew's churches (Ukraine) No 527ter

Official name as proposed by the State Party:

Kiev: Saint Sophia Cathedral with Related Monastic Buildings, St. Cyril's and St. Andrew's Churches, Kiev Pechersk Lavra

Location:

Kiev
Ukraine

Brief description:

In addition to Saint-Sophia Cathedral and Kiev Pechersk Lavra, the Churches of Saint Cyril and Saint Andrew bear witness to the historic and spiritual importance of the city of Kiev in the development of Eastern Christianity from the Middle Ages to the modern era. Saint Cyril's Church is a 12th century fortified church, in which there still remains extensive internal painted mural decoration. Built in the 18th century, Saint Andrew's Church is a unique synthesis of Western Baroque and influences specific to the Eastern Slav Orthodox world.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, these are two *monuments*.

1. BASIC DATA

Included in the Tentative List: 26 January 2009

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 26 January 2009

Background: This is a nomination for the extension of Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra.

The inscribed property was the subject of decisions at the 28th, 29th, and 32nd sessions of the World Heritage Committee (28 COM 15B.99; 29 COM 8B.56; and 32 COM 7B.111).

To implement Decision 32 COM 7B.111, the inscribed property was the subject of a joint reactive monitoring mission by the World Heritage Centre and ICOMOS from

2 to 7 March 2009.

The 33rd session of the World Heritage Committee (Seville, 2009) took the Decision 33 COM 7B.125 regarding the property already inscribed.

Consultations: ICOMOS consulted its International Scientific Committee on Wall Painting and independent experts.

Literature consulted (selection):

Angold, M. (ed.), *Eastern Christianity*, Cambridge, Cambridge University Press, 2006.

Magocsi, P.R., *A History of Ukraine*, Toronto, University of Toronto Press, 1996.

Rauschenbach, B. V., The Christianization of ancient Russia: a millennium, *The UNESCO Courier*, Paris, UNESCO, June 1988, pp. 3-29.

Zagrebelnyi, P., Paton, B., Nalivaiko, D., and Vissotski, S., Kiev, 1,500 years of culture, *The UNESCO Courier*, Paris, UNESCO, April 1982, pp. 4-27.

Technical Evaluation Mission: 1-3 September 2009

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The proposed extension to the property already inscribed includes two churches and their surroundings. Saint Cyril's Church is a monument located away from the inscribed property, 4.5km to the north-west of Saint-Sophia; it is built at the end of a promontory. Saint Andrew's Church is located inside the current buffer zone of Saint-Sophia Cathedral, at its northern boundary, on the edge of the plateau overlooking the Dnieper Valley.

Saint Cyril's Church was designed in the 12th century as a fortified church located on a high point providing advanced defence for the medieval city of Kiev.

The church's basic plan, which is close to square, is Byzantine in inspiration. The building has three naves: the central nave is extended by a semi-circular choir and the two lateral naves are extended by two apses, also semi-circular. The church has a narthex at its west entrance and a baptistery. The initial architecture is simple and solid, in accordance with its dual spiritual and defensive purpose. The walls are thick, ranging from 1.7m to almost 2m, and are made of brick with thick mortar joints. Its central dome rests on imposing pillars. This reflects a development in Christian religious

architecture within the area of the Principality of Kiev, and more broadly in the Old Russian world. It is a development that extends and replaces the initial Byzantine influence that is well represented in Saint-Sophia Cathedral and Kiev Pechersk Lavra.

After being devastated in the medieval period, followed by a complex stage in the history of the building about which little is known, repairs and reconstruction become noticeable, starting in the 17th century. The upper parts of the building, the roofs, and the dome were rebuilt in the 18th century. At that time a drum lit by twelve windows was added to the dome, which is flanked by four corner turrets in accordance with Baroque Orthodox tradition. The facades were also reworked in the same style, giving the church the appearance of an 18th century monument from the outside.

The contemporary interior of the church has retained the initial plan and architectural structure, clearly discernible in its lower sections. It has a large series of murals that cover a surface area of almost 2,400m², of which around 800m² date from the initial 12th century decoration. The paintings recount the lives of the saints (especially Saint Cyril and Saint Athanasius of Alexandria), hierarchies, and various religious scenes. It is typical of the spiritual expression of this medieval period of Russian and Ukrainian Christianity, marking a stylistic change from the Byzantine and Balkan styles of the same era. The subsequent restorations and additions sought to continue the same themes within the same stylistic approach as the originals, while introducing new colour.

The interior work carried out at the end of the 19th century began by revealing the 12th century murals. The focus was subsequently on restoration of the paintings using oil, and adding painted decorative elements, especially on the intrados of the western gallery vault without, however, too extensively affecting the heritage of the initial murals, by which they were manifestly influenced, working in the same religious themes and style.

The lower level of Saint Cyril's Church today bears witness to the internal appearance of a 12th and 13th century church, linked to the feudalism of the Russian Principality of Kiev and the spread of the religious and cultural values of Slav Orthodox Christianity. In its present form the upper interior structure has a private prince's box.

The monastery associated with Saint Cyril's Church has been converted into a hospital; many old buildings in close proximity to the church were demolished or modified in the 20th century and others have recently been built close by. The historical boundary of the monastery has been retained in the form of a fence, but in a modern and in places very mediocre form; it does, nevertheless, define the property boundary.

Saint Andrew's Church is a religious monument built in the mid-18th century by Empress Elizabeth, as part of the

Kiev Imperial Residence. The building was designed by the Italian architect Francesco Bartolomeo Rastrelli, one of the builders of Saint Petersburg, and was erected by the Russian architect Ivan Michurin.

The church is located on the north-eastern edge of the plateau on which the historic city is built, overlooking the Dnieper Valley. From this elevated position, in an environment of gentle wooded slopes and with its elegant silhouette, Saint Andrew's Church provides a characteristic visual point of reference within the historic urban panorama viewed from the riverside.

The complex geographical location and the presence of underground water required the construction using backfilled masonry of an impressive pentagonal base. From the outside it appears as a vast terrace construction upon which the elegant religious building stands. The base encloses the foundations and crypts of the church; it provides an access terrace and a promenade around the church, and is reached via an imposing metal staircase with three successive flights of stairs. The base includes two-storeyed housing for the priests.

The church is cruciform, its nave longer than its transept. Four large buttressed pillars support the large central dome, which is flanked by four lateral decorative domes in accordance with Orthodox tradition. The building is 50m high, whereas its greatest floor length is barely 32m.

The exterior openings and their decorative elements are typical of a Baroque style imported from Western Europe and applied to Ukrainian Orthodox churches. The facades are punctuated with Corinthian and Ionic columns; their decorative elements are made of cast iron, one of the first instances of the use of this material in Eastern Europe.

The interior painted decoration of Saint Andrew's Church is characteristic of a mixed Baroque style, blending Western with Russian and Ukrainian Orthodox cultural influences. It is complemented by gilded stucco and wood-carvings. The murals were completed in the 19th century, and are in sympathy with the initial décor. The interior character of the church is emphasized by the use of white and turquoise blue paint, highlighted with extensive gilding. In contrast, the iconostasis has a red background for its icons and sculptures.

Saint Andrew's Church has been conserved in an architectural and decorative state that complements its construction. It bears witness to the formation of a mixed architectural style, a combination of the Western Baroque and Slav Orthodox cultures. This style spread widely throughout Ukraine, Russia, and the Balkans, and as far as the monasteries on Mount Athos, for the construction and the decoration of Orthodox religious buildings. This style, sometimes referred to as 'Elizabethan Baroque,' spread widely throughout Imperial Russia in the second half of the 18th century and

the start of the 19th century.

Extension:

The two churches are nominated as an extension of the property already inscribed of Saint-Sophia Cathedral and Kiev Pechersk Lavra.

Designed to rival Hagia Sophia in Constantinople, Kiev's Saint-Sophia Cathedral symbolizes the 'New Constantinople,' capital of the Christian Principality of Kiev, which was created in the 10th and 11th centuries in a region evangelized after the baptism of St Vladimir in 988. It includes in particular exceptional internal decoration in the form of mosaics covering 260m² and around 3,000m² of murals. It played an important role in the construction of medieval Kiev and had a considerable influence in the development of monumental religious architecture in Old Russia (contemporary Russia, Ukraine, and Belarus). It is the oldest religious building of the Slav people in these regions. Byzantine architectural forms and construction techniques found new expression here under the influence of Slav culture and the tastes of the Princes of Kiev. Saint-Sophia was the Metropolitan's cathedral, the main temple of Old Russia, as well as its social and cultural centre; it was also the princely family's sepulchre.

The Kiev Pechersk Orthodox monastic ensemble (or Lavra catacombs), jointly with Saint-Sophia, was a major centre from which the Orthodox Christian faith spread throughout Eastern Europe. It includes buildings dating from the 11th century, such as the Dormition Cathedral, the Church of the Saviour, and the Trinity Church. Only a series of catacombs survive from this period, whereas the original religious buildings were reconstructed during the renaissance of the monastic community in the 17th and 18th centuries, and its extension to form a vast ensemble with religious and cultural functions.

History and development

Kiev, one of the Varangian principalities established among the Eastern Slavs, was founded in the 9th and 10th centuries. Located on the Dnieper, it developed very early because of its role as a centre of trade between the nascent Russian world and Constantinople. It was seen in the 10th century as the capital of a principality that ruled the entire central Dnieper Basin.

Byzantine Christianity was spread to Kiev from the 10th century, starting with the Regent Olga (945-64), and then Prince Vladimir (980-1015). The Constantinople Patriarchate raised Kiev to the status of Metropolate for all Rus' in 991, and the city experienced its initial urban growth. In the 11th century the influence of Kiev extended from the Baltic to the Black Sea, forming a vast kingdom for which it was both the religious and the political capital. Construction of Saint-Sophia Cathedral was undertaken during the reign of Yaroslav the Wise (1019-

54), within a vast urban ensemble that styled itself the new Constantinople of the North. With the wealth from its trade and its role as the capital, the city covered itself in churches and monasteries, the most famous of which is Kiev Pechersk Lavra, built during the second half of the 11th century. Kiev was at this time a major cultural centre in Eastern Europe, in terms of its religious influence and the production of manuscripts. It was also an active centre of diplomacy between the Byzantine Empire and the Western world.

From the second half of the 12th century the city had to fight off repeated attacks from the nomads of the southern plains. The fortified Church of Saint Cyril and its monastery were built against this background, when Prince Vsevolod Cyril Olgovich took control of Kiev in 1139. The Church became, following Saint-Sophia Cathedral, the venue for the coronation and interment of the Princes of Kiev.

Kiev was pillaged for the first time in 1169, marking the beginning of its decline. The city was again conquered and pillaged in 1240 by the Mongol Tatars. The Saint Cyril Monastery was affected by these events and suffered some destruction. In the mid-13th century the city was under the yoke of a Mongol governor. The centres of power within the Eastern Slav world then migrated towards the basins of the Upper Volga and the Moskva. In 1283 the see of the Kiev Metropolitan was transferred to Vladimir, in Muscovy, while retaining the name and its title.

From the 14th to the 17th centuries Kiev and its region were part of various alliances, including the Polish-Lithuanian Union and then the Union of Lublin. Nothing is known of the history of Saint Cyril's Church and its monastery during this period. It was, however, repaired in the early 17th century in the reign of Prince Ostrozky. This was, however, a century marked by numerous political and religious conflicts; the church was devastated in 1651 and then suffered from a fire at the end of the century. The monastery's residential quarters were then converted into a hospital, and the church's external architectural envelope was rebuilt in two stages, around the turn of the 17th and 18th centuries, and then in 1750-60, when it assumed its current Baroque exterior.

The Empress Elizabeth ordered the building of Saint Andrew's Church in Kiev. It was designed by the Imperial Court's chief architect, Rastrelli, around 1744. Located on a rocky spur with a legendary reputation, the main building was not completed until 1751, because of the unstable and wet subsoil (see Description). The interior and exterior decorations, also designed by Rastrelli, took a rather long time to complete, using various sophisticated painting, stucco, wood-carving, and cast-iron decorative elements. After its consecration in 1767 it rapidly fell out of Imperial favour and was transferred the following year to the City of Kiev.

Saint Andrew's Church underwent numerous and extensive repairs in the 19th and 20th centuries, but

without any major alteration to its exterior architectural structure or its ornamentation: the roofs were repaired or replaced several times and provided with metal frames, resulting in several minor alterations to their exterior appearance. The exterior wooden stairs were replaced by new iron stairs in 1845. During work on the foundations, a crypt was installed in the base, under the main church, connected to the monks' cells (1867).

The medieval murals in Saint Cyril's Church were rediscovered in the 1860s, under later layers. Work on uncovering and restoring them was undertaken in 1884. The walls also have tempera paintings from the 17th century. The iconographic programme was completed at this stage, respecting the original styles but using oil paint (see Description).

Saint Andrew's Church also underwent several maintenance and repair campaigns. A circular drainage system was installed in 1926, and additional drainage work and consolidation of the hillsides were carried out in the 1970s. Damage during World War II led to repairs around 1950.

The roofs were replaced in accordance with the original plans in 1978-79. Several restoration campaigns on the interior decoration took place in the 1990s, to consolidate the stucco on the iconostasis and repair the floors in particular.

In the 20th century the Churches of Saint Cyril and Saint Andrew became museums housing their own internal decoration, and that remains their current use. Religious ceremonies are sometimes held in them. Saint Andrew's Church is also a popular venue for religious services.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The original nomination dossier for Kiev: Saint-Sophia Cathedral and its monastic buildings (1989) did not contain a comparative analysis as such and no mention was made of the two monuments now being nominated for the extension.

In the current dossier for the proposed extension, the State Party first compares Saint Cyril's Church with five old Orthodox churches in Ukraine: Borys-Hleb Cathedral, Cathedral of Yeletsky Monastery in Chernigiv, Saint George's Cathedral in Kaniv, Assumption Cathedral in Volodymyr-Volynsk, and Saint Basil's Church in Ovruch.

The study focuses in particular on the murals and interior decoration. The comparison in this respect is extended to include the Russian Saint George's Church in Lagoda, and the Church of Our Saviour in Nereditsa-Novgorod (inscribed 1992, criteria (ii), (iv), (vi)), together with the Belarus Spaso-Preobrazhensky Church in Polotsk.

The State Party considers the murals in Saint Cyril's Church to be unique, notably in terms of the iconographic scheme depicting the lives of Saint Cyril and Saint Athanasius. They reflect an original view of the world in the 12th century that distinguishes the Kiev community from both the other Slav principalities and from Byzantium and the Balkans.

ICOMOS notes that there is no comparative analysis of Saint Cyril's Church in relation to Byzantine Orthodox churches of the same period. Moreover, it is only the interior iconographic schemes that are compared: the construction and architecture are not considered.

For Saint Andrew's Church, which dates from an entirely different period, the comparison is made with three other churches by the same architect, Rastrelli: Smolny Cathedral in Saint Petersburg (1990, criteria (i), (ii), (iv), (vi)), Saint Catherine Cathedral in Tsarskoye Selo Palace, and the Palace Church in Petergoff near Saint Petersburg, and also with the Cathedral of the Nativity of the Blessed Virgin in Kozelets (Ukraine), attributed to the Russian architect Kvasov.

What distinguishes Saint Andrew's Church is its position on a promontory and the presence of a raised base with a monumental staircase leading to the entrance porch. Saint Andrew's Church ushers in a Baroque Orthodox style that mixes Western influences with elements of Slav inspiration. The homogeneity and the completeness of its internal decoration are also remarkable. It is also one of the best preserved examples. It served as a model as far away as the Balkans, Moldavia, Serbia, and Bulgaria.

ICOMOS considers that the churches used to compare the genesis of Saint Andrew's Church are relevant, but they have not been properly analysed, as the study passes directly to the conclusion about the uniqueness of the site nominated for the extension. Furthermore, none of the Orthodox churches that the State Party nominates as having been influenced by Saint Andrew's Church in Kiev is presented. It is also necessary to explain how the nominated extension completes the property already inscribed.

ICOMOS considers that the comparative analysis does not justify consideration of the proposed extension to the property already inscribed for approval on the World Heritage List in its current state.

Justification of Outstanding Universal Value

The property proposed for the extension is considered by the State Party as contributing to the Outstanding Universal Value already recognized for Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra for the following reasons:

- The property already inscribed on the World

Heritage List does not reveal its full meaning and importance. Given the early and lasting development of Orthodox religious architecture in Kiev from the 11th century onwards, its cultural influence in the world of the Eastern Slavs and in the Balkans, its cultural and historic value, and its revival in the 18th century, it is essential to include Saint Cyril's Church from the 12th century and Saint Andrew's Church from the 18th century as part of the property already inscribed.

For Saint Cyril's Church more specifically:

- The church bears witness to a 12th century fortified church project, located at the edge of the urban ensemble of the former Kiev Metropole. It also testifies to Byzantine influence, as well as a nascent style of building specific to the Old Russian Orthodox Church.
- The church has a very large group of 12th century murals, based on unique or rare subjects. They were completed in the 17th and 19th centuries, in conformity with the original Orthodox style.
- Its history is directly linked to the final phase of the Kiev Metropole and the capital of the whole of Old Russia; it was the site of the coronation and interment of the Princes of Kiev, after Saint-Sophia.

For Saint Andrew's Church:

- The church is a unique monument created by the Italian architect Rastrelli; it is an outstanding 18th century example of the coming together of the Western Baroque style and Russian and Orthodox architectural influences, sometimes referred to as the Elizabethan Baroque.
- Given its position on a promontory overlooking the Dnieper Valley, the building completes the urban landscape of the historic centre of Kiev, the former Metropole of the Orthodox Church of all Russia.
- Saint Andrew's Church also has a complete and homogeneous interior ornamentation comprising paintings, stucco, and carved woodwork. Its typical exterior architecture is enhanced by the early use of cast-iron decorative elements.

Justification of the property already inscribed:

Designed to rival Hagia Sophia in Constantinople, Kiev's Saint-Sophia Cathedral symbolizes the 'New Constantinople,' capital of the Christian principality of Kiev, which was created in the 11th century in a region evangelized after the baptism of St Vladimir in 988. The spiritual and intellectual influence of Kiev Pechersk Lavra contributed to the spread of Orthodox thought and the Orthodox faith in the Russian world from the 17th to

the 19th centuries.

ICOMOS considers that the Churches of Saint Cyril and Saint Andrew bear witness, from the 12th to the 18th centuries, alongside Saint-Sophia Cathedral and Kiev Pechersk Lavra, to the historic and spiritual importance of the city of Kiev in the development of Eastern Christianity.

Integrity and authenticity

Integrity

In the opinion of the State Party Saint Cyril's Church has retained all its integrity from the 12th century: the original structure is completely preserved. All the reconstructions and renovations were carried out in accordance with the techniques specific to Orthodox architecture, using traditional materials.

Inside the church only 30% of the 12th century murals are in fact still present in the current pictorial series. Painted elements were added in the 17th century, and extensive restoration at the end of the 19th century affected the murals when they were uncovered.

ICOMOS considers that it is only the interior of Saint Cyril's Church that provides evidence of the 12th century, notably in terms of its Byzantine floor-plan and the building's load-bearing structures, up as far as the top of the first level.

Whilst it is true that the original 12th century murals have undergone extensive restoration and additions, this work has always been carried out in accordance with the original subjects and styles, in a context of continuity of expression of the original Russian faith and respecting its traditions. From this point of view, and in association with the structural integrity of the interior, Saint Cyril's Church provides a homogeneous and complete painted environment, illustrating the spirituality of Eastern European Orthodox Christianity from the 12th century. It is possible to claim its integrity as an iconographic expression of Orthodox spirituality.

The monastic ensemble adjacent to the church is today reduced to the state of several ruins. It was extensively destroyed, then rebuilt as a hospital. ICOMOS considers that on this point the integrity of the property nominated for the extension can be improved, by taking into account the entire fenced area of the former monastery to form a property incorporating all its remains.

The architectural and decorative integrity of the 18th century Saint Andrew's Church has been conserved, without any significant changes to its nearby natural environment.

Extensive maintenance and repair of the church took place in the 19th and 20th centuries, notably on the roof, but it has not had too serious an impact on the original forms. When this had been the case, such as for certain

visible elements of the dome, recent campaigns have restored the architectural integrity by scrupulously following the initial plans of the building's creator, Francesco Bartolomeo Rastrelli. The roofs are today made of metal, as are the stairs leading to the entrance platform, replacing the earlier timber version.

The many components of the interior decoration form a very complete ensemble that has been maintained, with its more fragile components (stucco, wood-carvings, gilding, etc.) recently restored using the original materials, forms, and techniques.

ICOMOS considers that the architectural and decorative integrity of the exterior and interior of Saint Andrew's Church is well preserved overall.

Given its lofty position overlooking the Dnieper Valley, Saint Andrew's Church plays a very important role in the overall panorama of the historic city and Orthodox Metropolis of Kiev, viewed from the riverside.

The integrity of the foundations has always been under threat, in the past and still today, because of the unstable and wet nature of the subsoil, requiring specific work on several occasions.

Authenticity

In the opinion of the State Party, Saint Cyril's Church has retained its medieval authenticity through nine centuries of history. The lost 12th century structural components, the west gallery arches and the central cupola, have been replaced. Inside, the original floor has been lost, the original doors and windows have been replaced, and the current iconostasis dates from the 19th century.

The church was restored in the 17th and 18th centuries, and Baroque elements were added which mainly affect the external appearance of the facades and roofs, mainly because of the addition of the four lateral domes.

The monastery buildings surrounding the church have disappeared and only their foundations remain.

ICOMOS considers that the exterior of the church reflects 18th century Baroque Orthodox architecture and bears no resemblance to the original appearance. The lower structures, on the other hand, when viewed from inside the church, provide authentic architectural evidence of the medieval construction of a 12th century fortified church.

The authenticity of the material conservation of the partially conserved 12th century murals, which had subsequently been extensively restored and completed, is strongly altered. The spiritual subjects have been conserved, and the original style guided and influenced the restorations.

For the State Party, Saint Andrew's Church has retained

all its 18th century authenticity. Its unique interior is entirely preserved, only the floor having been redone. The interior decoration has been conserved with a high degree of authenticity. So far as the exterior is concerned, the work performed during the various restoration campaigns has preserved a high degree of authenticity. The use of metal to replace traditional materials is notable for the roof and the access stairway.

ICOMOS considers that, despite the restorations and replacements that have taken place, the interior and exterior of Saint Andrew's Church have retained good overall authenticity.

ICOMOS considers that the two buildings proposed for the extension, by virtue of their prominent positions on high points overlooking the Dnieper, play an important role in the integrity and authenticity of the landscape when viewed from the valley floor.

ICOMOS considers that the authenticity and integrity of Saint Andrew's Church, when considered as an 18th century monument, are adequate. The architectural and ornamental testimony of the 12th century is only evident in the interior of Saint Cyril's Church, in conditions of mixed and partial authenticity and integrity.

ICOMOS considers that the property could meet the conditions of authenticity and integrity if the comparative analysis were improved so as to allow a more complete justification of its contribution to the Outstanding Universal Value, and with appropriate boundaries for Saint Cyril's Church.

Criteria under which inscription is proposed

The property is nominated on the basis of the same cultural criteria (i), (ii), (iii), and (iv) as those used for the inscription of the original nomination.

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that Saint Cyril's Church presents an architectural ensemble and unique and exceptional murals that are representative of the human creative genius of the 12th century, complementing those of Saint-Sophia Cathedral and Kiev Pechersk Lavra.

Saint Andrew's Church bears exceptional architectural and decorative witness to the birth of Ukrainian Baroque; it displays remarkable decorative particularities and it occupies an exceptional and emblematic site. In the same way as Saint-Sophia Cathedral and Kiev Pechersk Lavra, Saint Andrew's Church is perceived as a masterpiece.

ICOMOS considers that the architectural and decorative contributions of the two churches are important testimonies that complete those already provided by the inscribed property, but without achieving in themselves

the level of a masterpiece of creative genius. On the other hand, the two properties nominated for the extension complete the exceptional historic urban landscape value viewed from the Dnieper Valley, and they could in this respect reinforce criterion (i), already recognized for Saint-Sophia Cathedral and Kiev Pechersk Lavra. To this end, a study of the visual values of the historic town centre formed by the panorama of the entire property and the proposed extensions, along with a preservation and conservation plan (see Management), would be required.

ICOMOS considers that the two properties proposed for the extension could contribute to strengthening this criterion through their place in the panorama of the historic Metropole of Kiev. A study of the historic urban landscape values would need to be carried out.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that Saint Cyril's Church presents original and unique characteristics in terms of its construction, its decoration, and its historic and religious role. It marks the transition from Byzantine Orthodox influences to an architectural style and spiritual art specific to the Slav and Russian world. These traits have existed for more than eight hundred years, while undergoing various changes due to the history of Saint Cyril's Church and its cultural integration into the Russian-Ukrainian world.

In terms of its 18th century architecture and unique decoration, Saint Andrew's Church is a particularly successful and harmonious combination of the influences of Western Baroque, modern Russia, and the Orthodox faith in the Ukraine. The result is an architectural model for the development of the Orthodox Baroque in Eastern Europe and the Balkans.

ICOMOS considers that, within the general context of the role of the Kiev Orthodox Metropole of the Eastern Slavs, Saint Cyril's Church appears to bear witness to the exchange of major influences, mainly in the 12th century. This would need to be justified by an appropriate comparative analysis.

Saint Andrew's Church is a notable example of the dissemination and adaptation of the European Baroque in the 18th century all over Russia at the time, under the influence of the sovereigns, reflecting and following the construction of Saint Petersburg. Its role as an architectural model for the Orthodox Baroque has however not been established by the comparative analysis.

ICOMOS considers that the properties proposed for the extension could complete the justification already provided by the main property for this criterion, but that it would need to be confirmed by an appropriate comparative analysis.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that Saint Cyril's Church is one of the rare monuments of the 'Old Russian' style, like Saint-Sophia Cathedral and Kiev Pechersk Lavra, to have survived through to the present day. The church bears witness to the religious and cultural traditions of the 12th and 13th centuries in the Russian world that was in the process of being created. The monument is testimony to the architecture, building techniques, painting, and medieval writing of Old Russia.

Saint Andrew's Church bears witness to the religious and cultural traditions within the Russian Empire in the mid-18th century. It is a remarkable example of the creation and the dissemination of a specific architectural and decorative religious style: the Russian-Ukrainian Orthodox Baroque.

ICOMOS considers that Saint Cyril's Church does indeed appear to explicitly complete the testimony of the property already inscribed with regard to the cultural tradition linked with the medieval Orthodox Metropole of Kiev of the Eastern Slavs. Saint Andrew's Church could bear witness to the permanency and renewal of this tradition in the modern period, but this would need to be confirmed by a more in-depth comparative analysis.

ICOMOS considers that the properties proposed for the extension could complete the justification already provided by the main property with regard to this criterion, but would need to be confirmed by an appropriate comparative analysis.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that Saint Cyril's Church is an outstanding example of the Russian medieval church with three naves, a central dome, and an extensive scheme of interior murals. Its architecture is a synthesis of the Byzantine style with elements of European Romanesque architecture, forms specific to Slav architecture, and finally the Ukrainian Baroque. Its murals also bear witness to the synthesis of many influences, from medieval Byzantine to 17th century Ukrainian portraiture and the revival of Orthodox religious painting in the 19th century.

Saint Andrew's Church, a masterpiece of Elizabethan Baroque, illustrates an important period in the history of Orthodox religious architecture. It bears witness to the adoption and a particularly accomplished interpretation of architectural and decorative styles from Western Europe.

ICOMOS considers that the evidence of Saint Cyril's Church may significantly complete the medieval architectural and iconographic testimony of the property already inscribed. Saint Andrew's Church is an outstanding example of 18th century Orthodox Baroque. This needs to be fully demonstrated by a more thorough comparative analysis.

ICOMOS considers that the properties proposed for the extension could complete the justification already provided by the main property for this criterion, but this needs to be confirmed by an appropriate comparative analysis.

ICOMOS considers that the two properties proposed for the extension could significantly reinforce the Outstanding Universal Value of the property already inscribed, under criteria (i), (ii), (iii), and (iv), but that it needs to be more fully justified by means of an analysis of the landscape values and an appropriate comparative analysis, along with a more rigorous approach to the integrity of Saint Cyril's Church, including the remains of its monastery.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The two properties proposed for the extension are not subject to economic or urban development pressures, because of their status as museums.

The State Party considers that there is no particular urban pressure on the environment of Saint Cyril's Church, because of its remoteness from the modern city's development zones. This is, however, not the case for Saint Andrew's Church, in the heart of the old city undergoing renovation and in the same urban zone as Saint-Sophia Cathedral.

ICOMOS notes that Saint Cyril's Church is today in the immediate vicinity of a hospital, partially in the buffer zone, but also within the area of the property itself. Buildings have been added or are being added, without any control being exercised because of the site's heritage value. The State Party must clarify the hospital's exact footprint in relation to the site and the nature of the current projects.

ICOMOS considers that pressure from uncontrolled urban development is very high for the environment of Saint Andrew's Church, similar to the existing threats to the adjacent main property of Saint-Sophia Cathedral

within the same buffer zone. A significant number of large-scale buildings have been erected in recent years, or are being built, without any regulatory control. Additionally, automobile traffic and parking are totally uncontrolled within the immediate vicinity of the church. The historic character of the old city of Kiev is today highly compromised.

Tourism pressures

Too many visitors could affect the hygrometric conditions in the two churches and compromise the conservation of the murals. The number of visitors at any one time is as a result limited to 90 for Saint Cyril's Church and 50 for Saint Andrew's Church.

ICOMOS considers that Saint Cyril's Church is not subject to any particular tourism pressures. For the time being it is not often visited, as it is located away from the main flow of tourism in Kiev.

ICOMOS considers that the situation is different for Saint Andrew's Church, one of the city's most frequently visited historic sites, along with Saint-Sophia Cathedral. The excessive use of candles may compromise the conservation of the mural and iconostasis paintings in certain places. The immediate surroundings of the church have been invaded by a large number of unsightly tourist trade huts, which are subject to no regulations and lie outside any tourism infrastructure project.

Environmental pressures

Saint Cyril's Church is located on a hill close to steep slopes that are liable to landslides. The natural difficulties of the terrain are compounded by the presence of an old underground cavern under the building's northern section. More broadly, the building was erected on the remains of the foundations of an older and unknown building. Attention has been paid to the water rising from the foundations by means of drainage works in a bid to better control the conservation of the property in general and the murals in particular.

ICOMOS considers that the cracks appearing in various places in Saint Cyril's Church may be due to small movements in the subsoil, attributable to natural geological phenomena and to the church's archaeological past: these require attention. The same applies to controlling the rising damp affecting the pillars.

Saint Andrew's Church is located on a fault line on a slope, which has always been geologically unstable and complex, with the nearest subsoil containing a significant aquifer outcrop. From the start, the foundations were subject to repeated special treatment and monitoring. This situation is also one of the reasons for the creation of the imposing platform on which the church is built. Moreover, the deep roots of certain trees would also seem to pose a threat, and their removal is planned.

ICOMOS considers that the situation of the subsoil at Saint Andrew's Church is indeed a major recurrent problem for this building. It requires high-level scientific monitoring and adequate technical measures. The issue of deep roots in wet areas needs to be examined carefully in terms of possible soil movement after the potential removal of the trees. In fact, many wet subsoil situations are stabilized by the presence of tree roots (reinforced soil), rather than the opposite.

Natural disasters

Apart from the issue of potential landslides and unstable subsoil, both for Saint Cyril's Church and Saint Andrew's Church (see above), the sites are not subject to any major threat from natural disasters. The Kiev region has low seismic activity. Fire risk is relatively low owing to the limited use of timber in both buildings - for example, the metal roof frame in Saint Andrew's Church. There is no risk of flooding.

ICOMOS considers that the risk of landslides or soil subsidence is significant for both buildings.

Impact of climate change

The State Party does not mention this threat.

ICOMOS considers that climate change is not a threat to the property at the present time.

ICOMOS considers that the main threats to the properties proposed for the extension are the serious problems of unregulated urban growth in the immediate environment of Saint Andrew's Church, like that already observed and emphasized during the reactive monitoring mission (March 2009) and the Committee's decision concerning the state of the conservation of the property already inscribed (33 COM 7B.125). The same applies to the development of the hospital area near Saint Cyril's Church. Unstable subsoil is also a significant threat for both buildings.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

Saint Cyril's Church and a large part of the former monastery, now consisting of ruins, form one of the two properties proposed for the extension. It occupies a surface area of 1.683ha. It is mainly bordered by the former monastery boundary, which forms a perimeter that is fenced for most of its length. It includes abundant plant cover with many trees that contribute to the quality of the environment. There are no inhabitants.

The buffer zone has a surface area of 37.334ha, without any physical contact with the buffer zones of the property already inscribed. Much of the buffer zone for

Saint Cyril's Church is a reserve, the rest being the psychiatric hospital.

ICOMOS considers that the boundaries of the property should be extended to include the entire fenced area of the former monastery, in order to form a homogeneous and coherent ensemble that incorporates all the ruins. The part of the old monastery not included in the site nominated for the extension is currently used by the hospital staff and patients.

Saint Andrew's Church is located in the extreme north of the buffer zone for Saint-Sophia Cathedral. The property proposed for the extension includes the church and its immediate environment. The boundaries are physically clearly identified. The proposed property has a surface area of 0.496ha. Some twenty Orthodox seminarians and monks live in the cells that form part of the building.

The buffer zone is formed in the south by the existing buffer zone of Saint-Sophia Cathedral. To the west and the north a 0.838ha extension to the buffer zone is proposed, extending out from the existing buffer zone.

ICOMOS considers that the property boundaries are adequate. A buffer zone needs to be created to the north-east, however, on the hillside that drops away from the building. This point should be considered jointly with the recommendation in Decision 33 COM 7B.125 concerning the buffer zone for Saint-Sophia.

ICOMOS considers that the property boundaries should be extended for Saint Cyril's Church to form a homogeneous property corresponding with the entirety of the former walled monastic area.

ICOMOS considers that the buffer zone for Saint Andrew's Church should surround the property and be extended to the north-east of the property proposed for the extension.

Ownership

The Churches of Saint Cyril and Saint Andrew are both owned by the State. They are part of the Saint-Sophia of Kiev National Reserve, recently designated a National Conservation Area, which exercises the rights of ownership in the name of the Ministry of Regional Development and Construction of Ukraine.

Protection

Legal protection

Saint Cyril's and Saint Andrew's Churches have had the status of museum since 1929 and 1968 respectively. This status recognizes and protects their architectural and artistic values. The Ministerial decrees issued in 1965 and 1968 respectively incorporated both into the Saint-Sophia of Kiev National Reserve, which acquired national status (1994 Decree), thereby providing Saint

Cyril's Church and Saint Andrew's Church with the status of National Monuments. The reserve is also a National Conservation Area.

The legislative document that incorporates and harmonizes the former legislative system for the institutional protection and management of Ukrainian national heritage properties is the Law on the Protection of Cultural Heritage (2000). This law introduced two main stakeholders for the property's protection: at the national level the Ministry of Culture and Tourism, and at the local level the Municipality of Kiev.

Other laws may also apply, notably:

- Law on the Implementation of the State Programme for the Conservation and Use of Cultural Heritage (2004);
- Law and List of Cultural Heritage Monuments that may not be privatized;
- Law ratifying the European Landscape Convention;
- Law on Regional Development;
- Laws on Regulation of Architectural Activity.

Various Presidential Decrees and Ministerial Decisions emphasize the National Reserve status of Saint-Sophia of Kiev:

- New status of the Reserve (1996);
- Definition of the historic areas and restriction of economic activity within their boundaries (2002);
- Definition of the boundaries of Saint-Sophia of Kiev Cathedral property and its buffer zone (2005).

The Municipality of Kiev's activity is based on decisions governing:

- Monuments and cultural reserves and monitoring their environment (1979);
- Amendment of this decision (2002).

With regard to the protection and control of the three buffer zones of the property and of the proposed extension, a document was annexed to the dossier (Annex III, Doc. 8). Written in Ukrainian, it has not been translated into or summarized in any of the Convention languages.

ICOMOS considers that the word 'Reserve' initially defined a legal status as well as specific protection of national cultural heritage. This aspect of legal protection now only appears in the more recent texts or under the new term of the 'National Conservation Area of Saint-Sophia of Kiev,' as a management unit or as a relatively vague label without any precise legal content. The State Party needs to clarify this situation and to provide proof that the protection decisions actually exist and actually apply to the new National Conservation Area.

ICOMOS considers that, in accordance with the Decision 33 COM 7B.125, clarification of the protection of the whole properties, buffer zones, and landscape perspectives needs to accompany the implementation of a regulated town-planning system.

Traditional protection

It is noteworthy that a large number of Kiev residents, and more generally of the Ukrainian population, are attached to the old places of Orthodox worship in Kiev and their history. In the context of religious renewal linked to recent history, this provides an element of traditional protection and assurance of the interest the population places in the value of the property. Regular religious services are no longer held in either of the two churches. Saint Andrew's Church may be considered a place of popular piety.

Effectiveness of protection measures

ICOMOS considers that, despite the abundance of legislation and regulations, the situation regarding the protection of the property needs to be clarified, especially with regard to the legal content of the word 'Reserve' and its more recent synonym, 'National Conservation Area.'

ICOMOS considers that the legal protection covering the buffer zones is currently not functioning, especially in relation to the regulation of urban development (see Decision 33 COM 7B.125, notably Points 5 and 6). It needs to be reasserted, specifying the control mechanisms and the authorities in charge of its application.

ICOMOS considers that an overall landscape protection for the properties, beyond the buffer zones, must be rapidly implemented.

ICOMOS considers that, despite the abundance of legislation and regulations, the situation regarding the protection of the property is confused and the protection of the buffer zone is ineffectual, as already pointed out in the Committee's decision 33 COM 7B.125, Points 5 and 6. The texts governing the properties, their buffer zones, and landscapes need to be rapidly updated in terms that exclude any ambiguity; the authorities charged with their application must be clearly identified and provided with the necessary implementation resources.

Conservation

Inventories, recording, research

The administrative and management group for the National Reserve of Saint-Sophia has an archival department. In addition to medieval and modern written and iconographic archival documents, archaeological data are also stored. Several maps and documents compiling the state of the sites and the work undertaken

from the 17th to the 20th centuries exist in its archival records, such as the important report on the technical and scientific research on the conservation and history of the restorations of Saint Cyril's Church (1977). There is also a photographic archive showing the buildings throughout the 20th century, with approximately 900 negatives for each. A special documentary archive for the paintings in Saint Cyril's Church includes some 400 separate items.

Around ten reports and studies on the conservation of each of the two churches have been written since 2000 by professional organizations and recorded by the archival services. They deal with all aspects of conservation, including subsoil issues (see Factors affecting the property).

Present state of conservation

The long-term conservation of the property is ensured by its being State-owned and by the use of both churches as museums. The programmes of previous years and the current programmes ensure a good level of conservation of both monuments (see Conservation measures).

The main technical problems regarding conservation relate to the subsoil at both Saint Cyril's Church and Saint Andrew's Church, where there is concern about the situation.

ICOMOS considers that the current state of the interior and exterior conservation of both monuments is satisfactory. The cracks observed in various places in Saint Cyril's Church probably reflect the state of the subsoil. There is particular concern about the state of the subsoil at Saint Andrew's Church, with an awareness that it has been a permanent issue of the building's conservation since it was built.

Active conservation measures

The conservation of both sites is managed under the 2003-2010 conservation plan for the entire National Conservation Area. It is implemented under the supervision of the experts employed by the National Conservation Area of Saint-Sophia of Kiev, jointly with State institutes and specialist academics.

A non-destructive scanning system is used on the walls and murals in Saint Cyril's Church. This is an analytical instrument for monitoring and preparing conservation operations.

Non-destructive geophysical studies of the archaeological and natural subsoil have been carried out at Saint Cyril's Church, along with accurate hydro-geological monitoring of the soil and building foundations.

Similar monitoring has taken place at Saint Andrew's Church, where the situation is considered to be more

acute. An extensive programme of work to reinforce the soil and foundations is planned; it involves installing a dual row of buried concrete piles.

Maintenance

Standard maintenance of the buildings and their immediate surroundings is provided by the employees of each of the museums under the control of the Saint-Sophia of Kiev Reserve.

Municipal employees are responsible for the maintenance of public spaces in the buffer zone.

ICOMOS considers that the maintenance and monitoring of the public areas surrounding the churches should be part of an overall maintenance programme for the National Conservation Area of Saint-Sophia of Kiev.

Effectiveness of conservation measures

ICOMOS considers that the conservation measures for the architecture and murals are satisfactory. Attention should nonetheless be paid to carrying out restoration work in complete conformity with international standards under the supervision of a qualified manager.

ICOMOS considers it is essential to monitor and develop a clear strategy for work on the foundations and subsoil for Saint Cyril's Church within the medium term.

With regard to the geological instability at Saint Andrew's Church, ICOMOS considers that the solution of reinforcing the soil using concrete piles focuses more on the consequences than the causes, and that the future effects are unknown. These projects should be deferred in order to perform more in-depth studies of the context in order better to identify the necessary work and to consider less drastic solutions that focus preferably on the causes of the instability (e.g. drainage). Identifying and studying similar cases of instability in comparable buildings in other countries, would be useful.

ICOMOS considers that the conservation measures being implemented are adequate overall for the architecture and murals, but that they should lead to carefully considered measures with regard to stabilizing the subsoil for both buildings.

Management

Management structures and processes, including traditional management processes

The management structure for the property is the administrative unit known as the National Conservation Area of Saint-Sophia of Kiev, formerly and sometimes still referred to as the 'Reserve.' It includes the two groups of buildings already inscribed (i.e. Saint-Sophia Cathedral and Kiev Pechersk Lavra) and the two properties proposed for the extension. Each appears to

be a unit in the National Conservation Area, under the name of Saint Cyril's Department or Museum and Saint Andrew's Department or Museum. The National Conservation Area reports to the Ministry of Regional Development and Construction.

ICOMOS considers it necessary to involve the Ministry of Culture and Tourism and the Municipality of Kiev in the management of the National Conservation Area of Saint-Sophia of Kiev. Their respective roles and duties in compiling and implementing the conservation and management plans would need to be defined. This applies to the management of both the property and the buffer zones. In the absence of any clearly defined coordination structure, serious protection management problems have occurred. The management of all the components of the property also needs to be unified, including Kiev Pechersk Lavra, as indicated in Decision 33 COM 7B.125, Point 3.

ICOMOS considers that it is necessary to clarify the meaning and use of the terms 'department' and 'museum' with reference to Saint Cyril's and Saint Andrew's Churches, as they seem to overlap.

Policy framework: management plans and arrangements, including visitor management and presentation

The properties are managed under the Comprehensive Programme for the Preservation of Properties of the National Conservation Area of Saint-Sophia of Kiev (2003–2010).

Other plans and programmes are involved, apparently without any link to the preparation of or the objectives for the Comprehensive Programme presented as the management plan for the properties, i.e. the National Tourism Development Plan (2002-2010).

ICOMOS reiterates and emphasizes the relevance of Decision 33 COM 7B.125, Point 3: '*Notes the findings of the joint World Heritage Centre/ICOMOS reactive monitoring mission of March 2009 and in particular that the current fragmented management is failing to address the needs of the property and recommended that a unified system is put in place together with a unified management plan.*' It is essential to integrate the management of the buffer zone into the management plan and to ensure effective legislation to protect the property with regard to building permits.

ICOMOS is pleased to note the preparation of a Cultural and Landscape Project, in accordance with the recommendation of Decision 33 COM 7B.125, Point 7. It must study the property's visual perspectives within the general context of the historic urban landscape viewed from the valley. ICOMOS recommends integrating this document that is under preparation into the next unified management plan.

Under the Management Plan, ICOMOS recommends that tourism management measures should be implemented inside Saint Andrew's Church and its surroundings in order to provide tourism services commensurate with the property's value. A policy for the presentation of the property's values needs to be defined.

Risk preparedness

The properties are equipped with fire alarms that make possible a rapid response by emergency services. Their operation is checked regularly. There is a fire brigade responsible for the Saint-Sophia of Kiev area under the authority of the Ministry responsible for emergency situations.

Preparation for the risks associated with the geological and physical instability of the subsoil relates to the technical monitoring using non-destructive methods (see Factors affecting the property). A consolidation plan is scheduled for Saint Andrew's Church (see Conservation measures).

The perimeter of Saint Cyril's Church is fenced; guards are present 24 hours a day.

ICOMOS considers that it is necessary in respect of Saint Andrew's Church to confirm the presence of fire-alarm systems and whether there is any surveillance specific to the site other than the museum staff; and to specify for Saint Cyril's Church the number and status of active guards and the location of the fire brigade called in the event of a fire, given that the brigade for Saint-Sophia Cathedral is more than 4km from the city centre.

Involvement of the local communities

There is currently no official involvement of the local communities in any form whatsoever in the management of the properties. The Municipality is involved in the management of the buffer zone, public thoroughfares in particular.

Saint Cyril's Church is set apart, and its closest neighbouring community is the psychiatric hospital, which uses part of the site and is expanding in the buffer zone in accordance with its own rationale, without any reference to the value of the site.

For Saint Andrew's Church the local community has reacted several times to the property development policies that have allowed large buildings to be erected nearby.

ICOMOS considers it necessary to involve the local communities in order to develop a good understanding of the values of the property and develop its management through a consultation process.

Resources, including staffing levels, expertise and training

The structure of Saint-Sophia Reserve (or National Conservation Area) includes around twenty departments and services, which apparently cover expertise in history, museums, and architecture. The number of employees, their expertise, and their training are not stated. The Reserve may occasionally call on specialists from the Kiev universities, and the Academy of Fine Arts and Architecture. Conservation is funded by the Reserve.

The Saint Cyril Museum has twelve employees, including a manager, a research assistant, a guide, a building supervisor, and a technical team.

The Saint Andrew Museum also has around twelve employees, including a manager, three researchers, museum guards, and a technical team.

The employees of the Municipality of Kiev's services operate in the public areas of the buffer zones.

Effectiveness of current management

ICOMOS considers that the current management of the sites is based on ill-defined protection; it is, moreover, not being implemented in the buffer zones. The management is also fragmented between various independent stakeholders whose tasks are seemingly complementary but in reality are not: management of the properties by the Saint-Sophia Reserve ignores all the other partners; and management of the buffer zones by the Municipality and the Ministry of Construction is performed without any link to the preservation of the properties. As a result, the current management of the properties appears to be opaque and ineffective, each stakeholder concerning itself with its own interests without the slightest relationship with the heritage management of the properties and the appropriate expression of their values.

ICOMOS considers it necessary to review the next management plan completely, in a unified manner for all the properties, the buffer zones, and the overall visual dimension. It is necessary to involve all the properties' stakeholders in the management authority so as to make it effective and provide it with effective management resources.

6. MONITORING

The Reserve staff monitor the properties. The key indicators listed in the management plan for both the churches nominated for the extension are:

- Aquifer level (monthly);
- Soil humidity around the foundations (continuous);

- Cracks and deviations from verticality (quarterly);
- Temperature and relative humidity (continuous).

There is also photographic monitoring of the buildings, but the frequency is not defined.

The murals in Saint Cyril's Church are monitored by non-destructive scanning, but the frequency is not defined.

ICOMOS considers that the proposed indicators concern only certain aspects of the conservation of the monuments. Interior and exterior monitoring of the architectural and decorative components and murals of the properties is needed.

The proposed monitoring does not include the surroundings of Saint Andrew's Church and the site's land and other buildings for Saint Cyril's Church. Methodical monitoring of the buffer zones is required in view of the urban threats.

7. CONCLUSIONS

ICOMOS recognizes the potential for the Churches of Saint Cyril and Saint Andrew in Kiev to significantly strengthen the Outstanding Universal Value already recognized for Saint-Sophia Cathedral and Kiev Pechersk Lavra. This refers in particular to the urban landscape value of the historic Orthodox Metropole of Kiev within a more homogeneous and extensive series of remarkable architectural components and the very extensive decorative scheme of Saint Cyril's Church, and the affirmation in the 18th century of a particular Orthodox Baroque style in Saint Andrew's Church.

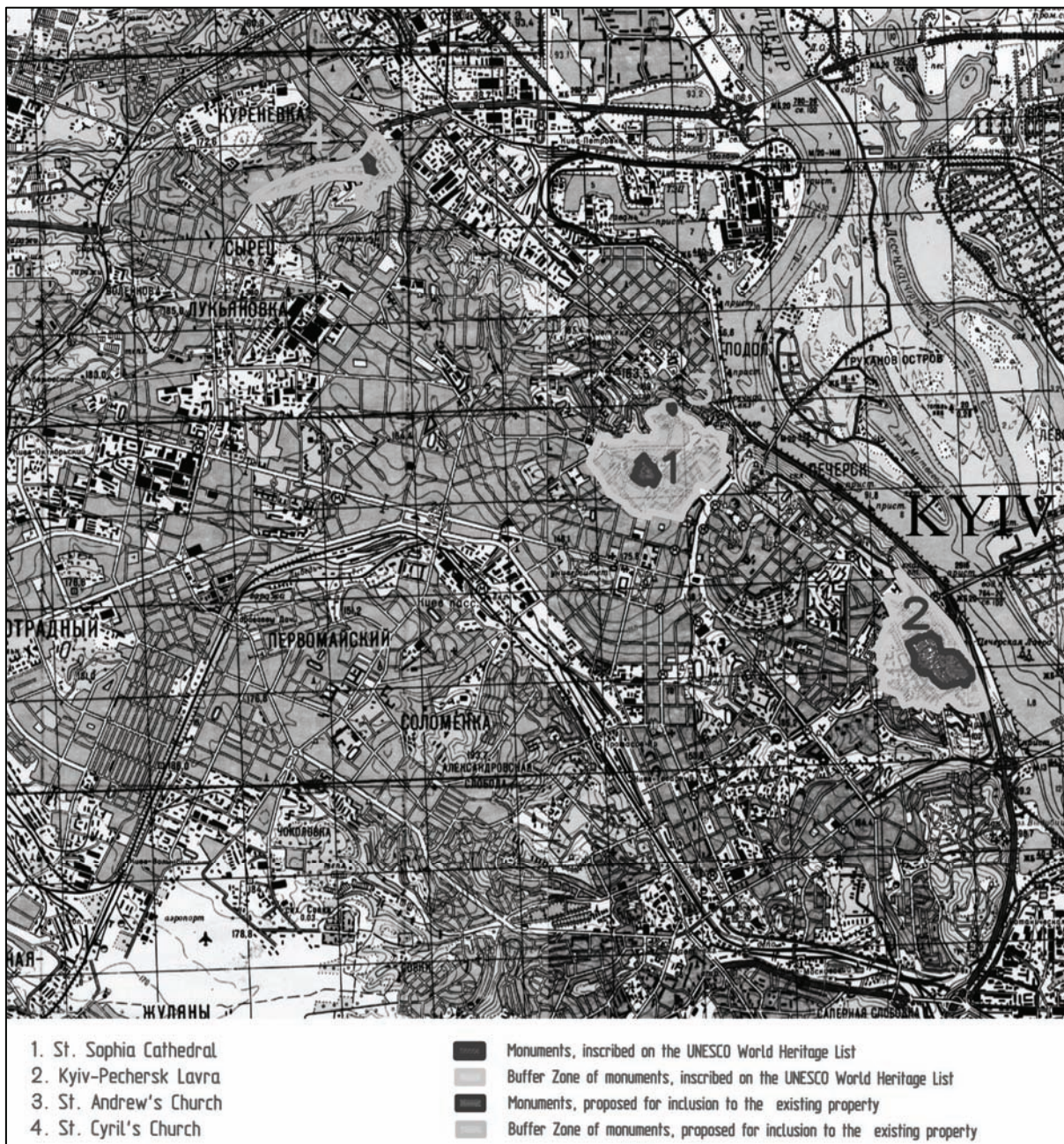
However, the inadequate comparative analysis and the current poor state of preservation in the buffer zones affecting the landscape values of the properties preclude, for the present, considering approval of the proposed extension.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the proposed extension of Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev Pechersk Lavra to include Saint Cyril's Church and Saint Andrew's Church, Ukraine, be **deferred** in order to allow the State Party to:

- Review and expand the comparative analysis: for Saint Cyril's Church with Byzantine churches and for the mural scheme; for Saint Andrew's Church the stylistic genesis and then its influence in the Orthodox Christian world;
- Review the boundaries around Saint Cyril's Church in order to extend it so as to include the former walled monastery and form a homogeneous and coherent ensemble separated from the hospital;

- Consider creating a buffer zone north-east of Saint Andrew's Church, on the hillside below the building. This point should be considered in conjunction with the recommendation of Decision 33 COM 7B.125 concerning the buffer zone for Saint-Sophia Cathedral;
 - Clarify the texts and responsibilities for the implementation of protection for the property's various components and the buffer zones, and specify the legal status of the Reserve (or National Conservation Area) of Saint-Sophia of Kiev. This point should be considered in conjunction with the recommendations of Decision 33 COM 7B.125;
 - In response to the current fragmented management, and in accordance with Decision 33COM7B.125, implement a unique system of management which involves the various stakeholders of the properties (the two ministries involved, the Reserve, the museums, the Municipality, the local communities, etc.);
 - Implement a unified management plan for the properties, buffer zones, and landscape protection of the Orthodox Metropolate of Kiev; through its implementation, focus on resolving the problems of unregulated urban development, already raised and highlighted by the reactive monitoring mission to the property already inscribed (March 2009) and Decision 33 COM 7B.125; define and implement a town-planning system that is compatible with the property's values; and implement the cultural and landscape project;
 - For the wet and fragile soil under the foundations of Saint Cyril's Church, consider developing a comprehensive works strategy for the medium term;
 - For the unstable soil supporting Saint Andrew's Church, the project for heavy interventions should be deferred and the context studied more extensively in order to identify better the work required; consider the least intrusive solutions, preferably focusing on the causes of the instability;
 - Confirm for Saint Andrew's Church the presence of fire-alarm systems, and whether there is a specific surveillance team for the property other than the museum staff; state for Saint Cyril's Church the number and status of the active guards and the location of the fire brigade in the event of a fire;
 - Implement quantified monitoring of the interior and exterior architectural and decorative components and murals of the churches;
 - Provide a summary in French or in English of the applicable texts concerning the protection of the properties, the proposed extensions, and the buffer zones.
- ICOMOS further recommends the State Party give consideration to the following:
- Clarify the meaning and use of the terms 'department' and 'museum' in reference to the Churches of Saint Cyril and Saint Andrew, as they seem to overlap;
 - Ensure that restoration work is carried out in complete conformity with international standards under the supervision of a qualified manager;
 - For the day-to-day management of Saint Andrew's Church, consider limiting the excessive use of candles, which may compromise the murals and the iconostasis paintings;
 - Control the immediate surroundings of Saint Andrew's Church, which have been invaded by a large number of unsightly tourist trading huts;
 - Consider an overall tourist infrastructure project and a general maintenance programme for the surroundings of the properties as part of the unified management plan.



Map showing the boundaries of the two properties proposed for extension



General view of Saint Cyril's Church



Interior view of Saint Cyril's Church



General view of Saint Andrew's Church



Interior view of Saint Andrew's Church

E Latin America and the Caribbean

New Nominations

Yagul and Mitla in the Central Valley of Oaxaca (Mexico)

No 1352

Official name as proposed by the State Party:

Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca

Location:

The Central Valleys of Oaxaca

Brief description:

Surrounded by the Mixe Mountain Range, the property lies on the northern slopes of the Tlacolula valley in subtropical central Oaxaca. Two pre-Hispanic archaeological complexes and a series of pre-historic caves are surrounded by land that is farmed to varying degrees. In the central part of the property are 147 caves and rock shelters, a few of which are said to have provided compelling archaeological and rock art evidence for the progress of nomadic hunter-gathers to incipient farmers. 10,000 years old *Cucurbitaceae* seeds within one cave, Guilá Naquitz, are considered to be the earliest known evidence of domesticated plants in the continent, while corn cob fragments from the same cave are said to be the earliest documented evidence for the domestication of maize. In part of the property are the remnants of low-lying deciduous forest that are said to represent the type of natural resources available to early man. The remainder is farmed or grazed to various degrees. To the south-west are the pre-Hispanic archaeological complexes of Yagul and Caballito Blanco.

Category of property:

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), paragraph 47, this is also a *cultural landscape*.

1. BASIC DATA

Included in the Tentative List: 20 November 2001

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 30 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committees on Cultural Landscapes and Archaeological Heritage Management. ICOMOS has also consulted several independent experts.

Comments on the assessment of this cultural landscape were received from IUCN on 18 February 2010 and are related to the following issues:

- Significance of natural values
- Intensive agricultural use
- Integrity and encroachment

The information was carefully considered by ICOMOS in reaching its final decision and recommendation in March 2010, and IUCN has also reviewed the presentation of its comments as included in this report by ICOMOS.

Literature consulted (selection):

Bautista, Jorge, Jose Luis Tenorio, y Enrique Martinez y Ojeda, 2002, "Yagul: patrimonio arqueológico y natural" in *Sociedad y patrimonio Arqueológico en el valle de Oaxaca. Memoria de la segunda Mesa Redonda de Monte Alban*, Nelly Robles editora, CONACULTA-INAH, pp 279 – 306.

Flannery, K.V., and C. Earle Smith jr., 1983, "Monte Alban IV Foodstuffs in Guila Naquitz", in Kent V. Flannery and Joyce Marcus (eds), *The Cloud People. Divergent Evolution of the Zapotec and Mixtec Civilisations*, New York Academic Press, p.206.

Hastorf, Christine, 2009, "Rio Balsas most likely region for maize domestication", in *Proceedings of the National Academy of Sciences of the United States of America*.

Smith, Bruce D., *Reassessing Coxcatlan Cave and the early history of domesticated plants in Mesoamerica*, Proceedings National Academy of Sciences, USA vol 102(27), 2005.

Zizumbo-Villarreal, D., & Colunga-García Marín, P., Origin of agriculture and plant domestication in West Mesoamerica, *Journal of Genetic Resources and Crop Evolution*, February 2010.

Technical Evaluation Mission: 11-18 October 2009

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 18 December 2009 on the following issues:

- Caves linked to plant domestication: Provide an inventory of caves with details of how they have been surveyed and recorded in order to demonstrate how they have yielded evidence for plant domestication or changes from nomadic to sedentary lifestyles.
- Justification for Outstanding Universal Value: provide a rationale for including Yagul as part of the property; and further evidence to substantiate for the way the property is said to demonstrate the earliest domestication of corn.

- Comparative analysis: augment the comparative analysis to compare the nominated site to other properties that demonstrate evidence for plant domestication over time, particularly in the same geo-cultural Region.
- Boundaries: provide a more detailed justification for the suggested boundaries in terms of relating them clearly to the key sites associated with plant domestication and early agriculture and to natural topography.

The State Party sent a reply on 18 February 2010. The analysis of this supplementary material is included in the present evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Lying to the east of the Central Valleys of Oaxaca on the lower slopes of the dry mountainous uplands of southern Mexico, the property covers some 1,515 hectares, with a buffer zone of an additional 3,860 hectares, between the municipalities of Tlacolula, Diaz Ordaz and Mitla.

The boundaries mark out a rectilinear area on the northern slopes of the Tlacolula valley above the main road that runs between Oaxaca and Mitla.

Some two to three hundred metres above the floor of the valley within volcanic rocks are some 147 caves, rock shelters or open sites, a few of which are seen to have provided archaeological and rock art evidence for hunter-gatherers and their transition to farming. The evidence extends back some 10,000 years. In one cave, Guilá Naquitz, botanical remains are considered to be the earliest known evidence for domesticated squash plants on the continent and to demonstrate that domestication of maize from *teosinte*, a wild local plant, took place in Oaxaca. In other caves are rock paintings.

At the western extremity of the property are the archaeological complexes of Yagul and Caballito Blanco.

The landscape that combines these archaeological elements is mainly farmed and grazed, with in some places remnants of low-lying forest, which is seen to reflect the type of natural resources that would have been available to early man.

These four elements are considered separately:

- Prehistoric caves
- Yagul
- Caballito Blanco
- Landscape

Prehistoric Caves

One hundred and forty-seven caves and rock shelters have been identified that were used in prehistoric times. These are scattered over the cliffs and outcrops of the lower slopes of the Mixe Mountains. Three caves were excavated in the 1960s – see History below – the remainder have been surveyed and recorded. The most significant caves are:

Guilá Naquitz

This small cave located at 1,926 metres above sea level was the key focus of the excavations in the 1960s. The dry conditions within it allowed the survival of botanical evidence. The excavation by Flannery (see History below) produced corn cobs, the seeds of squash and beans, and rind fragments of bottle gourds, as well as evidence that the site was occupied several times intermittently between 8,000 and 6,500 BC, by hunter-gatherers.

The wide range of plant food recovered within the cave deposits, including the wild forms of bottle gourd, squash and beans, are said to be evidence of early cultivation of these plants.

Analysis by AMS radio-carbon dating indicates that the seeds of squash, bottle gourds and beans date back to around 8,000 BC and are the earliest dated evidence for domesticated plants in the continent, while the three corn cobs from around 4,200 BC are the earliest dated samples of cobs, and thus, it is suggested, provide evidence for the domestication of corn earlier than that suggested by the previous finds from Tehuacán (2,700 BC).

Although not reported in the nomination dossier, since these excavations were undertaken, yet earlier evidence has been found for the domestication of corn from Rio Balsas from around 6,700 BC– see History below - and it is now clear that Naquitz does not present the earliest evidence of domestication of corn nor the evidence for it being the locus of the earliest spread of domestication on the continent. However the finds from Rio Balsas relate to grains and phytoliths rather than to cobs.

Cueva Blanca

This cave was also excavated in the 1960s and provided evidence of Pleistocene animals and stone tools.

Martinez Rock Shelter

Excavations of this shelter in the 1960s produced projectile points and small amounts of ceramics.

Cueva de la Paloma

On the ground of the cave is unexcavated sediment. On the walls are two rock paintings, one of two anthropomorphic figures and the second of a dove.

Abrigo Banco de Silex

This rock shelter shows evidence of flint working. Nearby is evidence of quarrying – the date of which is not given.

Cueva de los Machines

This cave has many red rock paintings illustrating a face, feline designs, corn, aquatic patterns and images of hands.

Caves around Caballito Blanco

Within rock shelters are paintings and petroglyphs, including a 'candelabra' and a white horse after which the ruins were named.

Gheo Shih site

An open encampment, located at low level near the river, has provided evidence for seasonal use of the abundant summer resources of fruit and small mammals. The site includes two parallel lines of small boulders and perforated stones have also been found on the site. (This is outside the nominated area, within the Buffer Zone.)

Yagul

The site of Yagul reflects the break-up of Zapotec hegemony in the Oaxaca valley, with the abandonment of Monte Alban (inscribed in 1987), and the subsequent diffusion of power and development to smaller urban centres, such as Yagul. It is suggested that these states would not have reached such levels of socio-cultural sophistication had it not been for agriculture. Yagul thus represents a different stage in the development of the valley.

The remains built mainly of stone and mud mortar consist, principally, of the Palace of Six Patios or 'labyrinth', the classically designed Ball Court facing east-west; a U-shaped building on one of the highest points of the site; the Council Room, built on a platform; five further patios and the Fortress following the natural, almost circular form of the highest hill.

Caballito Blanco

Southeast of Yagul lies the archaeological complex of Caballito Blanco (Little White Horse) in the upper portion of the field of the same name, with pre-Hispanic ruins of the pre-classical period, and several caves with significant examples of rock art - both paintings on cave walls and engravings on the cave floor - possibly used for the celebration of public rituals. The complex of Caballito Blanco has three small, low pre-Hispanic buildings with well defined rock walls, defining a central space or plaza.

Surrounding the site are caves that were occupied in different pre-Hispanic periods. The site itself is dated to Monte Alban II - which corresponds to the period when there was an urban revolution in the Oaxaca valley and in other Mesoamerican sites. The ruins comprise the remains of three low structures around a central space or plaza, a further small structure that has been interpreted as a steam bath, and an arrow shaped building that could be an observatory.

Landscape

In the plain around Yagul the landscape is intensively cultivated, while on the higher slopes there is some cattle grazing but otherwise minimal exploitation, as a result of the recent diminution of agriculture. In small pockets there are remnants of low-level forest. Pollen analysis carried out by Flannery on the material from Guilá Naquitz cave and on the current vegetation indicate that almost all species represented in the cave are still extant today.

The nomination dossier indicates that the landscape is valued in two ways. First the remnant forests are seen as places that reflect the type of vegetation that would have been available to pre-historic man. Secondly the general abandonment of the higher reaches of the overall landscape with its almost minimal agricultural use is seen as an opportunity to create a recreational landscape that attracts tourists for its aesthetic appeal.

The nomination dossier includes extensive documentation on the significance of corn in Meso-American culture and mythology. It is stated that '*corn, whose origin is found in the Prehistoric Caves of Yagul and Mitla provided the basis for development of the civilisations that began in Mesoamerica. It provided the economic incentive and the nutritional basis for this to be able to occur. It also became a central element in the culture and that of its descendants both of indigenous blood and those Mexicans of mixed blood who still today claim it as a part of their national identity*'. As set out in History below, it is now known that modern maize comes from one type of wild teosinte, and the type found in Oaxaca is not ancestral to domesticated maize. Genetic evidence from Guerrero, in the Rio Balsas, has shown that maize was domesticated there from a different type of teosinte and at a much earlier date than found at Naquitz cave. The corn cob from Naquitz cave dates to about 1,000 years after the first known domestication at Rio Balsas.

The large polygonal buffer zone surrounding the nominated property varies in size, according to its specific protective role. On the south it runs along the Oaxaca-Mitla highway to prevent unauthorised urban growth from the Tlacolula area; to the north it protects an extensive basin-shaped terrain with natural springs.

History and development

Hunter-gatherers followed nomadic lives in the area up to the end of the Ice Age, some 10,000 years ago, and, with the improvement in climate gradually moved towards a more settled way of life. Evidence of this gradual evolution, with the progressive domestication and improvement of plant species leading to an eventual agriculture-based society, and evidence of this gradual change has been preserved in two of the perpetually dry caves and one open site.

Sixty caves and rock shelters were surveyed in the 1960s by Kevin V Flannery. He excavated four sites: Guilá Naquitz and Cueva Blanca caves, the Martínez rock shelter, and also the open site of Gheo Shih (outside the nominated area). This work was seen to have produced evidence of the shift from nomadic to semi-sedentary lifestyles. Only three sites out of all the 147 caves and sites have provided botanical evidence. These are, Guilá Naquitz, Cueva Blanca and Gheo Shih. Some of the finds from Flannery's excavation are deposited in the Museum of the Cultures of Oaxaca, in Oaxaca City. Others were subjected to destructive testing and no longer exist.

In 1996 further exploration produced an inventory of plants on the property and in 2001 surveys identified caves not recorded in the 1960s.

Work was undertaken by the University of Michigan between 1970-80 on the cultural ecology of the Valley. The caves and rock shelters were further studied in 1995 by Victoria Arriola. From 1996 intensive research has continued, in particular, through the efforts of the National Institute of Anthropology and History. Finds from the Naquitz cave have been also been re-assessed by the Smithsonian Institution through accelerator mass spectrometry (AMS) radiocarbon dating, along with finds of early domesticated plant assemblages that were recovered in the 1950s and 1960s from four other caves in Mexico: Tamaulipas (Romero's and Valenzuela's Caves), and Tehuacán (Coxcatlan and San Marcos Caves).

In Oaxaca, evidence for the beginnings of plant domestication and settled agriculture during the period between 8,900 and 2,000 BC has been divided into four phases: Naquitz, Jicaras, Blanca and Martínez, after three of the four sites that provided evidence.

In the Naquitz phase (8,900-6,700 BC) within the Paleo-Indian period, evidence from Guilá Naquitz cave has been found for domestication of local plants including gourds, squash, beans and corn.

The Jicaras phase (5,000-4,000 BC) is related to evidence from Gheo Shih site, an open encampment, which seems to have seen seasonal and temporary use.

The Blanca phases (3,300–2,800 BC) relates to finds of projectiles from the Cueva Blanca cave linked to more permanent settlements.

The gradual shift from social groups based primarily on hunting to ones that were primarily based on settled agriculture took place in multiple areas at the same time across the Mesoamerican region.

The nominated property at the time it was excavated produced some of the earliest examples of domesticated plants. Although the evidence is acknowledged as being fragmentary, it is seen to outline this complex process.

In the 40 years since some of the caves on the property were investigated, further research at the Rio Balsas lowlands in south-west Mexico has revealed extensive evidence for the sequence from hunter-gathers gathering a variety of teosinte, the wild ancestor of maize, (7,000 BC), to its domestication and dispersal into the highlands of Oaxaca and other areas. One material difference between the two areas is that the evidence in Rio Balsas for the domestication of corn was based on seed evidence, whereas what was found in Oaxaca was a corn cob. However the seed evidence is much earlier than the corn cob.

The site of Yagul reflects one of a series of small city-states that emerged following the decline of the urban State of Monte Alban (remains inscribed on the World Heritage list in 1987) with its smaller satellite societies across the Valley, such as at the settlement at Caballito Blanco, a network of sites spaced at approximately 5km intervals.

The Yagul site was explored from 1954-61.

With the 16th century Spanish conquest in Oaxaca, land use moved away from the indigenous systems. The village governors were able to retain their lands and did not resist the invasion. Hernán Cortés, who was named the first marquis of the Valley, protected it from the huge changes endured in the Mexico Valley. Few Spaniards were at that stage interested in land acquisition however, by 17th century, large haciendas and labors (small farms with employed labour) had appeared, providing local markets with animal products and grains. Close to Yagul stand the remains of the Soriano hacienda including a decorated chapel.

In the early 20th century, major land and agrarian reforms occurred in Mexico. The community of the Union Zapata in the Valley is an example. It emerged in the 1930s as an *ejido*, with the former ranch, after considerable struggle, divided among 20 families of landless peons. There was not enough land for the community, it was minimally productive and issues arose over the common land 'the Fortress' with the Mitla community. Resentments continue between the landowners.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

In the nomination dossier, the nominated property is compared to a number of properties already inscribed on the World Heritage List – but not to properties that might in the future be inscribed. The analysis aims to demonstrate similarities rather than to demonstrate that there is no similar property on the List. It is stated that a considerable number of inscribed sites are comparable to the property in terms of aesthetics, settlement patterns and cave drawings.

The inscribed sites listed include Tassili n'Ajjer, Algeria, Cueva de las Manos, Rio Pinturas, Argentina, Gobustan Rock Art Cultural Landscape, Azerbaijan, and 15 other rock art properties; Neolithic Flint mines at Spiennes (Mons), Belgium, Kuk Early Agricultural Site, Papua New Guinea; and the conclusion drawn is that these share diverse elements with the nominated property.

As set out, this comparative analysis does not justify how there is room on the World Heritage List for the nominated site, nor does it set out to demonstrate that there are no other properties that might be nominated in the future with similar attributes.

As the focus of the nomination is evidence for the early domestication of crops and settlement formation, combined with the way the overall cultural landscape shows evidence of later state formation and the persistence of endemic species, ICOMOS considered that the comparative analysis needed to start from this combination of attributes. The State Party was therefore asked to provide further comparisons in a letter ICOMOS sent on 18 December 2009.

In the supplementary material submitted, the comparisons are linked only to sites that could be considered as the source of domesticated maize. The property is compared to the Tehuacán Valley only. This comparison shows that both sites demonstrate the development of agriculture and semi-settled communities. However the Tehuacán valley has a longer sequence leading to settled communities, with the Coxcatlan Cave being occupied over a span of nearly 10,000 years and providing *'one of the most extensive and detailed early records of human cultural history in Mesoamerica'*, while Oaxaca has the earliest botanical evidence for domestication of two plants in Guilá Naquitz. It is this one cave that thus sets apart the nominated property from the Tehuacán site.

What this extra material has not demonstrated is how the property as a whole with all its caves and monumental sites, together with endemic species surviving in the landscape – as put forward in the nomination – can be said overall not to have comparators.

However ICOMOS considers that if the three key sites only were to be compared with other possible sites, then a stronger case can be made for showing that their contribution cannot be precisely paralleled elsewhere.

ICOMOS considers that the comparative analysis does not currently provide justification of the consideration of this property as nominated for the World Heritage List. ICOMOS considers that the analysis needs to be modified to reflect the significance of the three key sites.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

The Prehistoric Caves of Yagul and Mitla in the central valley of Oaxaca constitute a cultural landscape of Outstanding Universal Value made up of extraordinarily rich places that provide evidence that the earliest domestication of plants, especially of corn, took place among a compendium of plants that are used for human survival. They constitute the most integrated example of a cultural landscape that maintains the components of the original lifestyle of human groups in the region. The cultural landscape of the Prehistoric Caves of Yagul and Mitla demonstrate the link between man and nature that gave origin to the domestication of plants in North America, thus allowing the rise of Mesoamerican civilisations.

The Outstanding Universal Value is considered to be reflected in a cultural landscape that is comprised of a series of caves and rock shelters, the natural framework of conserved low deciduous forest and the remains of monumental important post-classical cities that demonstrate the development of Mesoamerican cultures in the periods close to the Spanish conquest.

ICOMOS considers that the claim that the earliest evidence of the domestication of maize/corn is found in the caves of Oaxaca has been challenged, particularly following the identification in the Rio Balsas region in 2009 of the entire sequence from hunter-gatherers exploiting the wild ancestor of maize in around 9,000 BP (7,000 BC) to its domestication and dispersal into the highlands (to Oaxaca) and to the coast via the Isthmus of Tehuantepec. The argument cannot be sustained that Oaxaca is, through the birth, rather than the development, of corn, the cradle of Mesoamerican civilisation.

ICOMOS also considers that Yagul cannot be considered to be one of the most important post-Classical cities. Yagul was the capital of one of a number of city states along with Lambityeco, Mitla and Uxmal, that flourished after the abandonment of Monte Alban. Although the State Party acknowledges this implicitly it argues that by integrating Yagul as part of the property they can convey to visitors the importance of monumental as well as non-built cultural properties in the different stages of development in Mesoamerica. They also argue that Yagul is the result of the long process of plant domestication that took place in the nearby caves and that by including it the site may be *'conceptualised as part of an integrated whole'*.

ICOMOS considers that many civilisations may be said to have been built upon developments in the domestication of plants and that Yagul is no more special in this regard than the remains of the Zapotec

civilisations that preceded it, some of which are already represented on the World Heritage List.

Overall the property is nominated as a cultural landscape that is said to demonstrate the way the domestication of corn underpinned the whole subsequent cultural development of Mesoamerican civilisation, and that this process is manifest in the caves, the endemic plants and the monumental remains of Yagul that represent pre-conquest cultures.

The early evidence for plant domestication was found in one cave excavated in the 1960s. This was related to corn, gourds, squash and beans. In two other caves and an open site were found evidence for earlier hunter-gathering and later informal/ seasonal settlements. The significance of the site in terms of its role in plant domestication thus rests on the one cave – which is set into context by the three other sites, thus demonstrating a long time sequence for use of the area in the pre-historic era. However since the 1960s the process of corn domestication has become clearer and particularly the precise species of wild plants that were cultivated. It is now known that corn was domesticated elsewhere and that the evidence in Oaxaca relates to a period some 1,000 years after the first evidence for the domestication of corn. As for the evidence for the early domestication of gourds, squash and beans, the remains are still the earliest so far recovered. However they relate to one cave and cannot be related to any known dispersal or later development.

ICOMOS considers that the overall cultural landscape as nominated cannot be said to be the site from which the domestication of corn spread around Mesoamerica, nor can its caves and the monumental site of Yagul together be said to show how the domestication of corn led to the flowering of Mesoamerican culture. The one cave, Naquitz, is of importance for the remains that were found of the early domestication of gourds, squash and beans, but this significance cannot easily be spread across the whole nominated area. The remaining caves have not all been investigated: those that have show evidence for pre-historic use, but not botanical evidence, and as a group are of importance but can be paralleled by many other groups of habitation sites in the region.

ICOMOS thus considers that the Naquitz cave could be said to be outstanding for its contribution to our understanding of plant domestication and with Cueva Blanca and Gheo Shih could be said to be a small group of sites that are exceptional in terms of the way they add to our understanding of the link between plant domestication and the beginnings of semi-settled groups of people.

IUCN noted that *“while the nominated property provides important archaeological evidence of the evolution of man’s relationship with nature through the early domestication of plants, such as corn, the present landscape itself is not particularly significant in regard to a contemporary interaction of man and nature.”*

Integrity and Authenticity

Integrity

Within the boundaries of the nominated property of the Prehistoric Caves of Yagul and Mitla lie all the elements to sustain the Outstanding Universal Value as presented by the State Party. Its size, extent and content are sufficient to ensure the complete representation of its attributes. However ICOMOS does not consider that the justification for Outstanding Universal Value has been made in terms of the whole nominated cultural landscape being associated with the development of corn in Mesoamerica. If Outstanding Universal Value is linked to a much smaller range of attributes: the group of excavated sites, then the integrity relates to a much smaller area.

Authenticity

The claim that the earliest evidence of the domestication of maize/corn is found in one of the caves of Oaxaca has been challenged. The authenticity of this aspect of the nomination is thus questioned. The rest of the caves, the wider landscape and Yagul were all put forward as complimentary attributes to the evidence from this one cave. However ICOMOS considers that Naquitz cave, together with Cueva Blanca and Gheo Shih can be seen to convey sites where early man at an early dates is known to have domesticated certain wild plants and taken putative stapes towards semi-settled lives. For these small number of sites, authenticity can be said to be intact, even though the evidence on which our knowledge is based is no longer physically extant in the caves and sites.

ICOMOS considers that the conditions of integrity and authenticity might be considered to be met for a much smaller area than that nominated and related to a different justification for Outstanding Universal Value.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii) and (iv).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds of the property demonstrating the ability of early man to select the most desirable plants and affect genetic changes to adapt them to the uses and environment in which they found themselves. This resulted from the interchange of knowledge and experience between nomadic groups over a long period of time, during which they were able to adapt environmental conditions for their own benefit and the

domination of agriculture that made civilisation possible all over the world.

ICOMOS considers that although the squash seeds (*Curcubita Pepo*) found in the cave of Guilá Naquitz date back 10,000 years and are some of the oldest signs of plant cultivation in North America, it cannot be argued that the property is the cradle of plant domestication, particularly corn domestication, which subsequently spread out around the region and underpinned pre-Hispanic culture; nor that the advances in Oaxaca made civilisation possible around the world. Further research at other sites has now led to an understanding that the domestication of corn took place elsewhere and spread to Oaxaca; and the squash and bean seeds have not been linked to an understanding of how squash and bean domestication spread from Oaxaca elsewhere.

ICOMOS does not therefore consider that the property, on the basis of seeds and other botanical evidence from one cave, can be seen to demonstrate an important interchange of ideas in relation to plant domestication. Although the property also provides evidence of the transition from hunter-gatherers to settled agriculturalists, such evidence is also found elsewhere and that from Oaxaca cannot be said to be related to an interchange of ideas.

ICOMOS considers that this criterion has not been demonstrated.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that corn, which has documented origins in the Prehistoric Caves of Yagul and Mitla, was not only a food that made the rise of Mesoamerican civilisation possible; this element also became a fundamental part of life, in rites, beliefs and myths and influenced the ways that people saw themselves.

As the plant became more cultivated, it was used over a multitude of geographic areas. It became an important part of whatever culture grew it.

There are many pre-Hispanic myths and legends that contain corn as a central element and that have endured more than five hundred years of European colonisation.

Further, it is stated that the economic and ideological import of this plant is such that cultures are known as "cultures of corn" as opposed to the "cultures of wheat" of the Mediterranean, and the "cultures of rice" of Asia.

ICOMOS considers that the idea of culture of corn is a very broad category that could be said to apply to many societies in Central America. As it has not been demonstrated that the domestication of corn can be linked directly to Oaxaca, the way that the property can

be seen to be an exceptional testimony to the culture of corn has not been demonstrated.

However ICOMOS considers that the evidence from Guilá Naquitz cave related to the domestication of other plants – squash, gourds and beans, linked with the evidence from Cueva Blanca and Gheo Shih can together be seen to be an exceptional testimony to a very specific aspect of prehistory in central America.

ICOMOS considers that this criterion could be justified for a much smaller area than that nominated.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the cultural landscape contains the most compelling evidence of the transition of nomadic hunter-gatherers to settlements in the western hemisphere. This is important both regionally and universally. The extensive use of the site for medicine and foods for survival resulted in a profound knowledge of the area and made possible the following domestication of plants. The extraordinary beauty of the site (with the caves and rock shelters surrounded by native plants and small fields), combined with monuments of different periods, yield a vision of a place of universal importance.

The continuity of agricultural activity from prehistoric times until now is demonstrated through a gamut of archaeological evidence denoting different stages of cultural complexity. The natural border of low growing, deciduous jungle has fortuitously been conserved and presents an incomparable landscape. It contains many species with different uses including some found only in this area, and reflects a sustainable ecological equilibrium between man and nature over many periods of time.

ICOMOS considers that although the assemblage of sites within the landscape including the caves, the endemic species used by early man and the post-Classic and Pre-classic architectural ruins of Yagul and Caballito Blanco respectively, reflects some aspects of the transition from nomadic hunter-gatherers to settled agriculturalists making use of local natural resources, and then to the development of centralised pre-Hispanic societies, this evidence cannot be related to any significant stages in human history. The transition from hunter-gatherers to settled agriculturalists is demonstrated at other sites, some of which such as Rio Balsas demonstrate a much more detailed sequence. The link between settled agriculturalists and centralised societies is also not linked through the evidence to any specific periods in human history - the transition is better demonstrated at other earlier sites that reflect the beginnings of Zapotec culture rather than its break-up as demonstrated by Yagul.

ICOMOS considers that this criterion has not been demonstrated.

ICOMOS considers that criterion (iii) and Outstanding Universal Value could be demonstrated for a much smaller number of sites than has been nominated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The primary factor that threatens the site is rapid urban growth from Tlacolula, specifically the Duvil-Yasib area and the Tres Piedras neighbourhood to the southwest of the site area. Officers patrol this area to identify and prevent new invasions into the buffer zone of the property. The government is relocating families that have moved into the site's protected area. The nominated area itself is almost uninhabited with only a few isolated houses in the vast extent of land. The federal highway is close by and is the reason for constant inspections to see if any archaeological rescue needs to be carried out in the area. From the information from the 2000 Census of Population and Housing, the socio-economic indicators reveal immense social problems in the relevant communities, from lack of security, lack of education and lack of adequate income.

IUCN noted that: *"The area proposed for inscription is mainly dedicated to intensive agriculture and grazing. The more natural landscapes are in the buffer zone on the northern side of the property where a small ecological reserve is proposed to protect a watershed characterised by springs, intermittent streams, and a low lying deciduous forest. The natural values of the area appear to be of local or national significance. It is noted, however, that this portion of the nominated property serves to buffer the larger area from extreme weather events and to protect aesthetic values. The nomination provides little information on the integrity of the site, except to note the progressive encroachment of the urban periphery on the agricultural components of the site."*

Tourism pressures

The tourist influx in Yagul is not massive; to date it is not a relevant factor in the deterioration of the site. The site has adequate resources for patrols to protect it from any harm from visitors. Visitors are not permitted into the caves.

Environmental pressures

The sites have been exposed to the elements which slowly degrade them, possibly over thousands of years. While the damage is not drastic, it creates salt build up which may cause cracks, fissures and rock falls, all requiring preventative action. It is possible that further acidification of the atmosphere will worsen this effect.

Monitoring of these risks and action plans are in place. Corrective actions such as treating the area with substances that feed on the damaging phenomena or replacing infected elements to avoid propagation are the usual solutions to retard deterioration.

Natural disasters

If potential or actual damage occurs to the archaeological structures by earthquake, fire or hurricane, applications may be made to the National Fund for Natural Disasters (FONDEN) to help protect or restore damaged buildings. Fortunately, this has been unnecessary for this site, unlike the neighbouring sites of Monte Alban, Mitla and Lambityeco that suffered extensive damage. After Hurricane Stan, in 2005, damaged the central plaza of Monte Alban, FONDEN funded the restoration.

Impact of climate change

ICOMOS considers that the property could be vulnerable to changes in climate that impact on the vegetation of the area. For instance changes in rainfall could lead to over-grazing and erosion of soil which could impact on the remaining archaeological deposits.

ICOMOS considers that the main threat to the property is from urban development.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries to the property are clearly defined inside a polygonal outline that encloses 1,515.17 hectares, with an extent of terrain included for its potential to reveal further information under study. The defined area coincides with existing protected cultural and natural areas. However the boundaries are drawn across natural features and the property does not form a coherent geographical unit.

The buffer zone boundaries add a further 3,859.74 hectares, giving a total area for the property and buffer of 5,374.91 hectares. The buffer zone includes not only natural protected areas but also several sectors to protect the property from expanding urban areas or rural enterprises.

The buffer zone is appropriate in extent, delineation and land use zoning to protect the nominated property from specific pressures from neighbouring developments.

ICOMOS considers that the boundaries of the nominated property and its buffer zone might be considered appropriate if re-drawn to reflect geographical features. They also need to be reduced, in line with the

recommendations relating to Outstanding Universal Value.

Ownership

The ownership of the property is complex. It is made up of some communal land ownership, *ejidos*, private and government ownership corresponding to the municipalities of Tlacolula, Mitla and Diaz Ordaz. Agrarian centres and agencies include:

- Communal Property of Diaz Ordaz
- *Ejido* Diaz Ordaz
- Communal Properties of Mitla
- *Ejido* Union Zapata
- Communal Properties of Tlacolula
- *Ejido* Tlacolula
- Tanivet Agency
- Private property
- Nationally held lands

Protection

Legal Protection

The Yagul part of the property has protection as follows:

- Presidential Decree, declaring Zone of Archaeological Monuments in the Yagul Area, located in the Tlacolula de Matamoros Municipality, Oaxaca State (2001), covering 1,076 ha.
- Presidential Decree, declaring the Zone of Archaeological Monuments in the Yagul Area as Protected Natural Area and Natural Monument (1999).

However the remaining archaeological and landscape areas do not currently have national or municipal protection.

There are ongoing specific projects to protect these parts of the property. The nomination dossier states that *'The protected site area of the caves is in the process of being decreed. Also, the zone is in the process of registration as a protected municipal site for its use as part of ejidos (common lands) and communities'*.

Traditional protection

Under the Management Plan, in the major *Zone B – Controlled Use* on the nominated property, only traditional methods of farming, with indigenous plant species is permitted.

Effectiveness of the protection measures

The National Institute of Anthropology and History has a local delegation in Oaxaca with different branches. The

Yagul Archaeological Monuments Zone is taken care of by these branches and several actions to protect and conserve the site are being undertaken. This occurs for all cultural elements throughout the nominated area and buffer zone. The National Commission for Natural Protected Areas (CONANP) is in charge of the same procedures for the natural elements in the area.

ICOMOS considers that although the staff of the National Institute for Anthropology and History work with the property, there is a need for adequate legal protection to be put in place, not just for Yagul.

Conservation

Inventories, recording, research

The supplementary information provided by the State Party states that, following a bibliographic review of published and unpublished materials, an archaeological survey of the region was begun. This project is still ongoing. The aim is to record all previously unknown caves and rock shelters that can still be found in the area.

All visible archaeological evidence is recorded on record sheets for each site, together with mapping and photographs.

All documents, photographs and bibliographies that refer to the nominated property are held in the Centre for Documentation and Research of World Heritage Sites under the supervision of the Administration of the Archaeological Zone of Monte Alban, itself supervised by the National Institute of Anthropology and History.

Present state of conservation

The state of conservation of the caves differs markedly in relation to their location. Caballito Blanco has suffered the greatest deterioration. Some graffiti has even overwritten prehistoric cave drawings. There is also rubbish present and impact from grazing cattle. This level of damage is caused by the site's accessibility through proximity to the urban encroachment from Tlacolula.

In contrast, the caves and shelters in the area of Guilá Naquitz are in good condition, with only one exception - graffiti on a single element. Trash is minimal. The main problem is waste from the cattle which shelter here. The good state of conservation of the site is because of its distance from population centres and the difficulty of access – over an hour's walk. The properties are *ejidos* (common lands), with a watch committee to protect them from outsiders or prowlers. This has contributed significantly to conserving the abundant archaeological relics which have contributed the most significant information on the site.

With regard to pre-Hispanic architectural remains, Caballito Blanco has suffered major losses, as the area

was for many years used to grow corn and maguey. It is impossible to know how many structures were originally present. Three original structures have been described during restoration and their current state is relatively good. Some monuments of Yagul show signs of deterioration from their prolonged exposure to the elements. To counter this, in 2007, the *Integrated Program for Conservation of the Cultural and Natural Resources in the Yagul-Mitla Zone* was established to restore the most damaged structures. These include the Palace of Six Patios, the Council Room and the east building of the fourth patio.

In the Palace of Six Patios, patios C, E and F have been levelled and waste removed in critical areas. In the Council Room much of the building was replaced, modelling the original construction and stabilising it. In patio 4, the main staircase was uncovered and cleared of the debris from historical ransacking. All these projects are complete with documentation of the restorations, before and after, to keep control on the completed work. While it is necessary to continue to work on the site, past interventions have conserved much of it and it is now in a good state of conservation.

With regard to the landscape, the nominated area of the property is mainly dedicated to intensive agriculture and grazing. The more natural landscapes are in the buffer zone on the northern side of the property.

ICOMOS considers that overall the conservation of the caves relates more to whether or not they are remote than to a strategy of active conservation. Those readily accessible either to people or animals are suffering. This leads to concerns about the impact of increased visitor access to the property and the need to regulate grazing. ICOMOS considers that a more active conservation policy is needed to ensure that undisturbed remains are conserved.

Active Conservation measures

The principles guiding conservation policy for both cultural and natural elements of the property were agreed in 2007 by the two principal authorities, the National Institute of Anthropology and History (INAH) and the National Commission for Natural Protected Areas (CONANP). The principles are to:

- conserve the cultural landscape;
- assess the nature and condition of ecosystems;
- survey the presence and typology of monumental architecture;
- study the prehistoric evidence of human activities;
- survey present activities and uses of land;
- survey the ownership of land and how it is used;
- investigate the history of management practices and the interaction between people and the environment;
- research historical values and the present state of biodiversity.

Although these principles are sound, active conservation on the ground seems to be limited to some parts of the property.

ICOMOS considers that many elements could benefit from more regular conservation and protection.

Maintenance

The only regular cleaning and maintenance is carried out at the monuments of Yagul, on the structures of the monuments themselves and on the areas surrounding them. The side of the Archaeological Zone facing the highway is kept cleared, in order to be visible from surrounding areas. This has increased public awareness of the cultural landscape that the site represents.

Effectiveness of conservation measures

The general condition of conservation across the property is fair for both cultural and landscape aspects. While the state of conservation of Caballito Blanco remains the greatest concern, the conservation team has been successful in removing graffiti. Nevertheless ICOMOS considers that a full and sufficient conservation and maintenance regime is not in place for all the caves and archaeological sites, nor for the overall landscape.

ICOMOS considers the conservation and maintenance needs to be improved to ensure that they address the needs not only of the readily accessible monumental remains but the collection of caves and the wider landscape.

Management

Management structures and processes, including traditional management processes

The principal authorities responsible for the management of the property are the National Institute of Anthropology and History (INAH) concerned with all archaeological and cultural sites – including support for research and the preparation of inventories - and the National Commission for Natural Protected Areas (CONANP), both of which have state and local branches or departments. CONANP is responsible for the conservation of natural species and scenic spots in the Yagul area. In conjunction with INAH it establishes agreements with communities, favouring traditional land use practices.

Policy framework: management plans and arrangements, including visitor management and presentation

In 1999, a Management Plan was approved for the Oaxaca Valley Archaeological Corridor (CAVO), attached to the existing management plan of the Monte Alban Archaeological Zone. It established a corridor, to extend protection and management to the archaeology

of the whole Oaxaca Valley, including the significant Yagul – Mitla region. A program to survey the region was based on the evidence from Flannery’s research.

The Plan was established for 10 years (2005 – 2015) with the following goals:

- Long term preservation of cultural, natural and scientific values and resources into open areas and zones of archaeology and nature reserves.
- Provide to the general public the use of the assemblage of archaeological sites in the Valley for educational and recreational purposes, stressing the importance of the place as a “cultural corridor” through time.

The management plan considers three basic issues:

Social Factors: The regional socio-economic situation is one of the most depressed in the country, where most of the population has a salary of less than \$10 US per day. The Management Plan seeks to increase the quality of life for people associated with the property - with benefits in education and cultural advancement but mainly to increase income through the rational use of property as a cultural resource, with gradual training and extended employment.

Technical Aspects: The technical aspect must respect the vulnerability of both cultural and natural components of the property. This will be assessed for a plan that estimates the carrying capacity of the property for sustainable public access. A separate scientific project will explore the thematic potential of each component of the area.

Cultural Issues: The Management Plan will support the continuity of local cultural traditions within the property, such as traditional agriculture activities which are still alive and significant for the local and national identity. Other related cultural practices will be re-activated, such as rituals around corn and other traditional plants and the rich local gastronomy attached to traditional agricultural practices.

Four land use zones have been established across the nominated property and the buffer zone to regulate developments and activities. They are:

- Zone A: to be used exclusively for scientific investigation
- Zone B: for compatible uses only
- Zone C: as ecological reserve and basin protection
- Zone D: to contain urban growth.

The Management Plan also endorses joint projects with Municipalities, State and Region to:

- Stimulate traditional agricultural practices of basic food products

- Encourage the sustainable reproduction and exploitation of applicable native plants (medicinal, ornamental)
- Promote activities and services for ecological tourism through community agencies.
- Support interpretation centres and improved services in local towns surrounding the property, to encourage greater visitation to the region.

The Management Plan is to be governed by a Site Commission of representatives from the different levels of government and a Scientific Commission of representatives from appropriate scientific research institutions.

Risk preparedness

No information is provided on this question.

Involvement of the local communities

Local communities have diverse access and ownership of the land in the property - communal land ownership, *ejidos*, private and government ownership through the municipalities of Tlacolula, Mitla and Díaz Ordaz. Their participation in the planning, management and work on the nominated property is actively encouraged by both INAH and CONANP. The World Heritage project, in seeking to further involve the communities in the management and conservation of the site, includes consideration of their economic welfare.

Resources, including staffing levels, expertise and training

The principal funding agency is INAH, which supports most of the budget for research, conservation, restoration and management of the archaeological sites. Other sources have been CONACULTA for specific projects or foreign universities or agencies, supporting projects lead by external researchers. Funding and administration for the natural landscape is from CONANP with an annual budget for conservation and management with the communities.

The expertise and training of the staff is of a higher level. Most archaeologist, anthropologist, curator, conservator or lawyer come from institutions such as the Escuela Nacional de Antropología e Historia, Universidad Veracruzana, Escuela Nacional de Conservación or Universidad Benito Juárez de Oaxaca.

Management specialists come from the archaeological zone of Monte Alban (INAH), a site for which strategies have been developed for the management of archaeological sites all over Mexico and in other countries in Latin America. Technical, legal and management staff operate under the standards of INAH.

Effectiveness of current management

ICOMOS considers that the Management Plan presented is complete, adequate and innovative, and has the basic resources to be achieved. The proposition for joint management by two strong national agencies, as INAH and CONANP, provides a strong institutional presence, with skills to guarantee the effectiveness of actions to conserve and manage the property and its values.

ICOMOS considers that the management system for the property overall is adequate, although newly implemented and thus still being proved. It should be extended to include provisions for risk preparedness.

6. MONITORING

The archaeological sites, particularly in the region of caves but also the pre- and post-Hispanic ruins, have been exposed to the elements which slowly degrade them, over thousands of years. Further acidification of the atmosphere may worsen the situation. Regular monitoring of these risks is in place. Similarly, the site itself is patrolled to monitor incursions.

The State Party has identified key indicators for the regular measurement of the property's state of conservation. These are grouped under the headings: urban, socio-economic yields; natural; rupestrian elements; management; judicial department; and diffusion. It is not made clear who is responsible for this monitoring system.

ICOMOS considers that the monitoring system is satisfactory but needs to be linked to the management system.

7. CONCLUSIONS

The property has been nominated as an extensive cultural landscape with caves and shelters that are said to be associated with earliest evidence for plant domestication and in particular with evidence of the early domestication of corn, which is said to underpin the whole cultural development of Mesoamerica, as demonstrated by the monumental remains at Yagul.

Although the Guilá Naquitz cave has provided the earliest known botanical evidence of bottle gourds, beans and squash and the earliest known maize cobs, and, with two other sites, has provided evidence to demonstrate the evolution from hunter-gathering to more settled communities, what has not been demonstrated is how the complex of caves as a whole and the entire landscape within which they are set, together with the Yagul remains, can be said to have exceptional value. Other sites such as Tehuacán and Rio Balsas also demonstrate a sequence from hunter-gathering to more

settled communities, and have longer and more complex evidence, and specific evidence for plant domestication which in the case of Rio Balsas pushes the date for maize cultivation back much further than at Oaxaca.

The one distinguishing feature of the nominated property is the evidence discovered within the Guilá Naquitz cave that gives it precedence in terms of it having provided the earliest known date in the Americas for one type of domesticated plant and the earliest dated maize cob (although not the earliest evidence of domesticated maize and not evidence for the transition to settled agriculture). ICOMOS does not consider that this single cave justifies consideration of the extensive cultural landscape for inscription on the World Heritage List.

ICOMOS recognises that plant domestication practices are diffuse and occur across regions, and while the Guilá Naquitz cave provides an excellent example of a site from which extraordinarily well preserved botanical evidence was retrieved, it cannot be seen as the exemplar site in terms of demonstrating a fundamental shift in our understanding of the beginnings of settled agriculture and society; nor a significant link to the domestication of corn that is not found in other areas or sites; nor a fundamental link between the domestication of corn and the development of centralised societies in Mesoamerica – which are better demonstrated elsewhere. Nevertheless Guilá Naquitz cave, together with the Cueva Blanca and Gheo Shih sites do provide a valuable testimony to very specific aspects of pre-history related to the beginnings of agriculture and semi-settled life.

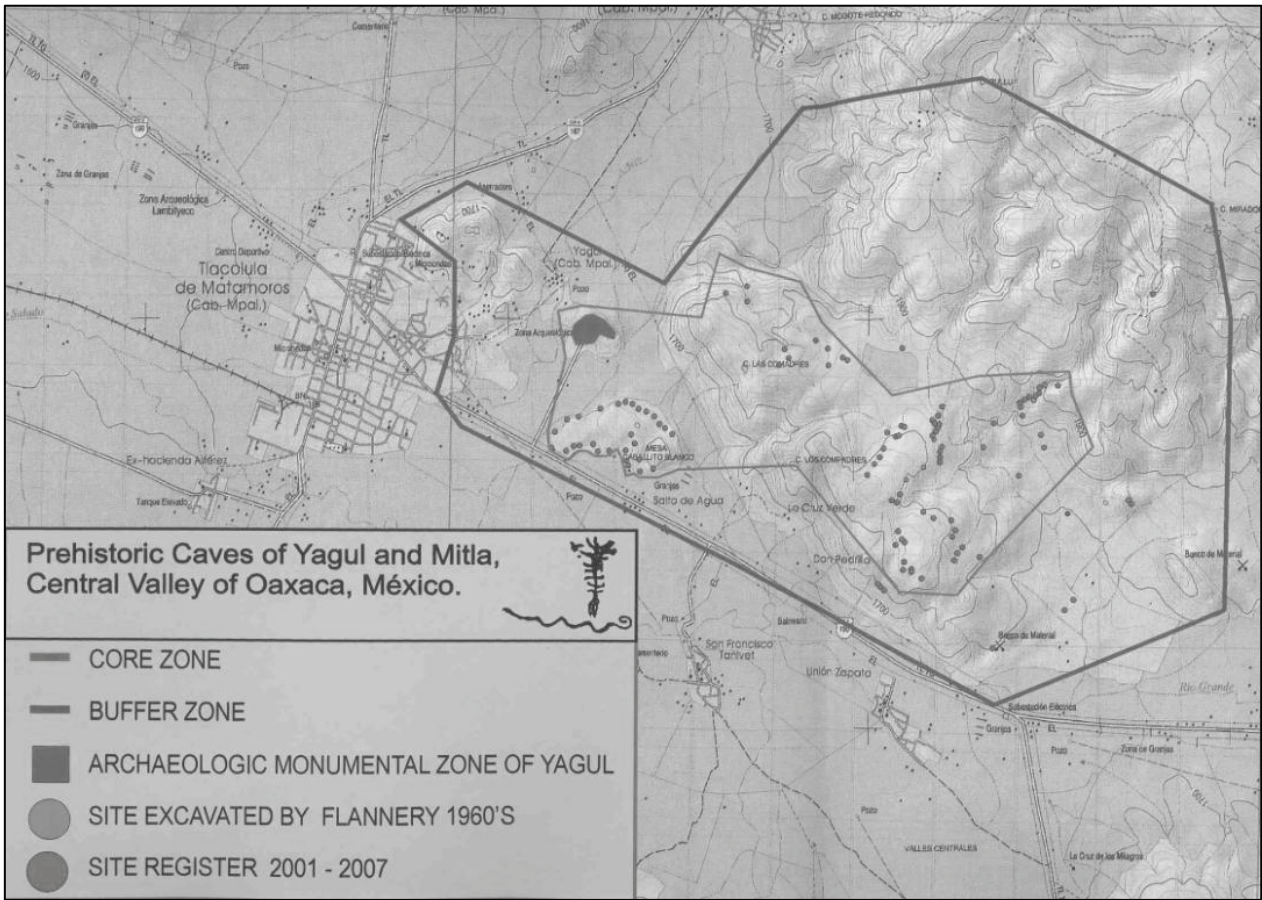
ICOMOS considers that in time with the results of more research into other caves in the area, a much smaller area than has currently been proposed could be nominated to reflect only the caves, shelters and early sites. These would however need to be very well conserved, have legal protection and carefully controlled access that allowed an understanding of their full significance.

Recommendations with respect to inscription

ICOMOS recommends that the nomination of the Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca, Mexico, be **referred back** to the State Party to allow it to:

- Define a much smaller area based on the Guilá Naquitz, Cueva Blanca and Gheo Shih sites;
- Put in place a revised comparative analysis to reflect the reduced area;
- Put in place legal protection for the whole nominated area;

- Put in place an active conservation policy to ensure grazing and access are controlled, and risk preparedness measures;
- Put in place a sustainable access strategy based on the carrying capacity of the nominated area;
- Promote a research programme to consider whether in time more substantial evidence might be uncovered that could allow the landscape of Oaxaca to be seen as having been a focus for the domestication of plants and the transition to settled agriculture that is exceptional in the context of its geo-cultural region.



Map showing the boundaries of the nominated property



Landscape within the nominated property



Archaeological complex of Caballito Blanco



Guila Naquitz cave



Rock paintings in Cueva de Los Machines

V Nominations of natural properties to the World Heritage List

A Asia - Pacific

New Nominations

Danxia (China)

No 1335

1. BASIC DATA

Official name as proposed by the State Party:

China Danxia

Location:

Chishui, Zunyi City, Guizhou Province
Taining, Sanming City, Fujian Province
Langshan, Shaoyang City, Hu'nan Province
Danxiashan, Shaoguan City, Guangdong Province
Longhushan, Yingtan City, Shangrao City,
Jiangxi Province
Jianglangshan, Quzhou City, Zhejiang Province
People's Republic of China

Brief description:

This nomination proposes the inscription of six areas, with buffer zones, that are representative of Danxia (red bed) landscapes in the southern humid zones of China. Demonstrating different stages of geological evolution, from most recent to oldest, they are:

1. Chishui, Zunyi City, Guizhou Province
2. Taining, Sanming City, Fujian Province
3. Langshan, Shaoyang City, Hu'nan Province
4. Danxiashan, Shaoguan City, Guangdong Province
5. Longhushan, Yingtan City, Shangrao City, Jiangxi Province
6. Jianglangshan, Quzhou City, Zhejiang Province

These red, sedimentary sandstones and conglomerates are characterized by spectacular landscapes of peaks, cliffs and canyons with subtropical evergreen broadleaved forests and great scenic beauty. China Danxia is also "*an outstanding global example of harmonious coexistence between humanity and nature*" (3.b-5).

Background information:

This is a new nomination. The property is nominated on the basis of criteria (vii), (viii), (ix) and (x).

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Extensive cultural values of China Danxia are described at length in the nomination dossier. With millennia of human occupation, the region and the individual sites within it are filled with rich cultural associations, ranging from prehistoric human use of natural resources and ancient agricultural settlement to contemporary human activities with long histories including farming, religious and scholarly activities, tourism and scientific activities. Each of the six areas has notable cultural associations and resources, including strong associations with and material evidences of Taoist, Buddhist and Confucian cultures.

China already has inscribed a number of World Heritage Sites related to significant representations of these cultures that are justified under criterion (vi). They include Lushan National Park (1996), where Mount Lushan is described as "*one of the spiritual centres of Chinese civilization. Buddhist and Taoist temples, along with landmarks of Confucianism...*"; Mount Qingcheng and the Dujiangyan Irrigation System (2000), with temples closely associated with the founding of Taoism; Mogao Caves (1987), "*spanning 1,000 years of Buddhist art*"; Mount Emei Scenic Area, including Leshan Giant Buddha Scenic Area (1996); Mount Wutai (2009), "*one of the four sacred Buddhist mountains in China*"; and Mount Taishan (1987), associated with the emergence of Confucianism, the Temple and Cemetery of Confucius and the Kong Family Mansion in Qufu (1994) and Mount Wuyi (1999), "*the cradle of Neo-Confucianism*". Mount Qingcheng, Mount Emei and Mount Wuyi all have Danxia landscapes.

Referenced for both its Taoist associations and its Yue culture in the proposed statement of Outstanding Universal Value, Longhushan stands out among the sites for its cultural values. They are evidenced in the culture of cliff burial / hanging coffins associated with the Ancient Yue Family ca 2,500BP, significant associations with the founding of Taoism and its Taoist courts and a continuing role as "the Taoism bethel of China", a Buddhist centre of some importance, poems and inscriptions of the Tang Dynasty on cliffs, and Xiangshan College. Longhushan's role in Taoism is particularly notable and might have the capacity to compare with Mount Wuyi's relationship with Neo-Confucianism.

The most important attribute, from the perspective of cultural value, is China Danxia's representation of the tradition in Chinese culture and religions of the perceived harmonious co-existence between people and nature which inseparably unifies cultural and natural associations in landscape. In the language of the proposed statement of Outstanding Universal Value, the landscapes embody "*A history of people adapted to their natural environment, demonstrating the harmonious coexistence between people and nature*" (3.b-1).

In addressing this aspect of the landscape, the State Party has focused on criterion (vii): to contain superlative

natural phenomena or areas of exceptional natural beauty and aesthetic importance. In justification of this criterion, it is stated that Danxia has a scenically superlative landscape and landforms and exceptional natural beauty, and holds a special place in Chinese culture. While the aesthetics of shape and form are highly important, the aesthetic significance of Danxia landscapes is not limited to these attributes. The scenery is seen as an embodiment of natural features with cultural meaning, and its exceptional beauty derives as much from spiritual and emotional associations as from visual qualities. *“The beauty of Danxia landscapes has promoted the development of China’s aesthetic culture, and given birth to series of exclusive terms of Danxia aesthetics. (...) Danxiashan is named for its colourful appearance akin to that of rose-coloured clouds.”* Chinese phrases used to describe Danxia mountain blocks and caves refer respectively to *“the ancient castle built by gold”* and *“the palace for a king or emperor (...) the ground where the gods live”* (2.a-5-2). *“The mountains like ‘ancient gold castles’ give a sense of solemnity and sacredness. At the same time they symbolize authority, richness and honor. The landscape colour has become associated with traditional religions. Thus, the Danxia landscapes are holy lands in religious terms, and perfect places for refined scholars to rest, and become immortal”.* (3.a-1)

Many Chinese traditional religious cultures are strongly associated with Danxia landscapes, and landscape components have religious significance embodying long-term associations between religious beliefs and natural landscapes. *“The purple hues of Danxia landscapes give people a sense of heavenliness, and are associated with authority, wealth and good fortune in traditional Chinese culture. Purple is also the main colour associated with China’s religions”.*

This association with religion is not limited to its visual qualities: the landscape is studied caves, statues and inscriptions. Temples built in Danxia caves *“strengthen the authority and mystery of the religious places and their environmental associations”* and *“funerals in Danxia caves made by ancients to ensure passage to heaven, that are closely related to the unique shapes and individuality of Danxia landforms”*. Large numbers of inscriptions on stone, statues and murals occur on cliff walls and in rock caves. *“This close relationship between landscape and people creates a particular special cultural association in Danxia areas that can be called a ‘Danxia culture’, which is well recognized in China”*. Aesthetics embodies a harmony between humanity and earth. *“The landscapes take on the significance of an immortal realm of sublime natural beauty”.* (2.a-5-2; 3.b-2)

Overall the justification that is put forward for criterion (vii) is very similar to the justification accepted for criterion (vi) for Mount Wutai (World Heritage Site 2009) which *“reflects perfectly the fusion between natural landscape and Buddhist culture, religious belief on the*

natural landscape and Chinese philosophical thinking on the harmony between man and nature”.

3. ICOMOS CONCLUSIONS

ICOMOS notes the care with which the State Party has integrated the cultural values of aesthetics and coexistence of humanity and nature in China Danxia into the nomination document, including the latter in the proposed statement of Outstanding Universal Value.

ICOMOS considers that the proposed justification for criterion (vii) in relation to Longhushan goes far beyond the recognised use of this criterion for natural areas that are perceived to have natural beauty.

The justification put forward is for cultural associations linked to religion and for cultural interventions in terms of rock caves, inscription, etc. which more normally would be associated with criterion (vi) and other cultural criteria.

ICOMOS considers that it would be inappropriate to recognise criterion (vii) for Longhushan for the justification put forward.

If the current justification is contemplated for this nomination, in line with what has been put forward by the State Party, then ICOMOS considers that this nomination should be considered as a mixed site and evaluated for its cultural significance by ICOMOS.



Dispersal wide valley peaks forest landscape in Longhushan



Ancient cliff tombs in Longhushan

Phoenix Islands (Kiribati) No 1325

1. BASIC DATA

Official name as proposed by the State Party:

Phoenix Islands Protected Area

Location:

Phoenix Islands
Kiribati

Brief description:

This nomination proposes inscription of the eight atoll islands, two submerged reefs, at least 14 seamounts and surrounding marine area that comprise the Phoenix Islands Protected Area (PIPA). Remotely situated in the Central Pacific Ocean midway between Australia and Hawaii, Kiribati includes the Gilbert Islands, the Phoenix Islands and the Line Islands that together make up less than 1% of its sovereign domain. PIPA, described as "an oceanic wilderness", is the largest marine protected area in the world.

Background information:

This is a new nomination. The property is nominated on the basis of criteria (vii), (ix) and (x).

Literature consulted (selection):

Smith, A. and Jones, K. L., *Cultural Landscapes of the Pacific Islands: ICOMOS Thematic Study*, December 2007.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Currently uninhabited except for government caretakers on the largest atoll (Kanton, 9km²), the islands have material evidences and immaterial associations of periodic occupation over one to two millennia. Cultural associations are described in the nomination document (pp.60-82), and work is underway to determine the importance of the cultural values. The area has not been extensively studied in the academic literature. Identified cultural values relate to archaeological evidence of early colonization by Micronesians and Polynesians, ancient and recent oral traditions, and archaeological remains of post-contact land uses from the 19th and 20th centuries.

3. ICOMOS CONCLUSIONS

ICOMOS considers that further work would be required to determine whether there might be justification for the use of cultural criteria in relation to the link between the atolls and migrations across the Pacific. ICOMOS considers that the ICOMOS Thematic Study on *Cultural Landscapes of the Pacific Islands* would be relevant to guide any further work that might be undertaken in a comparative context.

Even though ICOMOS considers that, on the basis of current evidence, the use of cultural criteria could not be justified, it nevertheless encourages the State Party to identify and respect the cultural values in the management of the Phoenix Islands Protected Area.

Tajik National Park (Tajikistan)

No 1252

1. BASIC DATA

Official name as proposed by the State Party:

Tajik National Park (Mountains of the Pamirs)

Location:

Gorno-Badakhshan Autonomous Region
Tajikistan

Brief description:

This nomination proposes inscription of Tajik National Park on the "Roof of the World", the Pamir Mountains of Tajikistan. Situated in the Gorno-Badakhshan Autonomous Region and bordering Kyrgyzstan to the north, the park comprises the high central part of the Pamirs, primarily in East Pamir. It includes cold continental deserts, a biome not currently (p.5) / not adequately (p.40) represented on the World Heritage List, as well as the highest mountain peaks, the largest glaciers and the largest fresh water reserve (Sarez Lake, formed in 1911 as a result of an earthquake) in Central Asia.

Background information:

This is a new nomination. The property is nominated on the basis of criteria (vii), (viii), (ix) and (x).

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Although the nomination states that there are a lot of natural, cultural and historic monuments within the boundaries (p.5), only natural features are identified as examples, and such cultural and historic monuments are not mentioned again.

Addressing cultural associations within the park area only very briefly (*History of economic development*, p.36), the nomination indicates that Neolithic and Bronze Age peoples inhabited the mountain area, probably seasonally, as evidenced by large quantities of argali and mountain goat bones dating to these periods; since then nomadic tribes have continued to occupy the Pamirs, primarily for pasturing and breeding cattle. A half century of Soviet collective farms policy disrupted the traditional transhumance grazing systems among the sparse population of the high Pamirs. Five settlements (pop. ca 2,000) near the upper reaches of the Bartang

River are identified as the sole settlements in the park area today.

The nomination gives details of Russian scientists who dominated exploration of the Pamirs in the late 19th century. Pamirski Post (now town of Murghab), established in the early 1890s and a key factor in the late 19th century 'Great Game', lies outside the boundaries of the nominated area and buffer zone. Remnants of quartz and marble mining installations from the Soviet period are mentioned in the buffer zone (p.57).

Information is provided of Gorno-Badakhshan (formerly Mountain Badakhshan), "*one of the world's centers of cultivated plants origin*" (p.39), which was included in the Russian academician N. Vavilov's worldwide "*areas of basic origin of cultivated plants*". He identified the high mountain desert of Pamir-Badakhshan as one of four areas in the high mountain Central Asiatic agro-ecological region, noting that agriculture here has existed for several millennia and ecotypes of barley, wheat and rye distinct from other agro-ecological regions of the world have evolved.

3. ICOMOS CONCLUSIONS

ICOMOS considers that the full importance of the property in cultural terms has not been set out in the nomination.

In the Pamirs, there is a wide range of evidence for human activity spreading back over 20,000 years. There is an urgent need to identify and evaluate the extensive known remains of Stone Age sites, cave paintings & petroglyphs, ritual sites, solar calendars, caravanserai, Buddhist remains and evidence of the Silk Roads trade, including some substantial remains of fortresses and castles.

The work already undertaken by the Academy of Sciences needs to be set out as a full survey of the cultural attributes of this archaeologically sensitive area in order to inform management and in order not to preclude further exploration and assessment of cultural sites in the future, some of which, either on their own or as a serial group, may have the capacity to justify cultural criteria.



High mountain village in the Vanch River Valley



Yaks grazing near Bulunkul Lake

B Europe – North America

New Nominations

Pitons, cirques and remparts of Reunion Island (France) No 1317

1. BASIC DATA

Official name as proposed by the State Party:

Pitons, cirques and remparts of Reunion Island

Location:

La Réunion, France

Brief description:

This nomination proposes inscription of the protected high area of L'île de la Réunion, a *département* or overseas region of France located 700km east of Madagascar, in the southwest Indian Ocean. The nominated area focuses on the peaks, cirques and ramparts of the two volcanic massifs that make up the island: le Piton des Neiges, a dormant volcano to the northwest, and le Piton de la Fournaise, an active volcano to the southeast. Interior areas zoned as urban and cultivated and an external surround constitute the buffer zone. The nominated area and buffer zone together comprise the Parc national de La Réunion (2007). Through the dynamics of volcanism, erosion and living form, the island is in permanent and rapid transformation.

Background information:

This is a new nomination. The property is nominated on the basis of criteria (vii), (viii), (ix) and (x).

Literature consulted (selection):

Gilles Pignon, "Écomusée-Salazie: un outil pédagogique de l'interculturalité", in Raoul Lucas, dir., *Sociétés plurielles dans l'océan Indien: enjeux culturels et scientifiques* (Paris, éditions Karthala), 195-206, 2002.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Known to the Arabs as early as the 11th century, the island became an important place of call on European voyages to the Indies from the 16th to the mid-19th centuries; it became a French colony in the mid-17th century. The 18th-century coffee plantations, with slave labour from Africa and Madagascar, and the sugar cane enterprises that succeeded them in the 19th century

centred on slopes and lowlands outside the nominated area.

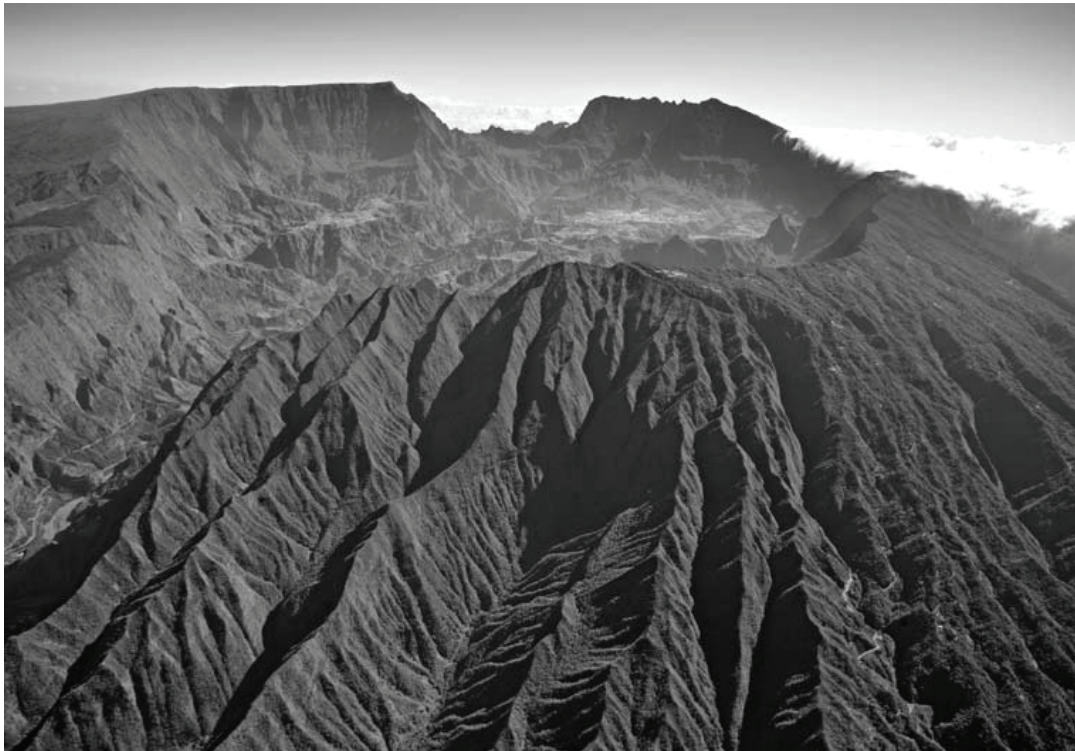
From the early 18th century until the abolition of slavery in 1848 and after, runaway slaves (Maroons Noirs) took refuge in the inaccessible cirques (Cilaos, Salazie and Mafate), revitalizing there the cultural traditions of their Madagasy homeland for over a century. Cultural values are embodied in place names, plant names and oral tradition (P. Eve; cf. pp.105, 107, 111, 241-44, 246) that reflect the history and human associations of the cirques. Later, villages formed within them, particularly around the hot-springs at Cilaos that led to development of colonial thermal spas. These centres, now used for tourism, comprise nodes of buffer zone within the nominated area.

The cultural value of biological and botanical discoveries is well-documented through historical floras, collections, names of places and plants, and oral traditions. The impact of human activity on indigenous flora and fauna of the island includes both losses from exploitation of natural resources and regeneration under protection from damaging land uses.

3. ICOMOS CONCLUSIONS

With a history of plantations and of the use of slaves and particularly of maroons, sheltering in remote areas, the property has similarities with the inscribed property of Le Morne Cultural Landscape, Mauritius. However, ICOMOS does not consider that the association of the property with maroons is sufficiently significant to justify consideration of cultural criteria.

Nevertheless, ICOMOS encourages the State Party to continue to respect the human histories of the park area, including the cultural value of the cirques, in the management of the property and to support activities such as the Écomusée-Salazie and the Maison du Peuplement des Hauts in Cilaos that valorize Creole heritage.



Aerial view of Cilaos cirque



View of the Mafate (left) and Salazie (right) cirques

Properties deferred or referred back by previous sessions of the World Heritage Committee

Dinosaur Ichnites (Portugal/Spain) No 1204rev

1. BASIC DATA

Official name as proposed by the State Parties:

Dinosaur Ichnites of the Iberian Peninsula

Locations:

Portugal:

Pedreira do Galinha, Lisboa e Vale do Tejo (NUTII) / Santarém.

Vale de Meios, Lisboa e Vale do Tejo (NUTII) / Santarém.

Pedra da Mua, Lisboa e Vale do Tejo (NUTII) / Setúbal.

Spain:

Tereñes, Principado de Asturias.

Fuentesalvo, Castilla y León.

Las Cerradicas, Aragón.

Costalomo, Castilla y León.

El Peladillo, La Rioja.

Los Cayos, La Rioja.

Tambuc, Comunidad Valenciana.

Fumanya, Cataluña.

Brief description:

This nomination presents 11 disconnected nodes of dinosaur tracks (ichnites) and trackways in the Iberian Peninsula: #1-3 in Portugal and #4-11 in Spain. They represent faunal succession of dinosaurs during the last 100 million years of the Mesozoic Era. From oldest to most recent, the sites, with locations, are:

1. Pedreira do Galinha – Parque Natural des Serras d'Aire e Candeeiros, Santarém
2. Vale de Meios – Parque Natural des Serras d'Aire e Candeeiros, Santarém
3. Pedra da Mua – Cabo Espichel, Setubal
4. Tereñes – Spain's Dinosaur Coast, Ribadesella, Asturias
5. Fuentesalvo – Villar del Rio, Soria, Castilla y León
6. Las Cerradicas – Galve, Teruel, Aragón
7. Costalomo – Salas de los Infantes, Burgos, Castilla y León
8. El Pedadillo – Igea, La Rioja
9. Los Cayos – Cornago, La Rioja
10. Tambuc – Millares, Valencia, Comunidad Valenciana
11. Fumanya – Vallcebre - Figols, Barcelona, Cataluña.

The sites are small and specific. Several sites were discovered in the course of local quarrying and mining activities.

Background information:

This is a deferred nomination (30COM 8B.26). The property is nominated solely on the basis of criterion (viii).

Literature consulted (selection):

Mary Lee Nolan and Sidney Nolan, "Regional Variations in Europe's Roman Catholic Pilgrimage Traditions" in R.H. Stoddard and A. Morinis, *Sacred Places, Sacred Spaces; the Geography of Pilgrimages* (Baton Rouge LA: Geoscience Publications, University of Louisiana), 61-93, 1997.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Cultural values are primarily associated with Pedra da Mua (Portugal), which derives its name from a well-known legend, said to date from the 13th century AD, of the apparition of the Virgin Mary holding the Baby Jesus and riding a mule from the beach to the cliff top at Cape Espichel. Fishermen regarded the sauropod dinosaur tracks as evidence of the legend. By the 15th century a hermitage (Ermita da Memoria) on the rock outcrop was a place of pilgrimage known as Pedra da Mua, and the site apparently remained so into the 18th century. A neglected architectural complex centres on the early 18th century Baroque Sanctuary of Nossa Senhora da Pedra da Mua (do Cabo), with its extensive pilgrim lodges and a chapel housing an 18th century ceramic tile depicting the legend (p.98, cf. 195, 198). The shrine is not, however, on the nominated ichnite site nor immediately adjacent to it, being on Cape Espichel, while the ichnite site lies between the Cape and Praia dos Lagosteiros. Pilgrimages, equinoctial worship and an annual festival continue today at Cape Espichel. Amid 300 Christian shrines in Portugal identified by Nolan and Nolan (see *Literature consulted*) and other religious and pilgrimage sites in the region, the shrine site appears to be of regional importance. The legend of Pedra da Mua is a notable, sustained example of geomythology.

National legislation on cultural heritage includes palaeontological heritage as a cultural asset, and a number of the ichnites sites are designated in accordance with the Spanish Historical Heritage Act (1985). Several provinces also include palaeontological heritage and/or provide protection for Cultural Interest Sites of palaeontological value under cultural heritage acts.

3. ICOMOS CONCLUSIONS

ICOMOS does not consider that the cultural associations of the fossil sites have the significance needed to justify cultural criteria.



General view of Pedra da Mua

Putorana Plateau (Russian Federation) No 1234rev

1. BASIC DATA

Official name as proposed by the State Party:

Putorana Plateau

Location:

Krasnoyarsky Krai, Russian Federation

Brief description:

This nomination proposes inscription of the Putoransky Reserve, which occupies the central part of the Putorana Plateau, in the northwest part of the Central Siberian Plateau. Situated on the natural border between taiga and tundra in the Eastern Palaearctic, the plateau represents subarctic tundra and forest tundra ecosystems, which are underrepresented on the World Heritage List. It is the only habitat of Putorana bighorn sheep, and experiences massive seasonal migrations of wild reindeer.

Background information:

This is a differed nomination (32COM 8B.13). The property is nominated on the basis of criteria (vii) and (ix).

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Cultural associations are briefly addressed in the nomination (especially *History of land-use*, pp.48-49), but only in the context of impact on natural values and in a philosophical separation of culture and nature. Cultural values relate primarily to the cultural relationship between indigenous peoples, particularly the Dolgan and Evenk, land and animals and the long historic use of the Putorana Plateau for reindeer herding, hunting and fishing. In the past the Putorana mountain system was intensely used for these activities, of which some material evidence such as corral remnants, changes to vegetative structural patterns, traps, decaying buildings and traces of ancient fires remain in the Reserve (pp.48-49, 74).

Reindeer herding and breeding were key components of the traditional livelihood of the Dolgan, in whose traditional forest-tundra occupation area the plateau largely exists, and of the Evenk, the northwest edge of

whose traditional territory extends into the plateau. Despite Collectivization in the 1930s, some remained nomadic until the mid-20th century. Herding of domesticated reindeer on the plateau declined only in the 1950s, although hunting of diverse fauna and fishing continued. State collective reindeer farming in the Reserve area from the mid-1960s to the mid-1970s ended prior to the establishment of the Reserve in 1989.

Approximately 400 Dolgan and Evenk, whose traditional occupation is reindeer herding, fishing and hunting, live today in Khantaisky village beside Khantaiskoye Lake; it is the only village on the plateau and sits outside the Reserve and buffer zone (p.76). Eleven tribal community and farmer production units are reported in the buffer zone. Work of the 'Bunisyak' farmstead near Lake Lama includes restoration and conservation of traditional use of the land by indigenous people (p.82). Even though substantial use of the Reserve appears to have ended about 25 years ago, the Dolgan and Evenk, continue to attach cultural value to the property and the buffer zone.

This assessment has not attempted to consider cultural values associated with any of the extensive and continuing 20th century development outside the nominated area which impacts the western part of the buffer zone (pp.44, 45, 74).

3. ICOMOS CONCLUSIONS

ICOMOS considers that the cultural significance of the landscape associated with a reindeer based economy of Dolgan and Evenk needs to be recognised and sustained as these peoples have exceptionally long associations with this area of what is now Siberia in comparison with the very recent 'creation' of this plateau as a natural Reserve in 1989.

ICOMOS is concerned that this nomination appears to condone the removal of reindeer hunters from this area and the suppression of the very longstanding traditional activities of reindeer herding and hunting, and questions whether this area could not be managed in conjunction with traditional practices.



Domestic reindeer grazing

Extensions

Pirin National Park (Bulgaria)

No 225bis

1. BASIC DATA

Official name as proposed by the State Party:

Pirin National Park as World Heritage Property

Location:

Blagoevgrad District
Republic of Bulgaria

Brief description:

The extension provides for inclusion of the formerly excluded central alpine zone and the exclusion of two ski zones, placed in a buffer zone, that compromise the integrity of the park. It also makes other small alterations, through inclusions and exclusions, to shape the World Heritage Site boundaries to conform to those of the national park and issues of integrity.

Background information:

The property is nominated on the basis of criteria (vii), (ix) and (x). This is an extension of the park which was inscribed on the World Heritage List at the 7th session (Florence 1983) of the World Heritage Committee on the basis of criteria (vii), (viii) and (ix).

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

The cultural heritage of the property comprises relics of successive territorial occupations and uses over millennia, including Thracian tumuli, remains of a pre-Roman fortress in the Yulen Reserve and medieval churches (pp.23-24).

More important representations of these assets exist elsewhere in Bulgaria, including in World Heritage Sites: two Thracian tombs, the Ancient City of Nessebar, Madara Rider and Boyana Church.

The nearby historic towns of Melnik (an architectural reserve, much rebuilt after a 1913 fire) and Bansko (with more than 100 cultural and historic monuments) and the Rila Monastery inscribed on the World Heritage List, all closely associated with the 18th- 19th century Bulgarian National Revival, lie outside the existing and proposed boundaries of the World Heritage Site. Historically, an important trade route crossing the lowest saddle of the North Pirin and caravans carrying cottons, tools and

wine passed through its 'Wine Gate' (p.23; WCMC). Traditional use included hunting and harvesting, tobacco-growing and mountain grazing. The region is also strongly associated with sheltering freedom fighters for independence from the Ottoman Empire and retains intangible cultural heritage such as songs. Cultural and historical heritage is addressed in section 1.18 and annex 7.12 of the park management plan.

3. ICOMOS CONCLUSIONS

ICOMOS considers that none of these associations appears to have the significance needed to justify cultural criteria.

Monte San Giorgio (Italy) No 1090bis

1. BASIC DATA

Official name as proposed by the State Party:

Monte San Giorgio

Location:

Regione Lombardia, Provincia di Varese
Italy

Brief description:

This nomination proposes to inscribe the Italian part of Monte San Giorgio as an extension of Monte San Giorgio, Switzerland, inscribed in 2003 as the best fossil record of marine life from the Mid-Triassic Period (245 - 230 million years ago). Justification of the nomination is presented, like its counterpart, under criterion (viii): to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features. The nomination responds to the World Heritage Committee's 2003 decision which encourages a trans-boundary extension.

Background information:

This is an extension to Monte San Giorgio, Switzerland, which was inscribed on the World Heritage List at the 27th session (Paris, 2003) of the World Heritage Committee on the basis of criterion (viii).

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Cultural associations relate to mining, quarrying and the history of palaeontological activities and their contribution to knowledge and are clearly outlined (pp.22-26). Many of the fossil finds resulted from industrial and commercial exploitation of the area, through mining activity in the bituminous shale from the mid-19th century onwards and in the first half of the 20th century for producing an internationally popular medicament, Ichthyol. Viggíú (in the buffer zone) has a history dating from the Roman era. Architect Martino Longhi the Elder (1534-1591) worked there, notably on the Chiesa di Santo Stefano, and founded a dynasty of architects whose principal work was in Rome. The area was noted for Viggíú stone and the art of stone-cutting. The notable Italian Renaissance estate/garden Villa

Cicogna Mozzoni lies outside the boundary of the buffer zone.

3. ICOMOS CONCLUSIONS

ICOMOS does not consider that the cultural associations justify consideration of cultural criteria.



The Spiniolo plant in Meride



Underground stone quarry in Viggù

UNESCO
World Heritage Convention
World Heritage Committee

34th ordinary session
(25 July - 03 August 2010)
Brasilia (Brazil)

2010

Evaluations of Cultural Properties

Prepared by the International Council on Monuments and Sites (ICOMOS)

World Heritage List Nominations 2010

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Tasmanian Wilderness (Australia) No 181bis

1. BASIC DATA

State Party: Australia

Name of property: Tasmanian Wilderness

Location: State of Tasmania

Inscription: 1989

Brief Description:

In a region that has been subjected to severe glaciation, these parks and reserves, with their steep gorges, covering an area of over 1 million ha, constitute one of the last expanses of temperate rainforest in the world. Remains found in limestone caves in the interior attest to the human occupation of the area from the Pleistocene to the end of the Ice Age and near the coast there is evidence of more recent pre-European settlements.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

In 1982 and 1989, the Tasmanian Wilderness World Heritage Area (TWWHA) was inscribed on the World Heritage List as a mixed property under cultural criteria (iii), (iv) and (vi), and under all four natural criteria (vii), (viii), (ix) and (x). In 1989 there was an extension of the property, mainly to the north and east..

State of Conservation (SOC) reports of the property were presented to the World Heritage Committee in 1991, 1992, 1993, 1994, and 1995.

The State Party prepared a management plan for the property and it was presented to the World Heritage Committee as well as SOC reports in 1997, 1998, 1999 and 2003.

During its 30th session (Vilnius, 2006), the World Heritage Committee (Decision 30COM 7B.32) requested, among others, the State Party to: "*submit a revised map of the World Heritage property, showing the areas of extended buffer zone and identifying other use zones directly adjacent to the boundary*".

A State of Conservation report was presented in January 2008.

A Reactive Monitoring Mission for Tasmanian Wilderness took place from 15 to 20 March 2008. It was made up of representatives from the World Heritage Centre, IUCN and ICOMOS. The mission report was reviewed at the 32nd session of the World Heritage Committee (Quebec City, 2008).

In its decision 32 COM 7B.41, the World Heritage Committee adopted the following recommendations:

The World Heritage Committee,

1. *Having examined Document WHC-08/32.COM/7B.Add,*

2. *Recalling Decision 31 COM 7B.43, adopted at its 31st session (Christchurch, 2007),*

3. *Takes note of the findings of the recent World Heritage Centre / ICOMOS / IUCN monitoring mission to the property, and requests the State Party to:*

a) *institute a mechanism through the future Tasmanian Wilderness World Heritage Area (TWWHA) management plan reviews, and involving all relevant stakeholders, to monitor, assess and manage the ecological integrity of the TWWHA and adjoining reserves by considering activities related to forestry operations, road construction and regeneration fires in the areas adjacent to the property;*

b) *submit a proposal for modifying the boundaries of the TWWHA to include the adjacent 21 areas of national parks and state reserves, which are currently not a part of the inscribed World Heritage property but are covered by its management plan;*

c) *not to renew the existing leases for mineral exploration and exploitation within the property and immediately adjacent to it (such as in the Melaleuca Cox Bight area), after their expiry and to rehabilitate the areas concerned and to incorporate them into the World Heritage property. Further, no new mining licenses should be granted within the property or in the areas which are being recommended for addition;*

d) *maintain and improve the resourcing for the research, documentation, protection, monitoring and effective management for archaeological and Aboriginal cultural sites both those within the TWWHA and those in the adjacent forestry areas that reflect the wider context of Aboriginal land-use practices and are of potential Outstanding Universal Value;*

e) *manage the forestry areas outside the inscribed property in order to protect cultural sites of potential Outstanding Universal Value;*

f) ensure logging roads in areas adjacent to the TWWHA consider the ecological integrity, possible cultural sites and aesthetic values of the property, and reclaim roads no longer required;

g) prepare and implement a vegetation management plan covering the TWWHA and the adjoining forest reserves jointly by national parks and the forestry authorities, to address representativity of vegetation types and to reduce risks, particularly from fires and climate change;

h) implement the recommendations emanating from the recently completed 2008 review of the Tasmania Regional Forest Agreement;

i) establish an active programme for monitoring the impacts of climate change on the property and incorporate this programme into a risk-reduction strategy and action plan;

4. Also requests the State Party to revise the Statement of Outstanding Universal Value for the property to include relevant recent natural and cultural knowledge available regarding the site, for approval by the World Heritage Committee;

5. Reiterates its request to the State Party to consider, at its own discretion, extension of the property to include appropriate areas of tall eucalyptus forest, having regard to the advice of IUCN; and also further requests the State Party to consider, at its own discretion, extension of the property to include appropriate cultural sites reflecting the wider context of Aboriginal land-use practices, and the possibility of re-nominating the property as a cultural landscape;

6. Requests moreover the State Party to submit to the World Heritage Centre, by 1 February 2010, an updated report on the state of conservation of the property, including a revised Statement of Outstanding Universal Value and progress related to the above mentioned issues, for examination by the World Heritage Committee at its 34th session in 2010.

Modification:

In February 2010, the State Party submitted to the World Heritage Centre a report entitled: "State party report on the State of Conservation of the Tasmanian Wilderness World Heritage Area (Australia) in response to World Heritage committee Decision WHC 32COM 7B.41".

This report included a request for a minor boundary modification.

The State Party's proposal is to extend the boundaries of the TWWHA by an additional 23,873 hectares. The existing property extends to 1.38 million hectares, or 20% of the State of Tasmania. The proposed extension thus represents a small proportional increase to the property of 0.0172%.

The proposed additions are 21 small areas around the eastern and southern boundaries that are part of national parks or state reserves and the Southwest Conservation Area south of Melaleuca to Cox Bight. The State Party considers that the addition of these adjacent formal reserves will increase the representation of tall eucalypt forests and cultural sites of significance to the Aboriginal community in the property. The areas have been chosen to reflect their significant eucalyptus stands as recommended by IUCN.

No information has been provided by the State Party as to the inclusion within these areas of cultural attributes of Aboriginal importance, not have the boundaries been justified in relation to cultural attributes.

The State Party has provided information on additional resources that are to be made available for the identification and management of Aboriginal cultural heritage sources for the whole of the TWWHA and for Aboriginal capacity building.

The State Party has also endorsed the recommendations of the mission for enhanced protection measures for archaeological and Aboriginal sites within and adjacent to the TWWHA which they say are in line with Forestry Tasmania's Sustainability Charter. This includes measures to identify, protect and maintain Aboriginal and historic cultural heritage values in State forests and seek active consultation with the Aboriginal community to develop opportunities for collaborative management of Aboriginal sites and values.

The State Party report also gives reassurance that cultural sites adjacent to the property will be respected in the planning and management of forest harvesting operations, including logging roads.

The State Party has submitted a retrospective Statement of outstanding universal value for the Committee's consideration and this will be assessed by ICOMOS and IUCN.

Apart from the addition of the 21 adjacent formal reserves and the Southwest Conservation Area south of Melaleuca to Cox Bight, Australia restates that it does not propose to extend the boundary of the TWWHA further.

3. ICOMOS RECOMMENDATIONS

ICOMOS considers that the proposed additions to the TWWHA property rationalise the boundary and are in line with the mission recommendations.

ICOMOS notes that the proposed modification to the boundary of the property includes only one significant Aboriginal site, Warragarra Cave (Mersey Block 1 or 2) and thus cannot be said to significantly improve coverage of Aboriginal sites.

ICOMOS is also aware that potentially significant sites lie outside the extended area and there thus seems to be some illogicality of the boundaries in relation to cultural sites. Pleistocene cave sites outside the boundaries, some of which are protected, should have been considered.

ICOMOS also considers that although a commitment has been given to increase resources for cultural heritage management the resources are small in relation to the size of the property and there is still a need to ensure that cultural heritage specialists are involved in the management of the property.

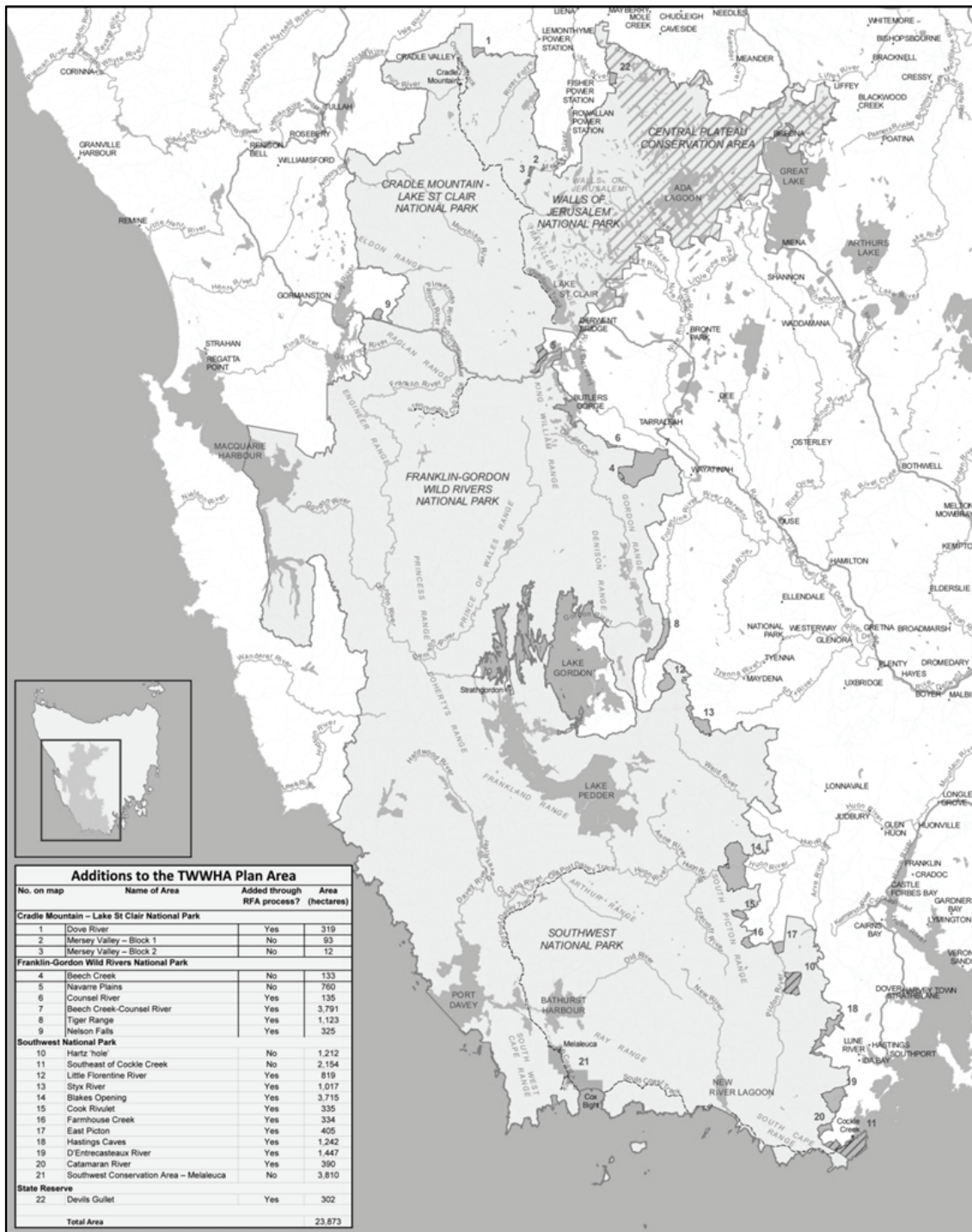
While ICOMOS is not against the extension of the property it considers that the proposal has been drafted from a natural perspective only. With a little more research and documentation and consideration of the disposition of cultural sites, ICOMOS considers that more satisfactory boundaries could have been drawn that would have respected both cultural and natural attributes and the mixed nature of the property.

Recommendation with respect to inscription

ICOMOS recommends that the proposed minor modification to the boundary of Tasmanian Wilderness, Australia, be **approved**.

ICOMOS further recommends that the State Party be requested to consider further minor modifications to the boundaries to allow for inclusion of appropriate cultural sites, related to and complementing those within the property, with appropriate protection being put in place.

ICOMOS also recommends that the State Party be requested to augment its staff with cultural heritage specialists in order to ensure the adequate protection and management of cultural sites both within the property and immediately outside the boundaries.



Map showing the revised boundaries of the property

Medina of Tunis (Tunisia) No 36

1. BASIC DATA

State Party: Tunisia

Name of property:

Medina of Tunis

Location:

Governorate of Tunis

Inscription: 1979

Brief Description:

Under the Almohads and the Hafsids, from the 12th to the 16th century, Tunis was considered one of the greatest and wealthiest cities in the Islamic world. Some 700 monuments, including palaces, mosques, mausoleums, madrasas and fountains, testify to this remarkable past.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background

The inventory included in the nomination dossier of the Medina of Tunis notes that no maps were submitted together with the dossier in 1978. It was indicated that the property comprised 270ha.

A letter dated 2 July 2004 sent by the *Institut National d'Archéologie et d'Art* to the UNESCO Cultural Heritage Division, provided a "map for the Medina of Tunis showing the boundary of the property inscribed on the World Heritage List and the different levels of protection for the traditional urban fabric". This map shows 7 areas surrounded by an "area of environment", a larger zone of protection, identified as follows: historic area of the Medina of Tunis (A), Sidi El Bechír (B), Sebkha (C), El Morkadh (D), Bab Souika (E), Halfaouine (F) and Tronja (G), covering an area of about 70ha.

During the 1st cycle of Periodic Reporting (29 September 2000), it was stated that the buffer zone was not formally established. It was also indicated that the *Institut National du Patrimoine* and the *Association de sauvegarde de la Médina* were developing a safeguard plan.

The retrospective inventory process identified the information needs regarding the property and requested the State Party to clarify if the map submitted in 1984 was showing the boundaries of the World Heritage property and submit a large-scale topographic or cadastral map to show the boundaries of the inscribed property and the buffer zone. It was also requested that the size in hectares of both the property and buffer zone be provided.

At the 33rd session of the World Heritage Committee (Seville, 2009), the Committee adopted the following decision:

Decision 33 COM 8B.45:

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1.Add,*

2. *Refers the examination of the proposed buffer zones for the Medina of Tunis, Tunisia, back to the State Party to allow it to:*

a) *Clarify the areas of the proposed property boundary and that of the buffer zone in relation to those provided with a map of 1984 showing 7 areas surrounded by an "area of environment";*

b) *Review the existing proposal to delineate a buffer zone so as to ensure the proper conservation and protection of the property, taking into consideration its values and its integration with the setting;*

c) *Provide information on how the proposed area will be managed and the regulatory measures foreseen for the buffer zone. Information on how these measures articulate with other planning tools for the place and the mechanisms for implementation should be provided;*

d) *Consider requesting a mission to the property to consider the proposed boundaries in conjunction with the retrospective Statement of Outstanding Universal Value, when completed.*

Modification

In February 2010, the State Party submitted a map showing the boundaries of the property and the proposed buffer zone. It indicated that the area of the inscribed property is 296ha 41a 39ca while that of the buffer area is 190ha 18a 91ca.

Although the original nomination could consider that the property consisted of seven serial sites with a protected area around them, in the current map it is included as a whole. However, because no precise boundaries were submitted at the time of nomination it is difficult to ascertain to which extent this constitutes a modification on the boundaries.

The inclusion of the seven sites inscribed as a series originally in 1979 and their immediate protection zone in the definition of the property itself ensures ICOMOS that the key elements of the property of Outstanding Universal Value are all included and interconnected by an urban fabric which now enjoys the same recognition and protection. The buffer zone proposed by the State Party adds to this protection and should, with the previous elements, enable effective protection and conservation of the property, while allowing for its values and integration in its environment. The fact that the limit of the proposed buffer zone and that of the inscribed property coincide at two points to the south of the Medina does not constitute a problem for ICOMOS, which considers that each of the seven sites inscribed in 1979 is well integrated inside the proposed boundaries, and that they are all surrounded by an urban fabric of sufficient density to ensure their protection.

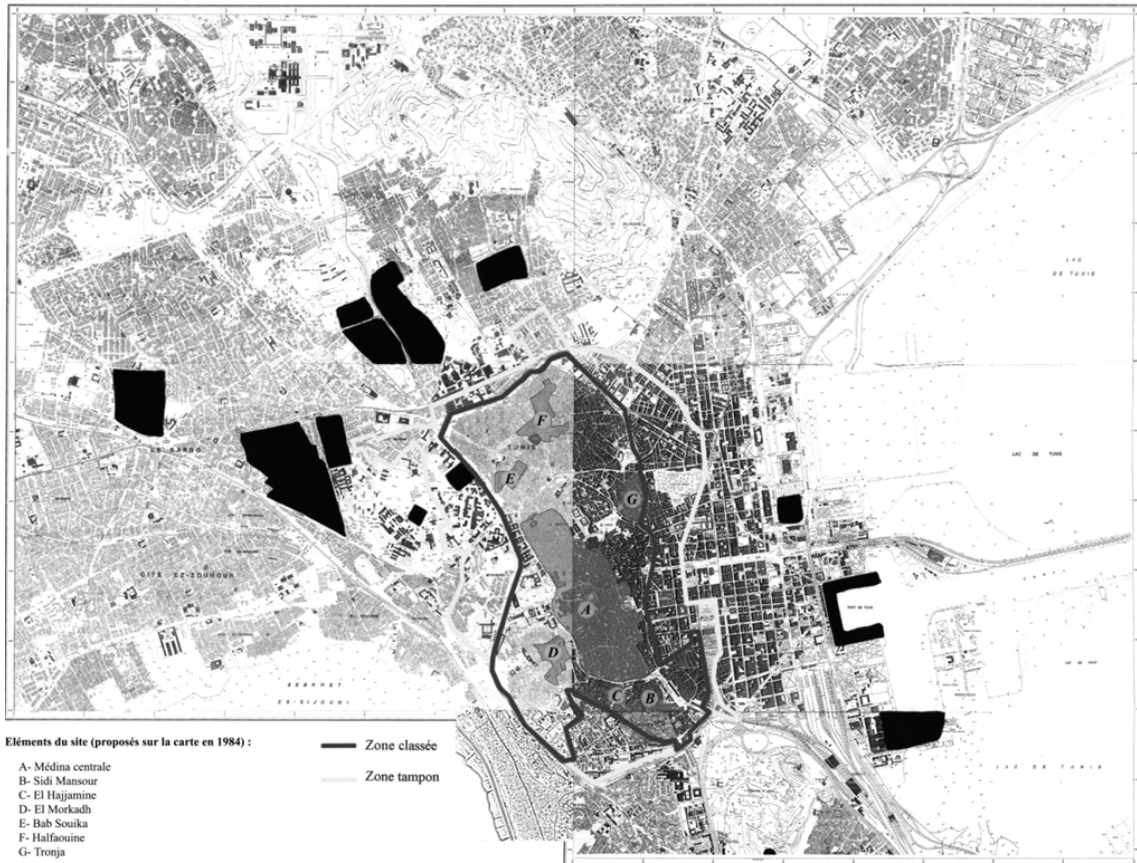
The State Party has also provided the following information and indications concerning the management of the site and regulatory measures:

The Medina of Tunis has been granted national statutory protection for 88 historic monuments. It also enjoys national protection for 5 monuments, 14 streets (including 3 souks) and one square. Its protection is ensured by the *Code du Patrimoine* (Law 94-35 of 24 February 1994), Law 2001-118 of 6 December 2001 on the protection of the archaeological, historic and traditional arts heritage, the statutory protection decrees and protection orders of around one hundred monuments, and by the *Plan d'aménagement urbain* of Tunis (PAU). The Medina of Tunis has a safeguard and management structure under the responsibility of the *Institut National du Patrimoine* and of an *Association de Sauvegarde de la Médina* which is under the Municipal Authority of Tunis.

3. ICOMOS RECOMMENDATIONS

ICOMOS recommends that the proposed boundaries for the Medina of Tunis, Tunisia, be **approved**.

ICOMOS recommends that the proposed buffer zone for the Medina of Tunis, Tunisia, be **approved**.



Map showing the boundaries of the proposed buffer zone

Amphitheatre of El Jem (Tunisia) No 38

1. BASIC DATA

State Party: Tunisia

Name of property:

Amphitheatre of El Jem

Location:

Governorate of Mahdia

Inscription: 1979

Brief Description:

The impressive ruins of the largest colosseum in North Africa, a huge amphitheatre which could hold up to 35,000 spectators, are found in the small village of El Jem. This 3rd-century monument illustrates the grandeur and extent of Imperial Rome.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background

The decree n°103 dated 16 December 1920 established the protection of the monument and its surroundings against modern constructions by creating a building free zone with a radius of 300 m around the property. In the nomination file, a *plan d'aménagement de la ville d'El Jem* was included where the uses are established for the surrounding area.

On 9 June 1988, in response to a questionnaire entitled *Information update on the cultural sites inscribed on the World Heritage List*, the State Party reported that: *The buffer zone around the amphitheatre did not undergo any attack since the proposal for an inscription. However it is advisable to announce that if the adjustment of this space is practically finished in the southern sector or in a good way of completion on the north side, it is not the same for the two east and west sectors, where the extension of the buffer zone and development of the building encounters very complex land and social problems.*

During the 16th session of the World Heritage Committee (16 COM, Santa Fe, 1992), the State Party reported that new constructions would be prohibited by order of the President within a radius of 100 meters around the

amphitheatre (16 COM p.13). However, this was not established formally as a buffer zone. It was also considered that new construction detracted from the authenticity of the property and its character.

The retrospective inventory process identified gaps in information and requested the State Party to submit the largest scale topographic or cadastral map available showing the boundary of the inscribed property and its buffer zone and to indicate the size in hectares of the property and the buffer zone.

At the 33rd session of the World Heritage Committee (Seville, 2009) the State Party presented a plan showing the boundaries of the property and its buffer zone. The inscribed property covers an area of 1.37ha, and the proposed buffer zone an area of 26.41ha. The circular shape of the proposed buffer zone (radius of 300 meters from the centre of the amphitheatre) does not allow for the urban fabric or cadastral boundaries, but as it is relatively large, it includes the area immediately around the property.

During the session, the World Heritage Committee adopted the following recommendation:

Decision 33 COM 8B.42:

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1.Add,*

2. *Refers the examination of the proposed buffer zones for the Amphitheatre of, Tunisia, back to the State Party to allow it to:*

- *provide information on the institutional arrangements and regulatory measures to manage and control development within the proposed buffer zone.*

Modification

On 1st February 2010, the State Party provided the following information and indications concerning the protection of the property:

A presidential decree limits the height of buildings to 5m within a radius of 100 meters from the centre of the amphitheatre, and all rehabilitation, redevelopment or construction applications in this zone must be approved by the services of the Institut National du Patrimoine.

The *Plan d'aménagement de la ville d'El Jem* provides for restricted areas in the buffer zone, and in the archaeological zones (in which all interventions must be preceded by a historic and archaeological study), and for vision cones to preserve urban perspectives (limiting height to 6.40 meters).

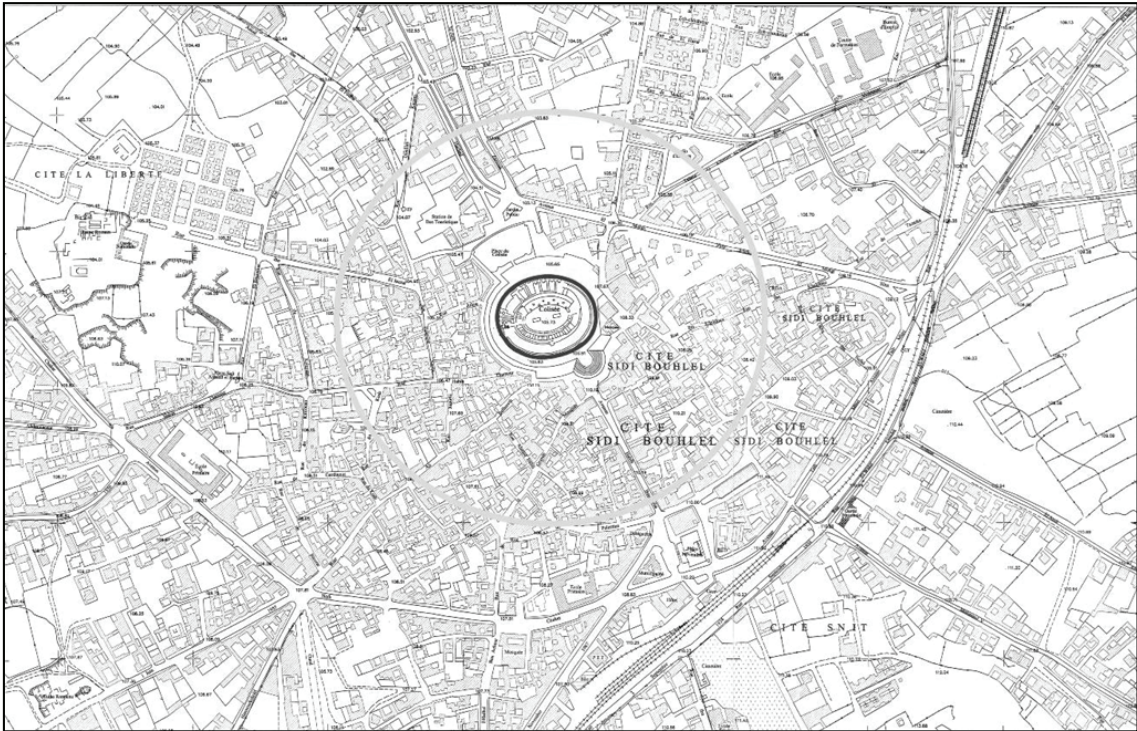
The heritage code (Law 1994-35 of 24 February 1994 on the protection of the archaeological, historic and traditional arts heritage) grants the state a right of inspection for all interventions around the monument (restricted area) and guarantees compliance with the provisions indicated above.

The preservation and management of the Amphitheatre of El Jem is carried out by a management unit run jointly by the *Institut National du Patrimoine* (responsible for scientific and technical matters) and the *Agence de Mise en Valeur du Patrimoine et de Promotion Culturelle* (in charge of the promotion and commercial management of the site).

ICOMOS considers that this information is satisfactory.

3. ICOMOS RECOMMENDATIONS

ICOMOS recommends that the proposed buffer zone for the Amphitheatre of El Jem, Tunisia, be **approved**.



Map showing the boundaries of the proposed buffer zone

Kerkuane (Tunisia) No 332bis

1. BASIC DATA

State Party: Tunisia

Name of property:

Punic Town of Kerkuane and its Necropolis

Location:

Cap Bon, Governorate of Nabeul

Inscription: 1985, 1986

Brief Description:

This Phoenician city was probably abandoned during the First Punic War (c. 250 B.C.) and as a result was not rebuilt by the Romans. The remains constitute the only example of a Phoenicio-Punic city to have survived. The houses were built to a standard plan in accordance with a sophisticated notion of town planning.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background

The Punic town of Kerkuane was inscribed in 1985 and the nomination was revised in 1986 to include the Necropolis. At the time of nomination only basic maps were submitted. In maps subsequently submitted the delimitation of the archaeological site and particularly of the Necropolis was not precise. The retrospective inventory process highlighted this situation and requested the State Party to verify the coordinates of the serial property and to submit revised topographic maps with precise scales or a cadastral map showing the limits of the inscribed property, as well as the indication of the surface in hectares for both elements and the proposed buffer zone.

At the 33rd session of the World Heritage Committee (Seville, 2009), the Committee adopted the following decision:

Decision 33 COM 8B.46:

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1.Add,*

2. *Refers the examination of the proposed buffer zones for the Punic Town of Kerkuane and its Necropolis, Tunisia, back to the State Party to allow it to:*

a) *Clearly delineate an area that promotes the integration between the two components of the inscribed serial property to adequately protect and conserve the property. Current land uses and cadastral plans should be considered for the delimitation of the buffer zone;*

b) *Provide information regarding the administrative and regulatory measures for the buffer zone as well the prescribed policies for its management.*

Modification

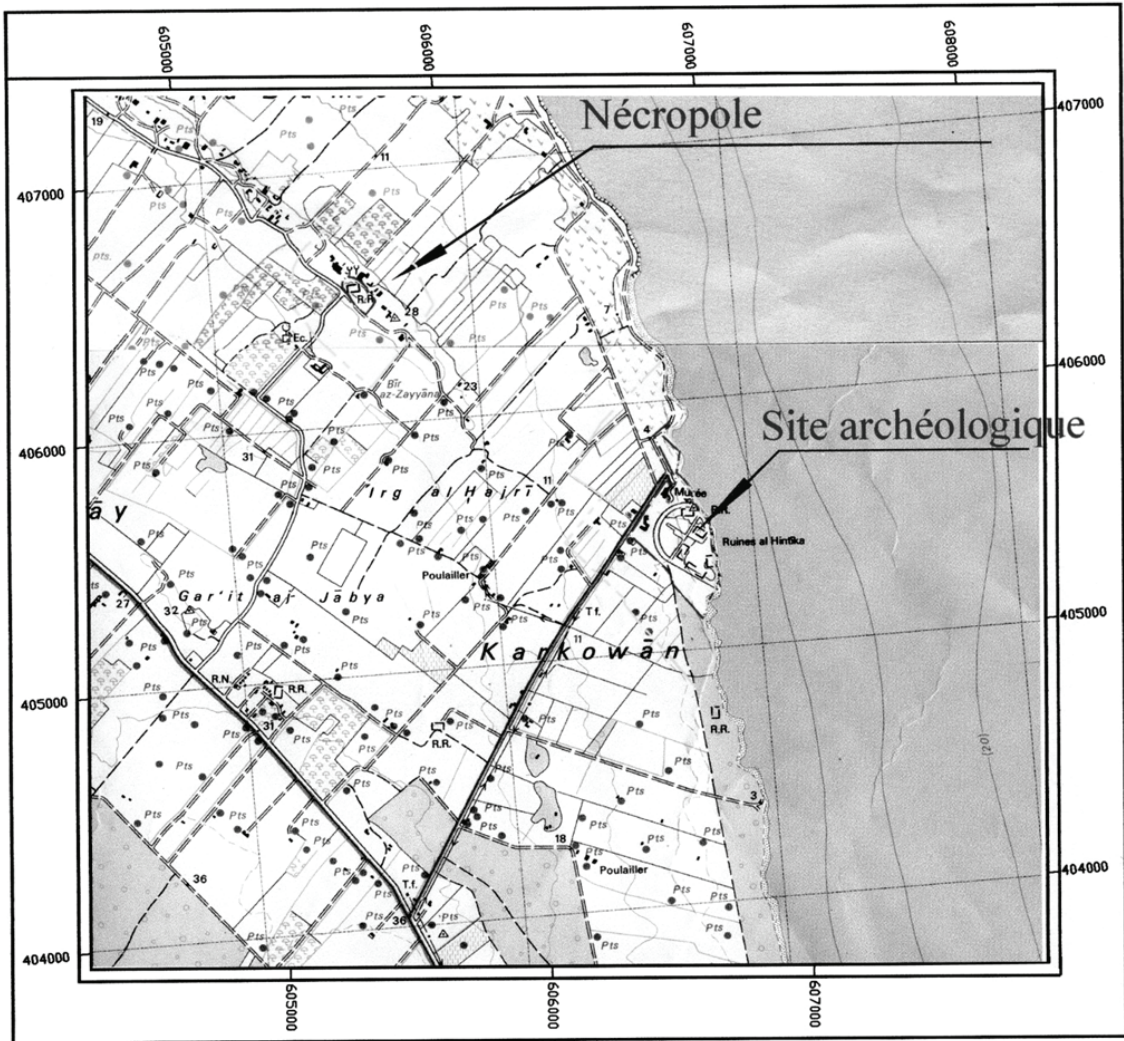
In February 2010, after studying the recommendation made by the World Heritage Committee, the State Party again submitted its original proposal for the boundaries of the two components of the property and their buffer zones, taking the view that it is difficult to consider for the time being a boundary which includes both components of the property inscribed on the World Heritage List. The State Party also provided information about the administrative and regulatory measures, and submitted a map indicating the boundaries of the inscribed property and the two buffer zones. The State Party estimates that the surface area of the inscribed property is 11.19ha and that of the two proposed buffer zones 61.17ha.

ICOMOS considers that the information provided about the administrative and regulatory measures are adequate, but that the plan provided by the State Party and examined by ICOMOS included a scale of 0 to 100 meters which did not correspond to the actual scale of the plan, while the proposed buffer zones (yellow line about 150 meters from the boundaries of the inscribed property) did not allow for the ownership boundaries, or the cadastral or parcel indications.

3. ICOMOS RECOMMENDATIONS

ICOMOS recommends that the proposed buffer zones for the Punic Town of Kerkuane and its Necropolis, Tunisia, be **referred back** to the State Party to allow it to:

- Provide a plan to scale clearly delineating the buffer zones so as to adequately protect and conserve the property. Current land uses and cadastral plans should be considered for the delimitation of the buffer zones.



Map showing the boundaries of the proposed buffer zone

Medina of Sousse (Tunisia) No 498

1. BASIC DATA

State Party: Tunisia

Name of property:

Medina of Sousse

Location:

Governorate of Sousse

Inscription: 1988

Brief Description:

Sousse was an important commercial and military port during the Aghlabid period (800–909) and is a typical example of a town dating from the first centuries of Islam. With its Kasbah, ramparts, medina (with the Great Mosque), Bu Ftata Mosque and typical ribat (both a fort and a religious building), Sousse was part of a coastal defence system.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background

The Medina of Sousse was inscribed on the World Heritage List in 1988. In 1992, the Bureau of the World Heritage Committee noted that the property comprised both public and private property and was under town-planning regulations based on those at Tunis. The place maintained economic and domestic life, with a majority of residential areas and shops and public activities in about one-sixth of the districts. Challenges were faced in balancing function, the needs of the inhabitants and heritage concerns as well as the implementation of existing regulations. Additional concerns were raised regarding legislation for town planning and legal measures to control new construction and interventions at historic buildings.

The retrospective inventory process identified information needs, in particular the precise definitions of the boundaries of the property and the lack of a defined buffer zone. The State Party was asked to submit the largest scale topographic or cadastral map available to depict the boundary of the inscribed property and its buffer zone and to indicate in hectares the size of the property and its buffer zone.

At the 33rd session of the World Heritage Committee (Seville, 2009), the Committee adopted the following decision:

Decision 33 COM 8B.44:

The World Heritage Committee,

1. Having examined Documents WHC-09/33.COM/8B et WHC-09/33.COM/INF.8B1.Add,

2. Refers the examination of the proposed buffer zones for the Medina of Sousse, Tunisia, back to the State Party to allow it to:

- a) Consider the enlargement of the buffer zone so as to effectively and adequately conserve and protect the property. The State Party may wish to extend the buffer zone to 200m beyond the ramparts, where possible, thus following the requirements of the Heritage regulations and the listing of the ramparts as "monument historique" (Decree of 25 January 1922);*
- b) Precisely identify regulatory measures to mitigate the impact of interventions at historic monuments and of new developments on the integrity of the property. Intersectorial management arrangements should also be explored to ensure the implementation of said regulations by all stakeholders involved in the conservation and management of the property.*

Modification

In February 2010, the State Party submitted a cadastral map showing the precise boundaries of the inscribed property and the proposed buffer zone. The inscribed property has an area of 32.61ha and the buffer zone 62.25ha (including the inscribed property). The buffer zone is a polygon whose distance from the inscribed property varies from a few meters to more than 270 meters, and which allows for the urban fabric and cadastral configurations. ICOMOS considers that the proposed buffer zone should enable effective and adequate conservation of the property.

The State Party has also submitted details about control measures to reduce the impact of interventions at historic monuments and intersectorial management arrangements to ensure that regulations are applied. It states that the Institut National du Patrimoine has set up a management unit for the Medina of Sousse comprising an architect / team leaders, a heritage conservationist, an administrator, a technician and two full-time inspectors based in the Medina, together with two construction superintendents. This unit is in charge of managing the Medina and establishing intersectorial discussions with the local authority and preservation associations.

ICOMOS considers that the details provided are satisfactory

3. ICOMOS RECOMMENDATIONS

ICOMOS recommends that the proposed buffer zone for the Medina of Sousse, Tunisia, be ***approved***.



Map showing the boundaries of the proposed buffer zone

Kairouan (Tunisia) No 499

1. BASIC DATA

State Party: Tunisia

Name of property:

Medina of Kairouan

Location:

Governorate of Kairouan

Inscription: 1988

Brief Description:

Founded in 670, Kairouan flourished under the Aghlabid dynasty in the 9th century. Despite the transfer of the political capital to Tunis in the 12th century, Kairouan remained the Maghreb's principal holy city. Its rich architectural heritage includes the Great Mosque, with its marble and porphyry columns, and the 9th-century Mosque of the Three Gates.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The nomination file for the property included a map of Kairouan marking the boundaries of the property in a thick pencil line. The site is a serial property that includes the Medina, the Zawiya de Sidi Sahab and the Aghlabid Basins. Although the limits could be identified, a precise delimitation was needed. The retrospective inventory process further underscored the need for updated topographic maps or cadastral maps to clearly show the boundaries of the three inscribed elements that constitute the World Heritage property as well as the delimitation of the buffer zone. Indications on the precise size of the property and the buffer zone were also requested.

ICOMOS has examined a map submitted by the State Party in February 2009, indicating the boundaries of the inscribed zones and of the proposed buffer zones. The total area of the property was 54ha and that of the proposed buffer zones 73.04ha.

At its 33rd session (Seville, 2009), the World Heritage Committee adopted the following recommendation:

Decision: 33 COM 8B.43

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1.Add,*

2. *Decides not to approve the minor modification of the boundaries of Kairouan, Tunisia;*

3. *Refers the examination of the proposed buffer zones for Kairouan, Tunisia, back to the State Party to allow it to:*

- a) *Review the existing proposal to delineate a buffer zone so as to ensure the proper conservation and protection of the Property. The buffer zone should also seek to integrate the three components of the World Heritage property;*
- b) *Provide information on the criteria for defining the buffer zone, existing regulations and measures to secure protection and arrangements for effective management.*

Modification:

The State Party has submitted a map indicating the limits of the property inscribed, whose total area is now 106.2ha, which corresponds to the area of the property inscribed in 1988. The area of the proposed buffer zones is 154.37 ha.

The boundaries proposed correspond to three separate buffer zones which apply respectively to the three components of the property inscribed, that is:

- a) The medina and its outskirts
- b) The mausoleum of Sidi Sahib
- c) The Aghlabid basins

In response to the Committee's recommendation that a single buffer zone should be considered for the three components of the property, the State Party has explained that the intermediate zones between the three components of the property have been developed in the recent past, which is not conducive to their inclusion in a single buffer zone.

ICOMOS considers that the three proposed buffer zones should provide effective protection. The buffer zone for the Medina and the Mausoleum of Sidi Sahib has a radius of around 200 meters; that of the Aghlabid Basins ranges from a few meters to 145 meters, but is the result of the division into parcels of the *Plan d'aménagement* which follows the main thoroughfares around the park.

The *Plan d'aménagement de la ville de Kairouan* (which is currently under review) allows for these buffer zones, prohibiting any building to a height of above 7 meters. The Medina, the Mausoleum of Sidi Sahib and the Aghlabid Basins are listed monuments and are thus protected by the decree of 10 April 1912 and have a

protection zone of 200 meters, doubled by an unbuildable zone (decree of 31 March 1914).

The Medina of Kairouan has an administrative entity inside the Institut National du Patrimoine, staffed by around one hundred people who manage the town's heritage and its conservation. For the last two decades, this team has been carrying out works for the rehabilitation of the urban fabric and the historic monuments. More than 80% of the town's monuments have been surveyed, and technical dossiers are available for them. The Medina of Kairouan preservation project is allocated an annual budget from the entry charges for the town's historic monuments and museums. It ensures the continuity of restoration and rehabilitation works in the Medina and its outskirts.

ICOMOS considers that the existing regulations and arrangements seem to be adequate to ensure effective protection and management of the property.

3. ICOMOS RECOMMENDATIONS

ICOMOS recommends that the proposed boundaries for the Medina of Kairouan, Tunisia, be ***approved***.

ICOMOS recommends that the proposed buffer zones for the Medina of Kairouan, Tunisia, be ***approved***.



Map showing the boundaries of the proposed buffer zone

Historic Monuments of Dengfeng (China)

No 1305rev

Official name as proposed by the State Party:

Historic Monuments of Dengfeng in "The Centre of Heaven and Earth"

Location:

Dengfeng, Zhengzhou City, Henan Province, People's Republic of China

Brief description:

Eight clusters of buildings spread out over 40 square kilometres around the lower slopes of Mount Songshan, and adjacent to Dengfeng city, include three Han Que gates - remains of the oldest Chinese state religious buildings, the tower of Songyue temple - the oldest Buddhist pagoda in China, the Zhongyue Temple - one of the earliest Taoist temples, the Shaolin Temple - with its stone pagoda forest and association with martial arts, the Songyang Academy -with perhaps the oldest extant cypress trees, the Huishan Temple, and, slightly set apart to the south-east, the Zhougong Sundial Platform and Dengfeng Observatory.

Many of the buildings were built under the patronage of Chinese Emperors who through nine dynasties offered sacrifices to Songshan as the central sacred mountain of China. The buildings variously reflect the perceived centre of heaven and earth, the power and influence of the mountain as a centre of mountain worship, and the birthplace of Chan (Zen) Buddhism.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a serial nomination of eight *groups of buildings*.

1. BASIC DATA

Included in the Tentative List: 29 November 2001

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre:

21 January 2008
21 January 2010

Background: This nomination was referred back at the 33rd session of the World Heritage Committee (Seville, 2009):

Decision: 33 COM 8B.13

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1,*

2. *Referred the nomination of Historic monuments of Mount Songshan, China, back to the State Party in order to allow it to:*

a) *Consider further the relationship between some of the nominated sites and the central China sacred mountain, Mount Songshan and;*

b) *Consider how a nomination of some of the selected sites together with part of the mountain might reflect their value as an ensemble that manifests the power and influence the mountain had in constitutional, religious and ceremonial terms and how the simple worship of nature was transformed into a force that legitimized imperial power, under the guidance of Confucian thought;*

c) *Consider nominating the Observatory on its own as a site associated with technological development and the development of scientific ideas;*

3. *Recommends that, as the collection of ancient trees is a key quality of the area, greater recognition, survey and research should be provided to establish its cultural value as part of any future nominated ensemble;*

On 21 January 2010 the State Party submitted a third volume of supplementary information. This volume is entitled Historic Monuments of Dengfeng in "the Centre of Heaven and Earth" and provides a new overall justification for the property with further justification for the criteria, and also includes a further comparative analysis, comments on authenticity and integrity, a paper on the concept of the Centre of the Earth in the History of Chinese Astronomy and a detailed comparative analysis for the Dengfeng Observatory.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Landscapes. ICOMOS also consulted the International Astronomical Union on the observatory and IUCN on the ancient trees.

Literature consulted (selection):

Chang, Chia-t'ai, *Shaolin Temple*, 1983.

Shahar, Meir, *The Shaolin monastery: history, religion and the Chinese martial arts*, 2008.

Xu, Wenbin, *Sichuan Han dai shi que: Stone que: towers of Han dynasty in Sichuan province*, 1992.

Technical Evaluation Mission: 12-16 September 2008

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 9 October 2008 on the coordinates of the nominated property, on how the overall nomination of the five sacred mountains of China will be related to the current nomination, and on the identification of ancient trees. The State Party replied on 13 November 2008 with 24 pages of supplementary information and the responses were included in ICOMOS's first evaluation report to the 33rd session of the World Heritage Committee (Seville, 2009).

ICOMOS sent another letter to the State Party on 19 December 2008 to clarify the information already supplied, in particular how *'Mount Songshan gave birth to the concepts of "Central State" ... and "Central Plain"'*.

The State Party responded on 2nd March 2009 with a second volume of supplementary information amounting to 36 pages. This included different justification for the criteria and a shift in the overall justification for the nomination away from the initial idea of Mount Songshan and religious sacrifice being the underpinning of the nominated sites, to an emphasis on the links to Dengfeng city and the idea of its association with the centre of heaven and earth.

This second volume of supplementary information requested two changes to the nomination: the name should be changed from Historic Monuments of Mount Songshan to Historic Monuments of Dengfeng in "the Center of Heaven and Earth"; and the Observatory, a component part of the serial nomination, should be described as Zhougong Sundial Platform and Dengfeng Observatory.

This second volume of supplementary information submitted by the State Party was almost a new nomination in the way it changed the focus of the serial property. In its first evaluation ICOMOS considered that more time than was available to it at a late stage in the nomination process, was needed to assess adequately this very different proposal and accompanying supplementary information through expert study. ICOMOS recommended that the Committee should defer the nomination in order to allow the State Party to articulate more clearly the justification for Outstanding Universal Value.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

In the central plain of China, Mount Songshan, the central sacred mountain, rises to 1,500 metres. The six main peaks of Mount Songshan stretch for 64km between the cities of Luoyang and Zhengzhou. The slopes rise steeply from the valley and are thickly clad with trees. On the lower slopes between two of the

peaks, Mount Shaoshi and Mount Taishan, are eight clusters of buildings, spread over an area of around 40 square kilometres.

The eight clusters of buildings or sites, totalling 367 structures, and spread out over 40 sq km, include three Han Que gates - remains of the oldest Chinese state religious buildings, the tower of Songyue temple - the oldest Buddhist pagoda in China, the Zhongyue Temple - one of the earliest Taoist temples, the Shaolin Temple with its stone pagoda forest and association with martial arts, the Songyang Academy with perhaps the oldest extant cypress trees, the Huishan Temple, and, slightly set apart to the south-east, the Zhougong Sundial Platform and Dengfeng Observatory.

Each of the collection of ritual, scientific and educational buildings belongs to different cultural and/or religious schools and they do not have a single common theme. They are variously related to the perceived centre of heaven and earth, a circular area some 40 km in diameter centred between two peaks of Mount Songshan and including Dengfeng city, to the power, influence and attraction of Mount Songshan as a centre of mountain worship, to the centre of oriental Confucian culture, and to the birthplace of Chan (Zen) Buddhism.

From ancient times the idea of the 'round heavens and square earth', was a crucial part of the idea of cosmic structure in China. Heaven and earth were separate but connected to each other and the link between was seen as either big trees or high mountains. This concept played a role in the development of Chinese astronomy and also influenced political, cultural and religious progress. It also prompted the search for the centre of the flat earth. There were several contenders. One was Luo, later renamed Luoyi in present day Luoyang. This was identified in the Zhou Dynasty (c 11th century BCE-221 BCE) and became its capital.

The location in Luoyi was not accepted by all and various other hypotheses emerged. One, the Gai Tian hypothesis, related the centre to beneath the north star and identified it as Mount Kunlun. A later hypothesis, the Han Tian, that emerged in the Western Han Dynasty (206BCE -25CE), was related to the idea that the distance between stars and the centre remained the same, and thus only astronomy conducted at the centre of the earth was reliable. Based on this hypothesis, Luo Xiahong and fellow astronomers took observations but these are not recorded.

Later scholars took up the Han Tian hypothesis and offered two sites: Luoyi and Yangcheng. The latter came to have greater influence in the history of Chinese astronomy. Yangcheng is present-day Gaocheng in Dengfeng (20km south-east of Mount Songshan). The two sites relate to different interpretations of the *Rites of Zhou* in which Emperor Zhou set out the length a shadow should reach at the summer solstice as a way of identifying the centre. Later scholars interpreted his criteria to equate to Yangcheng rather than his own

capital Luoyi. Surveys conducted by Guo Shoujing in the Yuan Dynasty (1206-1368) to reform astronomy used Yangcheng as a base and an observatory was constructed and poles erected for measurement at what is now Dengfeng.

The concept of the centre of heaven and earth is evidenced in murals, stone engravings, and stele inscriptions. Literary references reveal the long academic debate about the concept. Some scholars from the northern Song Dynasty (960 and 1279), also related it to nearby Mount Songshan, and this is now acknowledged as the natural component of the centre of heaven and earth, and thus the central sacred mountain. The supplementary information provides a plan showing the area considered to be the centre of heaven and earth, centred around the Huishan Temple between the two peaks of Mount Songshan, rather than on Dengfeng Observatory (although in the nomination dossier it is suggested that the Observatory was at the actual centre).

The concept of the centre persisted in astronomical thinking until the Ming Dynasty (1365-1644) when western ideas about a spherical earth were adopted. Nevertheless the general concept persisted as it was linked to the idea of the centre of national power.

The area around Yengcheng has been considered through Chinese history as the Zhongyan (Central Plain) and from where the country developed and expanded to become Zhongguo – the state located at the centre of the world. The Xia Dynasty, the first Chinese dynasty that ruled from around 2,000 BCE to around 1,600 BCE, was said to have its capital in Yengcheng – although its precise position has not been established. Even though the capitals of later dynasties were located elsewhere, the association between Dengfeng and the centre of the country, and of the world, persisted. The third volume of supplementary information provides a diagram of the circular area considered to encompass the centre of heaven and earth. This is a circle approximately 40km in diameter, centred roughly on the Songyue Temple between two peaks on Mount Songshan, and including Dengfeng city.

Songshan was revered as a holy mountain where immortals lived, and where emperors offered sacrifices to heaven and earth, to communicate with gods, and to pray for the stability of their country. An inscription records Emperor Wu offering sacrifices there after conquering the Shang Dynasty. By no later than the early Western Zhou Dynasty (11th century BCE-771 BCE), sacrifices had begun to be offered to the mountain.

From then on, and reinforced by Emperor Xuandi of the Han Dynasty (206 BCE–220 CE) designating in 61 BCE Mount Songshan as the central of the five sacred mountains, (the others being Taishan in the east, Hengshan Bei in the north, Huashan in the west, and Henshan Nan in the south), emperors continuously

offered sacrifices. Between King Wu of the Zhou Dynasty and the end of the Qing Dynasty in AD 1912, 68 emperors are recorded as having visited or offered sacrifice to Mount Songshan.

In Chinese feudal society imperial rulers exercised tight control over cultural and religious schools and used them to reinforce power and social order. In the Han Dynasty, Confucianism was adopted as the over-arching school. The simple worship of nature was transformed into a force that legitimised imperial power, under the guidance of Confucian thought. Two of the three Han Que gates provide physical evidence of buildings associated with imperial sacrifices to the mountain with vivid depictions of the festivities associated with rituals. When Taoism and Buddhism emerged, the struggles between them were 'coordinated' by Imperial power. The sequence of buildings in and around Mount Songshan associated with the formation of Taoism into a religion (the Zhongyue Temple) and with Buddhism (the Shaolin Temple, the birthplace of Chan Buddhism) is seen to reflect the jostling for Imperial favour as well as the institutionalisation of sacred rites.

Mount Songshan is symbolically referenced in the layout of three of the sites (Zhongyue Temple, Taishi Que, and Shaoshi Que) through the axial alignments of monuments to the mountain peaks, through inscriptions on steles and temple headboards, through pictorial stone engravings, in murals and also through literature, poetry and songs.

The nominated buildings were initially constructed over a span of eighteen centuries between 118 AD and the 20th century. The Tishi, Shaoshi and Qimu Gates have survived since Han times, while Zhongyue Temple and Songyang Academy, initially built in the Jin Dynasty (1115-1234), were reconstructed over succeeding centuries, lastly in the Qing Dynasty (1644-1912). The Zhougong Sundial Platform was constructed in the 8th century while the Dengfeng Observatory was built between the 13th and 16th centuries.

Many of the buildings were constructed as a result of imperial patronage, using top designers and craftsmen and following the best building standards and forms that could only be used in the highest status structures in the hierarchical system.

Collectively the nominated buildings are said to reflect the power and influence the area had in constitutional, religious, ceremonial, educational and astronomical terms.

In architectural terms, the Buddhist pagodas of the Songyue and Shaolin Temples have come to be seen as models, copied within China and further afield.

Within some of the sites are a collection of ancient trees, including around fifty that are considered to be over 2,000 years old, and a few that are reputed to have an age as high as 4,000 years.

Although the concepts of Dengfeng being the centre of heaven and earth and the birthplace of Chinese civilisation and of Mount Songshan being revered as a sacred mountain underpinned the imperial patronage and the development of temples and other buildings, neither the city nor the mountain itself form part of the nominated property. At a later date the mountain may be nominated as part of an extension of Mount Taishan to encompass the five sacred mountains, (as indicated on the current Tentative List of China).

The property consists of 367 structures within the following eight sites:

- *Taishi Que Gates and Zhongyue Temple*
- *Shaoshi Que Gates*
- *Qimu Que Gates*
- *Songyue Temple Pagoda*
- *Architectural Complex of Shaolin Temple (Kernel Compound, Chuzu Temple, Pagoda Forest)*
- *Huishan Temple*
- *Songyang Academy of Classical Learning*
- *Zhougong Sundial Platform and Dengfeng Observatory*

These will be considered separately:

Taishi Que Gates and Zhongyue Temple

The Taishi Que Gate (Que gates are those erected in front of a tomb or temple) was originally one of a pair of buildings at the foot of Huangghai peak of Mount Taishi that flanked the entrance to Taishi temple, used for sacrifices to the mountain. Built in 118 AD the gate is of grey stone but in imitation of a wooden structure, and carved in low relief on all four sides with vivid and dramatic images of beasts, spirits, and trees, that were perceived to have the power to ward off evil spirits. Although much weathered, one inscription which remains legible contains a eulogy to the central sacred mountain. The gate is protected by a shelter building.

Thirty-four ancient stone Han Que Gates remain in China, of which three are at Mount Songshan; the remaining ones were erected for private tombs. The three gates within the nominated property are the only surviving ceremonial structures from the Han era.

The Zhongyue temple replaced the Taishi temple at the end of the original track from the Taishi Que gate, a simple narrow earth route flanked by cypress trees. The Zhongyue Temple was originally constructed in the 5th century when Kou Qianzhi reorganised Taoist preaching and formalised Taoism as a religion. It has been rebuilt many times but its layout can be attributed to the Jin Dynasty (1115-1234). Its buildings relate to its last reconstruction in the Qing Dynasty (1644-1912) in what is known as the 'official architectural style' of that dynasty. Some buildings were reconstructed in the 20th century. There are 39 buildings, arranged in multiple courtyards along a central axis, many decorated with

carvings and glazed tiles. The Junji Hall, a place for offering sacrifices to the God of Zhongyue is the largest building on any of the sacred mountains.

The layout of the temple is recorded in a stele map carved in 1200 and a second one carved in 1547. The number of courtyards on the central axis, the form and location of the sacrificing stage, and the site of the main halls in this overall plan seemed to have influenced the layout of temples on the other four sacred mountains.

Around the temple are forty-three ancient trees considered to be between 2,200 and 4,000 years old, and 330 cypresses planted between the Han and Qing dynasties.

Stele record building of the temples and the sacrificial addresses of Emperors, while others depict the sacred mountains or extol their virtues in poetry.

Two stone statues 1.2 metres high date from 118 AD and are the oldest surviving stone figures in China. Four even larger iron statues some 2.5 metres high date from 1054 AD.

Shaoshi Que Gates

This pair of Han Dynasty Que gates, constructed in 123 AD flanked the approach to the now demolished temple of Mount Shaoshi. They are similar in form and materials to the Taishi Que gate and likewise decorated in low relief with around 60 pictures surviving. These include two young women on galloping horses, part of a circus show, and an ancient game of football, known as *cuju*. The sculptures are in urgent need of conservation – see below. A new shelter building is proposed for these gates – see below.

Qimu Que Gates

This pair of Han Que gates flanked the path to Qimu temple which no longer survives. They were built in 123 AD in a similar style and materials to the Taishi gate. On their surfaces, 60 images have survived that depict cockfights, shows by troupes visiting from the Roman Empire, texts recording the curbing of a flood, and a prayer for rain to fall on the mountain. The gates are protected by a shelter building.

The Qimu Que gate was built in commemoration of the mother of Qi, wife of Yu, the legendary founder of the Xia Dynasty the first Chinese dynasty that ruled from around 2,000 BCE to around 1600 BCE.

Songyue Temple Pagoda

The large cream coloured brick pagoda is a dodecagonal structure with a roof of 15 overlapping eaves. Constructed on open ground, with Mount Taishi in the background and in the foreground streams and lush woods, it is visible from many directions.

The pagoda was built between 508 and 511 for an Emperor of the northern Wei Dynasty on the site of his temporary palace. The rest of the temple and palace do not survive. The design of the pagoda with its parabolic contour and advance tubular form is considered to be very innovative and became a model for many later pagodas. Its decoration of flame patterns and lions reflects influence from regions further to the west.

The pagoda is now surrounded by brick and timber buildings from the Qing Dynasty.

In the temple precincts are ancient trees, such as ginkgo, maidenhair, scholar and juniper, that are said to date from the Han Dynasty.

Architectural Complex of Shaolin Temple (Kernel Compound, Chuzu Temple, Pagoda Forest)

This very large complex on the north side of Mount Shaoshi presents a dramatic picture of red walls and green glazed tile roofs set amongst dense trees.

The Chuzu Temple was built to commemorate the first Patriarch of the Chan sect of Buddhism in 1125. It sought to re-establish itself after a major Buddhist purge by building at the centre of heaven and earth. Despite being repaired many times, the apron walls, sixteen octagonal columns - eight adorned with lively relief carvings of flowers, flying deities, Buddhas, peacocks and cranes, and the long relief behind the sacred platform, with landscape and figures showing the beauty of a mountain forest, all date from the Song Dynasty.

The Kernel Compound contains two small brick pagodas from the Song Dynasty. The remaining buildings date from the Ming and Qing dynasties. The large Ming Thousand Buddha Hall is decorated with an extensive mural depicting 495 arhats against mountains, clouds and flowing water.

The pagoda forest is a compound of stone or brick pagodas, each one built to commemorate an eminent monk. The name 'forest' reflects the number and density of these structures, which with their crisply carved tapered tops resemble a forest of trees. In the 'forest' and nearby are a total of 241 pagodas, some rising to ten stories and many elaborately carved, erected during seven dynasties between the Tang and Qing, over almost 13 centuries (520-1803). As a group, the pagodas reflect the evolution in style of tomb pagodas and the gradual fusion between the Chan sect and other cultures.

The overall composition of the Shaolin temple was seen as indicating how a large temple should be, and was followed by Zen temples in other places.

Numerous cypress pines (known as the Chinese Arborvitae or *Cupressus arborvitae*) grow amongst the pagodas and some are causing damage to the pagoda

structures. A Chinese wingnut tree is considered to be around 2,000 years old.

Huishan Temple

In beautiful scenery below the Jicui peak of Mount Taishi, the wooden Huishan Temple was built in the Yuan Dynasty (12th century), from buildings constructed as a temporary China imperial palace in the Northern Wei Dynasty (5th century AD) and on the site of the living quarters of monk and astronomer Yi Xing. Eight structures survive on the central axis, including screen wall, main gate, and the east and west wings of the main hall, built on a large platform.

The Huishan Temple is ranked as one of the four main temples of Mount Songshan along with Shaolin, Songyue and Fawang (not included in the nominated area). Although repaired frequently in the Ming and Qing dynasties, the main elements of its timber structure have survived as prime example of Yuan architecture.

Songyang Academy of Classical Learning

At the foot of the Junji peak of Mount Taishi, and aligned to it, the Songyang Academy of Classical Learning is on the site of the Songyang Temple built in the Northern Wei Dynasty (5th century). The Academy was created in the later Tang Dynasty and by the Song Dynasty was considered as one of the four great academies of classical learning in China disseminating Confucian theories and culture. It is claimed that the academy contributed substantially to the dissemination of Confucianism into other parts of China through the Songyang doctrines.

The surviving buildings date from the Qing Dynasty (17th century). The simple buildings of grey bricks and tiled roofs, arranged around five courtyards, are in typical Henan style. They enclose over 100 rooms. There is no doubt that the first built academy of Mount Songshan set up an example for all following private academies. Since it was privately owned, the Songyang Academy could not match the other official academies in terms of scale and size of buildings.

The Academy is located on the foothills of Mount Taishi surrounded by a landscape with low forests. Its layout is in an axial alignment to a mountain peak. Within the grounds are two 'General' cypress trees reputed to be 4,500 years old and the oldest trees so far identified in China. The rank of General was conferred on these two trees by a Han Emperor.

At the south-western side of the academy gate stands a Tang Tablet, erected in AD 744 in the Tang Dynasty (618-907); it is the largest stele in Henan Province and famous in Chinese handwriting history.

Zhougong Sundial Platform and Dengfeng Observatory

The Observatory built in the Yuan Dynasty (13th century) is located some 15 km south-east of Dengfeng town on the outskirts of Gaocheng town beneath Gaocheng mountain.

It is purported to have been built under the orders of Kubla Khan, who selected twenty-seven sites to undertake nationwide astronomical observations. Only the Observatory in Dengfeng and another in Beijing were built in brick. The Observatory was designed by astronomers Guo Shoujing (1231-1316AD) and Wang Xun to measure the solstices in order to establish an accurate calendar. A contemporary text records that Guo Shoujing chose Dengfeng as one of the two most significant sites for astronomical observation, for Dengfeng was regarded the centre of Heaven and Earth.

Using their measurements and calculations, Guo Shoujing compiled in AD 1271 the *Shou Shi Calendar*, the most advanced calendar in the world at the time, and only five seconds different from calendars produced today from modern scientific analysis.

The Dengfeng observatory is built of grey brick and is designed as a huge quadrant. It retains all the features for its historic function – the bar for the sun's shadow and the water runnels that provided the water film for reflecting the shadow. At the foot of the platform is the dial laid out in blue stones.

To the south is the earlier 8th century Tang Dynasty Zhougong sundial platform. It is said that Nangong Yue built the monument to identify the spot where Zhougong measured the centre of Heaven and Earth.

Nearby is the Zhougong temple dating from the Ming Dynasty.

History and development

Evidence for human occupation around the mountain dates back to Palaeolithic times with rich finds in, for instance, the Zhiji cave. During the Neolithic period, the mountain had one of the most advanced cultures in China, as demonstrated by finds related to the Longshan culture at Wangchenggang in Dengfeng. This evolved into the beginnings of what are seen as the earliest states in China and the Xia, Shang and Zhou dynasties – some of whose capitals, including Yangcheng, were around Mount Songshan. One of the two capitals of the Xia Dynasty was at Wangchenggang.

During the first few centuries after Buddhism was introduced into China in the Han Dynasty, many Buddhist temples were established around Mount Songshan, including Songyue, Shaolin and Huishan, and the Chan sect was spread from the Shaolin temple. The Region also played an important role in the development of Taoism.

The Buddhist temples as well as being associated with the dissemination of Buddhism are said to have had their historical significance heightened by their proximity to the centre of heaven and earth and to one of the later capitals, the city of Luoyi and to the beautiful landscape.

In the Tang Dynasty (618-907), Empress Wu decreed the god of Mount Songshan to be the 'Emperor of Central Heaven', whilst Emperor Xuanzong nominated the god as 'King of Central Heaven' and expanded the Zhongyue temple.

In the Song (960-1279) and Jin dynasties (1115-1234) there was further imperial support that led to rapid development of religions and temples and also the creation of the Academy of Classical Learning. The Yuan Dynasty saw the creation of 44 pagodas as well as the building of the Observatory.

In the Ming Dynasty (1365-1644) the religious structures reached their greatest extent and prosperity and nine halls and 143 pagodas still survive from this period. It was in this period that the concept of the centre of earth was abandoned as western ideas about a spherical earth were adopted.

During the Qing Dynasty (1644-1912), buildings were renovated or rebuilt and there are now more Qing structures than from any other dynasty, including 34 temple buildings. Construction came to an end during the Republic of China.

For around 2,000 years the process of building and rebuilding temples continued, even though the capitals of the dynasties since the 3rd century BCE had not been around Mount Songshan. Sixty-eight rulers visited the mountain, or sent their deputies to offer sacrifices, and men of letters, scholars and eminent monks were attracted to live in the religious establishments and in some cases commissioned buildings.

The area thus retained its influence not just for its association with a sacred mountain or for its association with the concept of the centre of heaven and earth in astronomical terms, but also due to Dengfeng being at the heart of the country and thus associated with the soul of China.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The comparative analysis of the original nomination dossier compares individual elements of the property with other sites, rather than comparing the whole ensemble.

The Han Que gates are compared with 34 other surviving Han gates constructed between AD 36 and AD 220. The nominated ones are seen to be the earliest of

their kind surviving in front of a temple of national importance.

The Songyue Pagoda is said to be the earliest of its kind in China and therefore to have no comparators.

The Chuzu Temple is the only surviving Song wooden temple to have been built in the Song Dynasty near the capital city.

The Pagoda Forest of the Shaolin Temple is compared to 15 other surviving well preserved pagoda forests and is seen to have by far the largest number of pagodas.

In the original nomination, no details were provided for the Beijing sundial, nor comparisons made with the Ulugh-Beg observatory in Samarkand or observatories in Korea. These were provided in the first volume of supplementary information. It is said that the observatory played a similar historical role and made a similar contribution to astronomical science and astronomical architecture as Cheom-seong-dae built in the 7th century in Gyeongju, Republic of Korea, Ulugh-Beg Observatory built in 1430 in Uzbekistan, Beijing Ancient Observatory in the period of Zhengtong in the Ming Dynasty (around the year 1442), Kassel Observatory built in 1560 in Germany, the Greenwich Royal Observatory built in 1675 in Great Britain, and the Jantar Mantar Observatory built in 1724 in Delhi, India.

The Songyang Academy is said to be one of the four oldest in China.

In the second volume of supplementary information Mount Songshan is compared to the other sacred mountains in China and is seen to be the only one with a collection of historic buildings of diverse architectural styles and cultural connections, built by the government or by the private sector. It is acknowledged that Mount Taishan is much better known than Mount Songshan, largely because of later literature. However it is suggested that only on Mount Songshan can the history of Buddhist architecture be discerned, through the Shaolin Temple, Songyue pagoda and Huishan Temple. It is further suggested that Mount Songshan gives a more complete picture of ritual and sacrificial buildings than any of the other sacred mountains.

Although it is acknowledged that elsewhere in China there are substantial buildings associated with sacrificial rituals, these date from the Ming Dynasty. Mount Songshan thus provides much earlier evidence back to the Han Dynasty.

Comparisons with other sacred mountains outside China indicate that Mount Songshan is differentiated by its multiple faiths. Within China it is compared to Mount Wudang which has exquisite buildings of the Ming Dynasty built under imperial patronage. Mount Songshan does not have buildings of this imposing size or grandeur but it is seen to have buildings which in various ways

were influential – such as in the diffusion of the Chan sect.

In the original nomination the State Party stressed the importance of the associations between the various buildings and the sacred mountain. The later temple buildings could be said to be a continuation and reflection of the mountain's central role in the development of religious ceremonies. A strong case had not however been made for linking the Academy and the Observatory to the mountain in terms of patronage or sitting.

In the second volume of supplementary information provided, the emphasis changed from links between the nominated sites and the sacred mountain to the links between the sites and Dengfeng as the centre of heaven and earth, and the name was changed to reflect this. The assembly of buildings is said to reflect the power of Dengfeng as a cultural centre, related to the memory of it as one of the earliest capitals of China and as being the centre of heaven and earth. Thus the temples and the academy are a reflection of Dengfeng's role as a cultural centre and the observatory is related to the astronomical measurement confirming Dengfeng's role as the centre of heaven and earth.

China has had many capitals of which eight are acknowledged as great ones (not including Dengfeng, whose precise location is not known with certainty) and several have connotations with the notion of 'centre' such as Xi'an described as 'the city sitting straight under the sun', or 'the center of heaven' in literature; Beijing's Forbidden City, the supreme imperial palace in the Ming and Qing Dynasties, was also regarded as the centre of world; Zhumadian, the neighbouring city of Dengfeng in Henan province also once proclaimed itself as the 'the centre of Henan Province' and 'the centre of the world'.

Although undoubtedly Dengfeng has for many centuries been associated with the idea of the centre of heaven and earth, that does not mean that everything associated with Dengfeng can be said to exhibit Outstanding Universal Value. The concept of heaven and earth is an idea: the issue is how far the nominated sites can demonstrate an idea.

What needs to be set out in more detail is how the sites have been chosen from within the circular area perceived to be the centre of heaven and earth, within which are other sites, such as two mentioned in the third volume of supplementary information. These are the Buddhist Fawang Temple which it is said could be added to the ensemble and has not been included in the current nomination as the condition needs to be improved, and an 'ancient capital' close to the Dengfeng Observatory for which insufficient studies have so far been undertaken.

ICOMOS considers that the comparative analysis has not shown that individually any of the components (apart from the Observatory) could be said to have Outstanding

Universal Value – although all are exceptional in some way.

However the concept of heaven and earth is a unique concept that cannot be paralleled elsewhere. What has not been set out is a comparison between the sites that make up the nominated series and other sites within the area perceived to be the centre of heaven and earth, in order to justify the choice of sites, nor the complete scope of the serial nomination, if more sites are to be added in the future.

ICOMOS considers that the comparative analysis is adequate but needs to be augmented to justify the choice of serial components.

Justification of the Outstanding Universal Value

In the original nomination, the property was considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Historic Monuments of Mount Songshan are a group of buildings that maintain a strong affinity with the mountain and are the best examples of ancient buildings for ritual, religious, scientific and technological and educational activities;
- As the first of their kind, the ritual buildings of the three Han Gates had a profound and far-reaching influence on the culture of East Asia;
- The Songyue Temple Pagoda, the architectural complex of the Shaolin Temple and the Huishan Temple reflect the development of Buddhist architecture in China and set an example for later constructions over Asia;
- The Songyue Temple Pagoda and the Shaolin Temple Pagoda Forest are classic elements of world architectural history;
- The murals in the Shaolin Temple display the history and significance of Shaolin Martial art;
- The Songyang Academy of Classical Learning is heir to the vanished academy culture and a testimony to the role of Mount Songshan as the centre of Confucian culture;
- The Observatory is China's oldest surviving astronomical observatory and demonstrates brilliant achievement of early astronomical history.

Although revised justifications for the criteria have been provided in the third volume of supplementary information, no revised formal justification of Outstanding Universal Value has been put forward. The name of the property has however been changed to the Historic Monuments of Dengfeng in the "Centre of Heaven and Earth" and in the supplementary text it is stated that the 'nominated ensemble of Historic Monuments of Dengfeng is first and foremost associated with the long-term exploration of the natural laws of earth and sky and not with mountain worship. Only after the confirmation of

Dengfeng's location as "The Centre of Heaven and Earth" did the rulers, by virtue of their location in this central place and of their high status, use the concept to legitimise and perpetuate state ideology and power. Then, as the various schools of thought accepted this cosmological concept, they also sought to use it to strengthen their own positions, serve their own interests, and extend their influence, resulting in a whole series of activities and products in that region. That is why in this nomination the sacred mountain *per se* is not a core element. The ensemble of the historic monuments concentrated here testifies to this long and continuous process of historic development'.

ICOMOS notes that this suggests that the first point of the original justification for Outstanding Universal Value has been changed to reflect the link between the property and the concept of the centre of heaven and earth rather than an affinity with the mountain.

ICOMOS considers that each of the second to sixth points applies differently to the elements of the nominated serial property.

The centre of heaven and earth was partly an astronomical concept but was also linked to the seat of imperial power. The capital of the Xia Dynasty was at Dengfeng – but precisely where that was is not clear. In the subsequent Zhou Dynasty both the seat and centre were possibly at Luoyi, the latter determined by Emperor Zhou. However later scholars suggested that Emperor Zhou may have considered the centre of heaven and earth to be at Dengfeng. (In one place the nomination text suggest that Dengfeng was identified as the centre of heaven and earth 3,000 years ago, whereas in Annex 1, where the intellectual background to this concept is set out, it is shown that Yangcheng (Dengfeng) became perceived as the centre much later). Even so, Dengfeng has long been seen to be associated with the centre of power in China and the centre of heaven and earth.

The natural attribute of the centre of heaven and earth is Mount Songshan, and worship of Mount Songshan was used by the Emperors as a way or reinforcing their power, and that of the area as the centre of heaven and earth.

The three ideas do therefore to an extent converge: the centre of heaven and earth in astronomical terms is used as a propitious place for a capital of terrestrial power, and Mount Songshan as the natural symbol of the centre of heaven and earth is used as the focus for sacred rituals that reinforce that earthly power.

ICOMOS considers that the issue is how the nominated series of 367 structures can manifest the concept of the centre of heaven and earth and its links with central power and with Mount Songshan. It is clear that the Dengfeng Observatory has a strong link with the astronomical concept, as does the Huishan Temple, which was built on the site where an astronomer monk lived although the current buildings do not date from his

time, as do the Han Que gates that materialise rituals associated with Mount Songshan.

For the remaining groups of buildings, the Songyue Temple, the Shaolin Temple and the Songyang Academy of Learning, the links are more tenuous. What is suggested is that the two temples were built at the centre of heaven and earth as such a location was seen to be good for their influence and that these and the Academy reflected Imperial patronage.

One of the difficulties highlighted by the State Party is that in the future all 72 peaks of Mount Songshan could be nominated as part of the five sacred mountains of China. There is therefore a consideration to try and separate the current nomination from that subsequent one and to show that the concept of heaven and earth can be separated from that of the sacred mountain. One scenario suggested by the State Party is that the three sites that are focused on the mountain (Zhongyue temple, Taishi Que and Shaoshi Que) could be detached from the present nomination and submitted later with the mountain, while the remainder are nominated for their association with the centre of heaven and earth. ICOMOS does not consider that it is desirable to separate the concept of the centre of heaven and earth from the concept of Mount Songshan and mountain worship as one concept supported the other.

How the five sacred mountains are to be nominated is still to be decided – whether as a serial nomination of separate properties, or as one single property. In the second volume of supplementary information, it was stated that only on Mount Songshan can the history of Buddhist architecture be discerned, through the Shaolin Temple, Songyue Pagoda and Huishan Temple and that Mount Songshan also gives a more complete picture of ritual and sacrificial buildings than any of the other sacred mountains. This suggests to ICOMOS that Mount Songshan should be nominated together with not only the three sites focused on the mountain but also the Shaolin Temple, Songyue Pagoda and Huishan Temples, and also the Fawang Temple and possibly others. Its association with the centre of heaven and earth would clearly also be a great significance.

However, as Mount Songshan is of huge extent the issue is whether it could be nominated sequentially: with some or all of the current nomination being inscribed on the List and with the peaks – which it is suggested are the backdrop to the built structures - being nominated later and being considered initially as a buffer zone – a suggestion put forward by the State Party.

Mount Songshan remains the physical focus for the nominated sites. The mountain and its link to the centre of heaven and earth create the binding force.

Integrity and Authenticity

Integrity

Integrity is related to whether all the elements necessary to represent outstanding universal value are present within the boundaries. As discussed below, as a serial nomination there needs to be a link between the individual elements of the nomination. In the original nomination this was the proximity of the sacred mountain, although the mountain itself is not included in the boundaries. In the subsequent supplementary information provided, the emphasis changed to focus on the proximity to Dengfeng, the centre of heaven and earth, as the key link.

Within each individual site, sufficient attributes remain to reflect their original layout, even though in most sites many of the individual buildings have been subject to several periods of re-building.

In terms of how as a group the attributes are linked to the proposed Outstanding Universal Value, ICOMOS considers that they do relate to the area associated with the concept of the centre of heaven and earth, although the area is considerably larger than the nominated property and a full justification for the choice of sites within that area has not been provided.

Authenticity

Authenticity is related to the way the attributes truthfully reflect the value considered to be outstanding and universal. Individually, there is no concern over the authenticity of the elements in terms of their materials, religious associations, and spatial layout. However for the overall assembly of monuments ICOMOS considers that they do not readily convey in an obvious way the concept of the centre of heaven and earth, although some of the sites are related to the physical attributes of the concept – the mountain and its associated religious practices.

ICOMOS considers that the conditions of integrity and authenticity have been met but that the significant shifts offered by the State party concerning the justification for the series in the sequence of supplementary documents have not allowed the basis of the series and the logic of the selection of the series to be clearly expressed.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), (iii), (iv) and (vi). The third volume of supplementary information included new justifications for these criteria. The State Party states that although it considers that criteria (iii) and (vi) are the most prominent in justifying the nominated property, it has provided justification for all five.

Criterion (i): represent a masterpiece of human creative genius.

This criterion was justified by the State Party in the original nomination on the grounds that Mount Songshan is one of the birthplaces of Chinese civilisation. The architectural complexes around it are masterpieces of ritual, religious, scientific/technological and educational buildings and their components. As the earliest and finest examples of different architectural structures, they represent outstanding human genius and are masterpieces of the world's architectural history.

In the supplementary information this criterion is justified by the State Party on the grounds that the outstanding astronomical and calendar achievements of Dengfeng Observatory and Zhougong Sundial Platform, as well as the high attributes of the other associated heritage properties, justify this criterion.

ICOMOS considers that as a serial nomination of 367 structures in eight sites, it cannot be justified to consider this criterion if it is seen mainly to apply to two structures. The State Party acknowledges that not all of the sites can be said to meet criterion (i) and ICOMOS agrees with this.

From the supplementary material provided, ICOMOS does however consider that the observatory could on its own justify this criterion for its technological achievement.

ICOMOS considers that this criterion has not been justified for the serial nomination but could be justified for the observatory alone.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.

In the original nomination, this criterion was justified by the State Party on the grounds that the buildings of Mount Songshan have profoundly influenced the architecture of ritual, religious, scientific, technological and educational buildings. In particular the sacrificial and Buddhist buildings have influenced not only the rules and systems of religious buildings, but also cultural traditions; neo-Confucianism originating from the Academy played an important role in the rulers' autocratic control over people's thinking, while astronomical observation bears testimony not only to the formation, promotion and application of astronomical theory but also the planning, construction, and development of astronomical structures. It is also suggested that as a physical place of the centre of heaven and earth, Dengfeng has unmatched status compared to observation spots in any other capital cities through all dynasties.

In the supplementary information, this criterion was justified by the State Party on the grounds that the

nominated sites demonstrate that they both received influence from foreign cultures and exerted influence on the development of other regions in culture, science, and technology. The Dengfeng Observatory shows evidence of astronomical instrument design from Indian and Central Asia, whilst calendars derived from the measurements at the Observatory spread to many other nations; many structures exhibit the introduction and diffusion of the highly influential Chan or Zen Buddhism as well as the perfect fusion of Chinese and Indian architectural art and craft displayed through Songyue Temple Pagoda, and the largest Confucian Academy founded herewith influence on the cultures of China and neighbouring countries.

ICOMOS considers that the Buddhist buildings do exhibit an remarkable interchange of ideas between the Indian subcontinent, China and south-east Asia, but that the educational building (the Academy) did not have a profound influence in architectural, educational or technological terms, nor does it reflect an exceptional interchange of ideas. Rather the Academy was part of a wider movement. The Observatory was clearly of great importance as a centre of astronomical knowledge and could justify consideration of this criterion if it were a single nomination.

ICOMOS does not consider that the nominated ensemble of monuments as a whole can be seen to satisfy this criterion.

ICOMOS considers that this criterion has not been justified for the serial property as a whole.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.

In the original nomination this criterion was justified by the State Party on the grounds that the ritual and Confucian buildings provide excellent evidence of two now vanished cultural traditions, the ancient sacrificial culture and the traditional academy education. The ancient cult of offering sacrifices was transformed by the Emperors into a national religion with ceremonies that confirmed imperial power. The three Han gates are testaments to this culture. The Academy of Learning was one of the four most famous academies of the Song Dynasty and fostered renowned scholars and philosophers.

In the supplementary information, this criterion is justified by the State Party on the grounds that the scientific investigation of the form of the universe began three millennia ago and only gradually faded from the 15th-16th centuries. Many dynasties advocated the cosmology of "The Centre of Heaven and Earth," which was promoted by the elite classes, and accepted by the general population. The property is evidence of a scientific, educational and belief system that no longer exists today; and also the Buddhist cultural tradition that is living and evolving.

ICOMOS considers that the astronomical idea of the centre of heaven and earth is strongly linked with the idea of imperial power, with the propitiousness of establishing capitals at the centre of heaven and earth, and with its natural attribute, Mount Songshan, and its religious associations. What are nominated are sites that need to demonstrate the idea of the centre of heaven and earth, the circular area that the supplementary information says is associated with the centre of heaven and earth. This is however large and includes Dengfeng town as well as other temples. The relationship is clear for some sites in terms of their relationship with the mountain, or for the Observatory with its very direct links to astronomical ideas, but is less clear for others sites, apart from their being physically sited within the circular area.

ICOMOS considers that there is a need to explain to visitors the relationship between the sites and the overall area perceived to be the centre of heaven and earth.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

This criterion was justified by the State Party in the original nomination on the grounds that the historic monuments of Mount Songshan are all outstanding examples of brick and stone, or masterpieces of wooden structures, in terms of architectural design and construction technology.

In the third volume of supplementary information, this criterion is justified by the State Party on the grounds that the nominated property as a whole is a comprehensive and outstanding masterpiece and testimony to a unique spirit of space with lasting impact of great scale and depth. The buildings of this ensemble were carefully located according to their individual cultural and religious features so as to echo one another and form a perfect combination. Under the influence of supreme imperial power and guided by academic and religious philosophy, they were exquisite in structure and layout, and were the most outstanding building complex at that time. The high standards in architecture and design helped to further extend the imperial power and its influence and to consolidate the rule.

ICOMOS considers that although the Han Que gates, the Songyue Temple pagoda with its advanced tubular structure, the pagodas of the Shaolin Temple, the Observatory and the wooden buildings of the Chuzu Temple Hall, Huishan Hall and Zhongyue Temple are all outstanding structures, it is more difficult to link them to one or more significant stages in human history in terms of what their form manifests.

ICOMOS considers that this criterion has not been justified for the serial property as a whole.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

This criterion was justified by the State Party in the first nomination on the grounds that the concentration of monuments reflects the fact that Mount Songshan was one of the birthplaces of Chinese civilisation, based upon the sacred concept of the 'Centre of Heaven and Earth' in Chinese history. Additionally the Shaolin Temple, the Pagoda Forest, mural paintings and stele inscriptions were directly responsible for diffusing the Chan sect and martial art culture in China.

The third volume of supplementary information suggests that the essence of the nominated sites lies in their association with the "centre of Heaven and Earth", which is located in Dengfeng.

In this supplementary information, this criterion is justified by the State Party on the grounds that the historic ensemble has direct and tangible relationships with associated historical events, current traditions, ideology, and beliefs. The associated beliefs include the exploration of and belief in the laws of astronomy and the universe; promotion of and belief in the status of God-granted imperial power; the affirmation of and belief in sacrificial rituals, and the existing traditional Taoist and Buddhist beliefs that replaced them in later generations; and the belief in the Zen Sect of Buddhism which originated from and developed in Shaolin Temple.

ICOMOS considers that the concentration of sacred and secular structures does reflect the strong and persistent tradition of the centre of heaven and earth linked to the sacred mountain which sustained imperial sacrifices and patronage. The Buddhist structures came to have a symbiotic relationship with the sacred mountain.

ICOMOS considers that this criterion is has been justified.

At this stage, ICOMOS considers that the justification for a serial nomination in terms of all sites being linked to a coherent shared value has been demonstrated in general terms but that further comparisons are needed to justify the choice of sites.

In conclusion, ICOMOS considers that criteria (iii) and (vi) and the Outstanding Universal Value have been demonstrated.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The present road in front of the Zhongyue Temple now functions as the main road connecting Dengfeng County with the highway, which potentially leads to traffic problems and threats to the monuments. The proposed solution is to build another road further south to take most of the traffic. The proposal was approved by the central government authority in 2008 and is already partly completed.

In recent times uncontrolled building activity has had a negative impact on the surroundings of some of the sites. In some cases buildings have been removed and others renovated to mitigate the impact.

Tourism pressures

Currently visitation is not excessive with most monuments receiving an average of 100 visitors per day. Shaolin temple complex has much higher visitation due to the international interest in the Chan Sect. However, this appears to be well managed with the entrance to the Shaolin complex constructed for the spectacular display performances conducted at 9 am every day for visitors.

The estimated visitor capacity for the whole property is approximately 10,000 people per day. If the visiting tourist numbers exceeds the carrying capacity of the monuments, a redirecting plan will be implemented.

Damage by tourist foot impact is generally not apparent. The paved nature of the sites provides protection. The Pagoda Forest retains its natural ground surface but has compacted gravel to protect against visitor foot impact erosion in its central area.

One area where the effects of large numbers of visitors could become problematic is through the impact of body heat on the murals. It would be desirable to plan to safeguard the murals by controlling visitor numbers.

Facilities for visitors are in place including parking areas a short distance from the monuments. Electric people-movers convey visitors through the Shaolin Complex along routes where visitors can view groups of monks training in martial arts, or undertaking meditation.

Environmental pressures

The landscape surroundings of some of the monuments are farmed and are thus under the control of individual owners. There is no immediate concern for the impact of intensive methods of land management.

Around the Observatory, several kilometres outside the buffer zone, are coal mines. In order to prevent subsidence, it has been agreed that the mines should leave huge "columns" of coal especially on the side

facing the location of the monuments, and should add reinforcement if necessary to prevent collapse.

Natural disasters

In terms of natural disasters, geologically the site is unlikely to experience earthquakes. Wild landscape fires are not considered an issue due to current adequate rainfall. Flooding and silt damage to the Pagoda Forest has been experienced and the potential danger brought by floodwater has been effectively controlled through dredging, building dams and increasing the spillways to the north of Pagoda Forest. Early warning systems for extreme weather conditions are in place but management for disasters is a future issue to be addressed.

Impact of climate change

The property is sited within a warm-wet monsoon climate zone with four seasons of which winter is very cold and summer warm and wet. If the climate were to become more extreme in terms of higher snowfall or more rain in summer, it would have a detrimental effect on the buildings, particularly the roofs, and could also increase the risk of flooding to the Pagoda Forest.

ICOMOS considers that the main threats to the property are potential over-visiting and unregulated incremental development.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The plans provided with the nomination are of a small scale and do not show the layout of the complexes.

Plans from the *Master Plan* made available to the mission expert enabled greater understanding of the layout of the major features, other minor heritage features located in the nominated areas and planning for visitor management. Areas of archaeological sensitivity have been plotted on plans in the Master Plan document.

The boundaries of the nominated property are adequate for their protection. The buffer zones overlap with National Park designation – see below – but not all of the National Park is included in the buffer zones. As the National Park covers the surrounding mountain peaks and provides a link between all the nominated sites apart from the Observatory, ICOMOS considers that it would be appropriate if the National Park were to be considered as the buffer zone for the nominated sites. This is a suggestion made by the State Party in the third volume of supplementary information

ICOMOS considers that the boundaries of the nominated property are adequate and that the boundaries of the buffer zones should be extended to include the whole of the National Park, as suggested by the State Party.

Ownership

The land and buildings in the property are owned by the government.

Protection

Legal Protection

The nominated monuments are either protected as national monuments by the National Government or as provincial monuments as Henan Province protected sites. Only the Kernel compound is protected at provincial level.

The property if inscribed would be subject to the Measures on the Protection and Management of World Cultural Heritage adopted on 2006. This sets out overall responsibility at national level for World Heritage but puts responsibilities on provinces to establish protection plans and management systems.

The nominated area lies within the Mount Songshan National Park. This covers the peaks of Mount Shaoshi and Mount Taishi. The National Park has a Master Plan (2009-2025) to regulate its activities which are to protect both scenic and natural resources. Within the National Park, in addition to the provisions for individually protected monuments, there are construction control areas.

However it is not clear that the 'natural environment' in some of the buffer zones is sufficiently protected. For example, it is said that this 'should be classified as mountain forest zone in the urban master plan in order to avoid development'.

Traditional Protection

To complement the overall responsibility of the Dengfeng Municipal government, various local communities have set up 'village conventions' to ensure property protection from a daily management perspective. Local volunteer guides are trained so that they can participate in the management and supervision of the monuments.

Effectiveness of protection measures

The protection in place for the individual sites is adequate, but needs strengthening for the landscape setting that provides the overall context for the monuments.

ICOMOS considers that the legal protection in place is adequate for the nominated property but further protection is needed for the landscape areas of the buffer zone.

Conservation

Inventories, recording, research

The key aspects of the eight monuments have all been inventoried. The inventories include former temples and pagodas (now ruins) that could provide further heritage information.

The archival system is of the highest order with hard files on every object, including monitoring records in a modern compact repository. The items are cross-referenced according to sites and types. An electronic database also retains records. The archival repository is within a building at the Songyang Academy.

Present state of conservation

The Que Gates each have a protective shelter building. Taishi Que Gate has a solid simple historic building in sound condition that currently achieves the protective purpose. Chimu Que Gate has a simple modern building reflecting a traditional style, while the Shaoshi Que Gate has an older building with evidence of disrepair. The stone sculptures of this gate are in urgent need of conservation.

A new modern stylised shelter building is planned for Shaoshi Que Gate. The form and fabric of the structure with large expanses of glass will be highly reflective and could be intrusive.

The conservation of the pagodas in the Pagoda Forest is variable with many needing conservation. Conservation management measures are in place to deal with tree root damage to some of the pagodas. Trees (small cypresses) with roots impacting on the pagodas have been identified and are scheduled for removal as noted in the *Master Plan*.

Subsidence of stone structures is a concern and buildings likely to be affected are monitored carefully.

Water damage is present in the eastern walls of the Observatory. Measures are in place to create a small fall to the flat roof to reduce water penetration within the walls. The Observatory is near to some power plants and it is believed that nitrate, a by-product of the power plants, has been causing some fabric damage. Closing agreements are in place for the power plants, which were said in the original nomination to be effective in 2008. Nitrate effects to the observatory wall are being monitored and are expected to reduce with the closure of the power plants.

An aluminium factory mentioned in the nomination dossier is some distance from the sites and apparently has negligible impact. The coal mining noted in the dossier is some distance from the Observatory's buffer zone and is reported to have ceased operation.

The conservation issues of the significant painted murals at Shaolin Temple have been analysed and conservation treatment was undertaken in the 1980s and 1990s by Dunhuang Academy. Monitoring is conducted by the Administrative Bureau of Cultural Relics with the assistance of colleges and universities.

Few details are given for the conservation of the collection of historic trees within several of the sites.

The Observatory has landscaped surrounds to the buildings that are within a town setting that does not diminish the value of the monument. The other monuments all have either natural forest or farmlands in their settings. The forested areas are mainly regrowth or new growth.

Active Conservation measures

Research into environment control for historic interiors is said to be planned. As for the Shaolin murals, the crucial problems include flaking/scaling of paint layers by contraction of binding materials, dehydration and separation of renders, lacunae of renders, cracks in walls, and soot and smoke deposits by lighting butter lamps and burning incense.

After conservation treatment to the murals in 1980s and 1990s by Dunhuang Academy (a renowned institution in the field internationally), the condition of the murals is good and under monitoring. The local Administrative Bureau of Cultural Relics also invites colleges and universities to participate in the monitoring.

The conservation work is under the overarching guidance of the Administrative Committee of Cultural Heritage Protection of Dengfeng Municipal People's Government. Conservation plans and works are undertaken by experts.

Specific conservation plans are referred to in the booklet *Introduction to the Conservation and Administration of the Historic Monuments of Mount Songshan* provided during the evaluation mission.

The sites needing conservation works, such as some of the pagodas in the Pagoda Forest and the carvings on the Han gates, have conservation programs in place.

No details are provided for the conservation of the landscape setting of the sites.

Maintenance

Systems for regular maintenance of the monuments are in place.

Effectiveness of conservation measures

Overall a satisfactory system is in place for dealing with conservation, but work needs to move forward on the implementation of the conservation plans for stone reliefs of the Shaoshi Que Gates and the pagodas of the Pagoda Forest.

ICOMOS considers that conservation measures and plans for the buildings are adequate. Further details are needed on the conservation of the natural areas in the buffer zone.

Management

Management structures and processes, including traditional management processes

It is the responsibility of the Zhengzhou Municipal People's Government to lead the conservation and management of the historic monuments of Mount Songshan while the Dengfeng Municipal People's Government is fully responsible for implementing the conservation and management work. In 2007 the Zhengzhou Municipal People's Government established the Zhengzhou Municipal Preservation and Management Office of the Historic Monuments of Mount Songshan. The Dengfeng Municipal Administration of Cultural Heritage was established in 1990 to protect and manage the opening up of the historic monuments. Beneath the administration are preservation offices for each of the monuments.

Thirty-six qualified specialist staff, the cultural property preservation officers, are responsible for the daily conservation and management. An extensive program of training exists for all levels of personnel involved in management of the monuments.

Policy framework: management plans and arrangements, including visitor management and presentation

The *Master Plan (Regulations for the Conservation and Management of Historic monuments of Mount Songshan in Zhengzhou City)*, approved in 2007, documents policies for protection and management of the nominated sites as well as directions for visitor capacity, circulation, facilities and the ongoing needs of the religious communities.

The proposal described in the nomination dossier to construct three cultural exhibition areas appears excessive and runs the risk of fragmenting the area physically, visually and conceptually, as well as intruding into the relationship of the monuments with their landscape settings. It would be preferable if one exhibition centre could be considered perhaps alongside the boulevard in the town area.

Risk preparedness

A link to the meteorological system provides early warnings on extremes of weather. Lightning conductors are discretely located throughout the sites.

A very sensitive smoke detector system is installed in the temple buildings. A warning alarm is activated if visitors venture too close to the ancient trees.

Measures to protect against extremes of weather arising from climate change need to be considered so that plans of protective action and disaster management arising from weather extremes such as wild fires and hail storms are in place.

Involvement of the local communities

Local communities appear to be fully involved in the nomination, and in the ongoing future of the monuments. Volunteer guides (retired public servants) play an important and active role in monitoring and guiding at the monuments.

Local communities can use parts of the monuments for events under a booking arrangement. Religious leaders are all deeply knowledgeable about the heritage features of their temples and are responsible for the ongoing religious functions that are part of the heritage significance of the places.

Resources, including staffing levels, expertise and training

Funding for conservation work is primarily from the State Administration of Cultural Heritage (SACH) which receives a percentage of revenue from tourism. SACH considers proposals for conservation works and funds them according to a priority allocation. Funding also comes from religious donations by people on religious visits and donations from individuals.

Effectiveness of current management

The Master Plan applies overall to all the components of the serial nomination and provides an effective overarching framework for the management.

ICOMOS considers that the management system for the property is adequate.

6. MONITORING

Monitoring of all timber structures and sensitive features is undertaken annually. A range of indicators have been developed. These include state of vegetation but not the overall visual integrity of the current buffer zones.

The Zhenzhou Municipal Administration of Cultural Heritage with the Dengfeng Municipal Peoples'

Government undertakes the monitoring reports and submits them to the SACH.

ICOMOS considers that the monitoring arrangements are adequate for the nominated property but that monitoring needs to be developed for the landscape elements of the buffer zone.

7. CONCLUSIONS

The original nomination and the first supplementary volume of information received stressed the link between some of the nominated sites and the unique development of mountain worship and suggested that the value of the ensemble manifests the power and influence the mountain had in constitutional, religious and ceremonial, terms and how the simple worship of nature was transformed into a force that legitimised imperial power, under the guidance of Confucian thought.

The exclusion of Mount Songshan from the boundary, even though it was the inspiration for the development of the property, appeared to relate to the premise that although the eight monument ensembles relate to Mount Songshan as the birthplace of Chinese cultural civilisation, they are distinctive entities reflecting different cultural periods and dates.

However, in the second volume of supplementary information received, the link between the nominated sites and Dengfeng was brought to the fore and less attention was drawn to the association with mountain worship. It was suggested that the idea of the area of Dengfeng (the capital of the first dynasty whose precise location is unknown) being the centre of heaven and earth was the motivation for the construction of the various sites.

The third volume of supplementary information reinforced the link between the ensemble and the concept of the centre of heaven and earth, and has provided a new justification for the criteria. Although it is clear that Dengfeng was for centuries seen as the centre of heaven and earth, this astronomical concept was strongly linked to the concept of the centre of the earth being the seat of imperial power. Although Dengfeng was the capital of the first dynasty, its general location remained linked to the idea of it being the centre of the country. Dengfeng was also linked to Mount Songshan, as the natural attributes of the concept of heaven and earth.

ICOMOS considers that it is impossible to separate this concept from its associations with imperial power, with religion and with Mount Songshan, described as the natural attribute of the concept. As the supplementary information acknowledges, the central point of the zone perceived as the centre of heaven and earth is between two of the mountain peaks: it is surrounded on three sides by the mountain.

ICOMOS considers that the astronomical idea of the centre of heaven and earth is strongly linked with the idea of imperial power, with the propitiousness of establishing capitals at the centre of heaven and earth, and with its natural attribute, Mount Songshan. ICOMOS does not consider that it is possible to separate the idea of heaven and earth from its physical marker and the ceremonies and rituals associated with it: the concepts reinforced each other. The mountain links the sites and gives them context.

The State Party suggests that the sites could be linked by extending the individual buffer zones (already part of the National Park) to coincide with the National Park and ICOMOS agrees with this suggestion.

As the idea of the centre of heaven and earth is difficult to relate to all the components of the nomination, ICOMOS considers that the concept needs to be explained at the property in a way that enables visitors to understand what links the various sites.

Recommendations with respect to inscription

ICOMOS recommends that the Historic Monuments of Dengfeng in “The Centre of Heaven and Earth”, People’s Republic of China, be inscribed on the World Heritage List on the basis of **criteria (iii) and (vi)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

For many centuries Dengfeng, one of the early capitals of China whose precise location is unknown, but whose name is now associated with an area to the south of Mount Shaoshi and Mount Taishi, two peaks of Mount Songshan, came to be associated with the concept of the centre of heaven and earth – the only point where astronomical observations were considered to be accurate. The natural attribute of the centre of heaven and earth was seen to be Mount Songshan and worship of Mount Songshan was used by the Emperors as a way or reinforcing their power.

The three ideas do therefore to an extent converge: the centre of heaven and earth in astronomical terms is used as a propitious place for a capital of terrestrial power, and Mount Songshan as the natural symbol of the centre of heaven and earth is used as the focus for sacred rituals that reinforce that earthly power. The buildings that clustered around Dengfeng were of the highest architectural standards when built and many were commissioned by Emperors. They thus reinforced the influence of the Dengfeng area.

Some of the sites in the nominated area relate closely to the mountain (Zhongyue Temple, Taishi Que and Shaoshi Que); the Observatory is very clearly associated with the astronomical observations made at the centre of

heaven and earth, while the remainder of the buildings were built in the area perceived to be the centre of heaven and earth – for the status that this conferred.

Criterion (iii): The astronomical idea of the centre of heaven and earth is strongly linked with the idea of imperial power, with the propitiousness of establishing capitals at the centre of heaven and earth, and with its natural attribute, Mount Songshan and the ceremonies and ritual associated with it. The serial property reflects the significance of the area in terms of prestige and patronage.

Criterion (vi): The concentration of sacred and secular structures in the Dengfeng area reflects the strong and persistent tradition of the centre of heaven and earth linked to the sacred mountain which sustained imperial sacrifices and patronage over 1500 years and became of outstanding significance in Chinese culture. The Buddhist structures came to have a symbiotic relationship with the sacred mountain.

Integrity and authenticity

The attributes necessary to represent outstanding universal value are present within the boundaries although as the area associated with the concept of heaven and earth is considerably larger than the nominated property and a full justification for the choice of sites within that larger area has not been provided. Within each individual site, sufficient attributes remain to reflect their original layout, even though in most sites many of the individual buildings have been subject to several periods of re-building.

Individually, there is no concern over the authenticity of the attributes in terms of their materials, religious associations, and spatial layout. Overall although some of the sites are related to the physical attributes of the concept of heaven and earth– the mountain and its associated religious practices - the series as a whole does not readily convey the concept in an obvious way and the links need to be strengthened.

Protection and Management requirements

The majority of the monuments are protected as national monuments by the National Government. Only the Kernel compound (Shaolin Temple) is protected at provincial level.

The *Master Plan (Regulations for the Conservation and Management of Historic monuments of Mount Songshan in Zhengzhou City)*, approved in 2007, documents policies for protection and management of the nominated sites as well as directions for visitor capacity, circulation, facilities and the ongoing needs of the religious communities.

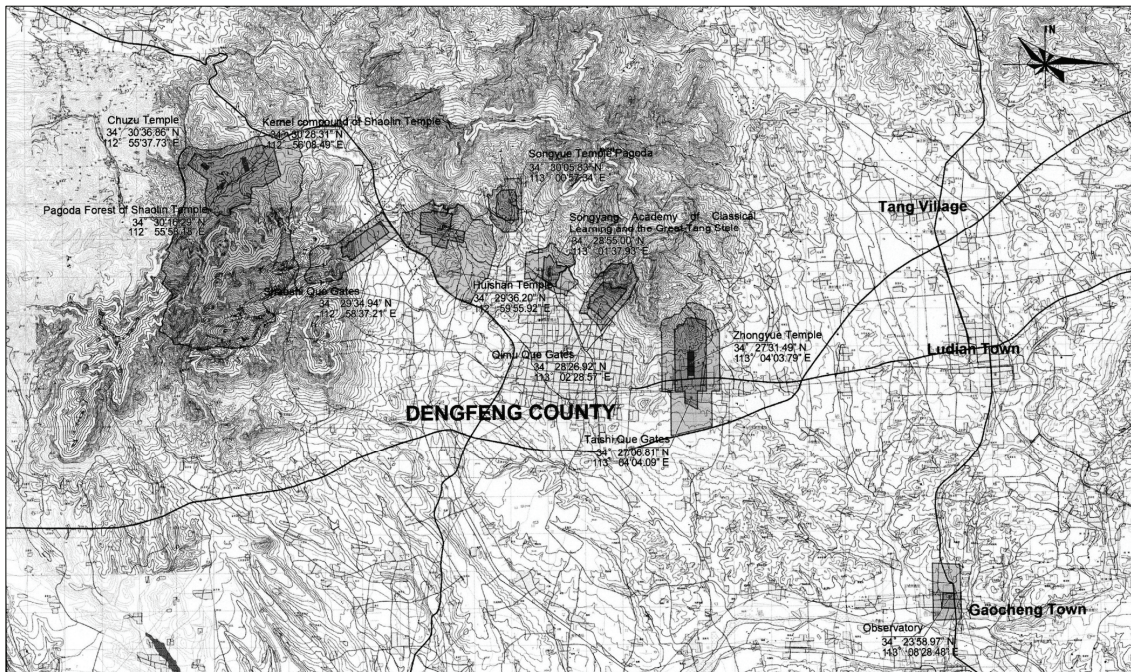
It is the responsibility of the Zhengzhou Municipal People’s Government to lead the conservation and management of the property while the Dengfeng

Municipal People's Government is fully responsible for implementing conservation and management work. In 2007 the Zhengzhou Municipal People's Government established the Zhengzhou Municipal Preservation and Management Office for the Historic Monuments of Mount Songshan. The Dengfeng Municipal Administration of Cultural Heritage was established in 1990 to protect and manage the opening up of the historic monuments. Beneath the administration are preservation offices for each of the monuments.

The nominated area lies within the Mount Songshan National Park and it is recommended that this becomes the buffer zone, absorbing the individual buffer zones proposed for the individual sites. The National Park has a Master Plan (2009-2025) to regulate its activities which are to protect both scenic and natural resources. Within the National Park, in addition to the provisions for individually protected monuments, there are construction control areas. The 'natural environment' within the Park provides the context and setting for the monuments and there is a need to ensure that this is adequately classified and protected in order to avoid adverse development.

ICOMOS further recommends that the State Party give consideration to the following:

- Extend the buffer zones to coincide with the boundary of the Mount Songshan National Park, as suggested by the State Party;
- Provide adequate interpretation at the property to ensure that the link between the component sites and the concept of the centre of heaven and earth is adequately understood.



Map showing the boundaries of the nominated properties



Zhongyue Temple



Qimu Que Gates



Pagoda Forest - Shaolin Temple



The Observatory

Iwami Ginzan Silver Mine (Japan) No C1246

1. BASIC DATA

State Party: Japan

Name of property:

Iwami Ginzan Silver Mine and its Cultural Landscape

Location:

Shimane Prefecture, Ohda City District

Inscription: 2007

Brief Description:

The Iwami Ginzan Silver Mine in the south-west of Honshu Island is a cluster of mountains, rising to 600 m and interspersed by deep river valleys featuring the archaeological remains of large-scale mines, smelting and refining sites and mining settlements worked between the 16th and 20th centuries. The site also features routes used to transport silver ore to the coast, and port towns from where it was shipped to Korea and China. The mines contributed substantially to the overall economic development of Japan and south-east Asia in the 16th and 17th centuries, prompting the mass production of silver and gold in Japan. The mining area is now heavily wooded. Included in the site are fortresses, shrines, parts of Kaidō transport routes to the coast, and three port towns, Tomogaura, Okidomari and Yunotsu, from where the ore was shipped.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The nominated property is a serial nomination of fourteen sites that demonstrate three aspects of silver mining production and transportation carried out on and near Mount Sennoyama and Mount Yōgaisan between the 16th and 20th centuries. The property comprises the remains of nine silver mine sites relating to the Iwami Ginzan mine, with archaeological evidence of administration buildings and fortresses; shrines and cemeteries, together with associated settlements, some still partly inhabited (Ômori-Ginzan); two Kaidō transportation routes to the coast with remains of wayside shrines, and three port towns (Tomogaura, Okidomari and Yunotsu) from where the ore was

shipped. The different areas of the inscribed property are joined together and surrounded by the buffer zone. The area of the inscribed property is 442 ha and the buffer zone area is 3,221ha.

The Advisory Body's evaluation of the property at the time of inscription suggested some modifications that could be made to the property boundaries as follows.

- 1) The nominated area boundary around the Ômori-Ginzan settlement was tightly drawn around the town area. The distinctively linear town stretching along the valley floor has developed because of the flanking ranges, which are a dominant feature of the town as part of a cultural landscape. Consideration should be given to including the flanking ranges, to the ridgeline either side, as part of the nominated area.
- 2) At the harbour at Yunotsu, consideration should be given to including the inner harbour to the high water mark as well as the presumed historic landing area, in the nominated area, as at the other two ports (Okidomari and Tomogaura).
- 3) The old Kaidō transportation routes continue in use as pedestrian or vehicle routes. Some sections of the routes display apparently early features and materials such as drains and steps; these have a high degree of authenticity and are included in the nominated area. Sections that were damaged by subsequent works have not been included as nominated areas, although the alignment of the routes is included within the buffer zone. The routes are dotted with stone stupas, small shrines, small Buddha halls, etc., which were built by people who passed along the route, or by local citizens.

Modification:

Ômori-Ginzan

Re-examination of past archaeological surveys of the flanking mountainsides has enabled identification of remains that have clarified the way the slopes were used and their relationship with the daily life of the residents of the mining towns at the time the silver mine was in operation. The remains include shrines, temples, cemeteries, sites of terraced farmland, and ruins of community roads that connected these sites with the mining towns. There are also stone walls, steps, drainage gutters and stone quarries.

One of the oldest gravestones bears the date 1621. Historical records indicate that the population of the town increased in the 18th century to well beyond its current built capacity, and this is borne out by the extensive settlement and cemetery remains on the slopes above the town, now covered by forest.

The proposed expansion of the current nominated area of Ômori-Ginzan will encompass these remains and the

topography of the town at its peak population by including the mountainsides as relict landscape around the town. The ridgelines correspond essentially with the traditional boundaries of Ōmori town, which was the extension of the Ginzan settlement, to the north-east. The additional area proposed is 129.9ha, an increase of around 36%.

ICOMOS considers that the proposed enlargement is justified as a minor modification enclosing the hidden part of the settlement and not affecting the Outstanding Universal Value. Although large in area it does not constitute an extension of the property in the sense of paragraph 164 of the *Operational Guidelines*.

Yunotsu

Additional research studies carried out since 2007 have identified the small promontory, beach and inner harbour as the original mooring and landing place at Yunotsu for the Iwami Ginzan mine. The proposed expansion of the current nominated area of Yunotsu will encompass this area, completing the integrity of Yunotsu as one of the three key ports for export of silver from the mine. The additional area proposed is 2.9ha, an increase of 8.6%.

ICOMOS considers that the proposed enlargement is justified as a minor modification incorporating a key element of the port area and reinforcing the Outstanding Universal Value.

Kaidō transportation routes: Tomogauradō and Yunotsu-Okidomaridō

Further research on the Kaidō has identified 4 additional sections on the Tomogauradō route and 3 additional sections of the Yunotsu-Okidomaridō route, which on the basis of their record in 19th century cadastral maps, the physical remains of adjoining sections and/or the existence of the original road surface beneath the current surface, can be restored. The proposed addition of these sections to the Kaidō nominated area will increase the protected length of the routes from 65.21% of their total length to 73.51%. The actual area of the proposed increase is 0.25 ha, an increase of 9%.

ICOMOS considers that the proposed enlargement is justified as a minor modification extending the integrity of the property and reinforcing the Outstanding Universal Value.

The whole area of the proposed expanded nominated area is owned by Ōda City and protected by municipal ordinances of Ōda City and the National Law for the Protection of Cultural Properties. The additions will further endorse the Statement of Outstanding Universal Value for the property as inscribed by the World Heritage Committee's Decision 31COM8B.26. The proposed total combined increase in the area of the inscribed property is 86.77 (excluding areas of overlap), which is 19.6%.

The buffer zone boundary remains the same, but its area will be reduced by the area that was formerly buffer zone

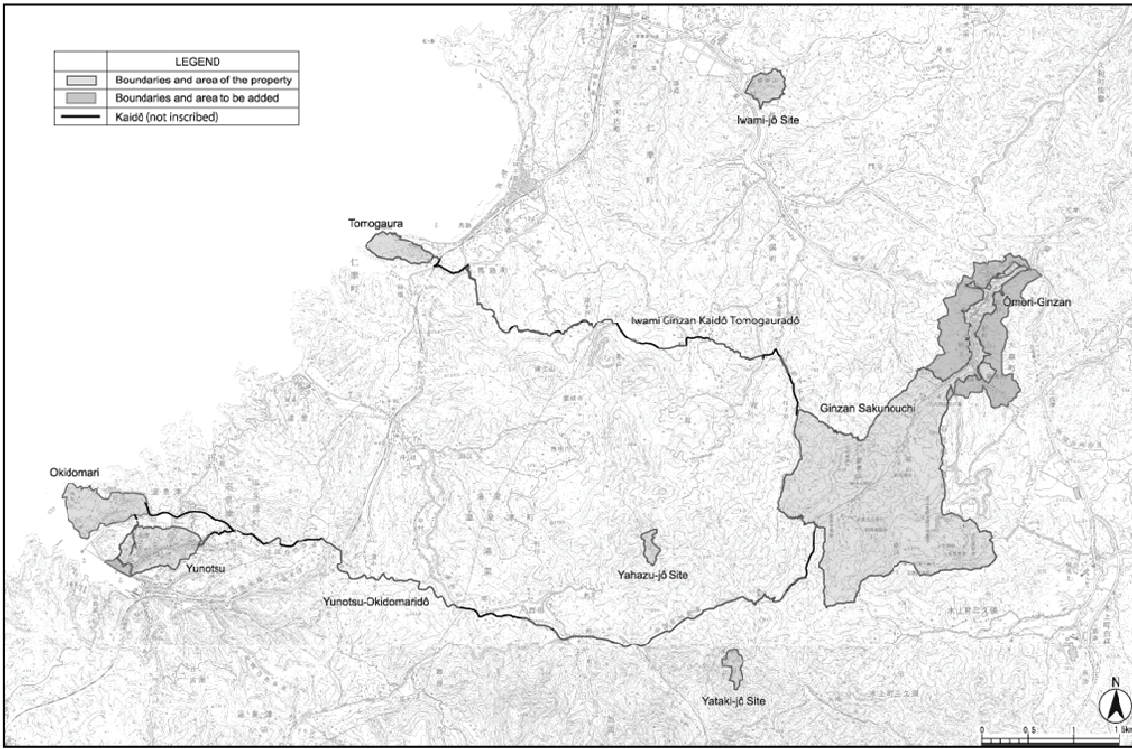
and is now proposed to become nominated area: 86.76ha, which is 2.7% of the former buffer zone area.

The proposal includes a statement of progress on the recommendations regarding management that were included in Decision 31COM8B.26, and Ōda City Preservation Plans for the Ōmori-Ginzan and Yunotsu Preservation Districts for Groups of Historic Buildings.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed minor modification to the boundary of the Iwami Ginzan Silver Mine and its Cultural Landscape, Japan, be **approved**.



Map showing the revised boundaries of the property

Lumbini, the Birthplace of the Lord Buddha (Nepal)

No 666rev

1. BASIC DATA

State Party: Nepal

Name of property:

Lumbini, the birthplace of the Lord Buddha

Location:

Lumbini zone, Rupandehi District, Western Terai

Inscription: 1997

Brief Description:

Siddhartha Gautama, the Lord Buddha, was born in 623 B.C. in the famous gardens of Lumbini, which soon became a place of pilgrimage. Among the pilgrims was the Indian emperor Ashoka, who erected one of his commemorative pillars there. The site is now a Buddhist pilgrimage centre, where the archaeological remains associated with the birth of the Lord Buddha form a central feature.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The boundary of the World Heritage inscribed property encloses an area 130m x 150m around the pool (Shakya Tank) where the Mother of Buddha (Mayadevi) is believed to have bathed before giving birth to the Lord Buddha, and excavated remains of the 3rd century BC brick temple that commemorated the birthplace. These remains are covered by a modern temple (the Mayadevi Temple) built in 2002. To the north of the temple is the Asoka pillar, also enclosed by the World Heritage boundary. This pillar was erected to mark the visit by King Asoka to the place in 249BC and bears an inscription identifying the site as the birthplace of Lord Buddha.

Subsequently the surrounding area was developed as a place of pilgrimage for one of the world's great religions, accommodating many monasteries and memorial shrines, whose excavated remains date from the 3rd century BC to the 15th century AD. This area is covered by the current buffer zone, which extends to a maximum

384m from the Asoka pillar and surrounds the inscribed property. It includes the mound of the ancient Lumbini village to the south-west, and vulnerable clusters of archaeological remains to the north and south-east of the inscribed property. This area also includes buildings from Shamsheer Singh Rana's period, which though not related to the Buddhist aspect of the site are never-the-less related to its re-discovery and archaeological exploration chronology. One of these buildings is the office of the Lumbini Development Trust and another is the police station. Both these buildings are said to offer reuse potential for activity related to the site such as a documentation centre or site museum.

Beyond the boundary of the current buffer zone is the area defined as the sacred garden, seen as providing an appropriate environment for one of the world's most holy, religious places. This is a rectangular area extending 800m to the west, south and east of the Asoka pillar, and 560m to the north of the Asoka pillar.

Modification:

Deriving from the Management Plan currently being prepared for the World Heritage property, a request has been made for a minor modification involving an expansion of the current World Heritage inscribed property to the extent of the current buffer zone boundary, with a new buffer zone to surround this and cover the area of the sacred garden.

The current delineation for the boundary and buffer zone is based on the Master Plan which was finalized in 1978. The Master Plan took the Asoka pillar as the focal point and developed a plan extending to an area of 5 x 5 miles. At the centre was placed the Sacred Gardens of approximately 1 x 1 mile. To protect the main archaeological site from floods, a drainage system was proposed linked to a water body and levee which surrounded the main archaeological site. The water body divides the site into an inner and outer Sacred Garden. Only the inner Sacred Garden was considered when the property was inscribed in 1997. The State Party now proposes to extend the boundary to cover the entire inner Sacred Garden and extend the buffer zone to cover the entire outer Sacred Garden.

The proposed modification to the property boundary will increase the area to 25.24 hectares, almost 13 times the current area.

The area of the proposed new buffer zone will be 192.36 hectares, almost 8.5 times the current buffer zone area.

The World Heritage Property is protected by the Ancient Monuments Preservation Act (1956) and the Lumbini Development Trust Act (1985). Management of the complex is the responsibility of the Lumbini Development Trust (LDT) and the Department of Archaeology. The LDT is an autonomous, non-government, not-for-profit organisation under Royal patronage and supported by

the United Nations Development Programme (UNDP) and other international and regional bodies.

No specific details are provided for the protection and management of the proposed larger area, nor the proposed buffer zone.

The maps provided are schematic.

The State Party considers that the enlarged property would not change the justification for the criteria nor the Outstanding Universal Value of the property. A draft statement of Outstanding Universal Value is provided but this is based on the current boundaries and it is stated that this will be amended once the enlarged boundaries have been agreed.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS considers that the proposal to enlarge the property to encompass the entire inner sacred garden and to enclose the outer sacred garden by a new buffer zone is to be supported in principle. However in order to approve the considerable extension to the property it considers that more details are needed of the area to be included in terms of descriptions, plans, photographs, and more detailed maps are needed that comply with the requirements of the *Operational Guidelines for the Implementation of the World Heritage Convention*. Furthermore details also need to be provided of the management and protection arrangements for the enlarged area.

As well, some of the statements referred to at the time of inscription need to be referenced such as the statements made at the time that various administration buildings were to be demolished.

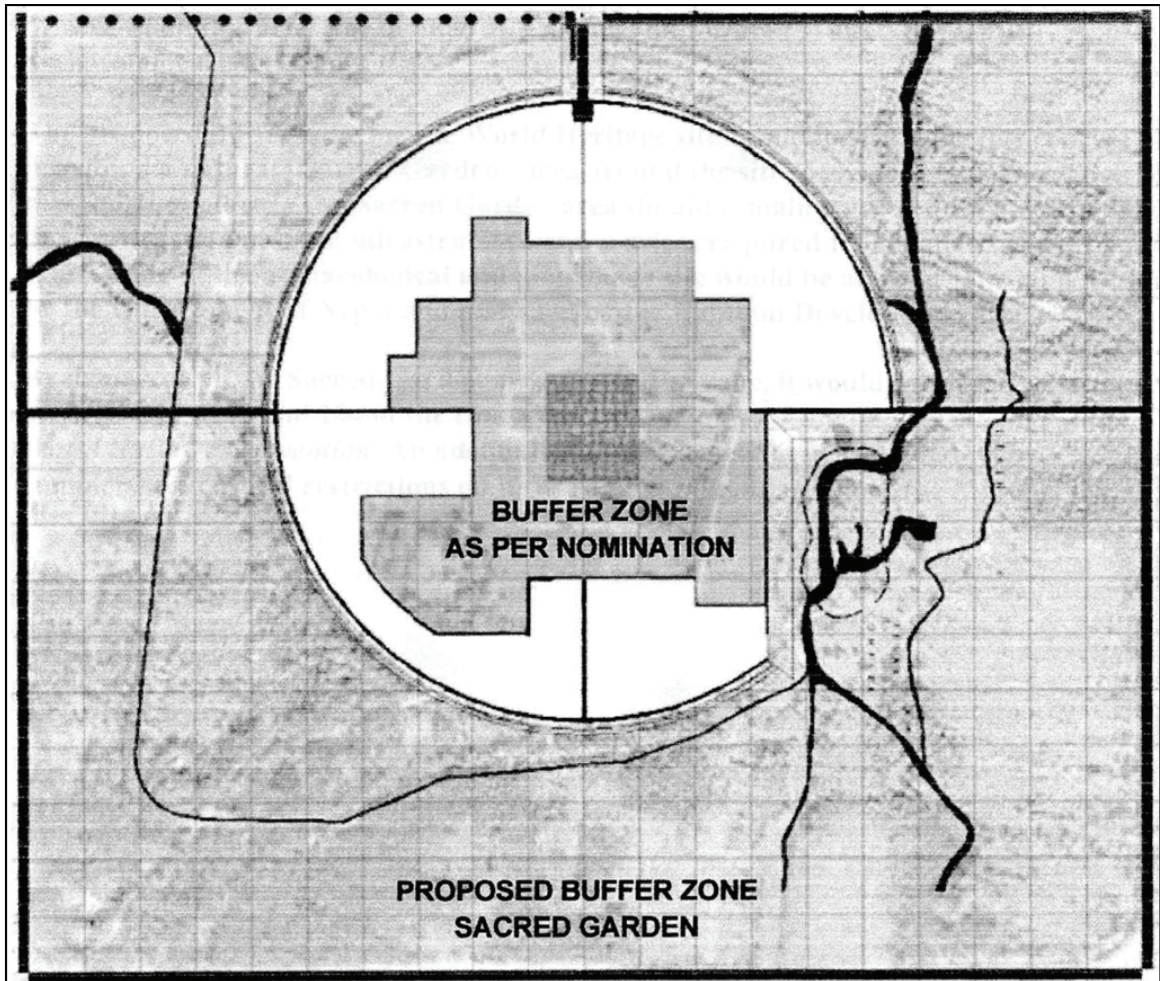
ICOMOS also considers that a statement of Outstanding Universal Value needs to be provided by the State Party identifying how the Outstanding Universal Value is reflected by the considerably extended attributes of the enlarged area.

Furthermore ICOMOS considers that a mission will be needed to understand the rationale for the boundaries and the adequacy of the management and protection arrangements. The request from the State Party refers to the development of a Management Plan and it would clearly be desirable of this Plan was completed, approved and implemented before the boundary was enlarged.

Overall ICOMOS considers that the requirements outlined above mean that this request cannot be considered as a minor modification. The request needs to be re-formulated with the extra material suggested, and submitted as a major modification.

ICOMOS recommends that the proposed minor modification to the boundary of Lumbini, the Birthplace of the Lord Buddha, Nepal, ***should not be approved***.

ICOMOS further recommends that the State Party submit a fuller nomination that will be considered as a major modification and evaluated with a mission to the property.



Map showing the revised boundaries of the property

Royal Exhibition Building and Carlton Gardens (Australia) No 1131

1. BASIC DATA

State Party: Australia

Name of property:

Royal Exhibition Building and Carlton Gardens

Location:

Melbourne, Victoria

Inscription: 2004

Brief Description:

The Royal Exhibition Building and its surrounding Carlton Gardens were designed for the great international exhibitions of 1880 and 1888 in Melbourne. The building and grounds were designed by Joseph Reed. The building is constructed of brick and timber, steel and slate. It combines elements from the Byzantine, Romanesque, Lombardic and Italian Renaissance styles. The property is typical of the international exhibition movement.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

This property was inscribed on the World Heritage List without any formal buffer zone. 2004 ICOMOS evaluation mentioned that if the site were inscribed the Commonwealth government would 'endorse' the Heritage Overlay Zones as the buffer zone for the site.

The Victorian Government enacted amendments to the Heritage Act 1995 (VIC) in 2004 to enable the implementation of a buffer area around any world heritage places in Victoria. The buffer zone is referred to in Victorian legislation as a World Heritage Environs Area (WHEA). The legislation requires the development of a Strategy Plan for the WHEA.

A draft strategy plan was developed by the Executive Director, Heritage and released for public comment in 2007. The Heritage Council of Victoria (HCV) called for public submissions and held a hearing in 2008. Twenty

two submissions were considered by the HCV. Following the hearing the HCV amended the Strategy Plan. The Minister for Planning made further amendments to the Strategy Plan in October 2009 and approved it on 21 October 2009.

In January 2010, the State Party provided the World Heritage Centre with the *World Heritage Environs Area Strategy Plan: Royal Exhibition Building & Carlton Gardens* that establishes a buffer zone for the property inscribed on the world Heritage List.

The Strategy plan describes in details the extensive public consultations begun by the State Party in 2004 for the creation of the buffer zone; it reviews the history of the area and the existing heritage controls; it identifies the areas of greater and lesser sensitivity and the heritage designated properties within or near the proposed buffer zone. It also describes the views to and from the Exhibition Building and the Carlton Gardens that should be protected. The Strategy plan covers all the important urban planning and regulatory issues that may impact the proposed buffer zone and the listed property. It describes the tools already in place and makes recommendations for modifications to existing regulatory instruments and for new ones.

Modification:

Description

The listed property area covers 26 ha and the proposed buffer zone is 55.26 ha (excluding the listed property area). It extends approximately 150 m to the West and South of the property and 200 m to the North and East. It respects the urban tissue and is aligned to cadastral or property lines. This area includes land within the City of Yarra Heritage Overlay precinct known as the "South Fitzroy Precinct" (HO 334), and land within the City of Melbourne Heritage Overlay precinct known as the "Carlton Precinct" (HO 1).

New Controls

The City of Melbourne and Yarra will need to adopt citations and make amendments to their planning instruments to protect views and Victorian Heritage Register amendments to Statements of Significance to ensure the contributory role they play within the buffer zone is adequately considered in the assessment of permit applications.

Existing Heritage Controls

In terms of existing heritage controls, the proposed buffer zone includes a number of properties on the Victorian Heritage Register; land and properties within the City of Yarra Heritage Overlay precinct known as the 'South Fitzroy Precinct' (HO 334); and land and properties within the City of Melbourne Heritage Overlay precinct known as the 'Carlton Precinct' (HO 1).

Heritage Overlay controls, some of which are included in the Victorian Heritage Register, are also included in the

buffer zone. Other planning scheme controls also apply in some cases including height controls specified under various Design and Development Overlays. While it is understandable that industry and government would not wish to restrict development activities in an area adjacent to the capital zone it is disappointing that in effect only places on the actual boundary of the Royal Exhibition Building and Carlton Gardens will have restrictions placed on future development, with the exception of St Vincent's Hospital which will have no heritage restrictions.

Places on the National Heritage List are subject to the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), including the EPBC Act Regulations and management principles relating to places of National heritage significance.

Properties included in the Victorian Heritage Register are subject to the provisions of the Heritage Act 1995 (Vic). The intention of the Act is to prevent places and objects which are included in the Register from being demolished or changed in a way that has the potential to affect or diminish their heritage value. Permits are typically required from Heritage Victoria for works such as extensions, interior works, new constructions, demolition or relocation, excavation, subdivision, changes of colour schemes and signage, new fences, new pathways or driveways, and landscape works beyond regular maintenance.

Properties included in the Heritage Overlay are subject to the Heritage Overlay provisions of the planning schemes. Before deciding on an application for a proposal, the responsible authority is required to consider a range of 'decision guidelines' which address issues to do with heritage significance, character and appearance of heritage places, and heritage impacts.

The South Fitzroy Precinct (HO 334) in the City of Yarra is subject to CL. 22.02 'Development Guidelines for Heritage Places'. This is a local planning policy which applies to all land covered by the Heritage Overlay in Yarra. Precinct citations for the South Fitzroy Precinct include a history and description of the precinct area and a statement of significance. They emphasise the importance of the nineteenth century building stock, street patterns and urban infrastructure, and the high density of generally low scale development.

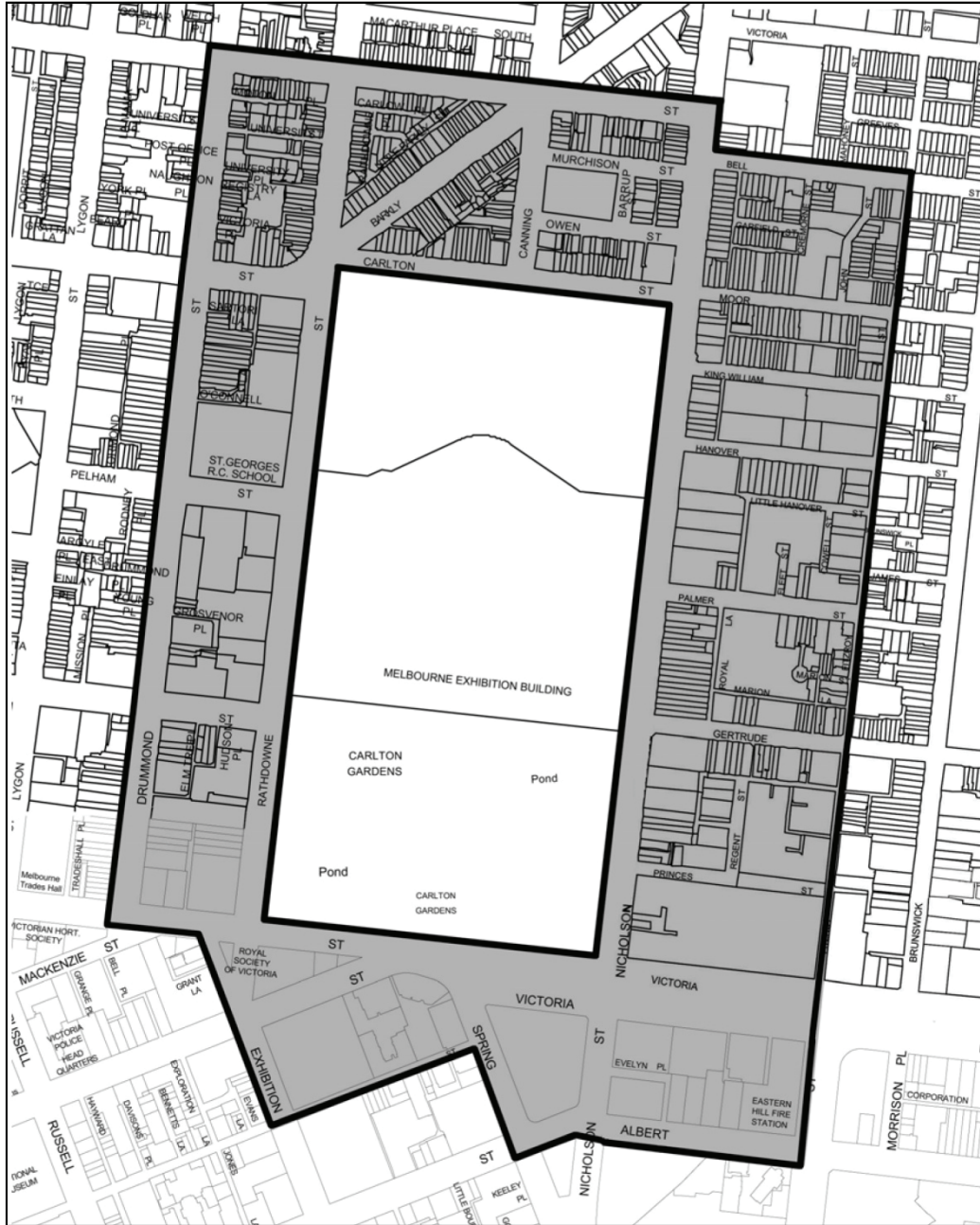
Other citations and regulations also apply to the proposed buffer zone and are further described in the Strategy plan.

ICOMOS considers that the proposed buffer zone should ensure adequate and efficient protection for the inscribed property.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed buffer zone for Royal Exhibition Building and Carlton Gardens, Australia, be **approved**.



Map showing the boundaries of the proposed buffer zone

Schloss Eggenberg (Austria) No 931bis

Official name as proposed by the State Party:

The City of Graz – Historic Centre and Schloss Eggenberg

Location:

Community of Graz, Province of Styria,
Republic of Austria

Brief description:

Schloss Eggenberg was built in the late Renaissance at the start of the Baroque period. It has conserved its painted and stucco interior décor, the composition and the ornamental complexity of which reflect the Baroque and Rococo conceptions of the universe. It is set in the midst of a park with trees and parterres of later design.

Category of property:

In terms of categories of cultural property as defined in Article 1 of the 1972 World Heritage Convention, this is a *monument*.

1. BASIC DATA

Included in the Tentative List: 8 February 2005

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre:

31 January 2005

14 January 2008

27 January 2010

Background: The nomination is a proposal for an extension of the City of Graz – Historic Centre, inscribed in 1999 on the basis of criteria (i) and (iv).

The examination of this extension proposal was deferred by the World Heritage Committee at its 30th session (Vilnius, 2006, Decision 30 COM 8B.51).

The extension proposal was again examined at the 33rd session of the World Heritage Committee (Seville, 2009), which took the decision 33 COM 8B.31:

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1,*

2. *Refers the extension of the City of Graz – Historic Centre, to include Schloss Eggenberg, Austria, back to the State Party in order to allow it to:*

a) *Extend the buffer zone to the road connecting the historic centre to the Castle along its entire length, through the intermediate zone urbanised in the 20th century, so as to preserve the historic link that existed between the two elements;*

b) *Strengthen the authority and broaden the scope of competence of the City of Graz Historic Centre World Heritage Coordination Bureau, which is in charge of the management plan.*

Consultations: ICOMOS consulted its International Scientific Committee on Historic Towns and Villages.

Literature consulted (selection):

Mosser, M., Histoire des jardins de la Renaissance à nos jours, Paris, Flammarion, 2002.

Heilbron, J.L., Astronomie et églises, collection Bibliothèque scientifique, Paris, Belin, 2003.

Faucherre, N., Pellerin, A., Joly d'Aussy, D., Crazannes, logis alchimique, Paris, Le Croît vif, in 8, Paris, 2003.

Cohen, G.B. and Szabo F.A.J. (ed) Embodiments of power: building baroque cities in Europe, New York, Berghahn Books, 2008.

Technical Evaluation Mission: 8–10 September 2008

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

Schloss Eggenberg is located c 3km west of the historic centre of Graz. It was built shortly after 1625, on the site of an earlier castle, as the state residence of Duke Hans Ulrich von Eggenberg (1568–1634), one of the most prominent political personalities of 17th century Austria. The Palace was linked with the city centre by a nearly straight road. The main zone of the nominated property consists of the Palace and its Park. The area is surrounded by a buffer zone, which encloses part of the surrounding small housing area and extends to a natural park area in the west. It includes the starting point of the avenue leading towards the city centre.

Schloss Eggenberg is generally presented as the joint work of the Italian-born architect to the Graz Court, Pietro de Pomis (1569–1633), and the architect Laurenz van de Syype from the Netherlands. It was planned by

the Duke for representative purposes, and it was also designed as a comprehensive architectural allegory, as a visible sign both of his new powerful worldly position and of the humanist-inspired vision of an ideal world. References are made to the utopias of the time, such as those of Tommaso Campanella, Thomas More, and Johann Valentin Andreae, part of whose works are conserved in the Eggenberg library. For example, there is a total of 365 windows in the Palace (equivalent to the days in a year) and the number of rooms on each floor is 31 (representative of the number of days in a month). Further numbers refer to weeks, hours, etc. The Hall of the Planets, the Chapel, and the Theatre are laid out on an axis that is of particular importance for the building.

The ground plan of the Schloss is a large rectangle (c 65m x 70m), recalling Spanish examples of Alcazar type construction, especially the castle-monastery of El Escorial. The main body of Schloss Eggenberg has three storeys. The corners are raised, forming tower-like additions with conical roofs. The inner part of the quadrangle is divided into three courtyards arranged in a T-shape. Axial symmetry was an architectural novelty, here used for the first time in Austria. Following the Spanish tradition, its plain exterior rejects all ornamentation in favour of the simple contrast between the white wall surfaces and the ochre colour of the structural elements. The inner courtyards, however, demonstrate an unexpected play of light and shade.

On the first level there is a richly decorated Mannerist grotto. The other rooms are more recent alterations.

In the centre of the building, at the intersection of the interior buildings, there is a central tower. This is the only surviving part of the 15th century castle. It includes a chapel on the second floor in Late Gothic style with tracery bays, gridded vaulting, a sculpted altar, and a painted retablo.

The second floor is made up of a cycle of 24 representative State Rooms. Its main focus is the *Hall of the Planets* so named because of the theme of its decorations. It was the work of the painter Hans Adam Weissenkircher (1646–95) from Salzburg, whose paintings are set into a vaulted stucco ceiling. The state rooms were created in two phases, representing the Baroque and Rococo style respectively. Of particular interest is the cycle of 600 ceiling paintings and friezes, executed by several court painters from 1666 to 1673, which has been completely preserved. The remaining decoration was created in 1754–63, and is based on the drawings of Josef Hueber, who also reconstructed the Eggenberg court theatre as the *Maria Schnee* (Our Lady of the Snows) palace church. The large angel sculptures of the Maria Schnee altar are by Philipp Jakob Straub and derive from an icon of the same name in Santa Maria Maggiore in Rome.

Three 18th century Oriental rooms are particularly noteworthy: their *Chinoiserie* decorations combine the Chinese and Japanese styles with European

characteristics. The Japanese room is decorated with imported painted paper screen panels. Dating from the beginning of the 17th century, they are a rare representation in the west of the Momoyama period in Japan (1570–1610), and depict the city of Osaka.

Five bedrooms in the north wing were painted by the Styrian artist Johann Baptist Anton Raunacher (1729–71). Bedroom 20 is dedicated to hunting scenes, 21 to bucolic scenes, 23 to card and other games, and 24 to the theatre.

The present Schloss Eggenberg Park was created from 1802 onwards as a sophisticated 'English Garden' where botanical rarities were acclimatised. The garden integrates some parts of the landscape garden. In the 20th century the garden lost some of its features, and starting in the 1990s it has undergone renovation and partial replanting, including the new Garden of the Planets, which was built on the site of the lost Pleasure Garden.

Extension

Graz is an exemplary model of the living heritage of a central European urban complex influenced by the secular presence of the Habsburgs. The old city is a harmonious blend of the architectural styles and artistic movements that have succeeded each other since the Middle Ages, together with cultural influences from the neighbouring regions.

History and development

The Eggenberg dynasty can be traced back to a landed patrician family in Graz in the early 15th century. Balthazar, a mint master of Emperor Frederick III, had the Orthof Castle built in the mid-15th century on the ancient trading route west of Graz. The chapel was built in the central tower in around 1470. The family took the name of Eggenberg at this time.

The rebuilding of the Castle was undertaken in 1625, with only the central tower of the former Palace being conserved. The work was commissioned by Prince Hans Ulrich von Eggenberg (1568–1634), of the Styrian Eggenberg dynasty. Educated at the Protestant University of Tübingen, he converted to Catholicism and became a proponent of the Counter-Reformation in the Holy Roman Empire. At the turn of the 16th and 17th centuries, he was a close collaborator and friend of the Archduke of Styria, and then of Emperor Ferdinand II. Towards the end of the period 1610–20 he was one of the most eminent dignitaries of the Empire. In 1621 he became Governor of Styria, and then an Imperial Prince and Duke of Krumau (Bohemia). He was at the height of his power when he undertook the building of Schloss Eggenberg on the site of the former family property, near Graz.

The Castle reflects the newly increased power of the Eggenbergs. Its architect was Pietro de Pomis (1569–1633), who was employed by the Emperor. Originally from the Milan area, he was an architect, painter, and medal-maker and was a leading light of the art of the Catholic Counter-Reformation in the Empire. Laurenz van de Syppe from the Netherlands continued his work at Graz from 1632 to 1634. Pietro Valnegro and Antonio Pozzo then completed the work on the Castle until 1646.

At the beginning of the 18th century the Eggenberg dynasty was suddenly extinguished, following the early death of the last male representative of the family. The Styrian possessions passed to the Counts Herberstein and Leslie. The Herberstein had the Castle redecorated from 1754 to 1763 in a Rococo style, under the direction of the Viennese architect Josef Hueber (1715–87). All the rooms were furnished with high-quality faience stoves, chandeliers, and wall lights of Bohemian glass. The court theatre was rebuilt as the Castle Church; its wooden gallery was modified into a Rococo oratory and included in the cycle of state rooms.

The garden was originally laid out geometrically in the 17th century Renaissance style. It was completely redesigned in the following century and transformed into a Rococo-style French garden, featuring hedged parterres. From 1820 onwards it was transformed into a landscape garden.

Having lost its functions in the early 19th century the Castle was opened to visitors as early as 1830. The Herberstein family sold the property in 1939 to the Province of Styria. Damaged during World War II, the ground floor of the Castle was converted into a museum and underwent alterations (1947–52). The reorganisation of the Museum rooms and collections at the beginning of the 2000s was especially notable for the opening of a *lapidarium* featuring Roman stone objects in the Park. An area of some 2000m² on the ground and first floors has been renovated for use as exhibition rooms, which were opened to the public in 2005.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY, AND AUTHENTICITY

Comparative analysis

The State Party draws a comparison between the remains of the original 16th century Castle, and particularly its tower and chapel, with the buildings in France by Jacques Cœur at Bourges and Jean Rolin at Autun, the architectural objectives and structures of which are considered to be similar to those of the Eggenberg dynasty and its first castle.

The castle of Hans Ulrich, built in the 17th century, is compared to El Escorial, built by Philip II and inscribed on the World Heritage List (Monastery and site of El Escorial, Spain, 1984). The comparison in this case is

based on the symbolism of the architectural choices and the geometrical juxtaposition of the courtyards.

The influence of northern Italy and its symbolism is also strongly present through the personality of the architect Pietro de Pomis and the role of the plans of the theoretician Sebastiano Serlio. The concept of the fortified Italian *castello* is also mentioned, even though the Castle does not possess any features of military architecture.

In France the Château de Richelieu, built by Armand-Jean du Plessis, Cardinal Richelieu, is of the same type. It was totally destroyed during the French Revolution. ICOMOS considers that Schloss Eggenberg must be considered in connection with the introduction into Styria of late Renaissance and early Baroque art and architecture, and its importance is closely linked with the cultural context of this region.

The Castle refers to several stylistic schools. It reveals the influence of the Italian Baroque, through its architect Pietro de Pomis, and more generally the intellectual influence of western and Mediterranean Europe in its design. Through its overall architecture, Schloss Eggenberg also has similarities with northern styles, such as the work of Laurenz van de Syppe. Reference can also be made to Schloss Johannisburg at Aschaffenburg (Bavaria), which is very similar in form and was built a few years earlier.

Several properties on the World Heritage List represent late Renaissance–Baroque architecture in Central Europe, such as the Historic Centre of Vienna (Austria 2001), Budapest, including the Banks of the Danube, the Buda Castle Quarter and Andrásy Avenue (Hungary, 1987 and 2002), the Historic Centre of Prague (Czech Republic, 1992), and Litomyšl Castle (Czech Republic, 1999).

In terms of interiors, Schloss Eggenberg bears witness to the intellectual demands of the Counter-Reformation and their expression in Baroque and Rococo decoration. Relatively speaking, a connection may be made on this point with Schönbrunn (Palace and Gardens of Schönbrunn, Austria, 1996).

In this context, Schloss Eggenberg constitutes an important artistic and architectural example in Styria. It is considered to complement the historic integrity of the City of Graz and it strengthens the expression of its outstanding universal value, which has already been recognised.

Schloss Eggenberg is not mentioned in the comparative analysis of the nomination dossier of the City of Graz – Historic Centre (1999). However, the construction of the castle is referred to in the description of the property and the section on history.

ICOMOS considers that the comparative analysis justifies consideration of the inscription of Schloss Eggenberg as an extension of the City of Graz – Historic Centre.

Justification of the Outstanding Universal Value

The extension is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- From the 15th to the 18th century Schloss Eggenberg and the City of Graz were inseparably linked because of the influence of the Eggenberg dynasty, which made a major contribution to the cultural and political development of the city and the region. In many of their aspects, the architecture and decoration of the Castle reflect this history.
- Schloss Eggenberg is an exceptionally well preserved example which bears witness, through its architecture and external decoration, to the influence of the late Italian Renaissance and the Baroque period.
- Its interior decoration bears testimony to the Baroque and Rococo styles, expressing an ambitious aesthetic and intellectual programme illustrating the cosmography of the period.

Justification for the inscription of the original nomination:

The historic centre of the City of Graz reflects artistic and architectural movements originating from the Germanic region, the Balkans, and the Mediterranean, for which it served as a crossroads for centuries. The greatest architects and artists of these different regions expressed themselves forcefully here and thus created brilliant syntheses.

The urban complex forming the historic centre of the City of Graz is an exceptional example of a harmonious integration of architectural styles from successive periods. Each age is represented by typical buildings, which are often masterpieces. The urban physiognomy faithfully tells the story of its historic development.

ICOMOS considers that this justification is appropriate because Schloss Eggenberg, its park and the first stretch of the avenue leading towards the historic centre of the city of Graz complement the main property, and contribute to the strengthening of its outstanding universal value.

Integrity and Authenticity

Integrity

The Schloss Eggenberg and the Eggenberg dynasty are inseparably linked with the Province of Styria and its capital, the city of Graz, not only geographically but also from the viewpoints of history, culture, and traditions.

The Castle and the garden have conserved their overall architectural and structural integrity.

The estate, which is located some 3 km from the city centre, was originally linked to the centre by an avenue, of which only an original stretch of c 500m still remains. This part of the avenue, which begins at the exit from the castle, is included in the proposed extension. The rest of the avenue is conserved, but within the 20th century urban fabric; not having any special protection, this link between the city centre and the Castle has undergone substantial restructuring as a result of the conurbation's urban development, and the development of its industry, railway network and university. It does however physically express the complementarity between the historic centre and the residence of one of its main aristocratic families. In its new proposal, the State Party suggests that the road should be included in a specific buffer zone (Zone XIII), which should be added, to would provide a continuous connection between the property and the proposed extension. This proposal complies with recommendation a) of World Heritage Committee recommendation 33 COM 8B.31.

ICOMOS considers that the integrity of the proposed extension is satisfactory.

ICOMOS considers that the property and its proposed extension are two complementary dimensions of the historical development of the city of Graz, and of the lifestyle of its elites in the modern period. This complementarity is tangibly expressed in the new extended buffer zone which connects the property and the proposed extension.

Authenticity

Schloss Eggenberg was largely unoccupied throughout the 19th century, as the Herberstein family only spent a few weeks there each year. The furniture and the décor have thus remained intact and complete. The only notable alterations in the 20th century affected the rooms on the ground floor, which were converted to museum galleries.

The official and state rooms of the Castle, on the first floor, are an authentic example of a Baroque and Rococo interior, which are matched by few other similar buildings.

Part of the church décor was painted over after World War II. Restoration of the underlying murals is planned over the next few years.

The materials and external surfaces of the Castle have been preserved, with restorations that respect the original.

The roofs have been restored unchanged, with the replacement of original tiles in poor condition and the refixing of the surviving original tiles.

The grotto has been restored in the same way.

The retable of the chapel altar, which was broken up in the 18th century and sold in 1929, has been recovered and reassembled and was replaced in 1996.

Since it became public property in 1939, the Park has lost some of its decorative and botanical elements (rose mound, the Temple of Bacchus, and the former Pleasure Garden), restoration of which has been announced. The kitchen garden was redesigned as a contemporary garden in 2002 by Helga Maria Tornquist. A new building has been constructed on the site of the former orangery to house the archaeological collections.

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The extension is nominated on the basis of cultural criteria (ii) and (iv), and of the additional criterion (vi). The City of Graz – Historic Centre property was inscribed on the basis of criteria (ii) and (iv). Criterion (vi) is thus an additional criterion which is specific to the extension.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.

This criterion is justified by the State Party on the grounds that, like the historic centre of Graz which reflects artistic interchanges between the Germanic area, the Balkans, and the Mediterranean, Schloss Eggenberg is an exemplary illustration of the way in which the architectural and decorative concepts of the Romance countries were received in Central Europe. The humanistic spirit of Protestantism is combined here with iconographic paradigms of southern Catholic origin.

ICOMOS considers that Schloss Eggenberg bears witness, through the architects and artists who worked there, to cultural interchanges between central and southern Europe in the late Renaissance and Baroque periods, particularly in Styria. Its decorative programme well reflects the intellectual needs of the period in the context of the Counter-Reformation, and the Rococo decorations bear witness to the lifestyle of 18th century Europe.

As had already been indicated in the ICOMOS evaluation in 2006, this is an important example for Styria which cannot, however, be considered as having universal value in itself. ICOMOS considers that this criterion can only be justified through an effective

association with the historic centre of Graz illustrating the influence of the philosophical ideas and architectural principles that originated in southern and central Europe, which has been tangibly expressed by the extension of the buffer zone.

ICOMOS considers that as a result of the effective link with the historic centre of Graz, this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

This criterion is justified by the State Party on the grounds that Schloss Eggenberg is one of the masterpieces that make up the urban complex of the historic centre of Graz. It represents the Italian *castello* type which was one of the standards of European aristocratic architecture from the early Renaissance period.

Forming an integral part of the City of Graz as the residence of the governors of the town and the region, Schloss Eggenberg is an important component of the integrity of Graz as an example of urban planning and the harmonious integration of buildings successively constructed in different architectural styles.

It is unrivalled by any other monument in its completely preserved interior decoration of the highest intellectual quality, which constitutes an architectural and decorative model of contemporary conceptions of the universe.

ICOMOS considers that Schloss Eggenberg and its Park complete the range of types of architecture already present in the historic centre of Graz, as an example of town planning and the harmonious integration of buildings erected successively in different architectural styles marked by the successful encounter between various cultural and artistic movements. As part of the city, since it was the governors' residence, Schloss Eggenberg is an important element that helps to strengthen the integrity of the historic centre of Graz.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

The State Party proposed this as an additional criterion on the grounds that Schloss Eggenberg bears an exceptional testimony to the political and intellectual programme of the man who commissioned it. It is therefore an outstanding monument of a personal world view transformed into an elaborate total work of art.

ICOMOS considers that, although the Castle, the building of which began in 1625, and its initial decorative scheme reflect the original desire of its initiator to assert his power, the 18th century alterations, together with later changes to the design of the Park, have obliterated this dimension of expressing a cultural tradition and illustrating ideas in an architectural and artistic work.

ICOMOS considers that, in the current context with the Castle nominated on its own as an extension to the property and not as an analysis of this new criterion for the entire property, it has not been justified.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the proposed extension fully meets criteria (ii) and (iv) and that it significantly strengthens the Outstanding Universal Value of the City of Graz – Historic Centre.

Description of the attributes

- Schloss Eggenberg complements the living urban heritage of the City of Graz – Historic Centre. It constitutes a remarkable set of monuments which strengthens the testimony provided by the city of the synthesis of central and southern European cultures, from the end of the Renaissance to the Baroque and Rococo periods. It provides a remarkable stylistic synthesis of them with its own specific values.
- Schloss Eggenberg bears witness both to the artistic and intellectual flourishing of the Counter-Reform in central Europe and to a lifestyle which was specific to the aristocratic elites of the Austro-Hungarian Empire.
- Schloss Eggenberg, with its park and its landscapes, complements the range of buildings which form the historic centre of the city of Graz, by adding an eminently aristocratic residence which is at once nearby and distant from the urban centre.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The zone near the Castle is a suburban area, which is densely built-up in certain places.

The State Party has indicated that there are five construction projects of some significance, all of which, however, are obliged to comply with specific directives (see *Protection, Boundaries of the nominated property and buffer zone*): a restaurant, a group of dwellings, a secondary school, a project for the reconstruction of the Eggenberg baths, and the extension of the Castle lapidarium next to the northern part of the Castle walls.

Behind the castle to the west, on the slope of a hill, the building of individual houses may have an impact on the landscape.

Tourism pressures

The Castle, the Museum, and the Park are visited by some 300,000 people each year. The facilities and spaces provided allow the reception of visitors without giving rise to any particular threat to the property. A reasonable increase in the number of visitors, which would result if the property were inscribed on the List, could take place without major changes to the reception infrastructures and without generating any particular pressures.

The use of the Castle for official receptions could cause some damage to the interior of the property, particularly because of repeated modifications to the relative humidity of the rooms, which could affect the conservation of wall paintings and the most fragile decorations. It is agreed, under the management plan, that the Castle will only be used for this purpose five times a year, and in new rooms specially adapted for receptions.

Environmental pressures

There are no pressures linked to air quality, which is good, or pollution, which is under control.

Road traffic density around the Park is low.

Natural disasters

Schloss Eggenberg is not situated in zones affected by flooding, landslides or avalanches, or earthquakes. Fire risk is regularly monitored by the fire service.

Impact of climate change

There is no evidence of climate change in measurements taken in the City of Graz.

ICOMOS considers that the main threat to the property is urban development.

5. PROTECTION, CONSERVATION, AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the property proposed as an extension are those of the Park, and include the ancient road leading to the City of Graz, over a distance of 500m. The total area is 19.1 ha. There are no permanent residents in the property.

The extended property will have a total area of 91.1 ha.

The buffer zone of the proposed extension covers a large area to the west of the property, in order to conserve the quality of the landscape on the hillside to the rear of the park. To the north and south, it covers built-up zones which are 150 metres and 350 metres wide. To the east, it consists of quite a wide strip on either side of the avenue forming the first stretch of the road towards the city. The areas are partly built-up with residential properties and public buildings (see *Development pressures*).

Between the Castle and the City, the buffer zone has been enlarged (Zone XIII) to include the ancient road linking the Palace to the historic centre of the city of Graz. It continues along Eggenberg Allee beyond the part already included in the property; it follows Eggenberg Strasse, crosses the railway bridge, and arrives at a road junction where it widens out to form an acute angle at Annenstrasse. Here it joins the urban buffer zone. The zone is 2040 metres long, and 70 metres wide (but slightly wider where it joins the urban buffer zone). It includes the buildings next to the road on both sides.

ICOMOS considers that the extension of the buffer zone along the ancient road provides a tangible expression of the physical and historic links between Schloss Eggenberg and the historic centre of the city of Graz. It complies with recommendation a) of decision 33 COM 8B.31.

The buffer zone of the extended property will have an area of 24.2ha.

ICOMOS considers that the boundaries of the property and of the new continuous buffer zone between the city and the castle are satisfactory.

Ownership

Schloss Eggenberg and its Park are the property of the Province of Styria. They have been managed by the *Steiermärkische Landesmuseum Joanneum* since 1947. They constitute an entirely public space.

Protection

Legal protection

Schloss Eggenberg is protected under the Austrian Monument Protection Act (533/1923 and amendments). The protection covers both immovable and movable property of historical, artistic, or other cultural value. The Act was revised in 1999 and amended by a Decree in 2006. The application of the legal protection is the responsibility of the Education, Art, and Culture Ministry.

At provincial level, Schloss Eggenberg and its Park are protected under the Graz Historic Centre Conservation Act (GAEG, 1974 and 1980). This Act has been updated

and supplemented by the Graz Historic Centre Preservation Act (2008).

At local level, the Castle and its Park are subject to the regulations and decisions associated with the current Urban Development Plan and the Land Use Plan of the City of Graz. These plans set out the general framework of inquiries for building permits, particularly in the buffer zone. The buffer zone is protected and is subject to a specific regime for the granting of building permits and modifying existing housing. Inside the Schloss Eggenberg buffer zone, constructions and extensions to buildings must not exceed the prescribed heights of the current housing in the quarters concerned. These provisions have been extended to Zone XIII, corresponding to the road linking the castle to the city, and specific provisions have been added, in particular a programme for the improvement of architectural and urban quality and of visual perspectives. All these measures are set out and harmonised in the new framework document: Graz Urban Planning (2009).

ICOMOS considers that the protective measures taken, particularly the regulatory extension applying to buffer zone XIII, are satisfactory.

Traditional protection

There is no traditional protection as such, apart from the attachment of the inhabitants of Graz and Styria to the Castle and its Park, a site which is one of the most popular in the region with visitors.

Effectiveness of protection measures

With regard to the Castle and its Park, the regulations in force are playing their role.

With regard to the buffer zone of the property proposed as an extension, the five major projects announced by the State Party seem to be appropriately controlled, particularly in terms of prescribed height and architectural conformity. The programme for the gradual architectural and urban improvement of buffer zone XIII is satisfactory.

ICOMOS considers that the protective measures for the property nominated for the extension are adequate.

Conservation

Inventories, recording, research

The Museum has reports on the inspection and monitoring of the property since the 19th century.

Existing documents and publications are abundant; they show that scientific knowledge exists concerning not only the architecture, but also all the decoration and furniture.

Research concerning the restoration of the gardens led to the production of a guide and reference document in 1993, and these have recently been updated. A handbook of recommendations for the architectural and decorative conservation of the Castle was also compiled in 2005.

Present state of conservation

The Castle and Park are in a good state of conservation.

Active conservation measures

Several restorations of the Castle building took place in the 20th century, particularly following the installation of the Museum on the ground floor.

The main recent conservation programme took place from 1983 to 1999 and was carried out with all the necessary scientific safeguards as regards preliminary studies and execution of works. The conservation works were conducted in turn on the chapel, the central tower, the roofs, and the facades.

A glazed entrance chamber was installed in the chapel to make visits possible without causing damage to the furniture as a result of excessively large variations in relative humidity and temperature. The chamber installation is reversible and does not affect the integrity of the chapel.

There have been several conservation campaigns on the state rooms on the first floor. Work was carried out on the prestigious Hall of the Planets between 1979 and 1983. All the other rooms were covered during an extensive programme implemented from 1994 onwards.

The interior space of the Museum and the presentation of the collections were restructured as part of a major programme in the early 2000s. These changes have not affected the integrity/authenticity or the conservation of the property.

In 1993 a guide to the management/conservation of the Park was scientifically compiled, with a view to carrying out gradual restoration of the landscape structure and planting composition. These objectives led to visible results from 2000 onwards. In 2001–2003 the abandoned parts of the Park were restructured so as to evoke the theme of the planets.

A visitor reception and accompaniment service is organised by the Museum department.

Maintenance

Routine maintenance is carried out by the Museum staff and the Park staff.

Effectiveness of conservation measures

The National and Regional Monuments Departments intervene for the conservation and restoration of the property, in conjunction with their specialist archaeology, architecture, and monument inventory units. The restoration–conservation works carried out at Schloss Eggenberg and in its Park have been well conducted and effective. They have maintained and in many cases restored the integrity/authenticity of the property proposed as an extension.

ICOMOS considers that the conservation measures for the Castle and its Park are appropriate, and that today they constitute a coherent ensemble whose integrity and authenticity are of good quality.

ICOMOS considers that the conservation measures are satisfactory.

Management

Management structures and processes, including traditional management processes

For the Castle and its historic Park, the management structure and processes consist of the following elements:

- studies on and the scientific monitoring of the conservation of the Castle and its historic Park are carried out by the Federal Historic Monuments Office (BDA);
- the management of the site and the Museum and the reception of visitors are carried out by the permanent staff of the *Landesmuseum Joanneum*, under the control of the Region of Styria. The second floor of the Castle is open for guided visits. The Castle can be reached by public transport, and there is a parking area for 300 vehicles.

The protection measures inside the buffer zone are enforced by the departments of the City of Graz, under the control of the relevant national and regional authorities.

The implementation of the Management Plan (December 2006) has been the responsibility of the City of Graz Historic Centre World Heritage Coordination Bureau since the start of 2007. The Bureau brings together representatives of the various partners involved in the management of the property. It has been operational since the start of 2009. The scope of its action includes the property proposed for extension. In accordance with recommendation b) of decision 33 COM 8B.31, the role and powers of the Coordination Bureau have been strengthened. One of its tasks is the permanent coordination of the application of the Management Plan, and it harmonises the actions of the various partners and parties involved: municipal departments, administrative

bodies and civil authorities, particularly with the Historic Monuments Preservation Department, citizens' associations, etc. It acts as a body for mediation, information and the monitoring of actions and control of their conformity. Its role as a mediator and a body which builds intermediate consensus is important, as shown by the creation of a detailed project, acceptable to all parties, for additional buffer zone no. XIII, and by the fact that the number of appeals against world heritage property management decisions was reduced to zero in 2009, compared with the previous total of 41.

ICOMOS wishes to express its satisfaction that a Coordination Bureau has been set up which coordinates the efforts of the various partners in the management of the extended property, whose powers have been strengthened, and which has proven its effectiveness. Recommendation b) of decision 33 COM 8B.31 has been fully complied with.

Policy framework: management plans and arrangements, including visitor management and presentation

A management-restoration guide exists for the Park, which was drawn up in 1993 in conjunction with the Historic Monuments Department. The document was revised and updated in 2006 in the form of the Park management-conservation plan (*Parkpflegewerk*).

The management plan adopted in December 2006 (City of Graz Historic Centre, Management Plan 2007) was drawn up in the first instance as a response to the Committee's decision 30 COM 8B.51 (Vilnius, 2006) and secondly to apply to the ensemble formed by the property already inscribed on the List and the proposed extension.

It includes the general guidelines for the management and conservation of the property and its buffer zone and a master plan for the land and the property.

So far as the property proposed as an extension is concerned, this is a master plan for the management of spaces and landscapes. It also sets out a programme of works necessary to maintain and reinforce the integrity/authenticity of the environment of the property.

Several programmes have been created since 2004 for the presentation and promotion of the property, particularly with regard to the Museum collections.

ICOMOS considers that there is a coherent and effective management system in place for the Castle and its Park. The joint management plan, for the property already inscribed and the proposed extension, complies with its recommendations.

Risk preparedness

The property and its possible extension are considered in the evaluation and monitoring of risk factors by the

Municipality and the Region, and in the intervention procedures of the local and regional civil protection authorities in the event of an accident.

A fire detection system is in place in the Castle, together with emergency procedures for the evacuation of visitors in the event of an accident.

Involvement of the local communities

With regard to the property proposed as an extension, the Municipality of Graz is mainly involved in the land and urban planning management of the buffer zone.

The Coordination Bureau is in regular contact with citizens' associations which take an interest in the property. The associations are thus involved in the management process.

Resources, including staffing levels, expertise and training

Schloss Eggenberg is entirely financed by the *Landesmuseum Joanneum* (stakeholders: Province of Styria 85%, City of Graz 15%).

Special subsidies can be granted via the Federal Monuments Department.

Until 2001, the restoration of the state rooms was financed by a radio and television tax.

Since 1985, 11 million euros have been invested in restoration. The restoration of the interior, which began in 1993, has been financed to the extent of about 2 million euros.

In addition, 5 million euros have been granted for the reorganisation and expansion of the Museum's collections.

The Park has been granted subsidies of 800,000 euros.

Everyday maintenance is carried out by the staff of technicians, caretakers, and cleaners (38 persons). There are eleven scientists, 36 staff concerned with visitors, and 44 security staff, both full-time and part-time.

Experts from other departments of the *Landesmuseum Joanneum* can be called in as required.

Eight restorers work in the Museum, several of whom specialise in paintings.

The various staff take training courses from time to time to increase their skills.

Effectiveness of current management

ICOMOS considers that the current management of the property proposed as an extension is effective. It is well

established, as regards both the conservation of the Castle and its Park and the museographic activity and the control of urban development in the buffer zone. It is provided with significant human and material resources. Initially it was more a management system with clearly defined roles for the Region and the Municipality, but today it is coordinated and controlled by the property's Coordination Bureau.

ICOMOS considers that the management system of the proposed extension is adequate.

6. MONITORING

Since 2005 the regular monitoring of the conservation and maintenance of the Castle and the gardens has followed the recommendations of a handbook from the Buildings Department and a guide to the restoration-conservation of the Park. They are carried out by the staff and scientific officials of the *Landesmuseum Joanneum*. They constitute the monitoring of the property proposed as an extension, which comprises in particular:

- The Park and its immovable property are assessed annually; the vegetation is continuously monitored by the staff in charge of planting and upkeep.
- The built elements of the Castle, and in particular the roofs, the drains, the wall surfaces, and the openings, are checked annually; the functional elements are under permanent surveillance by the Museum staff.
- Interior atmospheric parameters are continuously monitored.
- The fire alert and protection system is checked annually by specialists, and also where necessary at the request of the Museum.
- The interior paintings and decorative elements are continuously monitored; the furniture is checked annually.

Regular monitoring is also carried out on the state of the collections.

All the inspection, control, and monitoring evaluation reports constitute a basic documentation for the Castle and its related elements. The *Landesmuseum Joanneum* has also produced an annual overview report since its creation in the 19th century.

ICOMOS considers that the monitoring is adequate.

7. CONCLUSIONS

ICOMOS recognises the significant strengthening of the integrity and outstanding universal value of the "City of Graz – Historic Centre" property by its extension to include Schloss Eggenberg.

Recommendations with respect to inscription

ICOMOS recommends that the extension of the City of Graz – Historic Centre to include Schloss Eggenberg and become City of Graz – Historic Centre and Schloss Eggenberg be approved on the basis of **criteria (ii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The City of Graz – Historic Centre and Schloss Eggenberg bear witness to an exemplary model of the living heritage of a central European urban complex influenced by the secular presence of the Habsburgs and the cultural and artistic role played by the main aristocratic families. They are a harmonious blend of the architectural styles and artistic movements that have succeeded each other from the Middle Ages until the 18th century, in the many neighbouring regions of Central and Mediterranean Europe. They embody a diversified and highly comprehensive ensemble of architectural, decorative and landscape examples of these interchanges of influence.

Criterion (ii): City of Graz - Historic Centre and Schloss Eggenberg reflects artistic and architectural movements originating from the Germanic region, the Balkans and the Mediterranean, for which it served as a crossroads for centuries. The greatest architects and artists of these different regions expressed themselves forcefully here and thus created brilliant syntheses.

Criterion (iv): The urban complex forming City of Graz – Historic Centre and Schloss Eggenberg is an exceptional example of a harmonious integration of architectural styles from successive periods. Each age is represented by typical buildings, which are often masterpieces. The physiognomy of the city and of the castle faithfully tells the story of their common historic and cultural development.

Integrity and authenticity

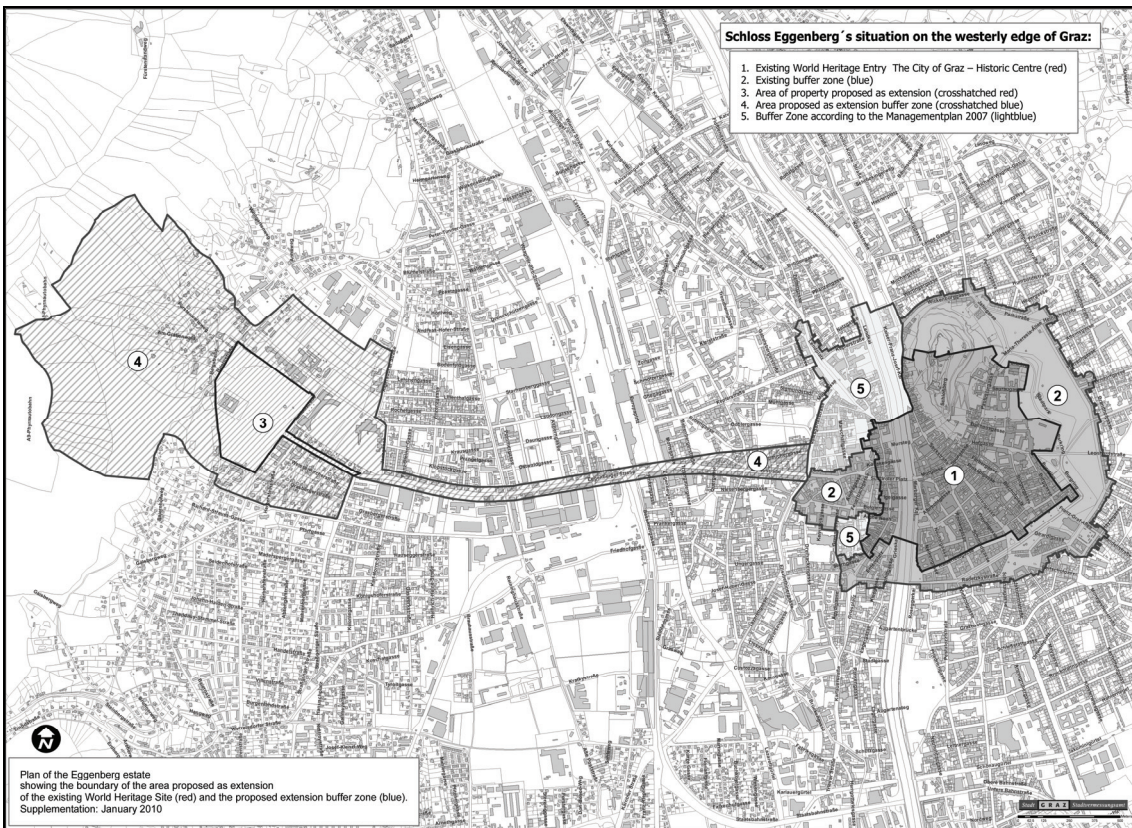
The extension of the City of Graz – Historic Centre property to include Schloss Eggenberg significantly strengthens the integrity of the property. The extension gives rise to the new enlarged buffer zone which is continuous, and includes the ancient road. Furthermore, the castle and its gardens have conserved satisfactory architectural and structural integrity. The external authenticity of the castle is good, and that of the baroque interior on the first floor is excellent. The authenticity of the ground floor, which has been converted into a museum, and that of the garden, which has been partly redesigned and restored, are of a lower level which however remains acceptable.

Protection and management requirements

Schloss Eggenberg is protected under the Austrian Monument Protection Act (533/1923 and amendments). The Management Plan has been in place since 2007 and brings together the town plan of 2009 and all protection and conservation decisions relating to the extended property and the buffer zone, enlarged to include the road leading from the historic centre of the city of Graz to Schloss Eggenberg. The Coordination Bureau for the extended property has been in place since 2009, and has been granted strengthened and effective overarching powers. However, particular care needs to be taken with regard to urban development pressures inside the property and its buffer zone, in order to maintain the outstanding universal value of the property and ensure that it is fully expressed.

ICOMOS recommends that the State Party should give consideration to the following point:

- Ensure effective control of works projects in the various parts of the enlarged buffer zone so as to ensure the long-term conservation of the property's landscape integrity.



Map showing the boundaries of the historic centre of Graz and Schloss Eggenberg



Aerial view of Schloss Eggenberg



Schloss Eggenberg - Main front



Planetary Room



View of the pond

The Triple-arch Gate at Dan (Israel) No 1105

Official name as proposed by the State Party:

The Triple-arch Gate at Dan

Location:

Upper Galilee region

Brief Description:

The nominated property is the archaeological remains of a gate formed of three arches in sun-dried mudbrick. The arches are semicircular and have a span of 2.5 metres. They form part of city rampart fortifications dating back to the 18th century BCE, i.e. the Middle Bronze Age. Amongst the earliest known arches, they are the most complete with the largest span. The arches make partial use of the voussoir system.

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *monument*.

1. BASIC DATA

Included in the Tentative List: 30 June 2000

International Assistance from the World Heritage Fund for preparing the nomination: No

Date received by the World Heritage Centre:
28 July 2003
1st February 2007
27 January 2009
20 February 2010

Background: The nomination was examined by ICOMOS in 2005 and withdrawn by the State Party before the 30th session of the World Heritage Committee (Vilnius, 2006).

The State Party submitted a new nomination dossier on 1st February 2007. The nomination was examined by the 32nd session of the World Heritage Committee (32 COM, Quebec, 2008) and by the 33rd session (33 COM, Seville, 2009).

The ICOMOS recommendation was as follows:

ICOMOS recommends that the Triple-arch Gate at Dan, Israel, should be inscribed on the World Heritage List on the basis of criterion (ii).

The World Heritage Committee adopted the following decision (32 COM 8B.34):

The World Heritage Committee,

1. *Having examined Documents WHC-08/32.COM/8B and WHC-08/32.COM/INF.8B.1;*

2. *Recognizes that the nomination entitled "Triple Arch Gate at Dan" brings to the attention of the Committee one of the elements of a technological innovation that has Outstanding Universal Value on the basis of criterion (ii);*

3. *Refers the nomination entitled "Triple Arch Gate at Dan, back to the State Party to present further information and legal and technical data to enable its formal inscription by the Committee at its 33rd session in 2009.*

The State Party submitted additional information on 27 January 2009.

The Committee adopted the following recommendation:

Decision 32 COM 8B.34:

The World Heritage Committee,

1. *Having examined Document WHC-09/33.COM/8B, recognizes that the nomination entitled "Triple Arch Gate at Dan"(Israel) brings to the attention of the Committee one of the elements of a technological innovation that has Outstanding Universal Value on the basis of criterion (ii), and more particularly the fact that the "Triple Arch Gate at Dan" bears testimony to the early diffusion of the architectonic principle of the vault and the voussoir arch, in the Middle East during the Middle and Late Bronze Age, and in particular its developed version including trapezoidal bricks for significant spans;*

2. *Notes the fact that the World Heritage Centre has received information presented by the State Party relating to legal and technical data, in accordance with Decision 32 COM 8B.34;*

3. *Requests the World Heritage Centre to facilitate the obtaining of the information which could enable the formal inscription of the property by the Committee at its 34th session.*

The State Party provided technical documentation concerning the management and conservation of the property dated 20 February 2010.

Consultations: ICOMOS has consulted its International Scientific Committee on Archaeological Heritage management.

Literature consulted (selection):

Oates, D., *Early Vaulting in Mesopotamia*, in D. E. Strong, ed. *Archaeological Theory and Practices*, 1973.

Sauvage, M., *La brique et sa mise en œuvre en Mésopotamie des origines à l'époque achéménide*, Paris 1998.

Van Beek, G.W., "Pre-classical developments in domical construction", *Domes from Antiquity to the present*, 1988.

Technical Evaluation Mission: 4-8 September 2007. As this is a referred back nomination, no further mission has been undertaken.

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The triple-arch gate is at the south-eastern end of the fortified ensemble of Tel Dan dating from the Middle Bronze Age. This is a large tell where there was a settlement over a long period at the start of historic time, but this settlement was not continuous. The fortified ensemble constituted the Canaanite town of Laish or Leshem, which is mentioned on several occasions in the Bible. It is surrounded by a region made naturally fertile by the presence of water.

Tel Dan is at the foot of Mount Hermon and the Golan Heights, near one of the three sources of the River Jordan, in the upper valley of the river, forming part of the Syro-African Rift Valley.

Nowadays, the Tel Dan site as a whole has a near-rectangular shape with rounded corners, with a basically oblong crater-like interior, a shape that is the result of the early fortifications that are underground for the most part. The total dimensions of the tell are roughly 400 m x 500 m.

The nominated property consists solely of the triple-arch gate and the immediately adjacent area. The gate is situated in a corner of the ramparts. Its own overall plan is close to a square (external dimensions: 15 m x 13.5 m), two sides of which join it to the ramparts. The two other sides consist of thick walls, one facing outside and the other inside the town, through which two great access arches have been opened up. They are set back from the main walls, whose four corners form defensive salients. A third arch passes through an inner separating wall. The span of the arches allowed a passageway of about 2.5 metres in width, which is considerable, and about 2.5 metres high to the top of the arch, and the thickness of the arches is around 2 metres. The built structure of the gate also contains four inner chambers.

The three arches have a massive appearance, and their shape is a slightly flattened half-circle. They are made up of three arcs of sun-dried mudbricks on top of each other, which pass on the loading to the piers. The bricks are sun-dried clay mud bricks. Two types of brick are present on the site. One is whitish because of the presence of calcareous aggregate, and the other is brownish. The shape, hardness and constructive use differ depending on the type of brick, and so does the state of conservation. The built structure of the gate probably had a roof, and thanks to the arch system it ensured the continuity of the fortified enclosure.

The imposing earthen ramparts that encircled the town were built on foundations consisting of basalt boulders; above them was the sun-dried mudbrick wall. A large part of these fortifications still exists: two short sections next to the gate are included in the nominated property. The rest of the fortifications are located in the buffer zone.

From the outside, the gate was approached by twenty basalt steps rising from the plain. On the town side, a short cobbled way led to stone steps descending towards one of the town's cobbled streets.

Excavations revealed the presence of the gateway (see below). None of the three arches has been entirely exposed in the interest of conservation. No evidence survives for the structure of the roof, which could have been either of cedar beam or of mud brick vault construction, overlain with mud plaster. Traces of mud and lime plastering on the wall surfaces have been found and remains of a thick layer of plaster that covered the cobblestone floor. These traces provide compelling evidence that the gatehouse was originally plastered and painted.

History and development

The land known as Canaan was situated in the territory of the southern Levant, in what is now Israel, the Palestine Authority, Jordan, Lebanon and south-western Syria. The inhabitants of Canaan were never ethnically or politically unified as a single nation. They did, however, share sufficient similarities in language and culture to be described together as "Canaanites."

City-states developed in Syria-Palestine around 3100, serving as mediators between the cultures of Mesopotamia and Gerzea in Egypt. At this time the dominant town was Ebla. Texts from the Egyptian Middle Kingdom (2040–1786) show that Egypt exercised a degree of political control over the area between 2040 and 1786 BCE, ruling through local vassal kings. This led to much dislocation and a decline in urban settlements.

The Golden Age of Canaan was between 1800 and 1450 BCE when strong urban centres were re-established, towns such as Hazor, Qatna, and Ugarit

flourished as centres of power in the region and the Canaanites became famed as traders across the Near East, particularly for purple dye obtained from sea-molluscs found along the Mediterranean coast.

The gate and ramparts of Tel Dan were constructed, it is now believed, in the 18th century BCE, when Canaan was at the height of its power and influence.

A second period of Egyptian control between 1450 and 1365 BCE preceded the break-up of the Egyptian Empire that enabled the Hebrew invasion into the land of Canaan around the 12th century BCE and, in time, the creation of the ancient Kingdom of Israel. According to Biblical evidence, Laish was conquered and renamed by the Hebrew tribe of Dan. Tel Dan flourished as the northernmost city of ancient Israel and is mentioned many times in the Old Testament. Excavations have been carried out on the northerly part of the site.

Laish (Dan) was strategically situated on the road from Damascus, in Syria, to Tyre on the coast of the Mediterranean Sea. The north-south route from Hazor to Lebanon passed through Abel-beth-maachah, just west of Dan. At the northern end of the upper Jordan Valley, Dan was sited in one of the most productive parts of the region where there is abundant rainfall. At the foot of the tell mound are extensive springs that represent one of the sources of the River Jordan.

Tel Dan was destroyed when the city was captured by Tiglath Pileser, king of Assyria, in 732 BCE. It was partially restored, but never regained its former importance. By the 4th century BCE it was described by Eusebius as being a village (*Onomasticon* 369).

Rescue excavations began at Tel Dan in 1966 by the Israeli Department of Antiquities and Museums, as there was a potential threat from military activities because of proximity to the Syrian frontier. Excavations in the south-east sector did not begin until 1977, and the top of the first arch was discovered in 1979. The two other arches, and then the passageways were uncovered in the ensuing years.

The excavations were then developed into a full research project, which continued until 1999, covering both the gate of the Canaanite town and the later "Biblical" city. After more than 30 years of work, less than 10% of the site has been excavated. The digs were interrupted in 2006 because of the war between Israel and Lebanon. They were scheduled to restart in 2008.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The key elements at the heart of the nomination are the three arches of the gate, which constitute a very ancient and technically accomplished example of the true arch. These are the rationale for the nomination.

The true arch differs from corbel arches and other older types of arches in that its arch-shaped structure converts the naturally downward pressure of gravity of the upper built structure into lateral thrust against the piers, solely by compression exerted on the construction elements.

The oldest examples of primitive vaults and arches appeared in the 4th millennium BCE in Mesopotamia during the Uruk period (Tepe Gawra about 3300 BCE). They are also present in the first dynasty in Egypt, c. 3000 BCE and under the fourth dynasty, c. 2580-2560 BCE. The true arch was found in the development of the city states of the Middle East during the 3rd millennium, for openings, vaulted ceilings, tombs, etc.

A move towards a more accomplished architectural form, the true semi-circular vault, took place as early as the 3rd millennium ceramic relief in Tell Asmar, period Ur I). Vaults and arches made of square or rectangular hewn brick, with mortar in the extrados, were quite widely present at the start of the 2nd millennium in the Middle East (Tell el-Rimah).

Simultaneously, the semicircular arch was improved by the voussoir system (trapezoidal bricks made to fit together); this is sometimes referred to as the true radial vault. The first genuinely accomplished vaults and arches of this type have spans of 0.8 m to 1 m, and the function of supporting the weight of the superstructure is fully expressed.

Some authors (Heinrich, for example) consider that true arches were built over gates from the end of the first dynasties in Egypt, and above the gates of cities and temples from ancient times in Babylonia.

The construction technology of the three large arches at Tel Dan is relatively sophisticated and expert, rather than experimental. The openings and elevations are large. This suggests the existence at the same period of other arches, probably in a relatively large perimeter from Mesopotamia to Egypt, which have either been destroyed or are as yet undiscovered.

One similar arch does exist at Ashkelon, Israel, from the same period (Middle Bronze Age IIA), but this is damaged and less complete. It also forms part of a fortification system, and was rebuilt twice during the Middle Bronze Age. No absolute dating has been achieved for the Dan arches or for the Ashkelon arch, but the arches at both sites appear to be very close in period. In the case of Dan, the gatehouse is linked to the city's 18th century BCE defence system.

Two arch gateways, built of brick and forming part of a fortification system, also exist at Mumbaqat in Syria. They too date from the Middle Bronze Age, but their construction technique is slightly different.

ICOMOS considers that, in the light of the above, the arches of Tel Dan do not represent the earliest example of the true radial arch or the earliest example of the brick

voussoir type arch. However, in the current state of archaeological excavations, the Tel Dan arches are the largest early arches and demonstrate an early use of the voussoir type arch.

ICOMOS considers that the comparative information known about vestiges of the earliest true radial arches and vaults justify consideration of the inscription of the property as an outstanding example of the diffusion and flourishing of a construction technique at the start of the 2nd millennium.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to have outstanding universal value as a cultural property for the following reasons:

- The three arches of the gate at Tel Dan are the only complete arches forming part of a fortification system known at the present time for the Middle Bronze Age (18th century BCE).
- They bear witness to a knowledge of the principles of construction of true radial vaults at the period in question in the Middle East.
- Their span is exceptionally large (2.5 metres).
- They bear witness to the apogee of the art of massive earthen fortifications during the Middle Bronze Age II, including sophisticated gateways with arches, and to the urban development of this period.

ICOMOS considers that the Triple Arch Gate at Dan bears testimony to great mastery of the technique of the true radial vault and arch, using sun-dried mudbrick. Fragile from a conservation viewpoint, it is at present the unique testimony of the diffusion of this type of highly innovative construction during the Middle Bronze Age in the Middle East.

Integrity and Authenticity

Integrity

The built part of the gate is complete. It includes in particular the three true arches on which its value is founded. Despite the lack of superstructure, even in the form of archaeological traces, the gate's overall integrity has been maintained, both in terms of its architectural plan and elevation views.

Sun-dried mudbrick constructions are furthermore relatively fragile over time, and a process of deterioration of the immediate built environment of the arches (spandrel and side walls) has begun since they were uncovered by the excavations. For about 25 years now this has raised significant conservation problems. The

integrity of the construction has been affected at certain points, as the natural elements (water, wind, sun) have removed portions of material and made the structure fragile to the north-east. (See 5, conservation).

With regard to the integrity, in the sense of completeness, of the nominated property, a question is also raised concerning the relationship of the gate to its environment of fortifications; the fortifications are in the buffer zone but not in the nominated property zone.

ICOMOS recommends that the State Party should give due consideration to this aspect, particularly bearing in mind that another later gate exists inside the archaeological ensemble included in the buffer zone.

In its additional documentation of 20 February 2010, the State Party declares that it has examined this recommendation, and has reached a negative conclusion for the time being. Firstly, the other parts of the fortifications linked to the triple arch gate are of less interest and have no direct link to the technological value of the nominated property, and secondly, they are under the natural protection of the layers of earth which it considers it is preferable not to remove. Finally, they are under the legal protection of the buffer zone which guarantees their conservation and their monitoring.

Authenticity

The authenticity of the excavated arches is not in doubt. However the precise dating of the gate is based on indirect elements. Many vestiges have been found in the excavations of the tell settlement area, near to the gate. They provide evidence of dates going back to the 18th century BCE. Furthermore, the use as an urban passageway gate of the three arches seems to have been limited in time. The gate was blocked up with earth, to ensure the continuity of the ramparts, which in fact ensured its conservation up until the contemporary excavations.

Furthermore, for the arches to be fully authentic, their immediate architectural environment must also be fully authentic, which again raises the issue of the recent process of decay and how to overcome it. Elements of reinforcement for the structures undergoing decay have been applied, taking care to ensure reversibility. Elements of restoration have also been considered.

The main challenges in the future will be to keep interventions to a minimum, without any significant reconstruction, to ensure the authenticity of the gate and the arches.

In its documentation of 20 February 2010, the State Party provided information about the permanent monitoring of decay in the built environment close to the triple arch and about the measures taken to keep the processes of decay under control (see Conservation).

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii) and (iv).

Criterion (i): represent a masterpiece of human creative genius.

For the State Party, although the three arches of the gate at Tel Dan are not the earliest known examples, they are the first example of a complete true arch. They meet all the criteria of this principle of construction. They are an exemplary representation of human creative genius in the technical and architectural mastery of the true radial vault and arch.

ICOMOS considers that the three arches of Tel Dan demonstrate complete mastery of the true arch technique, using the combined method of rectangular bricks and trapezoidal bricks, in the context of massive fortifications and the urban development of the Middle Bronze Age or slightly later.

The three arches of Tel Dan demonstrate how man adapts to his environment by the use of sun-dried bricks, made of mud and clay.

However, this technical expertise is neither unique at the time nor the earliest known. Clearly the earliest examples of voussoir arches were built earlier than at Tel Dan, in the 3rd and 4th millennia, in Egypt and in Mesopotamia. It seems that the arches of Tel Dan are not the oldest example of a complete true radial arch, nor the oldest example of a voussoir arch. The dating of the Tel Dan gate moreover is indirect, and its monumental and defensive use seems to have been of short duration.

ICOMOS considers that this criterion has not been justified.

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.

For the State Party, the three arches of Tel Dan represent a new architectural principle originating from Mesopotamia and largely disseminated in the Mediterranean and the Middle East. As there is no complete architectural example in Mesopotamia, it is the Tel Dan site which is the most significant example of mastery of this architectural principle and its dissemination. More generally, most mudbrick arches collapsed and disappeared as early as the Iron Age.

Since this initial dissemination of which Tel Dan is an example, the architectural principle of the true radial arch has been widely adopted in the Mediterranean world and in Western civilisation.

ICOMOS considers that Tel Dan bears witness to the early diffusion of the architectonic principle of the vault and the voussoir arch, in the Middle East during the Middle and Late Bronze Age, and in particular its developed version including trapezoidal bricks for significant spans.

The integrity of the arches is however threatened by the intrinsic difficulty of conserving sun-dried mudbrick architecture for future generations, particularly for a structure as elaborate as an arch. The initial excavation periods, which re-exposed the edifice to the elements, did not fully allow for this consideration and have compromised chances for conservation in the long term.

In its additional documentation of 20 February 2010, the State Party presents an overview of conservation efforts made since the discovery of the triple-arch gate, focusing on the results achieved. The results suggest that the efforts should enable the long-term conservation of the property (see Conservation).

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

In the view of the State Party the Tel Dan gate is the only conserved example of gates of massive fortifications, a defensive system that was used during the development of the civilisation of the city-states of the Middle Bronze Age. It is a unique example of a very important feature of civilisation, which is widely encountered in the Middle East.

In the view of ICOMOS, the nominated property is the triple-arch gate alone; the fortified ensemble is not nominated and its outstanding universal value does not seem to be justified. The nominated property does not present all the characteristics of the feature of civilisation referred to, i.e. the flourishing of fortified city states in the Middle Bronze Age in the Middle East.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the nominated property meets criterion (ii) and that outstanding universal value has been demonstrated.

Description of the attributes

- The Triple-arch Gate at Dan bears witness to great mastery of the technique of building a true arch with a significant span (2.5 metres) during the Middle Bronze Age or slightly later.
- It was built using sun-dried mudbricks, with the arch bricks making partial but unquestionable use of the innovative voussoir system.
- In the current state of archaeological knowledge, it constitutes a unique example of a gate with three complete arches, each with three successive arcs of brick, both for its early date and its state of conservation.
- Through its integration in massive fortifications, it bears witness to the importance of the move towards urbanisation in the Middle Bronze Age and to its technical advances.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

Economic development is not exerting any pressure on the Tel Dan site. All projects must moreover be authorised by INPA, the Israeli Nature and Parks Authority. There are no inhabitants either in the nominated property zone or in the buffer zone.

In response to the request by ICOMOS, the State Party has given guarantees that the area (about 6 hectares) of the buffer zone that does not form part of the natural reserve will be used exclusively for agricultural purposes.

Military risk

Situated close to the border with Lebanon and the border with Syria, the Tel Dan region could be affected by war risk.

Tourism

Up to now tourism has been kept well under control, and relatively limited numbers of tourists have visited the three-arch gate itself. Tourism could grow significantly inside the Reserve, without posing a particular threat to the archaeological site.

Any risks of vandalism are prevented by the presence of wardens on the archaeological site and the physical protection of fragile or dangerous archaeological elements. Routes inside the Reserve are indicated and signs are installed to encourage good behaviour. The real quantitative limit at the moment is the capacity of the parking area (up to 1,000 visitors at any one time). The annual average number of visitors for the Reserve is

around 200,000, but only 80 days a year are considered to be peak days for visits.

Natural factors and impact of climate change

The main natural risk threatening the nominated property is torrential rainfall. There is also a certain degree of earthquake risk in this zone. In view of the dominant vegetation cover, a brush fire could, in the dry season, spread as far as the site. It is not however directly exposed to this risk as vegetation is cleared away on the approaches to the site. There is no pollution in the site environment, and there are no climatic particularities.

ICOMOS considers that the main threats to the property are torrential rainfall, possibly combined with the action of the wind and sun.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

Nominated area:

The nominated property consists of the triple-arch gate and its immediate surroundings: the connections to the north and south-west rampart wall, and the external and internal gate access staircases. The property boundary is a rectangle of approximately 4,800 sq.m. around the gate.

Buffer zone:

The Tel Dan archaeological site forms part of a protected nature reserve that represents the bulk of the buffer zone. Since the 2005 nomination and the ensuing recommendations, the buffer zone has been extended to the south-east beyond the nature reserve zone, to include an agricultural zone belonging to the Snir kibbutz, to a depth of at least 150 metres. The total area of the buffer zone is 37.2 hectares.

ICOMOS considers that the boundaries of the nominated property are adequate. ICOMOS considers that the revised buffer zone boundaries are adequate.

Ownership

The nominated property is owned by the State of Israel. It is situated in the nature reserve of Tel Dan. It therefore has the legal status of a nature reserve and an archaeological site.

Protection

Legal protection

The nominated property is defined and protected by the following legal texts:

- The Israel Lands Administration Law of 1960.
- The 1965 Planning and Building Law and its amendments.
- The 1978 Antiquities Law and the 1989 Antiquities Authority Law (IAA).
- The 1963 National Parks, Nature Reserves, National Sites and Memorial Sites Law, amended in 1992.

Under the law of 1960, the property is governed by the powers of the state vested in the Nature Reserves Authority (Act of 18 September 1987), and the confirmation of a 49-year transfer of rights dated 7 May 2006.

Buffer zone:

Most of the buffer zone (84%) is under the protection of the natural reserve. The rest is a zone exclusively reserved for open-field agricultural activities. All requests for a waiver from this allocation rule (e.g. for a building) have been made impossible in view of the guidelines for the implementation of land use planning.

ICOMOS considers that the buffer zone protection measures are adequate.

Effectiveness of protection measures

The legal measures taken to protect the nominated property seem to be adequate.

ICOMOS considers that the legal protection in place is adequate.

Conservation

Inventories, recording, research

The archaeological study has been underway since the late 1970s. The archaeological documentation thus gathered on the site is considerable. It consists of several types of documents:

- Excavation reports for each campaign.
- The Tel Dan reserve annual report, published since 2001. This is a sort of log book compilation of all actions and observations on the site.
- The site dossier, which brings together all basic documents, plans and decision relating to the site. It is regularly updated.

The IAA/Getty Report provides an in-depth study of the archaeological situation of the property and any changes in its state of conservation since the property was uncovered at the start of the 1980s. It provides a solid

technical basis for the updating and improving of the property's conservation plan.

Present state of conservation

This monument is made of sun-dried mudbricks, which by their very nature are fragile, and the state of conservation of the arches and the mural elements of the gate confirm that constant attention is essential. Its survival since its creation was only possible because the site was buried quite rapidly, probably in the 8th century BCE. Once the structure was uncovered, in around 1980, it began to deteriorate because of the nature of its material of construction.

Recent excavations show the very probable presence of plastering on the surface of the joints between the bricks, and perhaps over the whole of the facades. This again attests that this construction was sophisticated and well mastered, rather than being a still experimental construction.

Active conservation measures

Following the uncovering of the gate in the late 1970s and early 1980s, an initial shelter was constructed above the gate in 1982. This protection however turned out to be only partial and inadequate. From 1985 to 1988 moreover, the protective roof deteriorated, and water penetrated into the north-east tower.

In 1992 the western facade and the interior of the gate were filled in, as a preventive conservation measure. A new and more complete roof was built in 1993, and another layer of protective fill was added.

From 1997 to 1999, the IAA (Israeli Antiquities Authority) and the Getty Conservation Institute drew up documentation of the archaeological structure, and analysed its conservation. Their report was completed in 2000. It provides a detailed chronology of the deterioration, with some examples of serious losses on the north-east tower. The report draws a distinction between intrinsic factors (linked to materials and construction technology) and extrinsic factors (recent preservation history). This report is comprehensive, and provides a thorough analysis of the causes and rates of deterioration of the monument.

The report suggested some reburial, some areas filled with sandbags to prevent access, some parts to be covered with geo-fabric textile, and basalt stones to provide support in some places.

In response to this report, in 2000-2005, discrete structural support elements were designed, in accordance with international reversibility standards, as appropriate for a monument of such fragility. Some structurally supportive reconstruction in limited areas, especially to the East tower or the gate, was undertaken. Discussions are under way about the replacement of the

present shelter structure with a more minimal one, and then by a complete system in future years.

This programme however illustrates the current difficulties, at an international level, of recommending long-term conservation methods for sun-dried mudbrick structures.

In its additional documentation of 20 February 2010, the State Party reports on the results recently obtained in the conservation of the most fragile elements of the structure. It refers to the restoration of the upper parts of the edifice, where the traditional techniques used have produced a result which is historically authentic and a stabilisation which appears to be solid and lasting. The detachment of the east wall, which had threatened to collapse, has been dealt with using a gradual mechanical process put in place in 2008. Today completed, it has resulted in a return to the original position and a re-attachment which is considered to be both satisfactory and lasting. Furthermore, roofs are currently being extended or modified, particularly on the east side, for more extensive and effective protection against rainwater. Work on sun protection structures is also under way. Processes of deterioration by damp have been halted.

A long-term conservation plan has been put in place, in line with the recommendations made in the ICOMOS evaluation of 2008. It brings together the efforts of two national authorities: the parks authority (INPA), which manages the property, and the antiquities authority (IAA). It also brings together the expertise of well-known international institutions (Getty, CRATerre) and independent experts in the field of earthen architecture conservation.

In addition to observation of the state of the property, the everyday surveillance of the site by guards involves the checking of water drainage during rainy weather, and the action of the protective roof.

ICOMOS, in its 2005 evaluation, stated that the conservation measures undertaken at the time were inadequate. The technical appraisal mission in 2007 indicates that substantial progress has been made in this area. Work is in progress to put in place structural support and stabilising elements; the work is carried out with great care, paying attention to issues of quality and possible reversibility.

ICOMOS, in its 2008 evaluation, recommended that a very stringent conservation plan should be put in place, in line with the best international standards for the preservation of sun-dried mudbrick architecture. The changes occurring in the structure remain however partly unpredictable, and call for a flexible and adaptable action plan, without sacrificing scientific rigour.

ICOMOS considers that recent efforts concerning the scientific and technical management of the processes of decay of the sun-dried mudbrick architecture of the

nominated property have been substantial, and in some cases exemplary. In addition, scientific monitoring and a long-term conservation plan are today in place and functioning, and the results obtained suggest that the long-term conservation of the property can thus be ensured.

ICOMOS considers that the conservation of the property has steadily improved since 2005, and has today reached a satisfactory level.

Management

Management structures and processes, including traditional management processes

The three-arch gate of Tel Dan is managed as part of the Natural and Archaeological Reserve of Tel Dan. It is the responsibility of the Israeli Nature and Parks Authority (INPA), in accordance with its hierarchical organisation chart: national directorate, professional divisions, Northern District and Golan Region, and finally the Tel Dan Reserve echelon.

The site is managed in accordance with several national plans and programmes. As a result funding and personnel are allocated to the Nature Reserve.

The Israeli Council for the Preservation of Monuments and Archaeological Sites is also involved, and cooperates with the management authority.

All projects for site management and archaeological works are supervised by the IAA (Israeli Antiquities Authority) from a scientific viewpoint.

Policy framework: management plans and arrangements, including visitor management and presentation

Conservation plan: A master research plan for the conservation of the archaeological site was requested when the 2005 nomination was examined. It was presented in 2006 under the name "Conservation Plan". It was to be based on the IAA/Getty evaluation report and on experience gathered during recent work. It will take over from the existing conservation measures, which have moreover improved markedly over the last two years (see Conservation). The plan must however retain a degree of flexibility in order to deal with the unpredictability of changes in the condition of the structure.

Archaeological excavation and visitor presentation plan: After a two-year break in excavations, a master plan for future excavations is to be started up in 2008. It will complement and assist the conservation plan. It has been drawn up by the Gluek School of Biblical Archaeology, in conjunction with the Reserve and the INPA. It also concerns other elements of the fortification

wall and the interior of the town. It involves work both for conservation and for presenting the site to visitors.

The Natural and Archaeological Reserve management plan: it manages the organisation of the site and the facilities for accommodating the public, including:

- Daily inspection of the site,
- Annual drainage system maintenance work,
- Seasonal cleaning of vegetation and prevention of bird nesting.

A detailed plan indicating the roads and access paths, the car park and the reception facilities has been provided in response to the request made by ICOMOS.

ICOMOS considers that a detailed site conservation management plan is necessary, while considering that this plan must remain flexible in order to be adaptable to changes in the structure and improvements in conservation techniques (See Conservation).

Following the ICOMOS request in 2008 suggesting that consideration should be given to presenting the three-arch gate in a way more closely linked to the rest of the fortifications and the urban centre of Tel Dan, the State Party examined this proposal. In its reply of 20 February 2010, it indicated that the nearby fortification elements are of limited archaeological interest and have no direct relationship to the essentially technological and architectural value of the property; furthermore, they are for the most part covered by a layer of earth which protects and conserves them. It therefore seems advisable to maintain the existing situation of the three-arch gate in respect of presentation and value preservation.

The three-arch gate is located in a nature reserve that receives a relative large number of visits and is popular in Israel, but its entrances are strictly controlled. The Reserve is entirely fenced in, and the archaeological site of the gate has an additional protection, with an access gateway. The archaeological site is only accessible to a limited number of visitors at any one time, but this point is basically positive in view of the current state of conservation, excavations and work on the site. It is not however possible for people with disabilities to access to the site.

Routes are proposed to visitors, together with large numbers of signs and interpretation points, with the following objectives:

- Presentation and interpretation of the site's major features;
- Encouragement of good visitor behaviour and protection of the site itself;
- Visitor guidance and safety.

The signs and information are in three languages: Hebrew, English and Arabic. They were completely

renewed in 2004, but on the basis of the visit plan drawn up in 1995.

Involvement of local communities

There is no institutional programme with local or regional communities. However, the Tel Dan local authority is active in that it organises regular educational visits for school groups, and provides information to the population about the archaeological and natural site.

Archaeological research partnerships

As regards the excavations, various educational institutions are in regular contact with the site: the Nelson Glueck School of Biblical Archaeology, the Hebrew Union College of Jerusalem. These institutions play a substantial role in funding excavations and publishing their results.

ICOMOS notes that no management plan is proposed with regard to the nominated property.

However, ICOMOS considers that the property is included in the larger context of a Natural and Archaeological Reserve whose management rules are long-established and well-defined. The measures in place are those of a state organisation whose operation has been tried and tested. They are under the scientific control of the IAA.

Resources, including staffing levels, expertise and training

The Natural and Archaeological Reserve currently has eight full-time employees. Their activities however range over the whole spectrum of tasks required in managing a nature reserve receiving a significant number of visitors, in which the nominated property is only one part among others.

Personnel are all recruited following appropriate academic training. They are given short complementary training at INPA and they are only taken on definitively after a two-year trial period.

Temporary employees are hired during periods of high frequentation.

Workers and contractors are required for maintenance and cleaning work.

At regional and national level INPA has a number of professionals specialising in the various questions that arise in the management and conservation of the site: a scientific director for the site, specialist archaeologists and architects.

Furthermore, the site can call on the national specialists of the IAA.

The IAA provides a 2-year course to professionals recruited by the INPA, who are then put in charge of monitoring sites such as Tel Dan.

As far as earthen architecture conservation is concerned, the IAA specialists have taken international courses at the Getty Institute of Conservation and CRATerre in Grenoble (France).

Depending on the difficulties encountered, external institutes and consultants are called in, as was the case of the Getty Institute to evaluate the structure in the late 1990s.

Architects and conservators specialising in the devising and conservation of architectural vestiges intervene on the site. The reproduction of sun-dried mudbricks was undertaken in this way.

The excavations are guided by archaeologists of national and international reputation, both from the INPA and from the Hebrew Union College (HUC).

ICOMOS considers the training of the personnel with scientific responsibilities to be of a good level, in line with international standards for the subject concerned. ICOMOS recommends however the stepping up of continuing education of the other INPA personnel working in fields related to the nominated property, on the conservation and preservation issues with which they are specifically concerned.

In the documentation it submitted on 20 February 2010, the State Party indicates the levels of competence of its personnel, and the training courses they have taken.

ICOMOS commends the measures in place constituting the management plan, and considers that the management system for the nominated property is adequate. ICOMOS recommends that the continuing education of personnel should be extended.

6. MONITORING

The visual monitoring of the condition of the nominated property takes place at least once a day, and often twice a day, by the Reserve personnel. The personnel is trained for this purpose, as part of the overall surveillance of the site.

The basic monitoring indicators are as follows:

- Observe the appearance of brick debris at the foot of the arches.
- Very rapidly locate incipient signs of damage to the arch surface to prevent them from becoming irreversible.

Under the conservation plan, the INPA team of professionals carries out regular scientific monitoring of the site. This monitoring includes systematic

photographs of the gate from fixed points, and regular comparison of the photographs taken. The conservation plan monitoring reports are approved by the INPA and the IAA.

Site water drainage and cleanliness are monitored annually.

In the documentation it submitted on 20 February 2010, the State Party indicates that it has given consideration to the ICOMOS recommendation made in 2008: "In view of the fragility of the property and the speed of changes that can occur, monitoring could be improved by permanent surveillance using a laser theodolite and 3D digital display." A system of this type has been set up with the collaboration of a specialised company. Initial results are currently being considered and methodology is at the development stage.

ICOMOS considers that the monitoring of the property is adequate.

7. CONCLUSIONS

ICOMOS recognises the Outstanding Universal Value of the Triple-arch Gate at Dan.

ICOMOS considers that the changes made since the property was first nominated for the World Heritage List in 2005, and since the 2008 evaluation, have been positive, particularly with regard to the enlargement of the buffer zone and the marked improvements in property conservation work and in the monitoring of the property.

Recommendations with respect to inscription

ICOMOS recommends that the Triple-arch Gate at Dan, Israel, should be inscribed on the World Heritage List on the basis of *critera* (ii).

Recommended Statement of Outstanding Universal Value

Brief synthesis

The three-arch gate of the Triple-arch Gate at Dan has outstanding universal value:

- It bears witness to great mastery of the technique of building a true arch with a significant span (2.5 metres) during the Middle Bronze Age or slightly later.
- It was built using sun-dried mudbricks, with the arch bricks making partial but unquestionable use of the innovative voussoir system.
- In the current state of archaeological knowledge, it constitutes a unique example of a gate with three complete arches, each with three

successive arcs of brick, both for its early date and its state of conservation.

- Through its integration in massive fortifications, it bears witness to the importance of the move towards urbanisation in the Middle Bronze Age and to its technical advances.

Criterion (ii): The Triple-arch Gate at Dan bears witness to the early diffusion of the architectonic principle of the true radial arch, in the Middle East during the Middle and Late Bronze Ages, particularly in its most complete version, including voussoir bricks, for wide spans.

Integrity and authenticity

The authenticity of the Triple-arch Gate at Dan is proven. However, the integrity of its sun-dried mudbrick structure raises considerable conservation problems with regard to the presentation of its outstanding universal value in a long-term perspective. A substantial conservation effort has been planned and begun by the State Party to achieve this aim. It must be continued with great determination, in view of the still imperfect state of expertise in the conservation of such constructions.

Protection and management requirements

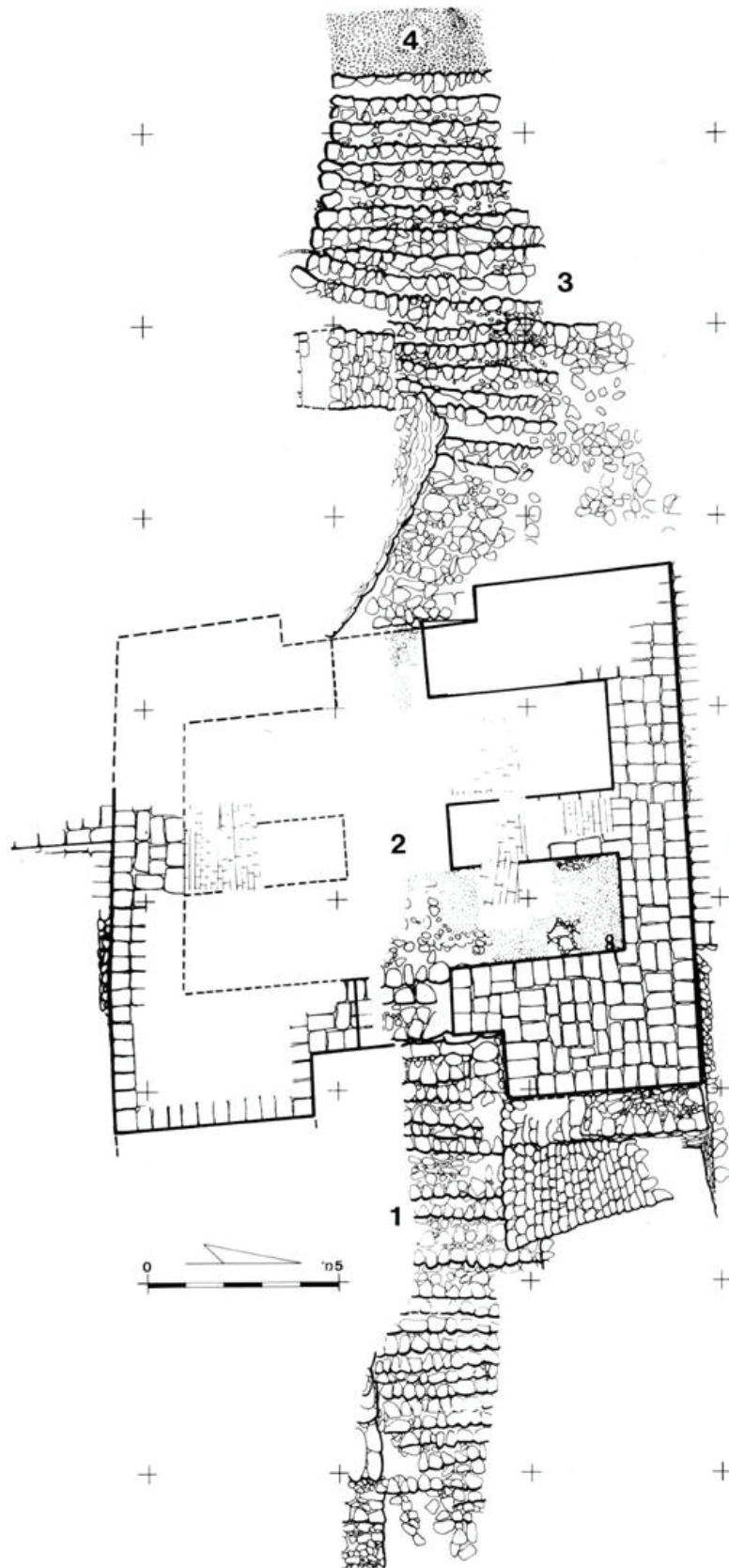
The legal protection in place is adequate. The site is managed by the authority of the Natural reserve of the Tel Dan Park, which is attached to the governmental organisation for nature and parks (INPA). Conservation management is conducted under the authority of the governmental antiquities organisation (IAA). The set of measures presented forms a satisfactory management plan for the expression of the property's outstanding universal value.

ICOMOS recommends that the State Party should give consideration to the following point:

- Make sure that an exacting conservation management plan, in accordance with the best international standards for the preservation of sun-dried mudbrick architecture, is implemented.

ICOMOS also recommends that:

- The continuing education of the non-scientific INPA personnel working on the nominated property should be stepped up on the conservation and preservation matters with which they are specifically concerned.



Plan de la porte



Façade est



Escalier menant de la ville vers la porte

Sucevița (Romania) No 598 bis

Official name as proposed by the State Party:

Church of the Resurrection of Sucevița Monastery

Location:

Historical Region of Moldavia, Suceava County,
Suceava, Romania

Brief description:

The interior and exterior walls of the church of Sucevița Monastery are entirely covered in painted murals dating from the end of the 16th century. It is located inside the enclosure of a fortified monastery and is the only church with a representation of the Ladder of St John Climacus. It is one of the painted churches of northern Moldavia, seven of which are already inscribed on the World Heritage List (1993). With their exterior walls entirely covered in 15th and 16th century paintings, directly inspired by Byzantine art, these eight churches in northern Moldavia are unique in Europe.

Category of property:

In terms of the category of cultural property, as defined in Article 1 of the 1972 World Heritage Convention 1972, this is a *monument*.

1. BASIC DATA

Included in the Tentative List: 3 February 2005

International Assistance from the World Heritage Fund for preparing the Nomination: No

Date received by the World Heritage Centre:

7 February 2007

1st February 2010

Background: This nomination is for the extension of the Churches of Moldavia that were inscribed at the World Heritage Committee's 26th session (Cartagena, 1993) on the basis of criteria (i) and (iv).

The extension nomination was examined by the World Heritage Committee at its 33rd session (Seville, 2009), and decision 33 COM 8B.35 was adopted:

The World Heritage Committee:

1. Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1,

2. Refers the extension of the Churches of Moldavia to include the Church of the Resurrection of Sucevița Monastery, Romania, back to the State Party to allow it to:

a) Promulgate the management plan for the Painted Churches of Moldavia property, along with the section dealing with the management of Sucevița;

b) Establish the Coordination Committee and its local representative in Sucevița;

c) Define a tourism development plan for each of the properties, within the management plan, boosting tourism infrastructure and stipulating the protection measures to be implemented within the buffer zones in relation with the tourism projects;

d) Complete the management plan relating to the property nominated for the extension by adding a programme of planned conservation work;

e) Produce without delay the Regional Town Plan designed to guarantee that development in the buffer zone is compatible with the value of the property;

f) Strengthen cooperation between the partners in the management of the property: the Orthodox Church, the national, regional, and local public authorities, and private owners.

The State Party submitted additional information on 1st February 2010.

Consultations: ICOMOS consulted its International Scientific Committee on Wall Paintings.

Literature consulted (selection):

Grabar A., *Roumanie, églises peintes de Moldavie*, Paris-New York 1962.

Dragut V., *Peintures murales de Moldavie*, Bucharest 1982.

Technical Evaluation Mission: 10–15 September 2008.

Additional information requested and received from the State Party: None

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The Church of the Resurrection is located in the middle of a square monastic enclosure (104m x 100m) 6m high that is built of stone, with its corners flanked by polygonal towers. It is accessible through a square gate tower in front of the monastery buildings built against the east wall. It has a basilical floor plan with a single nave and a trilobate apse. In terms of its overall volumes, it is

close to the Church of Saint Nicolas at Probota Monastery (part of the inscribed series). On the north and south facades two porches house the entrances to the exonarthex. Under a single overhanging shingle roof, interrupted by the transept crossing tower, the interior is covered with a series of four cupolas; the bay preceding the transept is covered with a transverse barrel arch (funeral chapel) and has an additional storey that is also arched, used as the treasure chamber. The exterior walls intermingle the Byzantine–Balkan tradition (lantern tower supported on diagonal arches) and elements inspired by Western European Gothic (buttresses, frames, and bay tracery).

The entire surface of the interior and exterior walls is covered by fresco mural paintings with a *secco* details presenting an iconographic programme that reflects the same theological and aesthetic themes as the seven churches already inscribed. The interior paintings are predominantly gilded and the compositions are often small in size, similar to miniatures.

The exterior iconography includes:

- The Church Hierarchy triumphing on the apses. Arranged in seven horizontal registers, the angels, the patriarchs, the apostles, the bishops, the martyrs, and the monks are facing emblematic figures painted along the axis of the church: God the Father, Christ, the Virgin and Child, Jesus Christ the Great Archpriest, and Saint John the Baptist.
- The Jesse Tree, the philosophers of antiquity, and the Akathist Hymn to the Blessed Virgin (chanted during the siege of Constantinople) are represented on the south facade.
- The Ladder of St John Climacus is painted on the north facade. Sucevița is the only church to represent this rare emblematic composition of monastic life. On the same facade there is also a Genesis cycle and the life of St Pacôme, founder of Cenobite Monachism.

In addition to its iconographic specificity, the Sucevița church is notable for a more graphic pictorial style and brighter colours, with a predominance of red and emerald green, than the seven other churches in the group.

Inside, the iconographic programme by and large respects the canonical indications of Byzantine painting:

- On the intrados of the lantern tower cupola, Christ Pantocrator is surrounded by the symbols of the Evangelists and groups of angels of the celestial hierarchy, followed by prophets, apostles, and bishops;
- In the lunettes formed by the oblique arches, scenes from the life of Christ (annunciation, nativity, presentation at the temple, baptism) are shown;
- There is an angelic liturgy at the base of the drum;
- The spandrels are occupied by the Evangelists;

- In the choir, the traditional Virgin and Child is here exceptionally replaced by the Ascension, and 17 of the 24 scenes of the Akathist Hymn of the Annunciation are painted on the vault. The following registers show the Tent of Witness, the twelve sons of Jacob, the communion using bread and wine in two separate scenes in accordance with the Orthodox tradition, the washing of the feet, and the Last Supper, as well as two compositions on the theme of divine wisdom. The lower register includes the Offering Child towards which the Hierarchs and the Deacons are moving;
- The vision of Peter of Alexandria is painted in the prothesis niche;
- In the nave, the paintings are structured into two zones: the vaults with the Marian Hymns and the walls with the life of Christ (passion and miracles). The lower register includes a mixture of scenes from Genesis, mystical themes, and figures of the warrior saints. On the western wall, the votive presentation of Ieremia Movila's family unfolds. On the opposite side, there is another votive painting showing the Metropolitan Gheorghe Movila, founder of the church, in front of a Deiesis;
- In the funeral chapel, figures of saints sit alongside the life of Moses.
- The narthex cupolas are decorated with God Sabaoth and God of the Trinity. The vaults present the seven ecumenical councils. The walls are covered with scenes from the liturgical calendar and the lives of St Nicolas and St George;
- The walls of the exonarthex show a Last Judgement and the vault the Virgin and Child surrounded by the signs of the zodiac. The remainder of the walls show various themes, including the life of St John the New whose relics were transferred to Suceava in the 15th century.

Extension

The seven churches of Moldavia already inscribed on the World Heritage List form a very coherent group in terms of the religious themes of their mural paintings and the representation techniques used by the regional artists. It is an aesthetic and spiritual programme dating back to the years 1530–50. The group of churches I, moreover, also located in the same region of northern Moldavia. The majority of the wall paintings were completed over a twenty-year period, although some decorative elements date from the end of the 15th century.

From an architectural point of view, they were sometimes older churches at the time of the programme of systematic exterior paintings, but they were restored or even rebuilt at this time. The other religious buildings were new or recent, built during the first half of the 16th century. Several of these churches are Orthodox monasteries:

- Church of the Holy Cross of Pătrăuți;
- Saint George Church, Voronet Monastery;

- Church of the Beheading of Saint John the Baptist in Arbore;
- Metropolitan Saint George Church, St John Monastery in Suceava;
- Church of St Nicolas, *katholikon*, Probata Monastery;
- Church of the Virgin Assumption, Humor Monastery;
- Church of the Annunciation, Moldovița Monastery.

History and development

Moldavia became an independent state in the 14th century; its peak was during the Crusades of Stephen the Great against the Ottomans (1457–1504) and those of Pierre Rareș (1527–38 and 1541–46). This period also bears witness to the birth of a great cultural movement, of which the churches with their exterior painted walls are the most astounding manifestation. A great Christian tradition of decorating the exteriors of churches then developed throughout Moldavia, to the extent that the entire surface of the facades was covered in paintings. This tradition had its own iconography, dominated by certain essential specific themes – the Church Hierarchy, the Last Judgement, and the Tree of Jesse.

Sucevița Church was built from 1584 to 1586, probably on the site of an earlier timber building, on the initiative of the Bishop of Rădăuți, the future Metropolitan of Moldavia, Gheorghe Movila, aided by his brothers Ieremia and Simeon, the future prince regents.

The paintings were commenced in 1595 and finished in the following years, by the latest in 1601 when the monastic ensemble was completed. They are attributed as being the work of two icon painters, the brothers Ioan and Sofronie.

The church lies at the centre of a monastery that has operated as such continuously since its foundation through to today, initially for monks and then for nuns.

The only transformations and changes to the monastic buildings have been those made necessary by the natural evolution of monastic life.

After World War II the church was restored on several occasions, and the Monastery underwent restoration from 1963 to 1968.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY, AND AUTHENTICITY

Comparative analysis

The nomination of the churches of Moldavia contained in the justification made for the property's inscription a reference to the Sucevița Monastery to justify the use of

criterion (ii) and the fact that this tradition had spread to other churches in Moldavia.

The comparative analysis of the present proposal for extension is essentially that made in relation to the seven Orthodox churches on the World Heritage List. This ensemble has already been judged to be a unique example of historiated religious murals painted on the exterior walls of churches. No comparison is possible elsewhere in Christian religious art, since murals are essentially inside the church, as in the Abbey Church of Saint-Savin sur Gartempe (France, 1983).

Sucevița belongs to the same region of northern Moldavia and is based on the same theological and aesthetic vision. Reference may then be made to a spiritual and artistic programme, manifested from 1530 onward by the creation of murals illustrating scenes from the Bible and sacred history. This is a regional ensemble of churches and monasteries of which Sucevița is the latest example. The murals are designed for the religious edification of the generally illiterate peasant population, in the context of the political and religious tension that was affecting south-eastern Europe at the time.

These are excellent quality murals painted by local artists with a rich colour range, of which Sucevița is simultaneously the culmination and a form of spiritual and artistic testament.

The Sucevița church fits perfectly into this series and provides several specific features worthy of attention, such as the specific iconographic themes and the chromatic range.

The initial nomination dossier for the painted churches of Moldavia, Romania, did not include a comparative analysis.

ICOMOS considers that with the addition of Sucevița the series of externally painted churches in Moldavia, dating from the end of the 15th century to the end of the 16th century, will include all the elements required to establish the property's outstanding universal value. ICOMOS therefore considers that the series comprising the property will be complete once the Sucevița extension proposal has been examined.

ICOMOS considers that the comparative analysis, although limited in its development, justifies considering the inscription of Sucevița on the World Heritage List, as an extension of the series of painted Moldavian churches already inscribed.

Justification of the Outstanding Universal Value

The extension is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- From the point of view of its architecture and its painted decoration, the Sucevița church belongs to the same group as the internally and externally painted churches of northern Moldavia, already inscribed on the World Heritage List on the basis of criteria (i) and (iv).
- The Sucevița church displays special chromatic and iconographic features which complement the inscribed churches. It provides an extension to the historiated themes already present in the other churches.
- The Sucevița church is testimony to the building of externally painted churches in Moldavia over a considerably longer period than that of the series already inscribed, ranging up to the end of the 16th century.

Justification for the inscription of the original nomination

With their exterior walls decorated with mural paintings, works of art inspired by Byzantine art, these churches in northern Moldavia are unique in Europe. Far from being mere wall decorations, these paintings form a systematic covering of all the facades and represent complete cycles of religious themes. Their exceptional composition, the elegance of the characters, and the harmony of the colours blend perfectly with the surrounding countryside.

ICOMOS considers that the justification is appropriate, as the monastery church of Sucevița is a consummate example of the final period of development of the painted churches of Moldavia, which was not represented in the series. The period has stylistic particularities, and completes the range of religious themes previously represented.

Integrity and authenticity

Integrity

The church has not undergone any modification throughout its history. It fully retains the integrity of its original structure from the end of the 16th century, along with its ensemble of exterior paintings.

The monastic enclosure has fully retained its initial appearance. It has not undergone any structural change.

The surrounding rural and wooded landscape has undergone only minimal transformation and development through to the present day; it has retained its integrity.

This is still a monastery of the Orthodox Church, the functional integrity of which has been retained continuously, including during the period of the Communist regime after World War II. Today it houses a fully functioning convent with seventy nuns, giving the site the character of a living monastery.

ICOMOS considers that the urban plan specific to the proposed extension must be directed towards protecting the integrity of the property's landscape, which is affected by contemporary built structures in some instances.

Authenticity

The paintings are authentic, in that they have been subject to only minimum work. The restorations undertaken since the 1970s have been performed with care and considerable attention to respecting the authenticity both of the motifs and the pigments and of the conservation conditions (see Conservation).

The restoration of the roof has returned the church to its original appearance, as documented in old iconographic sources.

The restoration of the quarter-sphere calotte of the choir, the largest, concentrated mainly on the filler components (solid background, vegetation).

The presence of an active young monastic community concerned for the cultural and spiritual values associated with the property is an important aspect of its authenticity.

ICOMOS considers that the conditions of integrity and authenticity have been met.

Criteria under which inscription is proposed

The extension is nominated on the basis of the same criteria used for the inscription of the original nomination: cultural criteria (i) and (iv).

Criterion (i): represent a masterpiece of human creative genius.

This criterion is justified by the State Party on the grounds that the entire church is painted, both internally and externally. The exterior scenes are the best preserved of the northern Moldavian churches. It is the end point in an evolution which has seen it described as 'a testament to Moldavian art.' The stylistic differences displayed here are testimony to the persistence and the evolution of this artistic phenomenon beyond 1550. Sucevița provides a special and complementary distinction.

ICOMOS considers that the special features of the Sucevița paintings and their good state of conservation complete the range already inscribed of the seven other painted Moldavian churches.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

This criterion is justified by the State Party on the grounds that from an architectural point of view the Sucevița church forms part of the Moldavian monuments created from the second half of the 15th century, providing an original synthesis between the Byzantine–Balkan traditions and the contributions of the Western Gothic. The Monastery’s fortified enclosure is one of the most representative examples in Moldavia.

ICOMOS considers that the painted Sucevița church is the culmination of the evolution of this typology of artistic creation.

The idea of completely covering the exterior surfaces of churches with paintings was adopted from other churches in Moldavia in the cultural, religious and political context of the Balkans from the 15th to the 16th centuries.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criteria (i) and (iv) and that the Outstanding Universal Value has been demonstrated.

Description of the attributes

- The Sucevița Church belongs to the same group as the churches of northern Moldavia already inscribed on the World Heritage List. They are remarkable for the quality of their exterior wall paintings dating from the 16th century.
- With their exterior walls decorated with mural paintings, which are masterpieces inspired by Byzantine art, these churches in northern Moldavia are unique in Europe. The paintings form a systematic covering on all the facades and represent complete cycles of religious themes taken from the Bible and Holy Scripture. Their exceptional composition, the elegance of the characters, and the harmony of the colours blend perfectly with the surrounding countryside.
- Sucevița presents rare iconographic themes that complement those on the other churches. It is the only one to show a representation of the ladder of St John Climacus.
- Chronologically, Sucevița is the last representative of the externally painted Orthodox churches in northern Moldavia; it completes the group already inscribed on the List.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

The Monastery is sited outside industrial and mining zones and so is not affected by this risk.

The extraction of timber does not affect the property. If it were to develop, it might eventually lead to an intensification of road traffic in the immediate vicinity of the Monastery, with heavy loads perhaps causing vibrations and atmospheric pollution. Furthermore, the intensive extraction of timber could lead to significant and notable changes to the traditional landscape.

Tourism pressures

The Monastery is one of the most visited places in Romania, by both pilgrims and tourists. It is one of Romania’s most prized tourist destinations (125,597 visitors in 2007). At present the number of tourists does not threaten the property. All visits are with a guide, and if these were to increase they might cause damage to the church with its limited interior space and alter its immediate surroundings with the installation of uncontrolled commercial activities and an expanding car park.

The construction of a hotel infrastructure could affect the property’s surroundings.

Environmental pressures

There is currently no pollution in the immediate surroundings of the Monastery.

The *Eternit* roofing on the Monastery buildings, a potential source of asbestos pollution, is being replaced with copper.

Natural disasters

The Monastery is not located in a seismic zone.

Spring flooding due to thawing and heavy rain mainly threatens the inhabited areas immediately adjacent to watercourses.

A fire in 2004 was caused by an electrical short-circuit.

Impact of climate change

The threat from climate change is only of a general order; the rainfall in this mountainous region is high. Thanks to the height of the enclosure wall, the exterior murals are protected from the prevailing winds, apart from the tower murals, which are located at a greater height.

ICOMOS considers that the main threats to the property are uncontrolled development of tourism and extensive forestry operations.

5. PROTECTION, CONSERVATION, AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The boundaries of the property for inscription correspond to the Monastery enclosure (1.4ha), and coincide with the statutorily protected monument.

The buffer zone extends to the top of the surrounding hills, including the slopes and built zones to the south and north, and to the east as far as that part of the river and the road where the Monastery starts to come into view (36.4ha).

ICOMOS considers that the boundaries of the property and buffer zone of the nominated property are adequate.

Ownership

The Monastery and the Church are owned by the Sucevița Orthodox convent.

Protection

Legal protection

Canonically, the Monastery comes under the Archdiocese of Suceava and Rădăuți, in the Romanian Orthodox Church.

The Monastery was added to the register of Historical Monuments of Romania on 16 July 2004, and as a result it benefits from the Protection of Historic Monuments and Protected Zones Law No 422/2001, revised under No 258/2006.

In addition, the following apply:

- The Order by the Minister of Culture and Religious Affairs No 2682/2004 pertaining to the method for classifying properties as historic monuments;
- Law No 5/2000 on the approval of the national development plan, section III, protected zones;
- Special legislative regulations concerning properties inscribed on the World Heritage List;
- Government Ordinance No 47/2000 pertaining to special measures concerning these same properties;
- Law No 350/2001 on land use and town planning;
- Law No 564/2001 promulgated by the President of Romania;
- Decision No 493/2004 by the Government of Romania concerning the monitoring of monuments inscribed as World Heritage and the method for establishing protection and management plans.

The buffer zone is under the protection of the 1992 General Town Plan of the municipality of Sucevița, which

is currently undergoing revision (2009). The revision forms part of a wider overhaul of the general town plans pertaining to the churches already inscribed and to the proposed extension, in accordance with governmental decision 738 of 9 July 2008.

For the general town plan in preparation pertaining to the Sucevița monastery zone (UTR1), the Ministry of Culture has carried out a study of the historical and heritage aspects of the property, particularly in landscape terms, in accordance with recommendation 392/U/2009. The specific regulation for the zone UTR1 (285 ha) has been drawn up, and has been promulgated by Ministry for Regional Development recommendation n°5/2010; it was issued to the municipality of Sucevița on 28 January 2010 for application. Four zones are established inside UTR1, regulating the height of buildings and construction density for the privately owned buildable area (ZCP3), inside the monastery (ZCP2) and in the forest zone (ZCP4); in the latter, only maintenance works on existing structures will be authorised. The church constitutes the property, while the buffer zone consists of the monastic enclosure and its immediate surrounds.

ICOMOS considers that the town plans specifically applying to the land occupied by the painted churches of Moldavia are in line with recommendation e) of Committee decision 33COM 8.B35. The plan pertaining to Sucevița has just been promulgated. The town plans for the other churches included in the property are either undergoing revision, or in the promulgation phase, or in preparation.

Traditional protection

The current use as a convent is an important element in the property's protection.

Effectiveness of the protection measures

To date, the protection measures have proved effective and relevant.

ICOMOS considers that the legal protection in place is adequate, but that the promulgation of the new Regional Town Plan must be confirmed.

Conservation

Inventories, archives, research

The Monastery and its murals have been the subject of several publications since 1923.

A multi-disciplinary research project, 'The Movila family in the history of Moldavia: an element of 16th and 17th century European history,' has been initiated by the Archdiocese, the Monastery, the University of Iași, and the Municipality of Sucevița.

The National Institute of Historic Monuments and the University of Iași have begun research on the murals.

The archives concerning the Monastery are conserved in national institutions.

Present state of conservation

The church and the convent are generally in an excellent state of conservation, except for the church roof. The roof shingles need replacing with identical material.

The church structure was consolidated in 1983; the building does, however, have a fissure in the choir vault and another deeper one in the arch stone between the nave and the funeral chapel.

The exterior paintings are in a good state of conservation, except for those on the lantern tower, which are exposed to the winds and partially erased.

The interior paintings on the lantern tower, the nave, and choir have been restored and are in a good state of conservation. Those in the funeral chapel and the narthex are undergoing chemical and biological analyses prior to restoration.

The paintings are totally preserved on the exterior, especially on the north wall.

Active conservation measures

The Monastery was completely restored between 1953 and 1968.

In 1953–54 the church timber roof underwent initial repairs in the style of early 20th century work. A new restoration in 1983 restored its fragmented appearance typical of medieval Moldavian churches, as shown in a votive painting of Prince Movila in the nave.

The exterior paintings were restored between 1989 and 1998.

In 1999 restoration work commenced on the interior paintings, planned for their entirety.

A project to reroof of the north wing of the enclosure in sheet copper has been implemented, as has another for the nuns' cells which is now in progress.

A programme for the systematic analysis of the state of conservation and establishment of best rules of practice was approved in 2004, in the form of a document committing the property's various stakeholders, 'Obligations concerning the use of the historic monument.' It mainly follows French heritage evaluation standards. These provisions are restated and supplemented by the new management plan for the property.

An additional restoration programme for the church (consolidation of the vaults and inspection of the timber frame), as well as the monastic buildings and the enclosure, has been announced. The works schedule presented as an annex to the property management plan foresees the replacement of the timber roof in 2010. This is in line with recommendation d) of Committee decision 33COM 8B.35.

Maintenance

Routine maintenance of the building is performed on a daily basis by the nuns, in association with their opening the monument to tourists and its supervision.

Effectiveness of conservation measures

ICOMOS considers that a conservation management dynamic has been in operation since the start of the restoration of the exterior paintings, in accordance with international conservation standards. In this respect, ICOMOS recommends in particular monitoring the most vulnerable paintings on the lantern tower exterior. The drawing up of the management plan for the church of Sucevița, as part of the management plan for the whole of the serial property, represents the culmination of these efforts.

ICOMOS considers that the conservation of the property nominated for the extension is satisfactory.

Management

Management structures and processes, including traditional management processes

The following organisations involved in the protection and management of the property are of international standard:

- The Ministry of Culture and Religious Affairs is involved on an administrative level through the Department of Historic Monuments and Museums, and on a public finance level through the National Office of Historic Monuments.
- The National Institute of Historic Monuments is in charge of monitoring conservation and research.
- The National Historic Monuments Commission has a consultative role.
- The G. Oprescu Institute of Art History of the Romanian Academy contributes to research.

At the regional and local levels:

- The Order of Orthodox Nuns is the owner and manager of the Monastery; it plays an essential role in the everyday management of the property. These prerogatives are exercised under the authority of the Archdiocese of Suceava and Rădăuți of the Orthodox Church of Romania.
- The Sucevița County Council is also involved in financial, environmental and regional development aspects.

- The County Department of Culture, Religion and National Heritage provides monitoring on behalf of the Ministry of Culture.
- The Sucevița Town Hall is involved in the municipal land use plans and building permits, notably in the buffer zone.

The *Coordination Committee* for the whole serial property was created by Order 2140 of the Ministry of Culture and Religious Affairs dated 24 March 2009. The Committee is responsible for coordinating the management of the various components of the property, preparing a detailed schedule and monitoring works in accordance with the management plan, monitoring the whole serial property, and accordingly updating conservation initiatives. It is required to draw up a report at prescribed intervals. It is assisted by a Scientific Committee which is particularly responsible for links with the university, research and educational initiatives. The Coordination Committee is chaired by an eminent scientist from the National Institute of Historic Monuments.

A Committee member is to be appointed by the Sucevița site and will carry out local coordination for the property. A local representative of the owner will be appointed as the site manager.

ICOMOS considers that the institution of the Coordination Committee for the whole of the serial property is in line with a significant part of recommendation b) of Committee decision 33COM 8.B35. However, no indications have been given about the work schedule of the Coordination Committee, the intervals at which its reports are to be drawn up, or the constitution of its local unit.

Policy framework: management plans and arrangements, including visitor management and presentation

Several general documents are currently being applied in the management of the property, in particular the Strategic plan for the management of monuments inscribed on the World Heritage List (2007-2013) and the Five-year plan for the management and monitoring of monuments inscribed on the World Heritage List (2007-2011).

Up to now, an Annual plan for the management and monitoring of the monuments inscribed on the World Heritage List has been drawn up, in accordance with the above master plans.

The State Party has recently drawn up a Management plan for the Churches of Moldavia; it was written and published in 2009. For the proposed extension, it sets out in particular the works planned for 2010-2011 (roofing, museum reorganisation) and ongoing conservation and monitoring actions (humidity control and protection of the lower painted parts during religious

services). Funding guarantees are also provided for the various components of the serial property.

In practice, pilgrims and visitors are managed by the nuns of the Monastery of Sucevița, several of whom speak foreign languages. 143,000 people visited the property in 2009. A limit has been placed on the number of visitors to the church, in order to regulate humidity levels.

With regard to tourism management and development, on the one hand the Management plan indicates the main priorities for the projected approach for explaining the value of the serial property, and personnel training, and on the other hand the State Party has provided a voluminous document, partly translated into French (Tourism in Bukovina). This is a regional plan for studying and forecasting regional tourism development in future years, in which the serial property has an important place.

The new Management plan announces a programme for studying and explaining the value of the proposed extension through several programmes:

- explaining the value of the mural paintings by reference to historical and art history research;
- awareness raising and guided visits for the general public and the media;
- a projected laboratory for the conservation and restoration of the Medieval icons, books and textiles; this project is to be set up in cooperation with Japan, and the construction of a building inside the monastery enclosure is planned;
- the rehabilitation of the medieval art museum;
- the rehabilitation of the library storerooms.

ICOMOS considers that the Management plan published in 2009 is in line with recommendation a) of Committee decision 33COM 8.B35. Special care must however be taken to ensure the architectural and landscape compatibility of the new building projected for the laboratory outside the monastery but inside the buffer zone.

ICOMOS considers that the level and the quality of visits to Sucevița appear satisfactory. However, visitor facilities outside the Monastery are insufficiently controlled at present, and there is therefore a risk of seeing private commercial operations and uncontrolled tourist facilities proliferate. Furthermore, the programme aimed at explaining the values of Sucevița should in principle make a significant cultural contribution in terms of interpreting and focusing on the values of the property. Finally, the vast general tourism study programme sets the serial property into a regional perspective. Recommendation c) of Committee decision 33COM 8.B35 has thus been taken into account by the State Party. However, a functional tourism development plan for Sucevița has not yet been drawn up, including effective control of peripheral tourist facilities: parking

areas, vehicle and pedestrian circulation, shops, visitor accommodation, etc.

Risk preparedness

The structure of the church was reinforced against earthquake activity in 1983, even though it is not located within a risk zone.

Involvement of local communities

The municipality is responsible for the management of the buffer zone, mainly through the implementation of the Regional Town Plan, which regulates permits for building and other works.

The Coordination Committee members include representatives of the Romanian Orthodox Church. The Management Plan has been drawn up in conjunction with local religious officials from the churches and/or monasteries. For the church and the monastery of Sucevița, the works and tourism development programmes are implemented in agreement with the regional and local religious authorities.

ICOMOS considers that the State Party has provided the information referred to in recommendation f) of Committee decision 33COM 8.B35.

Resources, including staffing levels, expertise, and training

Restorations are financed by the State through the intermediary of the Minister for Culture and Religious Affairs (over 1 million euros from 2004 to 2008).

Management of the property is financed by the Ministry of Transport, Communications and Tourism, and by the Suceava County Council.

The Monastery has its own income from the sale of entrance tickets, publications and pious objects, etc which is used in part for the maintenance and preventive conservation and restoration of the iconostases.

Restoration experts are trained in various universities. Each year the sisters who take guided tours attend refresher training courses.

The monastic community of Sucevița has 70 members.

Effectiveness of current management

The nuns provide the everyday management of the Monastery and the church, and missions by the relevant services of the Minister for Culture and Religious Affairs vouch for the effectiveness of the current management.

The Coordination Committee is in charge of monitoring conservation and the project for the tourist development of the whole property, in conjunction with the religious officials of the property and the monastic community

which lives there. However, no details have yet been provided about the local body representing the Committee at Sucevița and its operational means.

ICOMOS considers that the management dynamic of the proposed extension is positive and on the right track, particularly following the improvements made by the 2009 Management plan. However, no details have yet been provided about how the Committee will function or about the setting up of its local unit at Sucevița.

6. MONITORING

Monitoring is provided jointly by the Ministry for Culture and Religious Affairs and the owner. It is to be carried out from 2010 onwards within the framework of the Management plan, under the control of the Coordination Committee.

Monitoring of the climatic and biological conditions of the interior paintings is regularly performed using specialist equipment. The results are fed into a database.

Paintings undergoing restoration work are monitored monthly, and those that have already been restored are monitored twice-yearly. A monitoring data sheet has been drawn up by the Ministry of Culture.

The number of visitors in the church is also constantly monitored and is limited so as to prevent overcrowding of the space and thereby potentially altering the atmosphere.

ICOMOS considers that the monitoring is satisfactory. Details must however be given about the local unit of the Coordination Committee in charge of monitoring.

7. CONCLUSIONS

ICOMOS recognises the contribution of the Church of the Resurrection, Sucevița Monastery, Romania, in strengthening the Outstanding Universal Value of the Churches of Moldavia, already recognised on the basis of criteria (i) and (iv).

Recommendations with respect to inscription

ICOMOS recommends that the extension of the Churches of Moldavia to include the Church of the Resurrection of Sucevița Monastery, Romania, be **approved** on the basis of *criteria (i) and (iv)*.

ICOMOS considers that this extension completes and closes the series of Painted Churches of Moldavia.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The churches with external mural paintings of northern Moldavia, built from the late 15th century to the late 16th century, are masterpieces inspired by Byzantine art. These eight churches of northern Moldavia are unique in Europe. They are authentic and particularly well preserved. Far from being mere wall decorations, the paintings form a systematic covering on all the facades and represent complete cycles of religious themes. Their exceptional composition, the elegance of the characters, and the harmony of the colours blend perfectly with the surrounding countryside.

Criterion (i): The external paintings of the churches of Northern Moldavia cover all the facades. They embody a unique and homogeneous artistic phenomenon, directly inspired by Byzantine art. They are masterpieces of mural painting, and are of outstanding aesthetic value in view of their consummate chromatism and the remarkable elegance of the figures. They present cycles of events taken from the Bible and the Holy Scriptures, in the Orthodox Christian tradition.

Criterion (iv): The idea of completely covering the external facades of churches by paintings is an eminent example of a type of church construction and decoration adopted in Moldavia, which illustrates the cultural and religious context of the Balkans from the late 15th century to the late 16th century.

Integrity and authenticity

The monastic church of Sucevița has undergone no significant alteration in the course of its history. It preserves with total integrity its original late 15th century architectural structure, and its set of mural paintings, both internal and external. The monastery which surrounds it has conserved its initial appearance, and in particular its historic enclosure. The surrounding countryside, rural and forested, has undergone few transformations and changes up to the present day.

The mural paintings are authentic, as they have undergone only minimal interventions. They are in a good state of conservation. The restorations undertaken since the 1970s have been carefully carried out, with great emphasis being placed on respecting authenticity in respect of motifs and pigments, and on conservation conditions. The restorations to the roof have resulted in the church regaining its original appearance, as documented by ancient iconographic sources.

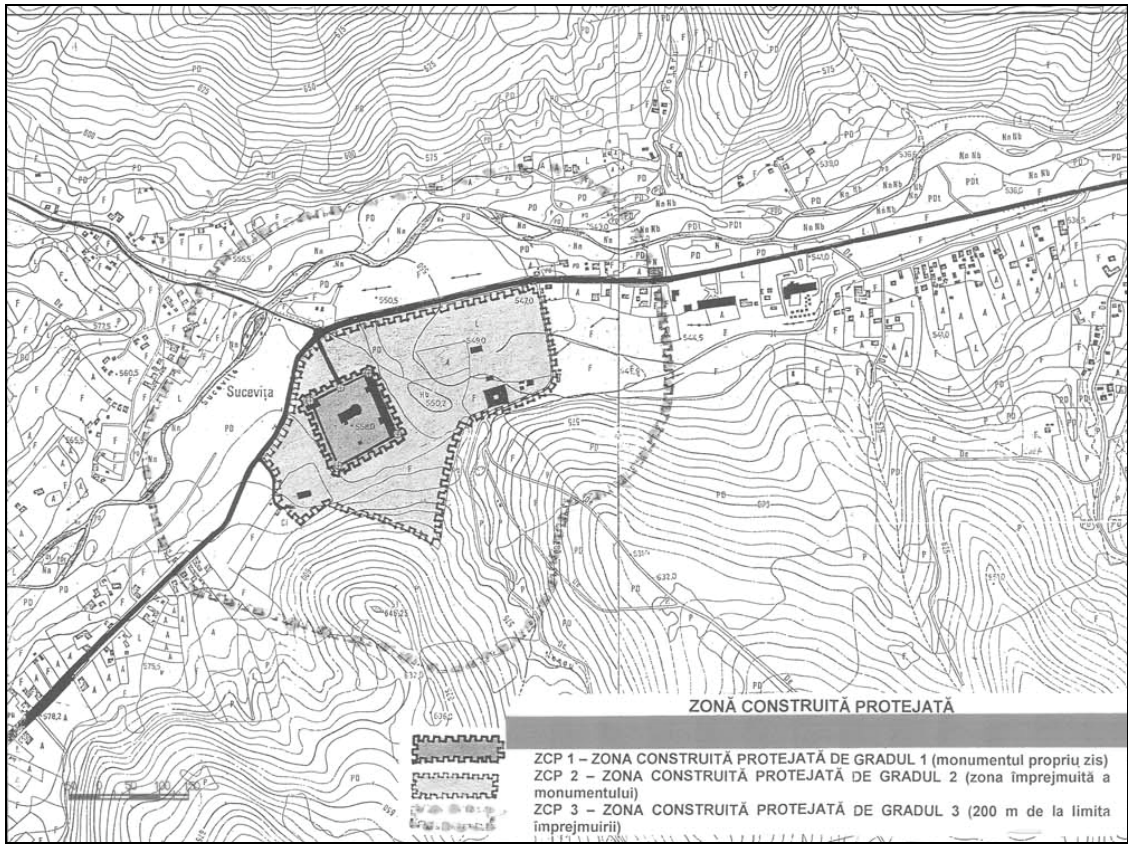
Protection and management requirements

The protection of the property is satisfactory, both for the serial property as a whole and for Sucevița, where the property is a place of worship inside a functioning monastery. The protection is completed by the

municipality of Sucevița's general town plan for this zone, which was recently promulgated (January 2010). The plan should enable active control of building and other works inside the buffer zone and in the landscape environment of the church and monastery. The management plan has been drawn up, including the part pertaining to the extension. The Coordination Committee for the serial property has been set up, but details must be provided about how it functions locally.

ICOMOS recommends that the State Party should give consideration to the following points:

- Provide a report for the 34th session of the World Heritage Committee (2011) to inform it about the actual functioning of the Coordination Committee and its local unit at Sucevița.
- Ensure control of the likely increase in visitor numbers to the Monastery and the church of Sucevița.
- In the framework of the updated Town Plan, establish a practical plan for the reception of visitors in the vicinity of the monastery of Sucevița.
- Keep the World Heritage Committee informed about architectural projects pertaining to the conservation laboratory planned in the buffer zone of Sucevița monastery, in line with paragraph 172 of the *Operational Guidelines*.



Map showing the boundaries of the proposed extension



General view of the monastery



Church of the Resurrection



South apse



Interior

The Mercury and Silver Binomial (Spain, Slovenia, Mexico) No 1313

Official name as proposed by the States Parties:

The Mercury and Silver Binomial on the *Intercontinental Camino Real*. Almadén, Idrija and San Luis Potosí

Locations:

Almadén, Autonomous Community of Castilla-La Mancha, Province of Ciudad Real, Spain.
Idrija, Slovenia.
San Luis Potosí, State of San Luis Potosí, Mexico.

Brief description:

The mercury route followed the *Intercontinental Camino Real* of the Spanish Empire, from Europe to Spanish America. It dates from the second half of the 16th century, when the mercury amalgamation process made possible the large-scale exploitation of the silver of New Spain.

A relatively rare metal, liquid at room temperature, mercury is produced only by a few mines across the world, of which the largest is at Almadén in Spain and the second largest at Idrija in Slovenia.

The exploitation of the silver mines of Mexico led to the building of colonial towns and the development of the *Camino Real* towards the north-west. San Luis Potosí, which was established in the second part of the 16th century, is one of Mexico's historically important mining towns.

Category of property:

In terms of cultural properties as defined in Article 1 of the 1972 World Heritage Convention, this is a nomination for the serial inscription of three *groups of buildings*.

1. BASIC DATA

Included in the Tentative List: 27 April 2007 (Spain)
18 June 2007 (Slovenia)
22 June 2007 (Mexico)

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre:
29 January 2008
26 January 2010

Background: This is a referred back nomination (33 COM, Seville, 2009).

A first nomination dossier was examined by the World Heritage Committee at its 33rd session (Seville, 2009). At the time, ICOMOS recommended to defer the examination of the nomination.

The World Heritage Committee adopted the following decision (Decision: 33COM 8B.26):

The World Heritage Committee,

1. *Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1,*

2. *Refers the nomination of the Mercury and Silver Binomial: Almadén, Idrija and San Luis Potosí, Mexico, Slovenia and Spain, back to the States Parties in order to allow them to:*

a) *Reconsider the definition of the property in San Luis Potosí, but also with its mining region, and more broadly in comparison with the other silver extraction sites using the amalgamation process in Mexico, to bring it into line with the mining and industrial theme of the mercury and silver binomial, and so to establish its Outstanding Universal Value. An inventory of the technical and industrial heritage linked to the silver mines would be necessary for such a redefinition;*

b) *Give consideration to a new name for the serial property, as the term Camino Real, specific to the Spanish colonial empire of the 16th to 18th centuries, is inappropriate for the Idrija site. The name must also reflect the two sites dedicated to the extraction of mercury;*

3. *Recommends that the States Parties should give consideration to the following points:*

a) *Reflecting on the extension of the property, on the one hand to include properties already inscribed because of silver mines in Bolivia and other countries in the Andes, and on the other hand to include the Huancavelica mercury mine in Peru;*

b) *Better integration into the definition of the property of the concepts of pollution and risks to human health that might arise from the production and use of mercury. The International Institute planned at Idrija for the study and the raising of public awareness of these issues is supported;*

c) *Inclusion of any additional component parts in the series not yet inscribed on the World Heritage List would require a new nomination.*

On 26 January 2010 the State Party submitted additional information.

Consultations: ICOMOS consulted its International Scientific Committee on Cultural Landscapes and the International Committee on the Conservation of the Industrial Heritage (TICCIH).

Literature consulted (selection):

Bargalló, M., *La amalgamación de los metales de plata in Hispanoamérica colonial*, México, Co. de Monterrey, 1969.

Dizdarevic, T., *The influence of mercury production in Idrija mine on the environment*, Ljubljana 2001.

Cañizare-Ruis, M., 'Patrimonio minero-industrial en Castilla-La Mancha: el área Almadén-Puertollano,' *Investigaciones Geográficas*, 31, Alicante 2003, p. 87-106.

Lescovec, I., 'Maintenance and presentation of the technical heritage of the Idrija Mercury Mine,' *Patrimoine de l'industrie*, Paris, 2004.

Mining and industrial heritage: its impact on major Cultural Routes of universal value. The Mines of Almadén and other mining sites linked to the Intercontinental Spanish Royal Road through the mercury route, Madrid – Almadén, ICOMOS Spain, 2006.

Technical Evaluation Mission: 27–31 August (San Luis Potosí) and 30 September– 6 October (Almadén and Idrija)

Additional information requested and received from the States Parties: None.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property consists of the two European mining sites of Almadén (Spain) and Idrija (Slovenia) used for the extraction of mercury (quicksilver), and the mining town of San Luis Potosí (Mexico) which used the mercury amalgamation process for the cold extraction of silver.

From the mid-16th century, the process was used on a large scale for the exploitation of low-grade silver ores containing other metals, such as lead, particularly in areas located in present-day Mexico and Bolivia. Considerable quantities of mercury were therefore necessary, and they were transported from the sites of production in Europe and Peru to the silver mines of the New World. The process of large-scale amalgamation was a speciality of colonial Hispanic America, which was the birthplace of the process (1555). The overall system, including the production, transport, and use of mercury for silver extraction, played a major part in the *Intercontinental Camino Real*, which was active from the mid-15th century until the 19th century.

Almadén

The nominated property consists of a main part, situated to the west of the town of Almadén, which includes the historic mining territory and its technical and industrial remains, and the nearby urban quarter up to the town centre. The main part of the property is completed by some scattered monuments elsewhere in the town, in the buffer zone.

The mining wealth of Almadén is linked to the very abundant geological presence of red cinnabar (mercuric sulphide), which made it an exceptional site for mining, as mercury ore is a rare commodity worldwide.

The elements of the nominated property comprise:

1. The mining site and the elements directly related to the history of its exploitation:

- the mines themselves, consisting of interlinking shafts and galleries of various periods;
- the entrances to the del Pozo, del Castillo, and La Contramina mines; the shafts, the machinery and the buildings of San Aquilino, San Teodoro, San Andrés, and San Joaquin;
- the constructions of the del Castillo mine, the mercury store (today the museum), and the administrative and social buildings;
- various tunnels with specific functions, such as the forced labour tunnel, Caña Gitana, and the mining transport tunnel of San Aquilino;
- the Bustamante cinnabar furnace, designed in 1720;
- remains of the brick furnace (17th century);
- traces of the road to Seville used for the transport of the mercury to its port of embarkation.

2. The property also includes the town centre, in its original fabric, from the mining site to Constitution Square, with the following noteworthy elements:

- Retamar Castle,
- the Chapel of San Miguel
- the historic San Miguel shaft,
- the Mining Academy building,
- the remains of the mine superintendent's house,
- the Inquisitor's House,
- the new San Sebastián church,
- the Carlos IV and Carros gates,
- groups of traditional dwellings.

3. Various monuments in the buffer zone:

- The archaeological remains of the forced labour gaol;
- the San Rafael Royal Miners' Hospital, which today houses the museum and archives of Almadén;
- the bullring.

Ildrija

The presence of mercuric sediment over a large area is the characteristic geological feature of the Ildrija region. It was exploited from the end of the 15th century onwards, when native mercury was discovered. It was associated with the presence of mercuric sulphide (cinnabar) which made up the ore. It is the second largest mine in the world, after Almadén. The network of galleries excavated since this period is around 700km long, at depths of up to 420m. Considerable quantities of wood were necessary for the mine's operation, to provide props to support the galleries and as fuel for the furnaces. The Ildrija region was equipped with dams in order to permit the transport of the wood by flotation.

The nominated property is divided into the main urban zone and six additional zones. The most important elements of the property from the viewpoint of the nomination are:

- the paths in Ildrija linking the mine, its facilities, and the stores; 'Anthony's main road,' which leads to the entrance to a shaft dating from the start of the 15th century;
- traces of the point of departure of the Mercury Route in Ildrija;
- the mining area and its outbuildings: the mining deposit, the shafts and tunnels, the facilities for extraction by ore smelting, the pumps, the machinery, and the associated equipment;
- the old town and its direct evidence of association with mining history, in particular: the mercury stores and the mine administration in Gewerkenegg Castle, the miners' theatre, the town hall, the secondary school for science, and the miners' living quarters.
- the dams and their hydraulic facilities used for mining extraction, on nearby watercourses.

The seven separate zones forming the property are:

1. the main zone of the old town and the castle, the stores, the theatre, the elements of the mercury route, the Francis shaft, the secondary school for science;
2. furnace 2 and the mercury extraction workshop;
3. the Kamšt water pump and the Joseph shaft;
4. the Gorenja dam;
5. the Vojsko dam;
6. the Putrih dam;
7. the Belca River dam.

San Luis Potosí

The mining town of San Luis Potosí is located on the central plateau of Mexico, in a semi-desert region. Its foundation and development are entirely linked to the working of the silver mines. The mines are widely scattered over the area.

The nominated property follows the boundaries of the historic town, particularly for the architectural value of its main monuments presented as evidence of mining wealth.

It includes in particular the following:

- the Real Caja (1764–67) is the most striking Baroque architectural evidence of the splendour of the town. With two street facades and an interior patio it is a readaptation of a building from the previous century on the site. It was the mercury store and the centre of mercury distribution to mining operators, under direct control of the Spanish Crown.
- the Municipal Palace (1838–92), on the main square (Plaza de Armas) is soberly elegant, featuring arcaded facades. It was built on the site of the earlier Casas Reales;
- the Government Palace (1798–1827) is in the Neo-Classical style, like the Municipal Palace;
- the Ipiña Building (1906) is one of the most important and significant monuments of the civil architecture of San Luis Potosí, and is also in the Neo-Classical style, featuring arcaded facades;
- the Cathedral (1701–32) is also located on the Plaza de Armas; it has a facade with three levels and a main access, flanked by two symmetrical bell towers. The Cathedral, which stands on the site of a much simpler parish church, expresses the Baroque style in Mexico.
- the Church and Convent of San Francisco (17th and 18th centuries); the Church has a Baroque facade and two asymmetrical bell towers, with a dome over the transept crossing. The religious architecture of the interior dates from the mid-17th century; the sacristy includes a set of remarkable sculpted decorations and painted frescoes.
- the Church, Jesuit College, and Chapel of Our Lady of Loreto (17th and 18th centuries) constitute one of the most characteristic groups of buildings in the Jesuit Baroque architectural style in New Spain.
- the Church of San Agustín (mid-18th century) has an imposing Mexican Baroque bell tower.
- the Church of San Juan de Dios (17th and 18th centuries).
- the Carmelite Church and its Convent (mid-18th century), the ornate facades and decorated altars of which are amongst the most typical and representative of the Mexican Baroque style;
- the Basilica of Guadalupe (1772–1800).

The silver ore was transported to the *haciendas de beneficio*, where the mineral reduction process was carried out, initially by smelting and then by the amalgamation process. The additional historical study clearly shows the early importance of the haciendas, and their number, directly linked to the establishment of the town of San Luis Potosí, close to a stream, and then to regional mining development.

The archaeological approach – which has led to an initial uncovering of mining remains, and then to observations concerning foundation worksites – reveal a stratigraphy

which can be identified by the presence of the *haciendas de beneficio*. However, these light structures, abandoned in the early 19th century in areas used for contemporary urban development, have not left any easily distinguishable archaeological traces up to now.

The State Party carried out (in autumn 2009) a soil survey based on historic maps of former metallurgical establishments, in order to measure residual presence of mercury at various depths in fifteen different places. In all the tests the rate of presence of mercury reaches significant values. Some concentrations (sites 2 and 10) are close to or exceed 100 mg/kg, which is one thousand times greater than average natural abundance (in the order of 0.1 mg/kg).

ICOMOS notes the recent mineralogical studies and archaeological observations which provide tangible proof of intense use of mercury in San Luis Potosí itself, backing up the historic documentation about the town's history. There is however not yet any archaeological programme linked to mining and metallurgical history in San Luis Potosí and the regional metal ore basin. The studies carried out respond mainly to additional recommendation 3-b) of recommendation 33 COM 8B.26, but only partially to the 2-a) main recommendation of the same decision.

History and development

Mercury and its mineral derivatives have been known and used since Greco-Latin antiquity in small quantities, as a coloured pigment (vermilion), in jewellery making, and as an ingredient of the pharmacopoeia.

The amalgamation process, based upon the ability of liquid mercury to dissolve the precious metals of gold and silver, has been known ever since this period. In the Middle Ages the Arabs described the process and they passed it on to the European alchemists. Mercury, the only metal that is liquid at room temperature, was known at the time as 'quicksilver'.

Mercury resources, which are usually in the form of an ore containing mercury sulphide (cinnabar), with sometimes small amounts of native mercury (in the metallic state), have the geological particularity of being few in number across the globe. Historically, only four main locations have been worked. The largest deposit is at Almadén in Spain, which has been known since ancient times; the second largest is Idrija, in present-day Slovenia, discovered in 1490. The two others are the mines of Huancavelica (Peru), discovered in 1564, and the mines in China, the existence of which became known to Europeans in the modern period.

In the 16th century the Idrija mine was developed under the control of the city of Venice, which brought in German master miners and marketed the mercury throughout Central Europe, in the Eastern Mediterranean, and in Flanders. An initial amalgamation

test for the extraction of silver was probably carried out in Venice in 1507.

The powerful trading dynasty of the Fuggers, who hailed from southern Germany, gained a dominant position in non-ferrous metal mines in Europe, thanks to an agreement with the reigning house of the Habsburgs. Almadén formed part of this entity, and work there was relaunched in around 1550.

Initial development of Spanish colonisation in Central America and the Andes in the 16th century was mainly concerned with gold resources. Gold was a native metal, exploitation of which on a large scale required a considerable labour force, but which was based on the use of craft techniques. Interest in silver emerged shortly afterwards, particularly with the discovery of the exceptional mining site of Potosí, in present-day Bolivia, in 1545. The first deposits worked were very rich, and traditional Indian furnaces were then sufficient for producing metal from the ore.

New Spain (Mexico) also proved to be rich in silver mines which were discovered shortly afterwards: Zacatecas and Santa Barbara, and then Pachuca, Guanajuato, and San Luis Potosí in the 1550s. However, the Mexican sites contained low-grade ore and were situated in regions that had very limited supplies of the wood required for the furnaces.

Bartolomé de Médina, drawing on the experience of German miners, studied the amalgamation process and was the first to develop an efficient process for the cold extraction of silver using mercury. It was operational in Pachuca from the mid-1550s and rapidly became widely used, making industrial metallurgical processing possible in the mines of New Spain and then those of the Andes, where the working at Potosí benefited from the discovery of the mercury mines of Huancavelica. In exports from Hispanic America resources drawn from silver became dominant in the second part of the 16th century and over the following two centuries.

Control of mercury extraction and the organisation of its transportation and trade then became an issue of great importance, under the monopoly of the Spanish royal treasury, from 1559 onwards. The Habsburgs thus took control of the Idrija mines in 1575.

It was at this point that the various terrestrial and maritime routes for mercury transport were set up, comprising the mining sites, specialised stores, routes, ports, ships, transport organisation, etc. Remains of the terrestrial routes survive at the point of departure at Almadén and Idrija. The main transit ports were Seville and then Cadiz in Spain, Veracruz and Tampico in New Spain, and Trieste in the Adriatic. Within the Spanish Empire this global transport system was given the name of the *Camino Real*, connecting up a vast intercontinental terrestrial and maritime network. Its Atlantic part led to the famous maritime organisation of the *Carrera de Indias*.

The east–west mercury route and the return silver route had considerable economic consequences in Spain and Europe and in Hispanic America, such as the structuring of the inner space of Mexico from the end of the 16th century onwards. The construction and architectural development of the town of San Luis Potosí, on one of the major silver-bearing sites in America, is a remarkable example of this. It is a faithful reflection of mining development: on the one hand it catered for the arrival of the colonists and the many displaced Indians and on the other it played an essential role in the development of the roads of the *Camino Real* and the conquest of the north-western territories.

Silver exploitation using the mercury amalgamation process continued throughout the 17th and 18th centuries. Around 1700 New Spain definitively supplanted Peru as the main silver producer.

Production began at the Idrija mines to supplement Almadén should the latter experience production difficulties or if production was insufficient. This was the case in particular between 1620 and 1645, and again in the second half of the 18th century. The Peruvian mines of Huancavelica were mainly assigned to the working of silver from the Andes, but on occasion they were also used for New Spain. The existence of a Chinese contribution, via the Pacific part of the *Camino Real*, remains no more than anecdotal.

The history of the exploitation of the process first developed by Bartolomé de Médina (1555) reflects various technical innovations: a more efficient hot amalgamation process in around 1590 and new furnaces for mercury preparation at Huancavelica and then at Almadén, by Bustamante, in the 1640s. A second wave of innovations was carried out at the Almadén mines, which were thoroughly reorganised following the fires of the 1750s. Production reached its apogee in the second half of the 18th century, and the period of peak production was between 1875 and the early years of the 19th century. Technically, this was made possible by a new supply of mercury from Central Europe, i.e. Idrija. However, the deepening of the mines was reaching its limits and was becoming more difficult.

Concern for the safety and diseases of miners exposed to mercury was first expressed as early as the 16th century in the case of the Idrija mines, and it continued in the centuries that followed. The presence of medical staff and a pharmacy is attested there in the mid-18th century. A first publication concerning the mercury-related diseases of miners was published (Scopoli, 1761). An insurance system for miners was in place at the end of the 18th century, a pioneering development in this region. The problem of industrial diseases arising from exposure to mercury is a serious issue, and one which affected workers engaged both in mining and in operating the furnaces. Attempts were taken at a very early stage at Idrija to reduce exposure to mercury vapours by the workers, such as the use of masks for those close to the furnaces and the use of a roster

system for the posts involving the most severe exposure. In the 17th century hot baths were used for treatment. The medical question continued to be studied in the 19th century and in the 20th century, when for example the miners were provided with preventive ionisation treatment.

At Almadén, and to some extent at San Luis Potosí, forced labour was used over a long period to provide the work force. The remains of the Almadén forced labour camp bear witness to this, together with a tunnel used to control the access to the mine by the forced labourers. A large part of the museography at Almadén is concerned with the forced labourers and the health consequences of exposure to mercury (the site of the forced labour prison and the museum of the former hospital).

Mexican silver production using the amalgamation process fell into rapid decline at the beginning of the 19th century, as a result of the numerous wars in which Spain became engaged, followed by independence movements, particularly in Mexico (1821). The *haciendas de beneficio* of San Luis Potosí were then abandoned, offering areas of land which were necessary for its urban development. Mineral waste was generally dispersed in the form of backfill containing residual mercury (see Description). Silver production resumed in the 1830s, increasingly using recently discovered Californian mercury, on other organisational bases, outside the town limits.

As a result of the tradition of its secondary school for science, Idrija was the site for the establishment of a school of geology in the 20th century which is today well known in Central Europe. Almadén developed higher technical education related to the mercury mines.

ICOMOS considers that the mining history of San Luis Potosí which contributes to the value of the property extends beyond the town centre, as indicated in recommendation 2-a) of decision 33 COM 8B.26. The definition of the property at San Luis Potosí has however not been reconsidered by the State Party. It should examine the value, integrity and authenticity of the mining and metallurgical sites historically linked to San Luis Potosí, together with the social history of the mines and *haciendas de beneficio*, and it should cover a period going well beyond the colonial period. For this purpose, a regional industrial archaeology study and inventory programme is essential.

In accordance with recommendation 2-b) of decision 33 COM 8B.26, the State Parties have reconsidered the name of the serial nomination, to better express the historic reality shared by the three sites and the content of the testimonies provided. The new name is: "The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí".

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY, AND AUTHENTICITY

Comparative analysis

The comparative analysis in the nomination dossier begins with comparison with international serial properties already inscribed on the World Heritage List. There is only a few of them that do not have any transboundary territorial continuity.

The intercontinental dimension of the nominated property and its theme of technical and economic interchanges on a very large scale over several centuries lend it a special character, the representation of which up to now on the World Heritage List has been very limited.

A comparison is then made with the theme of routes of human movement and transport, for which properties have already been inscribed. Only a few of these relate to economic exchanges: Quebrada de Humahuaca (Argentina, 2003, criteria (ii), (iv), (v)), Incense Route – Desert Cities in the Negev (Israel, 2005, criteria (iii), (v)). Several are on the Tentative Lists, with mining and/or commercial aspects: the Prehistoric copper route (Israel) and the Route of the Ancient Greeks (India, Pakistan, Afghanistan), Pre-Hispanic Route of the Andes (all Andean States Parties), *Camino Real de Tierra Adentro* (Mexico–United States), Mining Routes of Antiquity (Spain), etc.

The nominated property has a strong thematic relationship with the silver mine site of the City of Potosí (Bolivia, 1987, criteria (ii), (iv), (vi)) and the mercury mines of Huancavelica (Peru). They form two complementary silver production systems for the Spanish empire, from the 16th century to the start of the 19th century, but operated independently. In Mexico, the theme of the new colonial town linked to silver-bearing resources already has two representatives on the World Heritage List: the Historic town of Guanajuato and adjacent mines (1988, criteria (i), (ii), (iv), (vi)) and the Historic Centre of Zacatecas (1993, criteria (ii), (iv)). The historic town centres linked to the colonial period in Mexico, from the 16th century to the end of the 18th century, are furthermore represented by some ten properties already inscribed on the World Heritage List. For silver mines, the Silver Mine of Iwami Ginzan and its cultural landscape in Japan should be added (2007, criteria (ii), (iii), (v)).

The nominated property also forms part of a larger group of mining sites and landscapes present in different parts of the world, of which there are around twenty on the World Heritage List, divided up depending on the substance extracted (salt, copper, iron, precious metals, precious stones) and periods of exploitation. Almadén and Idrija are fully compatible with this group in terms of the nature of the nominated property.

Serial nomination:

ICOMOS considers that San Luis Potosí is a historic urban ensemble of the 17th and 18th centuries which played an important role, alongside others, in the history of silver extraction during the colonial period in Mexico, and more generally in Spanish America. Efforts to extend the property to include other silver mining towns which also used the amalgamation process have been undertaken by the Coordination Committee in respect of Guanajuato (Mexico, inscribed on the World Heritage List in 1988, criteria (i), (ii), (iv) and (vi)), Zacatecas (Mexico, 1993, criteria (ii) and (iv)) and Potosí (Bolivia 1987, criteria (ii), (iv) and (vi)). The same applies to the mercury mine of Huancavelica in Peru, which also embodies the same technical tradition.

ICOMOS considers that the comparative analysis demonstrates the value of the mining sites of Almadén and Idrija. However, this is not yet the case for San Luis Potosí and the use of the amalgamation process.

Justification of the Outstanding Universal Value

The nominated property is considered by the States Parties to be of Outstanding Universal Value as a cultural property for the following reasons:

- These sites are emblematic of the establishment of an original mining process which made possible the extraction of silver by amalgamation with mercury, over a period of more than 250 years. They founded the International Mercury and Silver Binomial Route on a vast intercontinental scale.
- The associated technical and scientific interchanges created cultural links between several parts of the world over a long historical period. They bear witness to this culture, and helped establish economic and social structures in interchanges between Europe and America from the 16th century to the early 19th century.
- Mercury is a relatively rare metal, and Almadén and Idrija have been its largest mining centres worldwide. Today they provide an expression of the processes and historical context of this intensive mineral exploitation.
- San Luis Potosí is a remarkable example of an urban centre made wealthy by the exploitation of silver. Located at a strategic point for controlling a vast territory, the town played an important role in the mercury trade.
- It is a unique example of the relationship of man with his environment, which lasted for centuries and which is tangibly expressed in various successive strata in the ground and in landscapes.

Serial nomination:

The serial nomination is justified by the nature of the nominated property. It embodies the complementarity of

mercury extraction and silver exploitation, in distant mining locations, through the process of amalgamation.

ICOMOS considers that this justification of a serial property is adequate for the exploitation of mercury mines in Europe, but that the serial nomination relating to the silver mines in America is inadequate at the present time.

Integrity and authenticity

Integrity

Almadén: The nominated property has retained since the 16th and 17th centuries traces of its mining function and the associated evidence of the exploitation of mercury, its processing, and its transport, as well as significant urban and architectural elements of the development of the mining town of Almadén. The property is set in a mining and urban landscape which evokes its history, linked to the 'Mercury Route' of the *Camino Real*.

The surviving remains of mining illustrate the evolution of the techniques of mercury exploitation and processing up to and including the 20th century. A sufficiently significant series of elements of tangible testimony has been conserved for its history to be represented with coherence and integrity.

The urban planning perceptible today is close to that of the 18th century. Some housing has been modified, and other housing has been largely destroyed (house of the mine superintendent, forced labour gaol).

Idrija: Like Almadén, Idrija bears witness to mining techniques throughout the different periods of its exploitation, up to its closure from the end of the 1980s onwards. Efforts to protect the mining elements as heritage began in 1952. These elements are extremely varied: shafts and galleries, machinery, hydraulic systems with dams for the transport of wood by flotation (for props and as fuel), industrial buildings and urban planning linked to the mine, and remains of the mercury transport routes. They provide an insight into the considerable coherence and integrity of the history of mercury mining at Idrija and its transport system.

San Luis Potosí: The urban ensemble nominated for inscription on the World Heritage List provides relatively homogeneous and coherent evidence of the urban planning of the town of San Luis Potosí and its civilian and religious architectural developments. In certain districts, however, this is adversely impacted by 20th century urban development. The integrity of the landscape is affected in particular by the erection of several large-scale buildings in the 1960s and 1970s. Some elements of industrial archaeology, which are disparate as yet and a study of the presence of mercury in the ground complete the definition of the property at San Luis Potosí.

ICOMOS considers that the three nominated sites form a coherent and significant group representing the historic development of the mercury-silver amalgamation process, but also that its value would be enhanced by extensions to the major historic mining sites of Mexico and the Andes, which have in part already been individually recognised by inscription on the World Heritage List. Furthermore, ICOMOS considers that the shortcomings noted in San Luis Potosí prevent the adequate establishment of the heritage dimension of the use of mercury in silver production using Mexican ore and, consequently, its transatlantic dimension. The integrity of the property as a series has not been established.

Authenticity

Almadén: The presence of underground mining elements dating from the 16th and 17th centuries has been authenticated.

A pair of Bustamante furnaces, the technical design of which dates from the 17th century, have been restored by the Spanish Historic Heritage Institute, in accordance with the principles of the Venice Charter. The restored parts are clearly identified.

The functions of some of the urban buildings have been changed from their original purpose and have undergone substantial alterations (e.g. Retamar Castle). However, most have a good level of architectural authenticity.

Idrija: All the mining elements and their technical annexes are authentic. Most of the water control systems date from the 18th century, the most recent from the start of the 19th century.

The most noteworthy architectural and monumental elements have in general a high degree of authenticity. The town itself has, however, undergone changes that affect its built structure and its urban structure.

San Luis Potosí: The civil and religious monumental buildings have a high degree of authenticity as regards to their architecture and their decoration. The changes they have undergone are minor.

The housing in the town and the urban plan generally have a relatively good degree of authenticity. They have, however, undergone substantial changes in some quarters, following repairs or reconstructions.

The archaeological observations recently made and measurements of the presence of mercury resulting from metallurgical uses in the ground in the town centre add an additional element to the authenticity of the property.

ICOMOS considers that the conditions of integrity are met for Almadén and Idrija so far as the theme of the serial nomination is concerned, but not for San Luis Potosí. The integrity of the entire series has therefore not been demonstrated. ICOMOS considers that the

conditions of authenticity have been met for the nominated property.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iv), and (v).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the States Parties on the grounds that the interchange of technical and scientific values is clear and considerable in the heritage created by the production, transport, and use of mercury, from the 16th century to the 19th century, via the *Camino Real Intercontinental*. These interchanges are illustrated by the development by Bartolomé de Médina of the amalgamation of silver with mercury and its use for the exploitation of the silver mines in New Spain and the Andes. Mining traditions of mercury and silver production then continued to evolve and influenced each other by further innovations.

The return flow of silver had a very important commercial, financial, and cultural influence on Spain and on modern Europe.

Mining traditions also influenced the creation of towns, with emblematic and exceptional buildings.

ICOMOS considers that the process of amalgamating silver using mercury determined the structure of important technical, economic, and cultural interchanges between Europe and Hispanic America over more than two centuries. These interchanges made possible the development of the working of the silver-bearing deposits of present-day Mexico. In return, the flows of silver arriving in Spain and Europe played a considerable financial and economic role in the modern period.

However, ICOMOS considers that the new dossier does not provide the additional elements needed to demonstrate this criterion at San Luis Potosí, where the definition of the property has not been revised in accordance with the request made in recommendation 2-a) of the Committee decision 33 COM 8B.26.

ICOMOS considers that this criterion has not been justified for the serial property.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage in human history;

This criterion is justified by the States Parties on the grounds that the mines of Almadén and Idríja are the two largest mercury mines in the world. Today, they represent the most significant events regarding its exploitation by man, in terms of mining techniques and impact on the environment. San Luis Potosí is a remarkable example of a town which has developed thanks to the application of the amalgamation process to extract silver metal from its ore and the creation of wealth that resulted. It is an outstanding example of the territorial organisation generated by the mine.

ICOMOS considers that the outstanding example of the technological ensemble represented by the amalgamation process for the extraction of silver has not been fully demonstrated for San Luis Potosí, where the definition of the property has not been revised in accordance with the request made in recommendation a) of the Committee decision 33 COM 8B.26.

ICOMOS considers that this criterion has not been justified for the serial property.

Criterion (v): be an outstanding example of a traditional human settlement, land-use or sea-use which is representative of a culture, or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the States Parties on the grounds that the nominated sites constitute an outstanding example of the interaction of man with his environment, an environment which is today vulnerable because of the closure of the mines and mercury pollution.

The human intervention gave rise to important social aspects, through a workforce that included forced labourers and prisoners at Almadén and San Luis Potosí and displaced indigenous populations and slaves at San Luis Potosí, through the difficult life of the miners, and the early consideration given to occupational diseases at Idríja. Many elements of intangible culture are associated with the specific nature of the human communities who participated in the exploitation of the mines.

The sites of the Mercury and Silver Binomial Route also bear witness to the continuous scientific and technological efforts made by man in his relationship with the environment.

ICOMOS considers that the material elements that make up the property, for Almadén and Idríja in particular, are in line with the arguments presented in favour of criterion (v). On the other hand, they do not fully apply for the San Luis Potosí property, whose definition has not been revised in accordance with the request made in recommendation a) of the Committee decision 33 COM 8B.26.

ICOMOS approves of the idea of an exceptional relationship between Man and Nature in the context of the Mercury and Silver Binomial Route, while considering that the pollution of the ground and water-table linked to the mining sites is an integral part of the property today.

ICOMOS considers that this criterion has not been justified for the serial property.

ICOMOS considers that the serial approach has been justified for the nominated sites. ICOMOS considers, however, that the selection of sites would be more appropriate if it was extended to include Mexico and the Andes.

In conclusion, ICOMOS considers that only the sites of Almadén and Idrija conform for the time being with criteria (ii), (iv), and (v) and that therefore the Outstanding Universal Value of the series has not been fully demonstrated at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

Almadén: Cessation of mining activities at the end of the 1980s had important social consequences. An industrial reconversion zone has been put in place.

Idrija: The pressure of economic development needs is limited naturally by the geography of the valley. Urban development pressure exists, however, under the control of the town's new land-use plan (2007).

San Luis Potosí: The town centre today contains housing, shops, public and private services, and religious activities. The industrial and mining sites are at least 5km away from the town centre. Population in the town centre has been increasing over the last ten years or so; this has given rise to pressure from property. The increase in road traffic is also a threat to the quality of life in the town centre.

Tourism pressures

Almadén: There is practically no industrial tourism at the present time.

Idrija: The town is primarily a summer route centre. Industrial tourism related to the mines is limited at present.

San Luis Potosí: This town is relatively important in tourism terms, and has more visitors than any other town in the province. 93% of the tourists are Mexican, and the tourism generates employment. There are 36 hotels with a capacity of some 4500 rooms.

Environmental pressures

Almadén: The Alcuia valley in which the mines and the town are situated is a region with an important natural heritage in terms of flora and fauna. A large part of the buffer zone consists of an ornithological reserve.

The landscape and environmental changes linked to the mine are being dealt with under a natural environment project (2005).

Idrija: The mining activities have had a damaging impact on the natural environment. A rehabilitation programme is under consideration.

San Luis Potosí: The main risk arises from the mine galleries under the town itself and their possible impact on ground stability. A geophysical risk assessment was carried out in 2005. Several buildings are currently in a fragile condition.

Residual presence of mercury

Almadén: The main risk is linked with the mine itself. The installations have been decontaminated. An environmental survey programme is in place. It follows wide-ranging studies of risks linked to mercury poisoning.

Idrija: 500 years of mining exploitation have resulted in a high degree of pollution of the ground by mercury and radioactive radon, with up to 900mg of mercury per kg. However, the level decreased rapidly after the shutdown of the mines (1995). Survey of the mercury level in the water is in place.

The level of disease in former workers is proportional to the number of years of employment in the mine.

An environmental rehabilitation project is being examined. There is an emergency intervention plan related to the mines in the event of a natural or human disaster.

The mine closure plan was accompanied by a ground control programme to avoid the fragilisation of the built structure as a result of the underground galleries, particularly for the historic town centre.

San Luis Potosí: The presence of mercury in the ground of the town has been studied (2009), in respect of former metallurgical establishments which used mercury. Significant presence of mercury was detected, but at relatively great depths which mean it is not potentially hazardous.

Additional studies to find any mercury pollution of tap water and any human contamination were carried out on inhabitants whose exposure would appear to be greatest by reference to the ground study (2009). In both cases the results were negative; there is no pollution of the

town's water supply or any observed case of human contamination.

Natural disasters

Almadén is not at first sight exposed to major natural disasters risks. The possibility of exceptional events such as tornadoes or very severe storms however cannot be excluded, as in the rest of Spain.

Idrija: The property is situated in a zone classified as sensitive to earthquakes.

San Luis Potosí: The town is not considered in national and regional prevention plans to be a zone of high natural risks.

Impact of climate change

This point is not specifically considered in the dossier. It may be considered that up to now there is no perceptible or expected effect linked to climate change.

ICOMOS considers that the main threats to the properties are the consequences of the mining exploitation itself in geological terms (ground stability) and in terms of mercury pollution. In addition, real-estate pressure for land and property may in specific cases threaten the properties and call for special care to be taken.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

Almadén: The nominated property has an area of 49.67ha and it is occupied by 825 people. The buffer zone has an area of 117ha.

Idrija: In reply to the request by ICOMOS dated 10 December 2008, the State Party has proposed a new decree dated 20 February 2009, defining the property and its boundaries as a cultural monument of national significance. The property is divided into seven constituent zones in accordance with the description (see 2). The property is occupied by 2400 inhabitants.

In reply to the request by ICOMOS dated 10 December 2008, the State Party of Slovenia has proposed buffer zones encircling the whole of the nominated properties. This is the extended buffer zone common to elements (1), (2), and (3) of the property; a new buffer zone around element (4), a buffer zone around element (5), and a common buffer zone for elements (6) and (7).

ICOMOS considers that it is necessary to specify the new surface area of the seven elements constituting the property in Idrija and their buffer zones, following the

decree dated 20 February 2009, and to publish the latter.

San Luis Potosí: The nominated property is 70.34 ha in area and is occupied by 3871 inhabitants. The buffer zone has an area of 133.49ha.

ICOMOS considers that the boundaries of the nominated property and the associated buffer zones are appropriate.

Ownership

Almadén: The mines themselves, the adjacent spaces, and the section of the Mercury Route identified at its point of departure are the property of the private company *Empresa Minas de Almadén y Arrayanes S.A.*, as are the Miners' Hospital and the San Miguel Chapel, situated in the town.

The public spaces of the town and part of the buildings identified as having historic and heritage value are the property of the Municipality of Almadén (Castle, house of the mining superintendent, mining academy, bullring).

The other elements with historic and heritage value are the property of the Catholic Church (San Sebastián Church and Nuevo Church) and of the University (archaeological site of the forced labour prison).

The great majority of the apartment blocks are private property.

Idrija: The cultural property of national interest is covered by an inventory of 34 elements, of which ownership is divided as follows:

- the State (two hydraulic elements);
- the Municipality and local authorities (seven elements, including the Theatre, the House of the Miners, part of the Castle, the Mercury Store);
- public institutions: the maternity hospital (three elements associated with the Castle), the Museum (four elements associated with the Castle and the hydraulic system heritage); the Gorica Hydroelectric Company (three hydraulic elements), and miscellaneous (one element in the Castle);
- the Idrija Mining Company, which is a private company (fourteen elements, mainly mining-related and industrial).

San Luis Potosí: The inventory of built elements indicates 865 constructions, of which 27 belong to the Federal Government of Mexico, nineteen to the State Government of San Luis Potosí, eleven to the Municipality, and 808 to private owners. The streets and the public spaces belong to the Municipality.

The properties of national historic value are under the following ownership and management authority:

- Real Caja: University of San Luis Potosí;
- Municipal Palace (formerly Casas Reales): the Municipality;
- the Government Palace: the State Government of San Luis Potosí;
- the Ipiña Palace: a private owner;
- the Cathedral: the Catholic Church by delegation of the Federal State;
- the Church and Convent of the Franciscans: ditto;
- the Church of the Jesuits: ditto;
- the College of the Jesuits: the University;
- San Agustín church: the Catholic Church by delegation of the Federal State;
- the San Juan de Dios Church: ditto;
- the Carmelite Church: ditto.

Protection

Legal protection

Almadén: The mining ensemble and the urban ensemble are under the legal protection of:

- the Spanish Constitution defining the Organic Laws and the Status of the Autonomous Communities (27 December 1978),
- the Spanish Historic Heritage Act (16/1985) and its regional application acts and decrees (Act 4/1990 of Castilla–La Mancha, and Decree 7/2005 in particular),
- the Local Territorial Authorities Regulation Act (7/1985),
- the Territorial Regulation Act (6/1998),
- the Protected Natural Spaces Act (9/1999).

The mining ensemble was declared a Property of Cultural Interest on 29 October 2007. It includes an inventory of the site's technical, industrial, and architectural elements. Several sites or monuments had already received this official protection previously: the Bustamante furnaces, the Castle, the Bullring, and the Miners' Hospital.

The town centre and its monuments are covered by the Special Municipal Protection Plan.

Idrija: The mining ensembles and the urban ensemble are under the legal protection of:

- the Cultural Heritage Protection Acts (7/1999 and 96/2002) and their implementation decrees;
- the Administrative Procedures Code (24/2006);
- the Territorial Planning Act (33/2007);
- the Building Acts (102/2004 and 14/2005);
- the Nature Protection act (39/2006);
- the Decrees relating to the Creation of the Mining Site Landscape Park (11/1993 and 37/1995);
- seven Municipal Decisions on the town's cultural and historic heritage.

The technical and industrial heritage of Idrija and environs has been declared a Cultural Monument of National Importance (Decrees 66/2001 and 55/2002). A list of elements of local interest exists, defining local protection.

San Luis Potosí: The urban ensemble is under the legal protection of:

- the Federal Laws on Historic Monuments and Historic Sites (1972 and 1975);
- the Presidential Decree of 14 December 1990, recognising the historic zone of the monuments of the town of San Luis Potosí;
- the Federal Laws of Land Use and Ownership (1993 and 2003);
- the Law on Religious Associations (1992);
- the Law on Ecology and Nature Protection (1996);
- the Laws on the Development of the State of San Luis Potosí (2000 and 2003);
- the Cultural Heritage Protection Law of the State of San Luis Potosí (2005);
- the various Municipal deliberations concerning territorial regulation, building permits, and public safety.

Traditional protection

The dwellings are in most cases private property and are maintained by their owners.

The Catholic Church carries out direct or delegated management for the religious buildings at its disposal at Almadén and Idrija.

Effectiveness of protection measures

In all three cases, the legal protection measures would seem to be sufficient.

ICOMOS considers that the protective measures for the property are adequate.

Conservation

Inventories, recording, research

Almadén: Inscription as a property of national cultural interest led to the creation of an inventory by the Spanish Heritage Institute. The inventory includes a description of the state of conservation.

The mining company has undertaken a major programme of surveying the mine and maintaining its cultural elements. The survey constitutes the documentary and material base for the museography and the mining park project. The company has also contributed to the creation of the Francisco Javier de Villegas Foundation, which is in charge of the mine museum and the mining archives (San Rafael Hospital).

The Technical University is also contributing to the museography and archaeological knowledge of the forced labour gaol.

Ildrija: The documentation work is carried out in conjunction with the survey and maintenance activities.

The inventories and documentation relating to the mining heritage of Ildrija are available at both national and regional level (Institute for the Protection of the Slovenian Cultural Heritage at Ljubljana and its Regional Office at Nova Gorica).

The Museum has archive material and documentation.

The Ildrija Mining Company also has its own archives and documents.

San Luis Potosí: The inventory of heritage elements and their state of conservation is deposited at the National Institute of Anthropology and History (INAH), San Luis Potosí Office. It contains 3624 technical datasheets compiled since 1992. It forms the basis of the studies carried out for recommendations concerning the restoration and conservation of elements of the property.

Present state of conservation

Almadén: The Bustamante furnaces were recently restored and are in a good state of conservation. The remaining two gates of the mining site have been restored, and elements of the Route are clearly identifiable.

Ildrija: Many restorations have been undertaken over recent years for components of the built structure, the technical and civil engineering elements of the mine, and the hydraulic elements.

San Luis Potosí: The main public buildings and the urban infrastructure are in a relatively good general state of conservation. On the other hand, some private buildings are in a poor condition, and some quarters generally appear to be in a poor state of conservation and maintenance.

Active conservation measures and maintenance

Almadén: Each of the management partners implements the relevant part of the conservation plan: the Foundation and the Mining Company for the mining park and its activities; the Municipality for the urban space and the monuments belonging to it; and the University and the private partners for the other real-estate and archaeological elements of the property.

Ildrija: Substantial conservation and renovation activities have been carried out recently, including restoration of the main monuments and restoration of Anthony's Route. The Municipality is coordinating the introduction of current and future conservation measures.

San Luis Potosí: Since 1987, 320 conservation projects have been undertaken and successfully completed in the historic centre. The Municipality is coordinating the introduction of current and future conservation measures.

Effectiveness of conservation measures

ICOMOS considers that the conservation measures appear to be adequate in the three component parts of the property.

ICOMOS wishes to know about the maintenance and restoration plans being contemplated in a short- and medium-term perspective by the three States Parties.

ICOMOS considers that the conservation of the three elements constituting the serial property is adequate.

Management

Management structures and processes, including traditional management processes

Almadén: The management plan was established in 2003 by grouping together and coordinating several programmes for the management of the property and cultural activities:

- the Francisco Javier de Villegas Foundation (Museum of the San Rafael Royal Hospital, historic archives of the mines, and management plan of the mining site by the park currently being constituted);
- the management plan of the University College (historic mine museum, Royal forced labour prison interpretation centre);
- the Almadén office, which has a cross-functional role in promoting economic and cultural activities at Almadén;
- the Mining Academy programme (geological and mining practices, *Camino Real* interpretation centre).

Ildrija: A management plan is currently being prepared (2008) under the auspices of the Municipality. It is intended to establish coordination between the institutions and organisations in charge of the conservation, management, and cultural valorisation of the site. It is intended that the following will be created:

- a local information and interpretation centre on the mercury heritage;
- an international information and research centre on the different kinds of impact of mercury on the environment, and the historic study of its exploitation and uses.

San Luis Potosí: The Municipality and its Planning Institute in collaboration with the National Anthropology and History Institute (INAH) have drawn up a Partial

Conservation Plan for the historic town centre (November 2006).

At the time of the preparation of the nomination dossier, other institutes were under consideration:

- an international conservation centre for Latin America and the Caribbean;
- an interpretation centre for the Mercury + Silver Binomial.

The States Parties also put forward the various projected centres and institutes as models of scientific cooperation and technical collaboration.

An International Coordination Committee for the activities of the three States Parties was created on 25 January 2008, and has been approved by the three States Parties. It has met regularly since it was set up, and ensures effective coordination between the three properties nominated for serial inscription. Common initiatives have already been put in place by the Committee: contacting of other sites under consideration for an extension of the series, organisation at Idrija of an international conference on the environmental and socio-economic impact of the extraction and use of mercury, on 28 and 29 May 2009.

ICOMOS considers that the International Coordination Committee for the activities of the property set up by the three States Parties complies with the recommendations of the *Operational Guidelines for the Implementation of the World Heritage Convention* in respect of the management of a transnational serial property.

Policy framework: management plans and arrangements, including visitor management and presentation

Almadén: The property is mainly covered by the following plans and programmes:

- the Environmental Rehabilitation Plan of the Mining Site (2005);
- the Plan relating to Mine-related Toxicological and Geological Risks;
- the Special Municipal Plan for the Protection of the Historic Town Centre;
- the Municipal Territorial Regulation Plan (2007);

A plan is also being considered to make the mining site visitable, in the form of a 'mining park' which will involve major works. The park must be planned in a way which provides every possible guarantee of safety for visitors.

Idrija: The property is covered by the following main plans and programmes:

- Long-term Territorial Planning (1999, updated in 2007).

- Operational Programme for the Elimination of the Effects of Mercury and the Rehabilitation of the Mining Site (April 2007);
- Programme for the Survey of the Mines and Flood Prevention (2008–14);
- the Idrija Cultural Heritage Management Programme currently being considered;
- Regional Development Plan;

The tourism project is guided by the principle of an educational approach enabling a better understanding of questions relating to the mine and to mercury. It is based on various tourism programmes – local, regional, and/or linked to transboundary tourism development (Italy).

ICOMOS considers that the large number of tourism plans and programmes at Idrija adversely affects the clarity of the policy of raising awareness of the value of the nominated property.

San Luis Potosí: The property is covered by the following main plans and programmes:

- the National Plan for Urban and Territorial Development (2002–2006 and 2006–2012);
- the Development Plan for the State of San Luis Potosí (2003–2009) and its Urban Development Plan (2001–2020);
- the Cultural Programme of the State of San Luis Potosí (2004–2009);
- the Municipal Partial Plan for the Conservation of the Historic Centre (2006) and the Prevention Programme for Endangered Historic Properties (2007).

Risk preparedness

Almadén: Risk preparedness is covered by the intervention plans of the civil security services, the fire service and the town's hospital.

Idrija: The town has a fire service and a hospital service. An emergency intervention plan relating to the mines exists to deal with natural or human disasters.

San Luis Potosí: Risk preparedness is covered by the intervention plans of the civil security services, the fire service and the town's hospital.

Involvement of the local communities

In all three cases the local communities are mainly involved through the Municipalities. In two cases, the University is involved in the management of the buildings (Almadén, San Luis Potosí). At Idrija, the Maternity Hospital and the Museum manage the built elements of the property. In certain specific cases, citizens' associations strive to defend a specific aspect of the conservation and/or management of elements of the property.

Resources, including staffing levels, expertise and training

Almadén: The Culture Ministry intervenes by means of its budget, which is guaranteed by the principle of 1% earmarked for culture. The same applies to the cultural heritage of the Autonomous Region of Castilla-La Mancha. The Municipal budget is also involved in the management of the property.

The Mining Park of Almadén is financially supported by the Regional Government, under the auspices of the Department of Industry and Labour.

The project is also supported by the European Community through cross-border operations (Interreg III) and the structural development aid funds.

The Javier de Villegas Foundation has been active at Almadén since 2004. Its resources come from public subsidies (State, Region), for specific research and/or conservation programmes.

The University also receives funds for the Museum and for the forced labour prison site.

Tax incentives are offered for all investments in the maintenance and restoration of heritage elements belonging to private individuals, and for all private contributions to actions in the cultural heritage field.

The human resources consist in the first instance of the specialist staff of the Ministry (Spanish Historic Heritage Institute).

The Technical University College of Almadén provides specialists in mining questions and in technical museography. The University of Castilla-La Mancha offers a cultural heritage training course.

Idrija: The Municipality devotes a substantial proportion of its annual budget, between 8% and 15%, to property conservation operations and to the town Museum. It receives governmental aid in the form of finance and the placing at its disposition of people with scientific and technical expertise (curator of the Museum).

The European Union is also involved (see Almadén).

The Cultural Heritage Law currently in preparation includes measures to encourage private investment.

The museographic and tourism activities generate funds for the property.

The expertise is provided by the Slovenian Institute for Cultural Heritage Protection, which organises training. Locally, the Geology Institute has scientific specialists; there are also museum specialists and guides trained in the specific aspects of the mining heritage in the Museum. The Mining Park has a staff of around fifteen people. The Mining Park has its own maintenance and

survey personnel (the number and qualification of the personnel are not specified).

San Luis Potosí: The funds for the conservation and maintenance of the public monuments forming part of the nominated property come from the Federal Government, the Government of the State of San Luis Potosí, and the Municipality. They are paid through a set of national, regional, and municipal public programmes, and they often involve complementary participations for each project. Over the period 2003–2007 the funds were allocated to 144 conservation and restoration activities for a total of more than 1.4 million pesos.

The actions are complemented by the work carried out by private individuals on their properties, Municipal actions for the maintenance of the infrastructure, and the tourism promotion actions of the town and the region.

The structure which evaluates and manages financing is the BANOBRAS bank. It provides direct support for some programmes and has a cooperation agreement with the National Culture and Arts Council to provide aid for the projects of private individuals.

The specialists in conservation, at national level are provided by the National Institute of Anthropology and History and the National Culture and Arts Council.

The University provides expertise in the fields of heritage conservation, architecture, and urban infrastructure engineering. It provides training in the restoration and maintenance of historic buildings (2nd and 3rd cycle studies) and training in cultural management (2nd cycle studies).

The Potosino Regional Museum also has personnel with restoration expertise.

Stonework seminars and workshops are organised by the Regional Culture Directorate and the Municipal Stone Cutting and Quarrying Institute.

Effectiveness of current management

The set of measures presented provide the planning elements and institutional support necessary for efficient management of each of the national sites forming part of the property.

In reply to the request by ICOMOS dated 10 December 2008, each of the three States Parties provided details about the organism in charge of implementing the management plan for each of the sites and for local coordination:

For Almadén, the *Fundación Almadén Francisco Javier de Villegas* is in charge of the management plan for industrial and mining heritage. It is assisted by the Municipality of Almadén in the performance of its practical tasks and the coordination of the many site stakeholders.

For Idrija, the Mayor of Idrija is legally responsible for the application of the management plan for the property; he is assisted in this task and in the coordination of the stakeholders by the Coordination Committee for the property. The management plan reported in the nomination file was published in July 2008.

For San Luis Potosí, the town's Municipal Council is legally responsible for the application of the property management plan. To coordinate the numerous institutional stakeholders, scientific bodies, and associations concerned, it has set up with them a consultation and cooperation body, the Historic Centre Coordination Bureau.

These management structures have now been in place since the northern summer of 2008 at the latest. The overarching management structure, the International Coordination Committee, has been operational since the end of 2008.

ICOMOS considers however that the international cooperations announced, in the form of academic and/or museographic institutes, while in principle being very useful, are at this stage projects on which little progress has been made, and for which the human and financial resources are not yet guaranteed.

ICOMOS considers that the overall system for the management of the serial property, and the management plans specific to each of the sites, are satisfactory and adequate. The serial property has a functioning overarching coordination authority.

Serial nomination:

In reply to the request by ICOMOS dated 10 December 2008, the three States Parties have provided details about the implementation of the Coordination Committee for the whole of the serial property. It has effectively been in operation since January 2008, and its status was approved in November 2008. It has two bodies: the Plenum comprising official representatives of each State Party, in charge of joint decisions; and the Technical Bureau to prepare joint files and operational decisions.

ICOMOS considers that the creation of the administrative authorities for the serial property is effective and capable of providing satisfactory coordinated management. ICOMOS considers, however, that the international cooperation initiatives announced, although sometimes very interesting in principle, are for the time being projects that have made little progress and for which the human and financial resources are not yet guaranteed. They are institutes of an academic and/or museographic nature.

ICOMOS considers that the overall management system for the serial property and the management plans specific to each of the sites are adequate.

6. MONITORING

The three States Parties declare that they have based their monitoring of the property on the same general criteria: the state of conservation, a study of possible impact of the environment on the property, and the value of the elements forming part of the property.

Periodical monitoring and assessments are carried out for the following:

- the mercury mines and the possibility of potentially toxic residues of mercury, the survey of the atmosphere (Polytechnic University of Almadén, the mining companies of Almadén and Idrija);
- the technical and civil engineering elements of the mines, the machines (Polytechnic University of Almadén, the mining companies of Almadén and Idrija);
- the architectural features and survey of potential invasive elements, such as new buildings (national ministerial institutes of the three countries, regional delegations).

Four tables of indicators, including periodicity and organisation in charge, are proposed:

- state of conservation of elements of the properties directly related to the establishment of the value of the Mercury Route;
- evaluation of the effectiveness of management system measures;
- evaluation of the factors affecting the properties relating to their state of conservation;
- evaluation of the degree of sustainable development of the properties and their buffer zones in connection with regional programmes.

ICOMOS considers that the monitoring of the three component parts of the property is satisfactory.

7. CONCLUSIONS

ICOMOS considers that the serial property 'The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí', Spain, Slovenia and Mexico, is for the moment only fully justified with respect to that part relating to the extraction of mercury in Europe. The two sites of Almadén and Idrija are therefore fully appropriate in terms of a serial approach. The dimension of the use of mercury for the purpose of silver amalgamation can, however, be extended to the Peruvian site of Huancavelica, as recommended in decision 33 COM 8B.26.

The part concerning the extraction of silver ore using the amalgamation process has not been fully established at San Luis Potosí, where the definition of the property must be reconsidered, as recommended by decision 33 COM 8B.26.

The Outstanding Universal Value of the serial nomination has thus not been fully demonstrated at this

stage of the definition of the component parts of the series.

Recommendations with respect to inscription

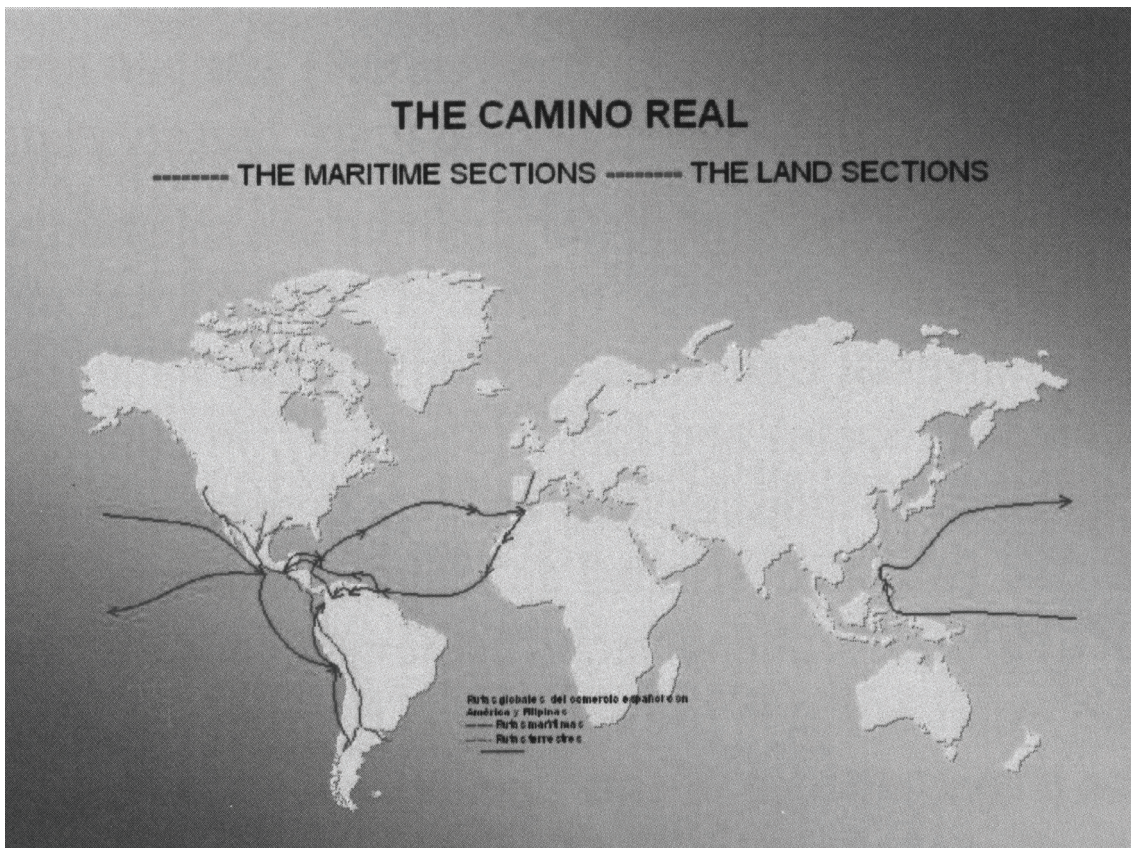
ICOMOS recommends that the examination of the nomination of the Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí, Spain, Slovenia and Mexico, to the World Heritage List be **deferred** in order to enable the States Parties to:

- Reconsider the definition of the property in San Luis Potosí, but also with its mining region, and more broadly in comparison with the other silver extraction sites using the amalgamation process in Mexico, to bring it into line with the mining and industrial theme of the mercury and silver binomial, and so to establish its Outstanding Universal Value. An inventory of the technical and industrial heritage linked to the silver mines would be necessary for such a redefinition.

ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.

ICOMOS also recommends that the States Parties should give consideration to the following points:

- Continuation of the contacts established with towns and silver mines which used the same mercury amalgamation process, particularly in Mexico and Bolivia, and with the Huancavelica mercury mine in Peru. However, the inclusion of additional sites which are not yet inscribed on the World Heritage List must give rise to a new nomination;
- Better integration into the definition of the property of the concepts of pollution and risks for human health resulting from the production and use of mercury. The International Institute projected at Idrija for the study and the raising of public awareness of these issues is enthusiastically supported.



The Intercontinental Royal Route



Almadén and the mine - Spain



General view of Idrija - Slovenia



Idrija, gallery - Slovenia



Real Caja - San Luis Potosi – Mexico

Choirokoitia (Cyprus) No 848

1. BASIC DATA

State Party: Cyprus

Name of property:

Choirokoitia

Location:

District of Lamaca

Inscription: 1998

Brief Description:

The Neolithic settlement of Choirokoitia, occupied from the 7th to the 4th millennium BC, is one of the most important prehistoric sites in the eastern Mediterranean. Its remains and the finds from the excavations there have thrown much light on the evolution of human society in this key region. Only part of the site has been excavated, and so it forms an exceptional archaeological reserve for future study.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The World Heritage property inscribed in 1998 included the archaeological remains excavated from 1977 to 1998 of the Aceramic Neolithic settlement of Choirokoitia, dating from the 8th Century BC. The settlement exposed at that time extended along the south-western slope of a peninsular bounded on the north, east and south-east by the Maroni River. It is characterised by circular dwellings constructed of stone, mud brick and rammed earth, and was protected on the west by successive walls with a complex defensive gateway.

Recent excavations to the north of the World Heritage property boundary have exposed parts of a wall following a parallel course to the Maroni riverbed, constituting the northern boundary of the settlement. This confirms that the original settlement was expanded to the north. The new evidence enriches knowledge of the social organization of the settlement as the construction of the extended wall at such length expresses a collective effort that implies a strongly structured social organization.

Modification:

The proposed modification of the boundary will include the area of recent excavation and co-incide with boundaries of Land Survey plots 1124 and 560. It will extend the current World Heritage property area of 1.5ha by a further 0.7 ha. The additional land is owned by the Department of Antiquities (DoA), and is currently covered by a "controlled" zone to the north of the World Heritage property boundary. The controlled zone encompasses the World Heritage property and appears to represent a buffer zone. The north boundary of the extension will partly coincide with the north boundary of the controlled zone along the line of the Maroni river. The Department of Antiquities plans to acquire more land adjacent to and around the World Heritage property within the controlled zone, but this intention does not appear to apply to land on the other (north) side of the Maroni river (Map retrospective inventory #21).

The site is managed by the Department of Antiquities under the Ministry of Communications and Works.

There is no Management Plan for the site. However the site is fenced, the entry is controlled by ticketing and the surroundings well maintained. A number of temporary shelters cover excavated areas pending consolidation of walls and structures, and it is proposed to also cover temporarily the excavations in the extended area. The visitors' pathway will be extended to the new area.

ICOMOS considers that the newly excavated remains should be added to the World Heritage inscribed property as an extension of the attributes that express the Outstanding Universal Value of the Property. However the site plan attached to the State Party's proposal (p.8) indicates that the fortification walls enclosed the greater part of the peninsular surrounded on the north, east and south-east by the Maroni river. It also indicates that the Neolithic settlement on the peninsular may have extended beyond the excavated areas. ICOMOS therefore suggests that the State Party investigate whether the boundary of the inscribed property should be extended to enclose all of this peninsular, which is shown to be government-owned land (plots listed as Ancient Monuments Schedule A lots).

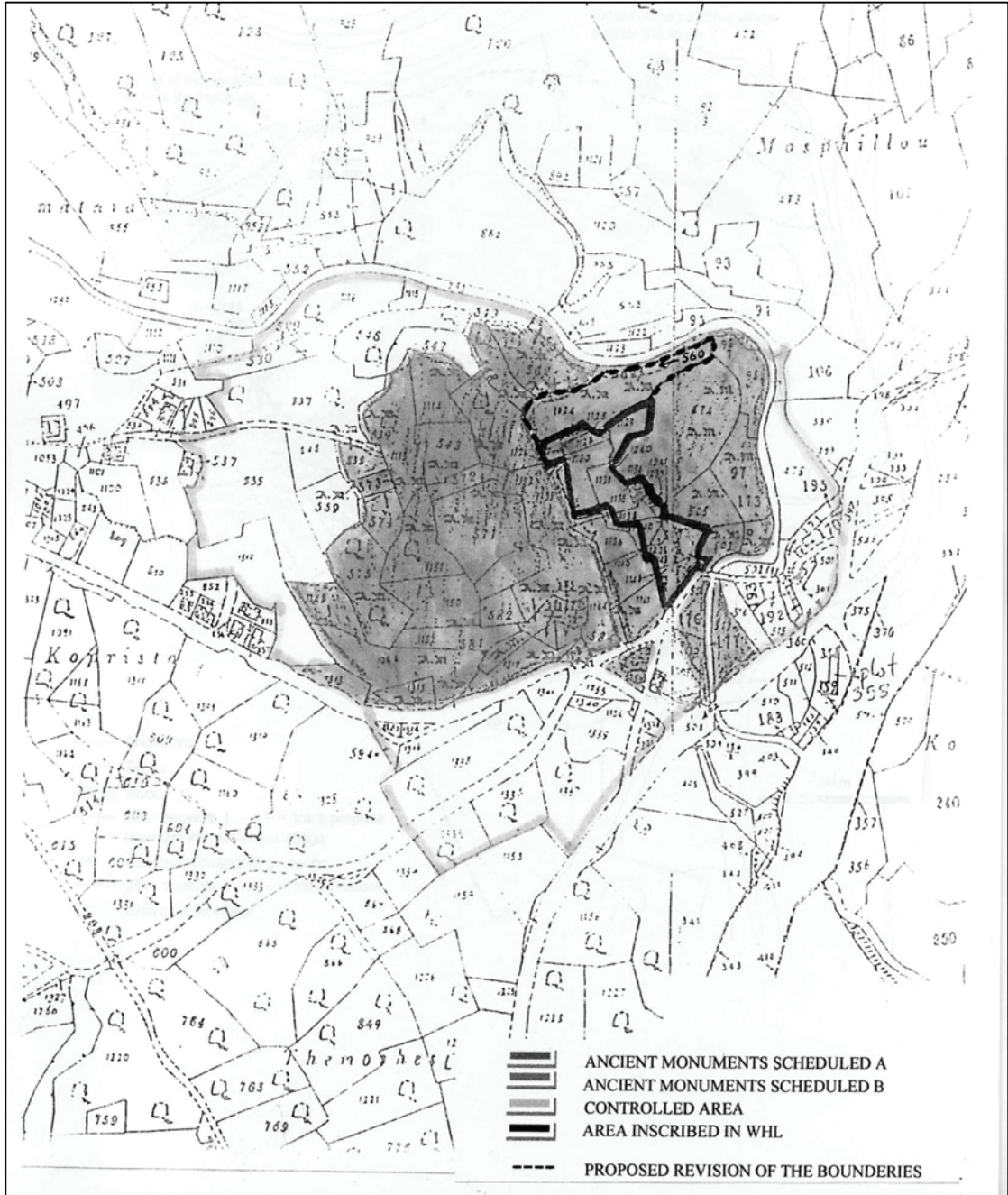
ICOMOS also considers that the State Party needs to confirm that the controlled zone represents the buffer zone as defined in the *Operational Guidelines for the Implementation of the World Heritage Convention*, and to investigate whether its boundary should be extended to the north, east and south in order to better protect the setting of the World Heritage Property.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed minor modification to the boundary of Choirokoitia, Cyprus, **be referred back** to the State Party in order to allow it to:

- Consider whether the boundary of the World Heritage Property should be extended further, in order to enclose all of the State-owned property of the peninsular bounded by the Maroni river;
- Confirm that the controlled zone is the buffer zone;
- Consider the enlargement of the buffer zone to the north, east and south.



Map showing the revised boundaries of the property

Residences of the Royal House of Savoy (Italy) No 823

1. BASIC DATA

State Party: Italy

Name of property:

Residences of the Royal House of Savoy

Location:

Piedmont Region: Turin, Province of Turin, Province of Cuneo

Inscription: 1997

Brief Description:

When Emmanuel-Philibert, Duke of Savoy, moved his capital to Turin in 1562, he began a vast series of building projects (continued by his successors) to demonstrate the power of the ruling house. This outstanding complex of buildings, designed and embellished by the leading architects and artists of the time, radiates out into the surrounding countryside from the Royal Palace in the 'Command Area' of Turin to include many country residences and hunting lodges.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The Residences of the Royal House of Savoy comprise a large serial inscription of estates including 22 palaces and villas developed for administrative and recreational purposes in and around Turin by the dukes of Savoy from 1562.

At the time of inscription, ICOMOS evaluation recommended that the gardens and parks of the estates should be associated more decisively with the conservation projects for the Residences, showing similar respect for their historic, aesthetic and landscape value. Subsequent periodic reporting in 2004 identified the lack of buffer zones.

The minor modification proposal for the Royal Residences of Savoy is for an extension to the boundary of the property by means of extension of the nominated

area of one of the Residences (Castello di Pollenzo); the creation of buffer zones for five individual Residences (Castello di Pollenzo, Castello del Valentino, Villa della Regina, Castello di Moncalieri and Castello di Govone) and the extension of the buffer zone for four other individual Residences (Castello di Rivoli, Reggia di Venaria Reale, Castello di Agliè and Castello di Racconigi).

Modification:

Minor modification to the boundary of the property:

Castello di Pollenzo

The request for modification of the boundary of the inscribed property at Castello di Pollenzo is aimed at incorporating a key component of the adjacent town that was redeveloped as part of the overall remodeling of the Residence in the 19th century. The palace comprises a remodeling of the fortress originally founded in the 14th century to control a crossing over the River Tanaro. This created a Royal holiday residence for King Charles Albert of Savoy, characterized by an eclectic neo-gothic architectural style. Simultaneously an English-style park was created to replace the existing baroque park, and an administrative building (the *Agenzia*) was constructed together with associated farmhouses intended to make the estate economically productive. The rebuilding at this time included the construction of the so-called "forum" (today's Piazza Vittorio Emanuele II), overlooked by the *Agenzia*, the Church of St Victor Martyr and the tower, all in similar eclectic neo-gothic style. The proposal is to expand the inscribed property (core zone) to include the *Agenzia* and the piazza overlooked by the Church of St Victor Martyr, the tower and the arcades, as they are a vital part of the Charles Albert project for the remodeling of Pollenzo. This will extend the area of the inscribed property at Pollenzo from 6.02ha to 25.36ha. The overall core zone of all the Residences together, that is the overall property inscribed, is 351.48ha. Thus the proposed overall increase is about 5%.

The Residence is protected by Ministerial decrees and town planning provisions, and in particular by the Regional Territorial Plan (2009) covering the protection and enhancement of the Residences of the Royal House of Savoy inscribed in the World Heritage List.

The creation of buffer zones is proposed for the following:

Castello di Pollenzo

The castle and estate stand on an archaeological area: the ancient Roman *Pollentia*, with remains and ruins such as the amphitheatre providing remarkable evidence of its foundation at the end of the 2nd century BC. The remains of the Roman town did not influence the layout created in the 19th century, which is characterized by an independent urban design with respect to the pre-existing axes and organization of the buildings.

The proposed buffer zone will surround the inscribed property, which includes the palace and gardens, and cover the entire area of the town, most of which is already protected by an archaeological decree as well as town planning provisions, with the River Tanaro as the south-eastern boundary. The proposed buffer zone measures 517.80 hectares.

Castello Valentino

The proposed buffer zone will cover the area of the 19th century park associated with the Residence. It surrounds the inscribed property and extends to the Po River along the eastern side. The park perimeter is identified by the General Town Planning Scheme of the Comune di Torino (2003) and sets the boundaries as Corso Sclopis, Via Petrarca, Corso Massimo D'Azeglio, Corso Vittorio Emanuele II and the River Po between the Umberto I and Principessa Isabella bridges. The proposed area measures 38.89 hectares.

Villa della Regina

The proposed buffer zone will cover the gardens, woodlands and vineyards of the original 17th century Residence of the Royal House of Savoy, including the area currently occupied by Villa Genero and its park. The proposed buffer zone does not completely surround the inscribed property, which includes the villa and its gardens, but comprises two areas – one to the west and one to the south-east. It does not extend along the road axis to the north-west. The axis from the Piazza Castello to the Villa della Regina was identified in ICOMOS evaluation as an important element of Charles Emmanuel II's expansion of Turin to the east. The areas identified measure 19.33 hectares.

Castello di Moncalieri

The proposed buffer zone will cover the adjacent settlement including remains of the medieval town associated with the original fortress on the site as identified by the General Town Planning Scheme of the Comune di Moncalieri (2000) currently in force, as well as the portion of the land which once belonged to the Royal House of Savoy and is now protected by virtue of its landscape value. The buffer zone boundaries are marked by: Viale della Rimembranza, Strada Rebaudengo, Viale Castello, Viale Palestro, Strada Torino, Via Bogino, Corso Trieste, Via Cavour, Via Tanivelli, Via Galileo Galilei, Via Cernaia and Via Francesco Petrarca. The proposed buffer zone covers the general area of the medieval town on the promontory bounded by the Po River to the south-east and extends to the north-west and south-east including 17th century mansions contemporary with the Residence. It is not contiguous with the inscribed property, which includes the palace and its gardens, along its north-eastern boundary. The area identified measures 56.64 hectares.

Castello di Gavone

The proposal states that the proposed buffer zone will include the whole of the historical area as identified by the early 19th century map and also recognized by the

General Town Planning Scheme of the Comune di Govone (1994) currently in force. However it does not in fact include the area along the approach from the west which is included on the 1812 map. The proposal states that the main roads within the development of the town are to be an integral part of the buffer zone: the road that runs along the old boundary of the garden, as well as the roads leading into the town, which is on high ground and prominent in the landscape. However the road from the west is not included. The buffer zone will surround the inscribed property, which includes the villa and its gardens. The proposed buffer zone boundaries are marked by: Corso Alfieri, Via Umberto I, Via Venti Settembre and the area measures 11.36 hectares.

The expansion of buffer zones is proposed for the following:

Castello di Rivoli

The buffer zone currently covers the gardens and historical park of the Residence. The proposed extension will encompass the whole historical area of Rivoli, as identified by the Municipal Town Planning Scheme currently in force, to include the town as developed up to the 19th century, including architectural developments attributable to the 17th and 18th centuries. It will cover houses and mansions constructed for the nobility with allegiance to the Royal House of Savoy such as Villa Cavalli d'Olivola, Villa d'Ussol and Villa Fiorito, as well as new and remodeled religious buildings, such as the parish church of San Martino, the confraternity of San Rocco and the new monastery of the Cappuccini order at Villa Melano. These buildings demonstrate through their architectural influences and craftsmanship, the links between the Residence and the surrounding settlement. The additional area measures 21.3 hectares, an extension of around 4.6%.

Reggia di Venaria Reale

The buffer zone currently covers the gardens and historical park of the Residence. The adjacent town was designed as a set piece with the palace in the 17th century to create an urban context for the administration of royal power. The grand palace scheme was never completed, but the central axis, the Via Mensa, lined with uniformly designed buildings leading from the hall of Diana at what was to be the centre of the palace to the oval Piazza dell'Annunziata and beyond, is complete. The piazza is adjoined by the church of the Nativity of the Virgin.

The proposed extension of the buffer zone will cover the urban centre of Venaria Reale, including this set piece, as outlined by the Municipal General Town Planning Scheme currently in force. The proposed buffer zone extension is contiguous with the inscribed property on the east and surrounds the south wing of the palace buildings.

The buffer zone boundaries are marked by: Via Vittorio Scodoglio, Via Giuseppe Cavallo, Via Goito, Via Trento,

Via Nazario Sauro, Via Don Giovanni Sapino, Via Savonera Druento and Strada della Barra. The additional area measures 16.66 hectares, an extension of around 4.2%.

Castello di Agliè

The buffer zone currently covers the gardens and historical park of the Residence. The 11th century fortress on the site was remodeled in the 17th and 18th centuries as a country palace set in formal gardens for members of the House of Savoy. Parts of the adjacent medieval town were redeveloped by associated members of the aristocracy and contiguous with remodeling of the palace in the late 18th century, the baroque square at the entrance to the Residence on the north-east was designed to create a unifying link between the Residence and the main axis of the town which was on a different alignment.

The town contains remodeled and new buildings of the 18th century including the Town Hall, the parish church of St Mary of the Annunciation and the church of St Martha. The proposed extension to the buffer zone will cover the entire historical part of Agliè, as outlined by the Municipal General Town Planning Scheme currently in force. The buffer zone will then surround the property except along the north-west boundary of the park.

The buffer zone boundaries are marked by: Via per Cuceglio, Strada della Luisetta, Strada Santa Giorgina, Strada per San Giorgio, Viale Frua, Vicolo Campodaneo, Via Rivalto. The additional area measures 58.95 hectares, an extension of around 78.7%.

Castello di Racconigi

The buffer zone currently covers the gardens and historical park of the Residence.

The Savoy-Carignano family was responsible in the 17th century for the remodeling of the 12th century fortress protecting the road from Turin to Cuneo as a country palace. The medieval settlement began to be redeveloped at the same time by families using architects from Turin for both public and private buildings including the churches of St Mary Major, the Confraternity of the Holy Name of Jesus, the Holy Trinity, St John the Baptist and the Franciscan monastery. The Residence is approached from the south by a long straight avenue, which terminates in a piazza at the palace entrance.

The proposed extension to the buffer zone will encompass the whole of the historical area of Racconigi, as identified by the Municipal General Town Planning Scheme in force. Thus the buffer zone will completely surround the World Heritage inscribed property. Part of the Corso Principe di Piemonte (aligned with the Residence), is already subject to restriction by Ministerial Decree of 26.05.1959, in the buffer zone. The buffer zone boundaries are marked by: Via Principe Amedeo, Via Santa Chiara, Via Ormesano and Corso Principe di

Piemonte. The additional area measures 12.81 hectares, an extension of around 0.9%.

The total additional area of the buffer zone will be 709.75 hectares, an expansion of around 11.4%.

General comments:

The State Party's justification for the creation of buffer zones and its extension is threefold:

- To cover additional areas of garden / parkland / woodlands / vineyards belonging to the Residences not included by the boundary of the inscribed property or existing buffer zone;
- To cover areas of the adjacent settlements that have remnant urban design schemes associated with the Residence, and/or mansions built by the nobility associated with the House of Savoy, and/or farmhouses and agricultural buildings associated with the estate and/or other buildings whose history and architecture connect them to the Residence;
- To recognise earlier layers of settlement where the palace/villa was a remodeling of a medieval fortress with its associated settlement, or where it overlays a Roman town.

However there has been no recognition of the urban design links between the Residences and the "command centre", in Turin. The ICOMOS evaluation at the time of inscription referred to the relationship between the complex of buildings in Turin where central power was executed in its different political, administrative and cultural forms, and the outlying Residences, which were "rapidly accessible from the capital through a network of straight, tree-lined roads", ensuring the cohesive and functional aspects of the ensemble. In order for the inscribed property to be properly understood, these connections need to be maintained and made apparent. The Residences are usually located on high ground and prominent in the landscape. The protection of views and vistas needs to be considered.

In fact the concept of the buffer zone demonstrated by the State Party relates only to the land and buildings directly associated with the Residences and already protected under the various Ministerial decrees and town planning provisions, without taking account of historical connections between them, axial relationships, and intended views and vistas.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed minor modification to the boundary of Castello di Pollenzo,

Residences of the Royal House of Savoy, Italy be ***approved.***

ICOMOS recommends that the proposed buffer zone for Castello di Pollenzo, Castello del Valentino, Villa della Regina, Castello di Moncalieri and Castello di Govone, Residences of the Royal House of Savoy, Italy be ***approved.***

ICOMOS recommends that the proposed extension to the buffer zone for Castello di Rivoli, Reggia di Venaria Reale, Castello di Agliè and Castello di Racconigi, Residences of the Royal House of Savoy, Italy be ***approved.***

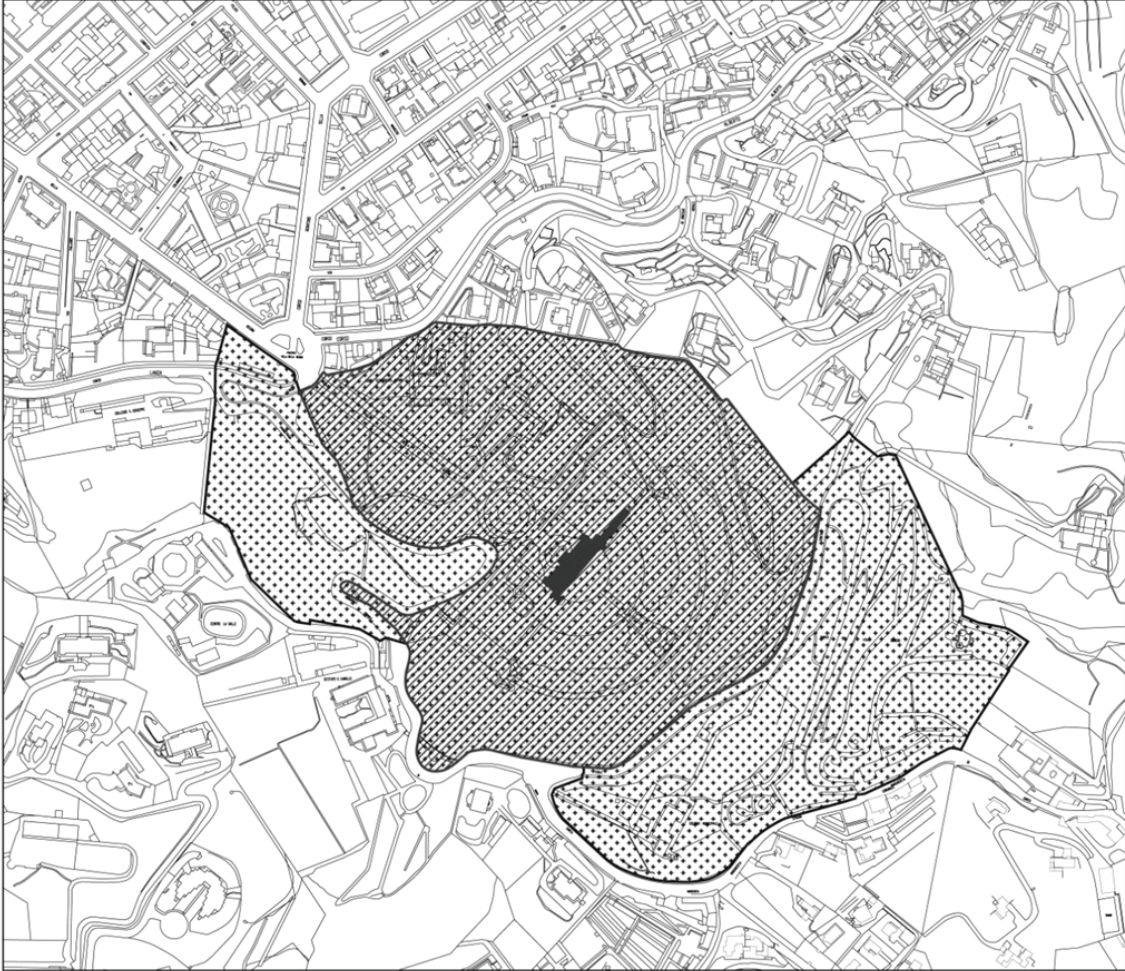
ICOMOS recommends that the State Party consider, when possible, future extensions to the buffer zones of the Residences of the Royal House of Savoy, in terms of the historical connections between the Residences and the “command centre” in Turin, their axial relationships, views and vistas.



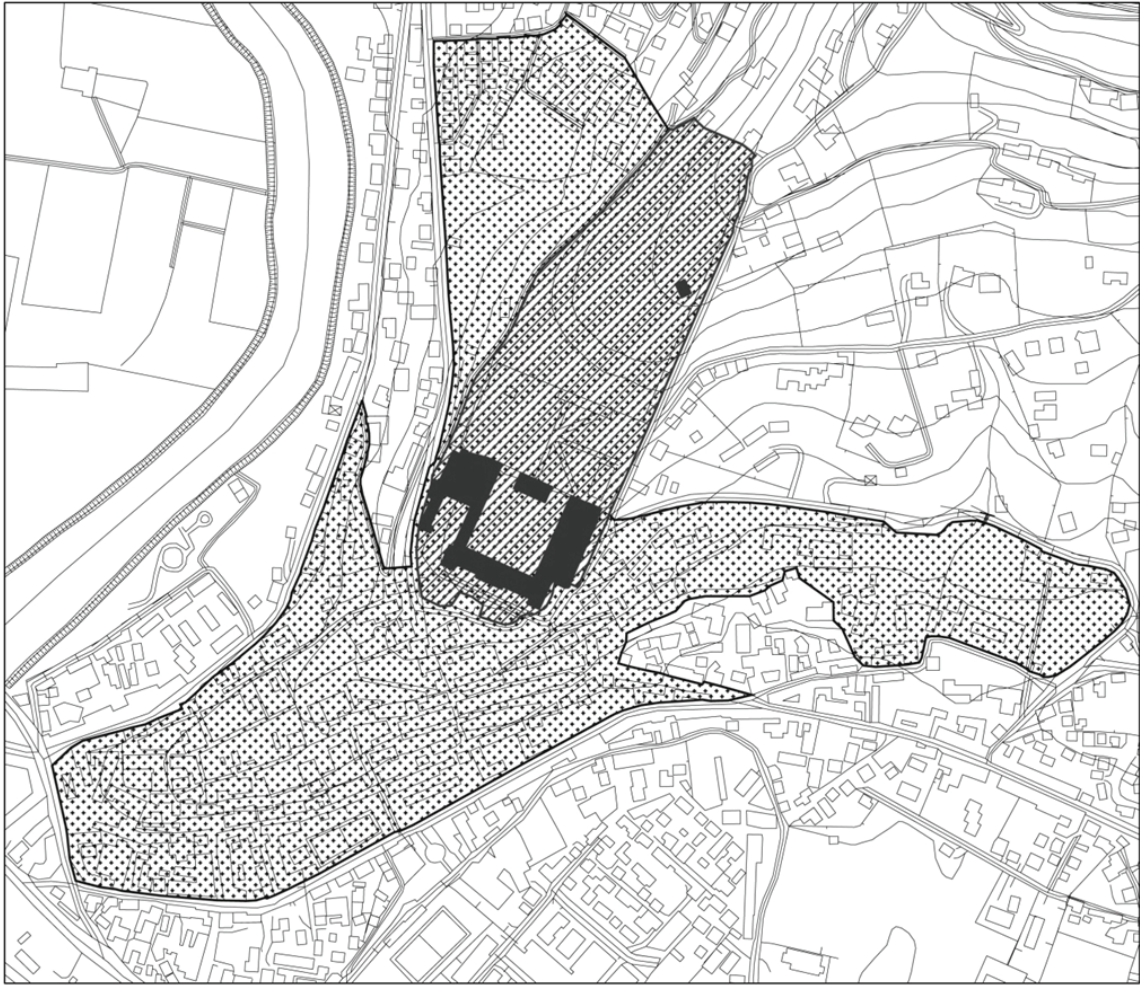
Castello di Pollenzo - map showing the revised boundaries
of the property and the proposed buffer zone



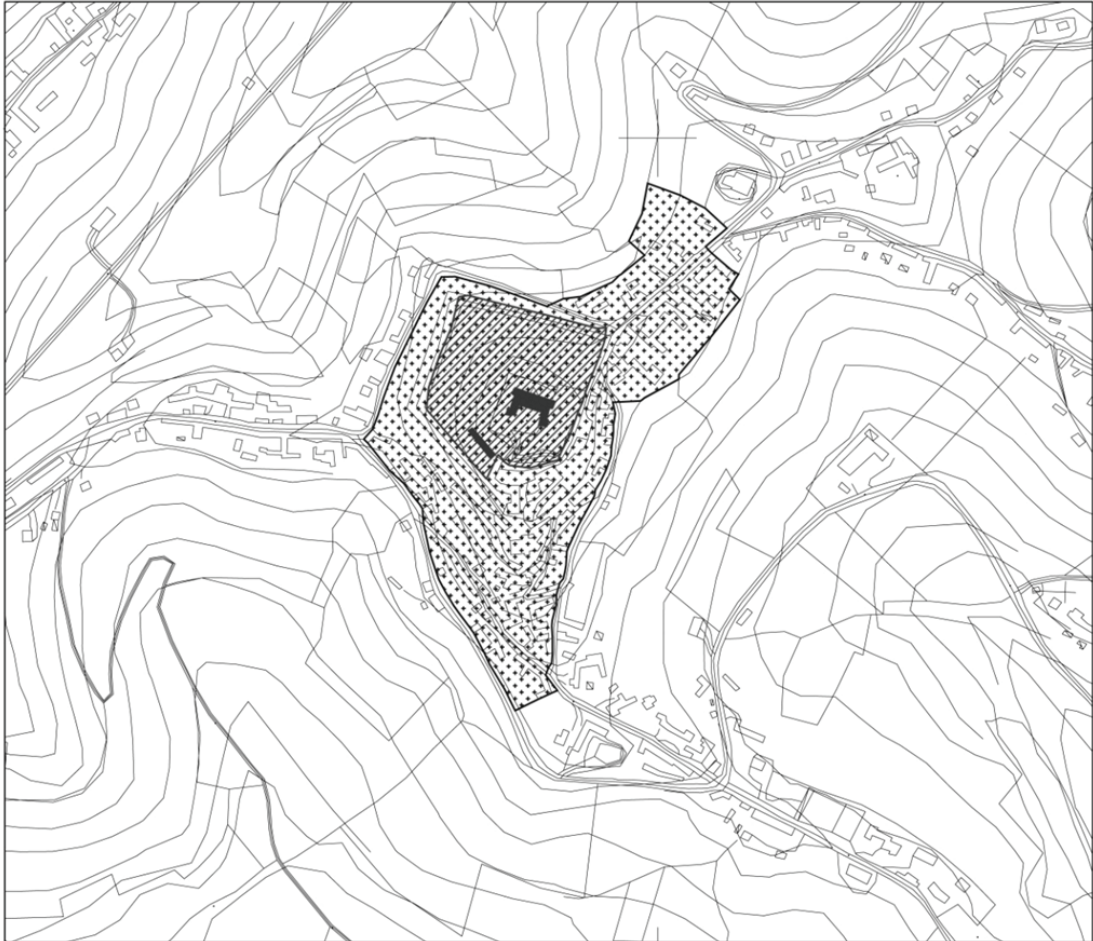
Castello del Valentino - map showing the boundaries of the proposed buffer zone



Villa della Regina - map showing the boundaries of the proposed buffer zone



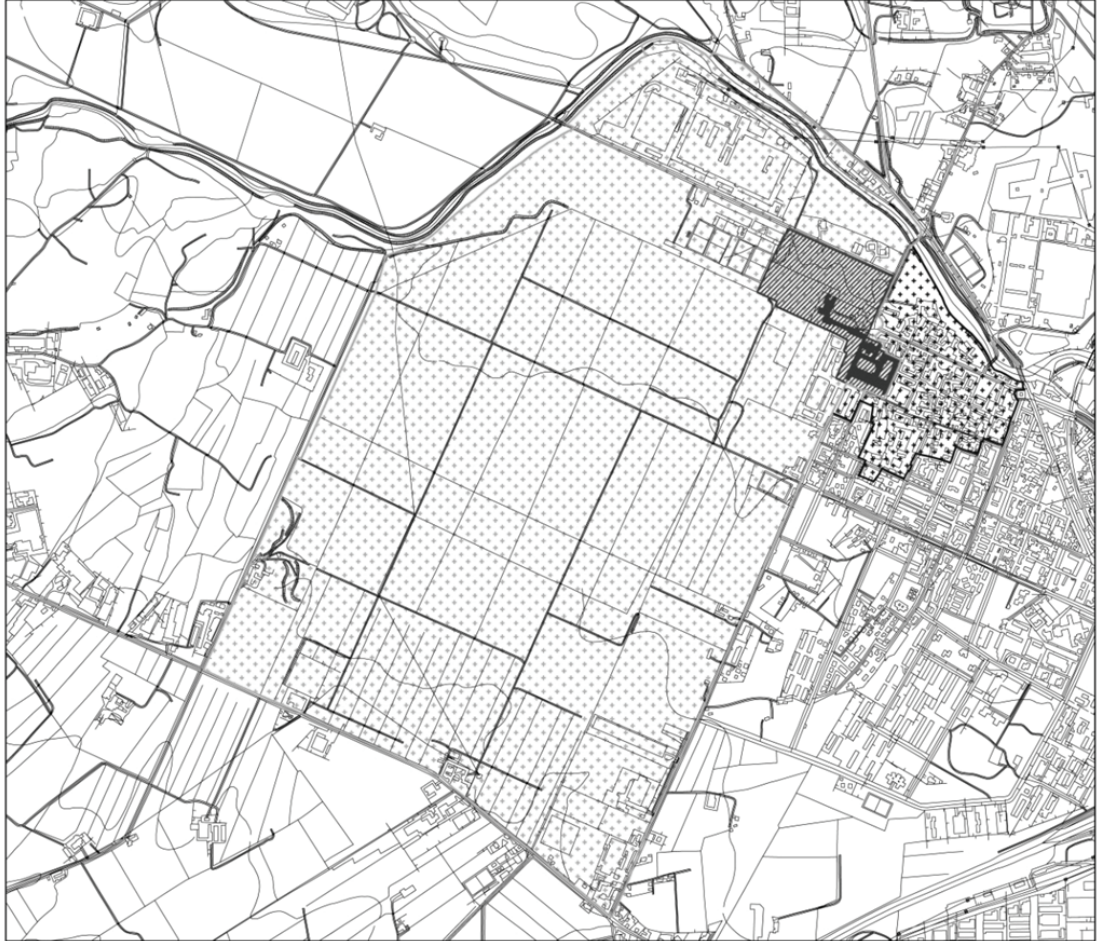
Castello di Moncalieri - map showing the boundaries of the proposed buffer zone



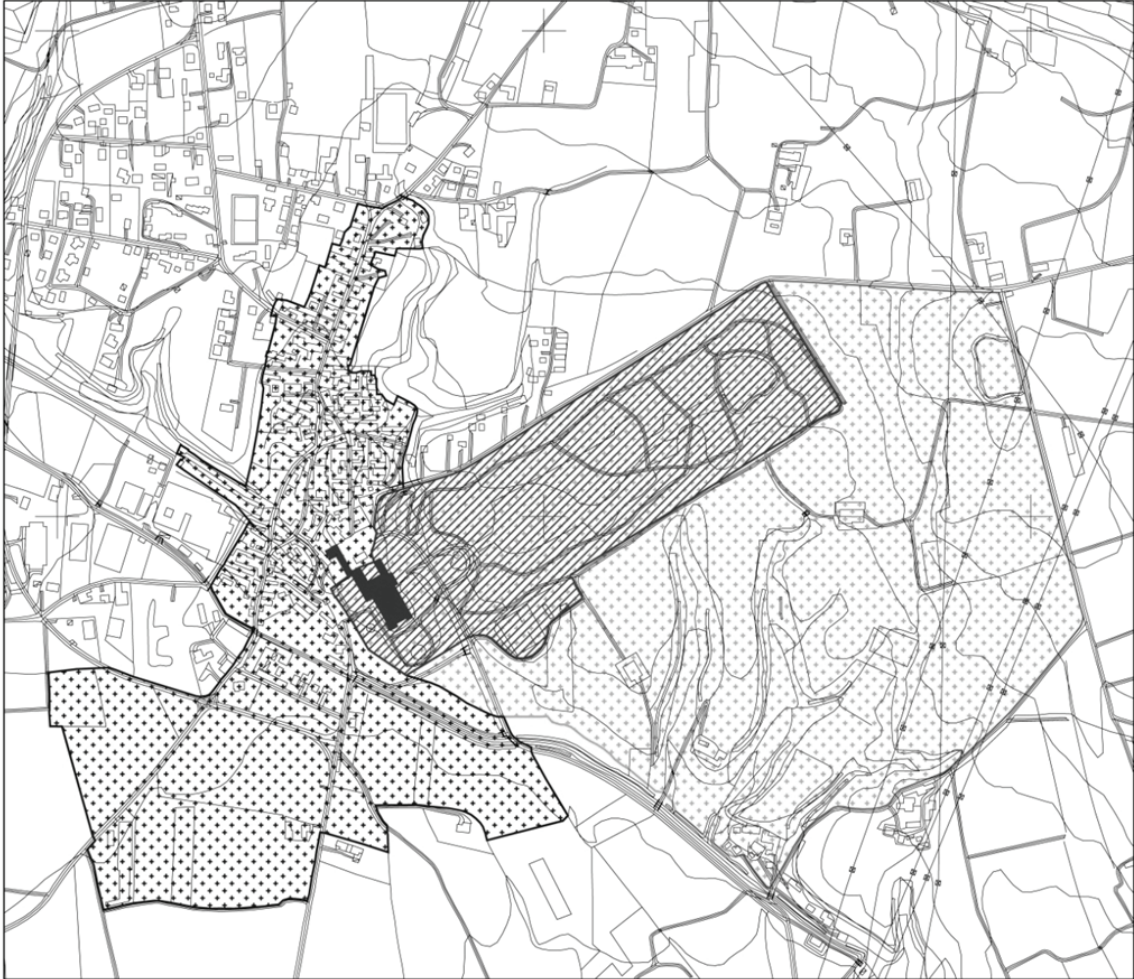
Castello di Govone - map showing the boundaries of the proposed buffer zone



Castello di Rivoli - map showing the revised buffer zone



Reggia di Venaria Reale - map showing the revised buffer zone



Castello di Agliè - map showing the revised buffer zone



Castello di Racconigi - map showing the revised buffer zone

Würzburg Residence (Germany) No 169

1. BASIC DATA

State Party: Germany

Name of property:

Würzburg Residence with the Court Gardens and Residence Square

Location:

District of Lower Franconia, State of Bavaria (Bayern)

Inscription: 1981

Brief Description:

This magnificent Baroque palace – one of the largest and most beautiful in Germany and surrounded by wonderful gardens – was created under the patronage of the prince-bishops Lothar Franz and Friedrich Carl von Schönborn. It was built and decorated in the 18th century by an international team of architects, painters (including Tiepolo), sculptors and stucco-workers, led by Balthasar Neumann.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

2006 Periodic Reporting, Cycle 1, Section II, point 2, states that no buffer zone has been defined for the property and that the establishment of a buffer zone is planned for 2006/07. The Bavarian Administration for State Palaces, Gardens and Lakes should have launched negotiations with the Town of Würzburg to this end.

During its 32nd session (Quebec city, 2008) the World Heritage Committee adopted the Decision 32COM 8D and took note of the clarification of Würzburg Residence with the Court Gardens and Residence Square boundaries and size, provided in response to the Retrospective Inventory.

The State Party has provided a clear map of the property, displaying the boundaries of each component of the inscribed property; geographical coordinates allowing geo-referencing have been provided for several

points on the map. The area in hectares of each component of the inscribed property has also been indicated, as follows: Residence: 12.8455 ha and Rosenbach Park: 1.9275 ha, totalling 14.7730 ha.

Modification:

In February 2010 the State Party provided the World Heritage Centre with a management plan and a scaled plan for a proposed buffer zone for the inscribed property. The proposed buffer zone is an irregular polygon that extends from 30 m to 300 m on the West of the inscribed property; 30 m to 100 m to the North; and from 90 to 250 m to the East and South. It respects the urban tissue and is aligned to cadastral or property lines. It includes the urban attributes and characteristics that are essential to the immediate environment of the inscribed property. Important views and sightlines to and from the inscribed property have been identified and mapped as well as the historic district (Old City of Würzburg) that comprises the inscribed property.

The proposed buffer zone covers 25,0685 ha.

The management plan establishes objectives and measures to carry out protection, maintenance, usage and development programmes for the inscribed property. It is prefaced by the reasons for outstanding universal value and the declaration of authenticity and integrity. It suggests guidelines for effective and sustained actions and brings together existing and future planning programmes into a unified perspective. The Management Plan is a project of the Free State of Bavaria and the City of Würzburg that have acknowledged a shared responsibility for the conservation of the inscribed property. All urban development directly or indirectly affecting the inscribed property must prioritise and respect its outstanding universal value.

Alterations to the inscribed property, type and scale of development and alterations to properties in the buffer zone or in the historic district are all subject to existing legislation and regulations. They comprise:

- Federal Building Code;
- Bavarian Building Regulations;
- Bavarian Law on the Protection of Monuments;
- Bavarian Law on the Protection of Nature;
- Regulation concerning the Bavarian Administration for State Palaces, Gardens and Lakes.

ICOMOS is concerned by the size of the parking lot on the Residence Square itself. ICOMOS recommends that the State party give consideration to considerably reduce it in order to improve the visual integrity of the site.

ICOMOS considers that the proposed buffer zone, the management plan and the existing legislation will offer

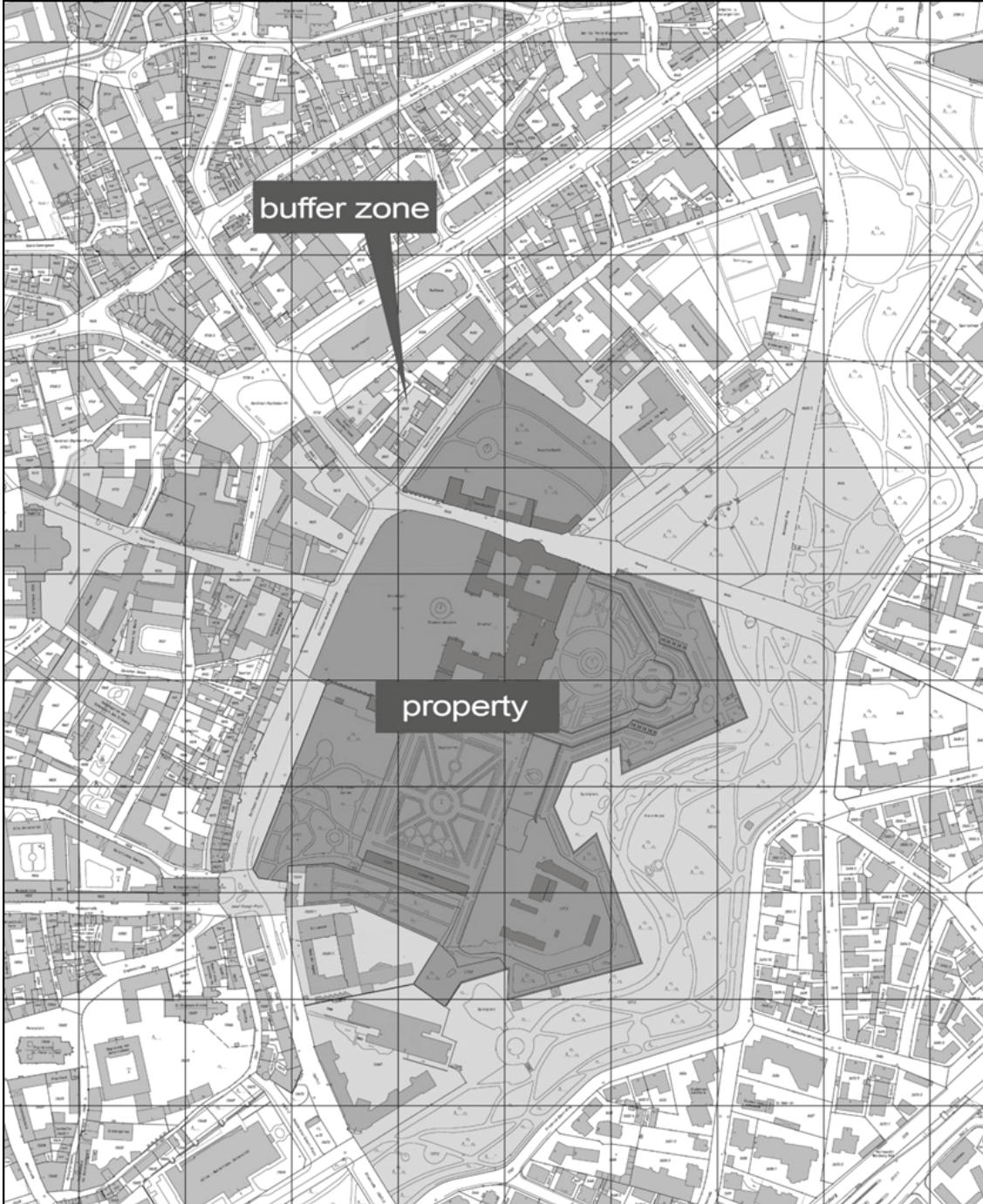
adequate and effective protection for the inscribed property.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed buffer zone for Würzburg Residence with the Court Gardens and Residence Square, Germany, be **approved**.

ICOMOS recommends that the State party give consideration to considerably reduce the parking lot on the Residence Square in order to improve the visual integrity of the site.



Map showing the boundaries of the proposed buffer zone

Abbey and Altenmünster of Lorsch (Germany) No 515

1. BASIC DATA

State Party: Germany

Name of property:

Abbey and Altenmünster of Lorsch

Location:

District of Bergstrasse, State of Hesse (Hessen)

Inscription: 1991

Brief Description:

The abbey, together with its monumental entrance, the famous 'Torhall', are rare architectural vestiges of the Carolingian era. The sculptures and paintings from this period are still in remarkably good condition.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

The World Heritage inscribed property is in two parts: the site and remains of the first monastery founded on the River Weschnitz in 764AD and the site and remains of the second, much larger monastery including the Torhall, founded 650 metres to the west on higher ground (the dune) only three years later and consecrated in 774AD. The extent of the original area of the first monastery (the Altenmünster) has not been established. The original area of the second monastic enclosure, taken as being the area enclosed within the remaining Abbey wall and its traceable line, has been reduced by about one third with the construction of a road (Nibelungenstrasse) and residential development across its northern part.

The Periodic Report of 2004 noted that the status of the boundary of the World Heritage property was inadequate and that no buffer zone had been defined. Subsequently a cadastral map showing the boundaries of the two parts of the World Heritage property was provided in 2005. This does not include the area of the Abbey site originally enclosed by the Abbey wall and now built over, to the north of Nibelungenstrasse. It encompasses the State-owned Abbey site south of Nibelungenstrasse and municipality-owned green land around it to the east and

south, extending beyond the Abbey wall to cover possible remains of ditch or moat. The Altenmünster site is covered to the extent of the municipality-owned cadastral lot 100/1, encompassing known archaeological remains.

No buffer zone was shown.

Modification:

The Abbey and Altenmünster of Lorsch (German) Management Plan of 2009 proposes a buffer zone surrounding and uniting the two parts of the World Heritage inscribed property and including the area of the former Abbey site to the north.

The proposed buffer zone will encompass the known area of the second Abbey, including the area of the monastic enclosure now built over, to the north of Nibelungenstrasse. It will then extend north-east along the north side of Nibelungenstrasse and its continuation until it crosses the Weschnitz River (now canalized). It then follows the east bank of the Weschnitz canal, crossing back south of the Altenmünster nominated area along the south-east boundaries of cadastral districts 106 and 77, west along the northern boundaries of cadastral lots 185-7 running due west until it meets the footpath 424/4 when it turns south to Karolingerstrasse, then west along that street, including the built properties along the southern boundary of the Abbey nominated area, to the corner with Römerstrasse. From there it runs north along Römerstrasse to the Marktplatz, including the built properties to the west of the Abbey nominated area, across Nibelungenstrasse and north to proceed around the northern boundary of the original monastic enclosure.

The World Heritage Property and the proposed buffer zone are protected by the Monument Protection Act of the State of Hesse, administered by the Departments of Monument Preservation and Archaeology/Palaeontology and the State Administration of Palaces and Parks of Hesse, and the planning provisions of the Municipality of Lorsch. The Abbey site is partly owned by the State of Hesse and partly by the Municipality of Lorsch; the site of the Altenmünster is owned by the Municipality of Lorsch.

The concerns of ICOMOS have revolved around the need for protection of the archaeological remains of the area of the Abbey site north of Nibelungenstrasse, which was originally included within the Abbey walls, and the need to link the two areas of the property. These concerns are met by the extent of the proposed buffer zone, which also covers a considerable area around the Altenmünster property.

However ICOMOS considers that the State Party needs to investigate how the important approach view of the Torhall should be protected either by inclusion in the buffer zone or through other means. This could mean

extending the buffer zone to the west of the property to encompass Benedikterstrasse and Marktplatz, including the buildings framing them.

Also the State Party should consider whether the buffer zone should extend to the north beyond Nibelungenstrasse/Alte Bensheimer Strasse, which takes the line of the central axis connecting the Altenmünster site and the Lorsch Abbey site. The Klosterfeld area on both sides of the street is an important component of the agricultural land that was the economic basis of the monastery. The red line boundary on figure 8.15 'Protected Areas and Buildings' in the Management Plan (p.63) seems more appropriate in this respect.

ICOMOS considers that the protection of the proposed buffer zone is satisfactory.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed buffer zone for the Abbey and Altenmünster of Lorsch, Germany, be **referred back** to the State Party to allow it to:

- Consider whether the boundary of the proposed buffer zone could be extended to the west of the World Heritage property to protect the important approach view of the Torhall and include Marktplatz and Benedikterstrasse, or whether this view could be protected by other means;
- Consider whether the boundary of the proposed buffer zone could be extended further to the north to protect the line of the central axis connecting the Altenmünster site and the Lorsch Abbey site and enclose the Klosterfeld area on the north side of Alte Bensheimer Strasse.

ICOMOS also encourages that the State Party keep the World Heritage Committee informed of any development project concerning the property, its buffer zone, and wider setting in conformity with paragraph 172 of *the Operational Guidelines for the Implementation of the World Heritage Convention*.



Map showing the boundaries of the proposed buffer zone

Cracow's Historic Centre (Poland) No 29

1. BASIC DATA

State Party: Poland

Name of property:

Cracow's Historic Centre

Location:

City and County of Cracow, Lesser Poland

Inscription: 1978

Brief Description:

The historic centre of Cracow, the former capital of Poland, is situated at the foot of the Royal Wawel Castle. The 13th century merchants' town has Europe's largest market square and numerous historical houses, palaces and churches with their magnificent interiors. Further evidence of the town's fascinating history is provided by the remnants of the 14th century fortifications and the medieval site of Kazimierz with its ancient synagogues in the southern part of town, Jagellonian University and the Gothic cathedral where the kings of Poland were buried.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

2006 Periodic Reporting, Cycle 1, Section II, point 2, states that no buffer zone has been defined for the property and that the establishment of a buffer zone is needed.

During its 32nd session (Quebec city, 2008) the World Heritage Committee adopted the Decision 32COM 8D and took note of the clarification of Cracow's Historic Centre boundaries and size, provided in response to the Retrospective Inventory.

On 19 January 2010 the State Party provided the World Heritage Centre a map showing the limits of the inscribed property and the proposed buffer zone along with a written description of the buffer zone and the legislation and planning instruments that apply to it.

Modification:

Description of the proposed buffer zone

The listed property area covers 149.65 ha. The proposed buffer zone covers 1 057 ha (including the listed property area). It is an irregular polygon that extends approximately 500 m to 1 500 m from the inscribed property limits. It respects the urban tissue and is aligned to cadastral or property lines.

The proposed buffer zone overlaps with the urban layout of 19th century Cracow when concentric ring roads and a network of radiantly dispersing streets were formed. The buildings and spaces within this area share distinct common architectural features.

Protection and management

The buffer zone is created chiefly to protect the silhouette of the property listed on UNESCO's World Heritage List. The proposed buffer zone is entered into the register of monuments, which, according to Polish law, offers the best guarantee for its protection because of the obligation to ensure that all development operations are in accordance with conservation practices. Historical and conservation documentation with guidelines covering urban design and public spaces is available for the proposed buffer zone.

The proposed buffer zone is subject to valid local area development plans regarding: Zabłocie, Lubicz Brewery and Wilga Estuary. Local area development plans are being prepared for the following areas: Old City, Dębniki, Krasickiego – Orawska, Vistula Boulevards and Żabiniec Południe. The buffer zone will be taken into account in the new version of the Study of *Conditions and Directions of the Area Development Plan for the City of Kraków*, currently under preparation, and then during the preparation of local area development plans and their modifications. The protection regulations for this zone are also included in the communal monument protection and preservation plan, which have been completed in 2009.

ICOMOS considers that the proposed buffer zone, the management system and the existing legislation will offer adequate and effective protection for the inscribed property.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed buffer zone for Cracow's Historic Centre, Poland, be **approved**.



Map showing the boundaries of the proposed buffer zone

Old Town of Ávila (Spain) No 348rev

1. BASIC DATA

State Party: Spain

Name of property:

Old Town of Ávila with its Extra-Muros Churches

Location:

Province of Ávila, Autonomous Community of Castilla y León

Inscription: 985

Brief Description:

Founded in the 11th century to protect the Spanish territories from the Moors, this 'City of Saints and Stones', the birthplace of St Teresa and the burial place of the Grand Inquisitor Torquemada, has kept its medieval austerity. This purity of form can still be seen in the Gothic cathedral and the fortifications which, with their 82 semicircular towers and nine gates, are the most complete in Spain.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background

At the time of inscription a buffer zone was not established. The vulnerability of one of the extra mural churches was demonstrated by developments in the Plaza of Santa Teresa between the town walls and the extra mural church of San Pedro. This was discussed by the Committee at its 27th, 28th, 29th and 30th sessions. As a result of concerns for the setting of the extra mural churches, at its 29th session, the Committee requested an updated report on the designation of buffer zones, in the context of the Periodic Reporting exercise.

At its 30th Session (Decision 30 COM 7B.79) the Committee noted that the State Party had reported that it had designated a buffer zone, and requested the State Party to submit detailed maps presenting the boundaries of the property and its buffer zones, and ICOMOS to review the boundaries of the property once the boundary modifications have been presented. The Committee further requested the State Party to provide the World Heritage Centre with a progress report on the legal status and the implementation of the protection zones by

1st February 2007 for examination by the World Heritage Committee at its 31st session (2007).

At the 31st session, the Committee considered a proposal put forward by the State Party for an extension of the nominated area to encompass six churches and for a buffer zone that encompassed the three extra mural churches which were part of the original inscription and six further churches.

The Committee approved the extensions to the boundary, and requested that an adequate buffer zone be established and submitted for approval to the Committee, and that further explanations for the choice of the boundaries to protect the setting of the town and its extra muros churches and views to and from it should be provided.

At its 32nd session, the Committee considered a proposal for a buffer zone submitted by the State Party. This buffer zone encompassed the old town, the three extra mural churches which were part of the original inscription, and the six further churches approved at the 31st Session.

Although the Committee asked at its 31st session for a justification for the way a buffer zone would offer protection to the property and views to and from it, no such justification was provided.

The Committee agreed to refer the decision on the proposed buffer zone back to the State Party (Decision 32 COM 8B.66) to allow it to provide more details on the justification for the boundaries for the close surroundings of the property and visual identity as well as for the protective policies in place in its buffer zone.

On 30 January 2009, the State Party submitted a report on progress with meeting the requirements of the Committee. This report listed the legal instruments on urban planning and cultural heritage available to protect the inscribed area. It also set out details of the development a strategic plan for the Historic Heritage of the Community of Castilla y León that would address the comprehensive management of historic heritage, and would be based on the 'conceptual and physical link between heritage and territory'. This strategic plan would include consideration of an urban heritage system that acknowledges 'fundamental elements or nodes and their relationships, which define the value of the heritage of a city, regardless of the degree in which they manifest themselves from a visual point of view'.

A management plan for Ávila would be part of this strategic framework. To take forward this management plan, the Department of Culture and Tourism for the Regional Government of Castilla y León and the Ávila Town Hall signed a framework agreement in September 2006. The plan process was launched in September 2008. It was stated that the Plan would 'enable the city to be governed in a flexible way with regard to the incorporation of new values, as long as they make way

for global improvement without compromising any existing values’.

The State Party proposed to consider the appropriateness of the boundaries of the property and its buffer zone as part of the development of this management plan.

At its 33rd session (Seville, 2009), the World Heritage Committee adopted decision: 33 COM 8B.53:

The World Heritage Committee,

1. Having examined Documents WHC-09/33.COM/8B and WHC-09/33.COM/INF.8B1.Add,

2. Refers the proposed buffer zone for the Old Town of Ávila with its Extra-Muros Churches, Spain, back to the State Party in order to allow it to finalize the management plan for the property.

Update

On February 2010, the State Party submitted a document outlining a concept for the Management Plan and progress towards its drafting and implementation.

This includes the statement that a Statement of Significance is being drafted which includes a reconsideration of the Outstanding Universal Value of the property in the light of the evolving concepts of cultural heritage.

3. ICOMOS RECOMMENDATIONS

ICOMOS notes that further progress has been made in developing a detailed management plan that will respond to the needs of the city in terms of protection of the built fabric and to the need to sustain and enhance the social and economic framework of the city.

ICOMOS does however consider that such a plan should be based on an agreed Statement of Outstanding Universal Value that must be primarily based on the Outstanding Universal Value of the property that was recognised at the time of inscription. Whereas other values might well have been identified since inscription in response to changing ideas of heritage and can be the subject of the Management Plan, there is a need to differentiate between the Outstanding Universal Value, which is non-negotiable, and other values.

ICOMOS recommends that the proposed buffer zone for the Old Town of Ávila with its Extra-Muros Churches, Spain, be **referred back** to the State Party in order to allow it to finalize the management plan for the property and to develop a retrospective Statement of Outstanding Universal Value as the basis for the Management Plan.



Map showing the boundaries of the proposed buffer zone

Cathedral, Alcázar and Archivo de Indias in Seville (Spain) No 383rev

1. BASIC DATA

State Party: Spain

Name of property:

Cathedral, Alcázar and Archivo de Indias in Seville

Location:

Province of Seville, Autonomous Community of Andalusia

Inscription: 1987

Brief Description:

Together these three buildings form a remarkable monumental complex in the heart of Seville. The cathedral and the Alcázar – dating from the Reconquest of 1248 to the 16th century and imbued with Moorish influences – are an exceptional testimony to the civilization of the Almohads as well as that of Christian Andalusia. The Giralda minaret is the masterpiece of Almohad architecture. It stands next to the cathedral with its five naves; the largest Gothic building in Europe, it houses the tomb of Christopher Columbus. The ancient Lonja, which became the Archivo de Indias, contains valuable documents from the archives of the colonies in the Americas.

Date of ICOMOS' approval of this report: 17 March 2010

2. ISSUES RAISED

Background:

At its 33rd Session (Seville, 2009) the World Heritage Committee requested the State Party (Decision 33COM 7B.123) to define a buffer zone for the World Heritage property and to submit a map by 1 February 2010, for examination by the World Heritage Committee at its 34th session in 2010.

This request was in response to concern expressed by the Committee at the potential adverse impact of the proposed 40 storey (178metre) Cajasol tower on the western bank of the Guadalquivir river approximately 600 metres from the boundaries of the Alcazar, which

with the other two buildings are approximately 300 metres from the east bank of the river.

Modification:

The State Party has proposed a buffer zone that links the three buildings and covers an area within which are spaces and buildings that were directly associated with, or have some tangible bearing on, the Latin American colonisation. The buffer zone thus relates to the Outstanding Universal Value of the property in terms of the complementarities of the three inscribed buildings as an illustration of the involvement of Seville in the processes of Latin American colonisation.

This buffer zone includes the remains of the inland port and spaces and buildings associated with the development of trade between the Old and New worlds. The nine key buildings are listed in the submitted report and historical details provided.

The wider landscape of the buffer zone has been set out as a result of two studies on the historic urban landscape and the city landscape of the outskirts. This acknowledges the way the city has grown and altered over the past two centuries in such a way that the relationship of the three inscribed buildings to their urban context and to the river has been significantly altered and now make it difficult to trace the historical boundaries of the city. The studies identify key views.

The buffer zone comprises 205 hectares and covers the area surrounding the three inscribed buildings and part of the river where the port was located. The buffer zone demarcates an area within which the Giralda Tower will dominate the skyline and protects lower level views of the Tower.

Protection

The nine key buildings within the buffer zone are designated monuments.

The whole of the buffer zone is included within the extended Conjunto Histórico de Sevilla that was declared by Royal Decree on 2nd November 2009. The buffer zone covers nine sectors. The decree allows for Special Protection Plans to be drawn up – and these exist for five sectors – and also for catalogues of monuments to be created, and these exist for five sectors. It is however acknowledged that the Special Protection Plans do not cover all aspects of spatial planning.

However, the 2007 Historical Heritage Act of Andalusia allows for visual impact assessments to be carried on proposed projects and it is said that this would apply to development that might impact on the property – although not the Cajasol Tower that was approved prior to its implementation.

The General Urban Planning scheme of 2006 includes a special plan for the Puerta Triana, within which the proposed Cajasol Tower would be located and this allows for 'for-profit' construction up to 225 metres in height. The buffer zone does not therefore cover the area of the Cajasol Tower.

ICOMOS considers that the proposed buffer zone that has been carefully delineated to surround an area that can be seen as the immediate setting for the three inscribed buildings and part of their wider context in terms of the monuments and spaces within the buffer zone that have links to the Outstanding Universal Value of the property.

ICOMOS further consider that the protection for this buffer zone is adequate in terms of its designation as part of the Conjunto Histórico de Sevilla. The City Council has agreed to complete the catalogues for the sectors where these are still needed and this will further protect both the inscribed property and the buffer zone.

ICOMOS also considers that whereas the proposed buffer zone will protect the immediate setting, it remains concerned that protection outside this area in the wider setting will still be needed in terms of potential developments of tall buildings that will need to be considered through visual impact assessments for their possible impact on Outstanding Universal Value.

3. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

ICOMOS recommends that the proposed buffer zone for the Cathedral, Alcázar and Archivo de Indias in Seville, Spain, be **approved**.

ICOMOS notes that the City Council has agreed to undertake the remaining catalogues for the sectors within the Buffer Zone and urges the State Party to ensure that these are in place as soon as possible.

ICOMOS also notes that development outside the buffer zone in the wider setting will be subject to impact assessments on the inscribed property under the 2007 Historical Heritage Act and urges the State Party to ensure that these are applied rigorously.



Map showing the boundaries of the proposed buffer zone

Camino Real de Tierra Adentro (Mexico) No 1351

Official name as proposed by the State Party:

Camino Real de Tierra Adentro

Location:

The series of nominated properties lies within ten Mexican States. From south to north these are:

- City of México
- State of México
- Hidalgo
- Querétaro
- Guanajuato
- Jalisco
- Aguascalientes
- Zacatecas
- San Luis Potosí
- Durango
- Chihuahua

Brief description:

The serial nomination of 55 sites and five existing World Heritage sites lies along a 1,400 km part of the 2,600km Camino Real de Tierra Adentro (the Royal Inland Road, also known as the Silver route), a route that extends north from Mexico City to Texas and Nuevo Mexico (New Mexico), United States of America.

The Camino Real de Tierra Adentro was actively used as a trade route for 300 years, from the mid-16th to the 19th centuries. The main trade in the first two centuries was in silver extracted from the mines of Zacatecas, Guanajuato and San Luis Potosí, and in mercury (needed for its working through the 'amalgamation' method), imported from Spain and at times Slovenia. The silver was exported via Veracruz to Spain, where it transformed the economies of Europe, and via Acapulco to Manila, where it was exchanged for the silks and porcelains of Asia.

The Camino Real de Tierra Adentro forms one section of the Spanish Intercontinental Camino Real (Spanish Intercontinental Royal Road), a land and sea route that was used for the exploitation and commercialisation of natural resources, linking Spain with its colonies in America and south-east Asia at the beginnings of the Modern era.

The Camino was part of a much wider network of roads in 'New Spain' estimated at 24,800km in 1808, of which

a third was suitable for wheeled vehicles. Some of these overlaid the pre-Columbian routes and extended them into the north and west where mines and settlement were developed.

Although it is a route that was motivated and consolidated by the mining industry and the transportation of silver and mercury, it also fostered trade in wheat, corn and several other sorts of merchandise that supplied the northern mining communities and other regions. And, as with most trade routes, Camino Real de Tierra Adentro fostered social, cultural and religious links, in particular between Spanish and Amerindian cultures.

The nominated sites have been chosen to reflect the development of multi-ethnic societies over three centuries, through the selection of representative typological components. These include five existing urban World Heritage sites and 55 other sites related to the use of the road, such as bridges, former haciendas, historic centres/towns, a cemetery, former convents, a mountain range, stretches of road, a mine, chapels/temples and caves.

Category of property:

In terms of categories set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of 60 *monuments, groups of buildings and sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), annex 3, this is a *heritage route*.

1. BASIC DATA

Included in the Tentative List: 20 November 2001

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre: 30 January 2009

Background: This is a new nomination.

Consultations: ICOMOS has consulted its International Scientific Committee on Cultural Routes and several independent experts.

Literature consulted (selection):

Bargellini, C., in *La Arquitectura de la Plata*.

Van Young, E., *Hacienda and Market in 18th century Mexico, The rural economy of the Guadalajara Region, 1675-1820*, 2006.

Technical Evaluation Mission: 18-28 August 2009 and 28 August – 4 September 2009

Additional information requested and received from the State Party: On 19 October 2009, ICOMOS sent a letter to the State Party on the following points:

- Selection of specific sites to represent the cultural route;
- Identification on all maps and plans the entire alignment of the Camino Real across the various chosen sites;
- Status of the 'Initiative for a Decree to create a Federal Law on the Protection of Cultural Routes'.

The State Party replied on 20 November 2009.

On 18 December 2009, ICOMOS requested the State Party to provide additional information on the following:

- Justification of Outstanding Universal Value;
- Comparative analysis;
- Line of the road;
- Management Framework;
- Boundaries;
- Buffer Zones.

A response was received from the State Party on 26 February 2010. This suggested revised buffer zones for some properties and minor changes to boundaries.

The information supplied by the State Party in these two letters has been integrated into the following evaluation.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The nominated property is a series of 60 separate sites along or near a 1,400km stretch of the Camino Real de Tierra Adentro. Also known as the Silver route, this road was developed primarily for the export of silver to Spain from the mines of Zacatecas, Guanajuato and San Luis Potosí, north-west of Mexico City, and the import of mercury from Spain and at time Slovenia. It was a part of the Intercontinental Royal Road that linked Mexico City to Veracruz on the coast in the south and thence to Spain. It was also part of what is now called the Mercury route between Spain and the three main silver mines

Initially the Camino Real de Tierra Adentro ended at the Zacatecas, it was then extended northwards to Santa Fe, New Mexico.

The full 2,600km extent of the route thus embraces Hispanic founded towns in Texas and New Mexico, in territory now known as the United States of America. Sites along this latter stretch of the route have not been nominated, but the nomination suggests will be in the future.

The Camino Real de Tierra Adentro was developed by the Spanish during the 16th century. The need for the route was to link the new silver mines with the Viceroyalty capital and the coast. The discovery of rich seams of silver in Zacatecas between 1540 and 1550 led to the development of a foundry in the town. This brought about a need for a better and more direct connection to the Spanish Viceroyalty capital, now Mexico City. Initially the mine was linked by a route through Guadalajara. This link to the capital was difficult across ravines and narrow canyons with hostile indigenous communities in Nueva Galicia. A new route was duly constructed along the spine of the high plateau by 1552.

The Spanish initially consolidated their use and control of this new route through the development of small settlements, each with a church and sited in a defensive line. In the mid 16th century three larger Spanish/Indian defensive towns were constructed: in 1555 Spanish town of San Miguel el Grande, in 1562 the villa of San Felipe and in 1563, Santa María de los Lagos. These were outposts or "villas protectoras del camino" (protective villas of the road).

By 1700 the road had been extended northwards from Zacatecas to Santa Fe, via Sombrerete and Nombre de Dios. The road was also connected by side branches to the regions that supplied goods particularly mercury for the processing of silver, and also timber and food to the developing markets of the north, and, as more silver deposits were discovered in the Guanajuato region, between the Zacatecas and the Michoacán roads, east-west side branches were also developed to those areas and to San Luis Potosí, Venado, Charcas, Durango and Guadalajara.

The roads were used as conduits not only for trade but also for the exchange of ideas, particularly religious ideas and people. As with trade routes around the world, the Camino Real de Tierra Adentro did not just have an economic influence but also substantial social and cultural impact.

Many of the mines had periods of prosperity interspersed by periods of decline or even abandonment of their supporting settlements. The largest fared best but even cites such as Zacatecas had surges of prosperity at the end of the 17th and the end of the 18th centuries.

Its demise as a central artery was largely brought about by the railway in the 19th century.

The nominated sites are said to be typological elements of the route that reflect the evolutionary processes of a multicultural society.

The nominated sites extend from the Plaza de la Constitución in México City, north-west to the Plaza de la Constitución of the town of Valle de Allende in Chihuahua. Some of the route of the Camino Real de

Tierra Adentro is now part of the Pan-American Highway.

The sites consist of:

- eleven historic centres or ensembles
- nine towns
- seven former haciendas
- seven temples
- six chapels
- five separate bridges (+ two associated with other sites)
- four stretches of road
- two former colleges
- two caves
- one mine (+ one associated with another site)
- one former convent
- one former royal hospital
- one cemetery

And includes the following World Heritage sites (with date of inscription):

- Historic Centre of México City (1987)
- Historic Monuments Zone of Querétaro (1996)
- Protective town of San Miguel and the Sanctuary of Jesús Nazareno de Atotonilco (2008)
- Historic Town of Guanajuato and Adjacent Mines (1988)
- Historic Centre of Zacatecas (1993)

The nomination dossier provides considerable detail on the history and development of each of the sites, but much less on description. With some sites the precise extent of the buildings is not clear nor their dates of construction or their architectural features.

Specifically, the sites are as follows, from south to north:

1. CITY OF MÉXICO

Historic Centre of Mexico City and Xochimilco (World Heritage site, inscribed 1987)

This city was inscribed on the List, under criteria (ii), (iii), (iv) and (v), not only for its Spanish buildings that reflect the power and wealth of the silver trade but also for its pre-Spanish Aztec remains. Thus part of the inscribed site relates to the Camino – the Cathedral and the market area and public buildings constructed in the 18th and 19th centuries.

2. STATE OF MÉXICO

Former college of San Francisco Javier in Tepotzotlán

A hermitage was constructed in 1525 and further convent buildings were added from 1580. The extant buildings date from the 17th and 18th centuries. The elaborate 18th century facade of the church reflects Mexican Churriguesque style. The buildings, altarpieces, paintings, books and furniture are said to

characterise the colonial life, together with vestiges of clothing, tableware, and ornaments.

Town of Aculco

The town includes two haciendas that housed travellers along the Camino. In the 18th century the mainstay of the population was muleteering as the town had an abundance of grass and water for the mules. It is not clear which extant buildings now reflect this extensive mule trade.

Bridge of Atongo

This bridge was part of a chain of stone bridges constructed in the 18th century to improve the road. They were linked to a toll system. This bridge has three arches.

Stretch of Camino Real between Aculco and San Juan del Río

This cobbled stretch of road extends to 0.950km in length. It is suggested that it represents an earlier pre-Spanish route that was taken over by the Conquerors. It is one of two alternative routes in this area.

3. HIDALGO

Former convent of San Francisco in Tepeji del Río and bridge

The prosperity of the Hidalgo region was related first to cattle breeding and later to mines. Wealthy miners acquired haciendas and so too did the religious monasteries, first the Franciscans, then the Augustinians and later the Jesuits. The Convent of San Francisco was established in 1560 by the Franciscans in between the territories of two indigenous communities. The existing simple building apparently dates from the 18th century and is adorned by Baroque murals by Juan Correa and Francisco Martínez.

Stretch of Camino Real between bridge of La Colmena and former hacienda of La Cañada

This short stretch of road is partly paved near the hacienda and still has side parapets. It includes three apparently 18th century stone bridges. The bridge La Cañada, part of the former hacienda of La Cañada (founded in 1563 and rebuilt in 1868) has one single round headed arch; at the other end of the stretch of road is the bridge of La Colmena with three arches and buttresses; and in between is a third, Tlautla, not described but said to be disused and difficult to see.

4. QUERÉTARO

Historic centre of City of San Juan del Río

The City of San Juan del Río is sited at a point where the main Camino joins a branch road to the mining area of Sierra Gorda. The main economic activity of the region was cattle breeding, inns for merchants and travellers, and muleteering. The city was founded in the second half of the 16th century. There is no description of the historic centre of the town.

Former hacienda of Chichimequillas

The hacienda which was completed in 1813 was part of the Carmelite convent of Queretaro, founded in 1691 and enlarged in the 18th century. The hacienda includes a chapel and grain stores.

Chapel of former hacienda of Buenavista

The chapel is the main building surviving from the hacienda that was established in the 16th century and divided in the early 18th century. The Chapel, a sober building of pink stone, was constructed in 1772.

Historic Monuments Zone of Querétaro (World Heritage site, inscribed 1996)

The historic centre was inscribed under criterion (ii) and (iv) as the centre of a colonial town that reached its highest level of wealth in the 18th century, reflected in much rebuilding that demonstrated an integration between the Spanish and indigenous parts of the city.

The evaluation of the property does not stress its strategic importance in terms of it being a link between the mining areas of Zacatecas, Guanajuato, and San Luis Potosí. It was inscribed on the list as a colonial town with a unique layout.

5. GUANAJUATO

Former Royal hospital of San Juan de Dios of San Miguel de Allende

The hospital, of four corridors and twenty-seven cells, was commissioned in 1743 and work started ten years later and lasted until 1770. The buildings included a church and a cemetery. By the end of the century it had treated 2,000 people from 160 different regions. In the early 19th century the lack of funds led to its decline. It was revived in a basic way in the second half of the 19th century and turned into a civil hospital in 1935, a use it still maintains.

Bridge of El Fraile

Bridge of San Rafael

Bridge La Quemada

These bridges were three of more than 11 bridges built during the 16th, 17th and 18th centuries by the Village of San Miguel.

The bridge of El Fraile with its one arch is said to be 16th century but was rebuilt in the 18th century.

The Bridge of San Rafael is not considered exceptional in terms of construction but is located at the convergence of several ways: the Camino Real de Tierra Adentro with three other routes. It was built in the 18th century. Part of the bridge was demolished by a flood in the 19th century and only one arch of three remains.

The bridge of La Quemada dates from the 16th century and is formed of five arches with triangular cutwaters between the arches. It linked the Hacienda of La Quemada with the road to San Diego de la Union. The hacienda is not in the nominated area.

Protective town of San Miguel and the Sanctuary of Jesús Nazareno de Atotonilco (World Heritage site, inscribed 2008)

This town was inscribed on the List under criteria (ii) and (iv) as a fortified town, established in the 16th century to protect the 'Royal Route' inland, and which reached its apogee in the 18th century when many of its outstanding religious and civic buildings were built in the style of the Mexican Baroque. The town supplied goods and services to other cities, villages and mining centres between the 16th and 18th centuries.

Historic Town of Guanajuato and Adjacent Mines (World Heritage site, inscribed 1988)

The city was inscribed on the List under criteria (i), (ii), (iv) and (vi) as a Spanish city founded in the early 16th century that became the world's leading silver-extraction centre in the 18th century. This past can be seen in its 'subterranean streets' and the 'Boca del Infierno', a mineshaft that plunges 600m. The town's fine Baroque and neoclassical buildings, resulting from the prosperity of the mines, have influenced buildings throughout central Mexico.

6. JALISCO

Historic centre of City of Lagos de Moreno and bridge

The City of Lagos was founded in 1563 as a defensive settlement part of a network of such settlements aimed at pacification of the region. Originally its houses were small and built of adobe. The fertility of the surrounding grazing land gave the settlement prosperity. In the late 17th century convents were built, and, as in many other urban areas, there was much re-building in the 18th century and also again in the 19th century when the parish church was constructed and the four-arched bridge completed 1878.

Historic ensemble of Town of Ojuelos

Ojuelos was founded as a fortified settlement (along with Portezuelo), probably in 1570 to safeguard territory between San Miguel and Zacatecas. The town includes remains of the fort, a small 18th century neo-classicist church, 19th wool textile buildings, inns, school and chapel and a square with 19th century arcading in Mudejar and Neoclassic style.

Bridge of Ojuelos

This eleven arched bridge is on the road from San Felipe Torres to Ojuelos in the direction of Zacatecas. In conjunction with it is a stretch of the old Camino Real. Although the bridge is not definitively dated it is thought to date from the 17th century. The parapet has not survived.

Former hacienda of Ciénega de Mata

Founded in 1598, this enormous hacienda produced wheat and cattle and by the 18th its prosperity was such that it encompassed 1,865 inhabitants and had a large church with sacristy, dome and tower, decorated with sculptural reliefs.

Cemetery in Encarnación de Díaz

The commercial importance of Encarnación in the 19th century based on agriculture and cattle led to the development of a cemetery. This has a central patio surrounded by portals with crypts and mausolea decorated with neo-classical sculpture.

7. AGUASCALIENTES

Former hacienda of Peñuelas

The hacienda was established in 1601 and the fertile land soon made it prosperous from agriculture and cattle breeding. It grew to become one of the largest estates and was sub-divided in the 18th century into still relatively large units. In the 19th century, as with many other estates, it faced bankruptcy and was bought by a textile manufacturer. The large elaborate church has a 19th century facade and the residential buildings still survive.

Former hacienda of Cieneguilla

The hacienda lands were given to the Society of Jesus in 1616. The church was constructed between 1751-3. The Society was expelled in 1767 and the large hacienda passed eventually to private owners. Structures include remains of a dam and dykes for irrigation and a fragment of the Camino Real lined on both sides with huizache trees.

Historic ensemble of City of Aguascalientes

The settlement was founded in 1575 with the purpose of protecting travellers along one of the three roads from Guadalajara to Zacatecas. It remained a village until the late 17th century. Gradually as the prosperity of haciendas around the settlement grew, their owners invested in houses in the town and churches were built in 1647, 1764, and in 1767. No details are provided of the buildings. The nominated area consists of two churches linked by a stretch of road.

Former hacienda of Pabellón de Hidalgo

The land was granted as a hacienda in 1597. As with other haciendas in the area, investment came from the successful miners of Zacatecas. A church survives as does the main house, which is now a museum, and a large dam. The stables and a second church are in ruins.

8. ZACATECAS

Chapel of San Nicolás Tolentino of former hacienda of San Nicolás de Quijas

The Chapel was constructed between 1793 and 1796. Next to it are the main house and remains of workers' housing.

Town of Pinos

Seven buildings have been nominated. The parish church of San Matias de Pinos was built between 1682 and 1697 and remodelled in the mid 18th century. In 1795 work started to enlarge the naves but stopped before completion. The Temples and convent of San Francisco de Pinos was founded in 1594 but the present

building appears to date from the 18th century. The Temple of the Inmaculada Concepcion de Tlaxcala was constructed in the 18th century. The other buildings are a municipal palace, restaurant and three squares.

Temple of Nuestra Señora de los Ángeles of Town of Noria de Ángeles

The large Temple of Nuestra Señora was constructed in 1870-2.

Temple of Nuestra Señora de los Dolores in Villa González Ortega

The Temple of Nuestra Señora was built in 1855.

Former college of Nuestra Señora de Guadalupe of Propaganda Fide

This Franciscan temple was established in 1707 on the outskirts of the city of Zacatecas. Construction took place between 1713 and 1721.

Historic ensemble of City of Sombrerete

The city is located in high rugged valleys where several mines at the end of the 16th century were said to have competed with Zacatecas and Parral in terms of output. They had two further periods of prosperity in the end of the 17th and early 18th centuries. The mines have not been nominated. The nominated area contains ten churches and chapels and three town squares that are not described. The Parish church was built in 1685 with the tower being reconstructed in 1777. The Temple of Vera Cruz dates from 1684. The other churches date from the 18th century.

Temple of San Pantaleón Mártir in Town of Noria de San Pantaleón

The mining town in a small canyon with views of slag heaps is currently almost abandoned. The small simple temple, apparently constructed in the early 18th century, is the only nominated building, together with a small square at one side with a kiosk.

Sierra de Órganos (Mountain Range of Órganos)

This natural site is seen to have constituted the 'frontier' between the Kingdom of Nueva Galicia and Nueva Vizcaya on the route between the mines of Sombrerete and the Hacienda of San Antonio de Muleros in Durango.

Architectonic ensemble of Town of Chalchihuites

The nominated area covers four buildings: two churches, including a Franciscan temple, and two civil buildings of this former mining town which produced modest amounts of silver from the late 16th century to the end of the 18th century.

Stretch of Camino Real between Ojocaliente and Zacatecas

The segment of the road covers around one kilometre and stretches between the presidio of Palmillas and the College of Propoganda Fide of Guadalupe. The surface was of stone boulders in rammed earth and many

boulders are still visible. This construction was characteristic of the area south of Zacatecas.

Cave of Ávalos

The cave is situated approximately 30km south-east of Zacatecas. Inside the cave are rock paintings, and many of the around ninety images depict horsemen and lassoed quadrupeds.

Historic Centre of Zacatecas (World Heritage site, inscribed 1993)

The historic centre was inscribed under criteria (ii) and (iv). Founded in 1546 after the discovery of a rich silver lode, Zacatecas reached the height of its prosperity in the 16th and 17th centuries. Built on the steep slopes of a narrow valley, the town has many old buildings, both religious and civil. The cathedral, built between 1730 and 1760, dominates the centre of the town. It is notable for its harmonious design and the Baroque profusion of its façades, where European and indigenous decorative elements are found side by side. The silver mines were so extensive that by 1550 there were 34 mines in operation. None of the mines are included in the inscribed property.

9. SAN LUIS POTOSÍ

Historic centre of City of San Luis Potosí (nominated as part of The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí nomination and in the process of evaluation)

The mining town of San Luis Potosí is located on the central plateau of Mexico, in a semi-desert region. Its foundation and development are entirely linked to the working of the silver mines. The mines are widely scattered over the area.

The nominated property follows the boundaries of the historic town, particularly for the architectural value of its main monuments presented as evidence of mining wealth. The silver mines are not included in the nominated area.

10. DURANGO

Chapel of San Antonio of Former hacienda of Juana Guerra

The chapel, main house and mill survive, alongside the Pan American highway, but only the chapel is in the nominated area. This dates from 1795 and has a handsome doorcase and facade which relates it stylistically to the Franciscan convent of Guadalupe in Zacatecas.

Temples in Town of Nombre de Dios

The nominated area consists of two temples and an adjoining road, and also three smaller chapels separated from the road. The parish church of San Pedro Apostil was rebuilt in the 19th century but keeping the plain 18th century facade. It is constructed of adobe with ashlar at the corners. The Franciscan convent in the town was not wealthy and the buildings were modest in size and

materials. What survives is its church, a roofless structure constructed around 1720. Its walls are of adobe with a stone porch. The three smaller structures are the Temple of Jesus Nazareno, the Hermitage of la Natividad and the Sanctuary of the Virgin of Guadalupe – all simple 18th century buildings built of adobe.

Former hacienda of San Diego de Navacoyán and Puente del Diablo (Devil's Bridge)

What survives are the late 18th century chapel, with the coffered ceiling of the apse rising over the nave, the early 19th century main house, and a nearby bridge across the river, constructed in 1782. This twelve arched bridge was in two parts to allow it carry both a road and an aqueduct.

Historic centre of City of Durango

Durango was the civil and ecclesiastical centre of Nueva Vizcaya and the Bishopric of Durango, during the colonial period. The nominated area covers 39 blocks in the centre of the city, around the large Baroque Cathedral which was started in 1695 and completed in 1788. Its construction prompted architectural activity in the city not seen before to the north of Zacatecas. Its interior of three naves and dome, was remodelled in the 19th in a neo-classical style. Within the nominated area are also two small 18th century sanctuaries, the early 18th century Hospital of los Santos Cosme y Damian and temple of San Juan de Dihe, the 18th century parish church and two 19th century churches. The civil architecture mainly reflects the rebuilding of the late 18th century in late Baroque style and includes the House of the Conde del Valle de Suchi built in 1763, which, with its distinctive carved decoration, is considered to be the best example of civil architecture in the north of Mexico.

Temples in Town of Cuencamé and Cristo de Mapimí

This was a key mining area until the discovery of Parral in 1631. It had a revival in the 18th century but was never a wealthy place. The simple parish church was built in 1720 and has remained largely unchanged, apart from the render being removed. It has the characteristic apse that rises on the main nave. The Chapel of the Virgen de la Soledad is also a simple construction with wooden ceiling, for which no date is given; the Sanctuary of the Virgin of Guadalupe was probably constructed in the early 19th century. Cuencamé is renowned for the miraculous image of the Cristo y Señor de Mapimí and the annual pilgrimage, processions and dances associated with it.

Chapel of Refugio of the former hacienda of Cuatillos

The small chapel, now with its render removed, was part of a hacienda for travellers on the road across the semi-desert of Naranga. It was constructed in 1791. There is also a treadmill in the nominated area. The hacienda, now damaged, is in the buffer zone.

Temple of Town of San José de Avino

The temple is in the centre of the small town that grew up around the mines of Avino and San Lucas. It was raised by the proprietor of the mines possibly in the early

18th century. Inside the simple building is an elaborate gilded altarpiece mentioned in 1759.

Chapel of former hacienda of La Inmaculada Concepción de Palmitos de Arriba

This agricultural hacienda was used by travellers between Durango and Parral. The hacienda is now in ruins in the proposed buffer zone. The small church was rebuilt in 1856.

Chapel of former hacienda of La Limpia Concepción de Palmitos de Abajo (Huichapa)

This agricultural hacienda was also used by travellers between Durango and Parral. The hacienda is now in ruins in the proposed buffer zone. The small church was probably built in 1760 of adobe. The coffered ceiling of the apse rises over the nave. It too has an elaborate altarpiece, although smaller than Avino.

Architectonic ensemble of Town of Nazas

This group of eight buildings, one chapel and the remaining civil, is in the centre of this small town, located next to the ford across the Nazas river. The church was rebuilt after a fire in 1820 and its facade dates from 1901. Around the church are one storey houses and a hacienda, reflecting mid 19th century prosperity and with distinctive undulating cornices.

Town of San Pedro del Gallo

The nominated area consists of the church and surrounding domestic buildings, mainly to its south. The substantial church was constructed in 1783 and the tower and probably part of the portal remodelled in 1894. The houses are a homogenous ensemble of single storey buildings.

Architectonic ensemble of Town of Mapimi

The ensemble consists of the church and five neighbouring buildings. The town was founded to exploit the nearby mines. It suffered from severe unrest from the local population and was at various times abandoned. It nevertheless had a period of prosperity from the end of the 18th century. The current church dates from 1870. The houses mainly date from the 19th century and early 20th centuries and have the local undulating cornices. The mines are not included.

Town of Indé

Twelve buildings in the centre of the town form the nominated area of which one is a church. The town was founded to work the nearby mines which produced modest prosperity in the 19th century. The church was rebuilt in 1944-5; the houses, around from a homogeneous group of similar forms. The mines are not included.

Chapel of San Mateo of former hacienda of La Zarca

The hacienda was a stopping place for travellers and also a focus for the seasonal movement of sheep from New Mexico to the south. The current buildings of chapel and hacienda in neo-classical style date from 1890.

Former hacienda of Limpia Concepción of El Canutillo

This rich hacienda was linked to the mines of Parral. The present buildings date from around 1784. The church was reconstructed in 1980. The house is now a museum.

Temple of San Miguel of Town of Villa Ocampo

The temple was constructed in 1736. Its coffered ceiling and the way the apse rises on the main nave is a practice found also in Avino, Huichapa, Nombre de Dios, Cuencamé, and Navacoyan.

Stretch of Camino Real between Nazas and San Pedro del Gallo

This 64km stretch is the longest that has been preserved. It crosses a semi-desert area between the Nazas river and the old Presidio of San Pedro del Gallo. Two southern sections converge at Puerto de la Vaquilla and from there, there is a single route to San Padre del Gallo. This section is unpaved

Mine of Ojuela

This mine was closely linked to that of Mapimi. At the height of its prosperity it had 35 shafts. In the 1890s the production was modernised and a railway and suspension bridge introduced. The bridge has recently been rebuilt. The mining town nearby is now a ghost town, having been abandoned in 1931.

Cave of Las Mulas de Molino

This cave has an extensive group of paintings with black pigment. They display hunting, cattle breeding, mule trains, scenes of war and emblematic animals. Some figures are shown wearing hats that can be dated to the end of the 16th and early 17th centuries, suggesting these as the dates for the paintings.

11. CHIHUAHUA

Town of Valle de Allende

Established in the second half of the 16th century, the town became a Franciscan convent in 1570. The town has a formal layout with streets and canals making up its urban axes. The discovery of the mine at Parral brought prosperity and a church was constructed in 1638. The current church, the Temple of the Parish of San Bartolomeo, dates from 1788 and its doorcase and other stonework are the work of master mason, Nicolás Morín, who also worked on Chihuahua Cathedral (not nominated) and that of Durango.

The nominated area includes 66 buildings – but other than the church these are not described.

The State Party indicates in the nomination dossier that, in future, the boundaries of the property could be extended inside Mexican territory to include 36 further sites (listed in the nomination dossier), secondary routes, and also routes for salt and transhumant cattle, and that a trans-frontier nomination might also be put forward to include towns on part of the route in the United States of America.

History and development

The Camino Real de Tierra Adentro developed to serve the great mining initiatives in northern Mexico during the Spanish colonial period, with attendant farming, grazing and military support for mining activities. Concurrently, evangelists devoted themselves to the spiritual life of indigenous people and settlers who accompanied the mining process.

In the early stages the Camino Real de Tierra Adentro was not fixed in all its points and tracts. Even in later years it was not one fixed route, but can be seen as a gradual development of routes that linked what is now Mexico City to the remoter areas of the north where the mines and new towns were created. And along these routes, since the 16th century were planned development of forts, towns and haciendas to protect the routes.

The discovery of the mines of Zacatecas in 1546 was the fundamental starting point for this process, since it was indispensable to protect people and to guarantee the safe delivery of silver, mercury and the goods that were essential to supply the needs of the mining towns.

The wealth of the American North was exploited by conquerors, clerics and traders from Spain between 16th and 19th centuries. The first stages of the route linked the mines of Zacatecas, Guanajuato and San Luis Potosí to the city of México, capital of the viceroyalty of Nueva España.

The Camino Real de Tierra Adentro was itself connected, through Mexico City, to stretches of the Intercontinental Camino Real reaching Spanish dominions in the Philippines, Florida, the Antilles and the American South. Mexico City was linked overland to the port of Veracruz, on the Gulf of Mexico, to service the European trade and overland to the port of Acapulco on the Mexican Pacific coast, to link to the Asian trade.

The expansion of the route later continued north to the villa of Santa Fe of the viceroyalty of Nuevo Mexico founded in 1598, today the State of Nuevo Mexico, USA.

In 1552 the mines of Guanajuato were discovered and they quickly led to great wealth. That discovery was followed by the development of mines at San Martín, Fresnillo, Sombrerete, Chalchihuites, Nieves, Mazapil, Indé, Santa Bárbara, Parral and Pinos, all between 1556 and 1604.

Increasing quantities of silver were exported to Spain and large amounts of currency were coined at the Casa de Moneda of México, the first Mint of America, founded in 1535. All this led to a huge growth of international trade, to the monetarisation of the world economy and, in 18th century, one of the first global economic revolutions.

The operation of the Camino Real led to a wide range of architectural, urban, industrial, highway and cultural

development. The intensive silver production, exploration and growth of trade laid the foundations for the *reales de minas* (royal mining camps) and their protective frontier institutions, the *presidios* and *misiones*. New cities exerted administrative, economic, political, religious and regional control to ensure continuity for early Spanish villas, with Indian settlements as essential sources of farm-workers.

Along the route, as it extended through the north of the viceroyalty of Nueva España, landmarks were introduced to signpost the route, especially when far from population nuclei. An understanding of the natural environment and its topography was essential to build safe, controllable roads for all forms of transport, as well as infrastructure for the mercantile traffic - bridges, paving and fords. This reality configured the character of each section of the Camino Real de Tierra Adentro and the propagation of Catholic dogma and the Hispanic language followed the trade.

The route had several periods of prosperity in the 17th and 18th centuries. This prosperity waxed and waned as new mines were discovered, epidemics took hold or there were hostilities. Taking a broad overview, the 16th century was the foundation of all that followed and the settlements and churches built then are of great importance as setting out the way ideas from Spain were modified for the needs of the territory. The late 16th century and early 17th century were periods of great expansion and prosperity in some places when wealthy mines were discovered, and towns were founded, such as Zacatecas which grew rapidly in an unplanned way.

Other towns were set up as staging posts along the road as were forts and land allocated for Spaniards to develop haciendas – in many cases in conjunction with mining activities. The road itself remained mostly unpaved and hazardous and difficult to navigate in wet weather although a few early bridges were created. Planned mining towns followed in the late 17th century such as San Luis Potosí, and these were sited some way from the mines they supported.

The second general period of prosperity, also based on the silver mines, was the second half of the 18th century. During this period money was spent on rebuilding churches – many from adobe to stone, in providing stone bridges over rivers and streams and in enlarging haciendas.

The third general period of prosperity was after the Wars of Independence in the mid 19th century when the opening up of the route into New Mexico led to increased trade with the north, and in a variety of goods, not just silver. Again many churches were rebuilt, as were houses and civil buildings in the towns and cities.

The road began its decline as a conduit for silver with the advent of the railways.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative analysis

The State Party has compared the nominated property with heritage routes now inscribed on the World Heritage List, namely the Routes of Santiago de Compostela (both Spain, listed in 1993, and France, listed in 1998); the Quebrada de Humahuaca (Argentina, 2003); the Incense Route – Desert Cities in the Negev (Israel, 2005) and Sacred Sites and Pilgrimage Routes in the Kii Mountain Range (Japan, 2004). It concludes that each offers evidence of the vocation from which it originated and represents specific functions such as pilgrimage. Relatively, in the mercantile, rural and mining fields, the Camino Real de Tierra Adentro is seen as the most important enterprise of the Spanish Crown and developed urbanisation to the greatest extent then known on the American continent.

ICOMOS notes that what has not been offered are comparisons with other colonial cultural and trade routes of European powers, such as Portugal, Holland or Britain – not yet inscribed on the World Heritage List. However, ICOMOS recognises that no other European colonial power developed such an extent and complex network of communication routes as Spain did in the Americas between the 15th and 19th centuries. No comparisons are provided with empires such as Rome or the Ottoman Empire, both of which developed vast networks of routes, though they are part of quite different geo cultural contexts.

Whilst recognising the Camino Real de Tierra Adentro as one of the most important portions of the colonial routes in the Americas, ICOMOS considers that the comparative analysis could be strengthened in order to establish the importance of the property in the framework of the Spanish Royal Intercontinental Route.

ICOMOS considers that the comparative analysis could be strengthened to better explain the importance of the property in the framework of the Spanish Royal Intercontinental Route.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Camino Real de Tierra Adentro (Royal Inland Road) is one of the most important cultural routes in history, as a branch of the dynamic Spanish Intercontinental Camino Real. Its scale is extraordinary, extending over 2,600 km, and it lasted for over three hundred years, creating direct links between several migratory and indigenous cultures (principally the Spanish and the Amerindian).

- While the initial objective of the Camino Real de Tierra Adentro was the discovery of mines in the American territories of Nueva España, Nueva Galicia and Nueva Vizcaya, it led to a general penetration of the territory and construction of essential infrastructure. The exploitation of silver, led to the foundation of agricultural estates, towns of Indians, garrisons for the protection of the roads and religious missions. In addition large numbers of cattle were domesticated, and settlements of muleteers developed. Master builders and architects also spread ideas and news, offering their skills to communities living on the prosperity of the mining towns.
- The cultural expression of the Peninsular, of creoles, mestizos and of pure Indians is evident along the Route. The rock art created by semi-nomadic Indians provides evidence of the Europeans' occupation of the northern territory and illustrates the dynamics of the Camino Real.
- The use of the Camino was intense and is evidenced by fort houses, garrisons, missions, chapels, cathedrals, convents, schools, hospitals, farm estates, roadside inns, taverns, towns, villas, cities, royal mining camps, strongholds and houses, bridges, fords, vestiges of the road and indigenous rock art of the vice-regal time. The importance of the Cultural Route is understood through the itemized reading of these substantial and tangible elements.
- The Camino Real is a network of cultural, social, ethnic, scientific, economic, biological, architectural and artistic experiences. The communities along it, within Mexico and beyond its frontier, have material and spiritual values that have been preserved as a rich and varied inheritance responsible for promoting development and extending bridges to other cultures without diminishing their own. Language, traditions, built heritage, libraries, archives, painting, music, architecture, landscaping, the fusion of cultures all suggest the civilizing process of the Camino.

ICOMOS considers that the Camino Real de Tierra Adentro was an extraordinary phenomena as a communication channel that was developed comparatively quickly from 1520 to open up the mines and then to facilitate the safe transport of silver between the new mines of the north, and what is now Mexico City and then beyond to the coast and onwards to Spain, and for the safe transport of mercury – an essential component of the amalgamation process, from Spain to the mines. Silver was the driving force that generated the wealth and commitment of the Spanish Government and the will of colonists to 'open up' the northern territory for mining, to establish the necessary towns for workers, and to build the forts, haciendas, and churches. The church came behind as a supporter of the overall process.

The impact of the road was enormous in terms of social tensions as well as ultimately social integration between the many people that came to be involved in the economic development – Spaniards, free mulattos,

Indians of repartimiento, free Indians of the centre of the viceroyalty (Mexicans, Tarascos, etc.), black slaves and mulattos – as described in the nomination dossier.

The development went far beyond mining to encompass cattle ranching, agriculture, architecture and other arts – all largely underpinned by the demand for silver in Spain.

ICOMOS notes that the justification provided is for the route itself rather than for the collection of sites that have been nominated. On the basis of paragraph 25 (iv) of Annex 3 of the *Operational Guidelines*, the identification of a cultural route is based on a collection of tangible elements, testimony of the significance of the route itself. Whilst recognising that the nominated sites express the importance of the route as a whole, ICOMOS considers that the links between these sites and the route could be stressed in order to better illustrate the outstanding universal value of the property.

At the same time, in the nomination dossier it is stated that in future sites will be nominated that reflect not just silver mining but also the ancillary salt and cattle routes. ICOMOS does not consider that all the manifestations of all the secondary trades related to the silver trade will necessarily be able to demonstrate their links to the Outstanding Universal Value of the primary silver route.

What is also not clear from the justification is how the five existing World Heritage sites relate to this current nomination. In some cases the justification for their inscription does not relate to their position along the road and includes areas that reflect other quite separate periods of history. Any association between existing World Heritage sites needs to be set out more clearly to show whether the whole of the inscribed area is being considered and how they relate to the road. The link between some of these properties and the nominated *Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí* serial property also needs to be considered, as in that nomination it is suggested that in the future the property could be extended to include both Zacatecas and Guanajuato.

ICOMOS recognises the Outstanding Universal Value of the Camino Real de Tierra Adentro but considers that a stronger justification of the selection of sites that make up the serial nomination is needed.

Integrity and Authenticity

Integrity

Integrity needs to be considered in terms of how individual components relate to the justification of Outstanding Universal Value and of whether any are at risk.

All the components are nominated as one property in which the components together are seen to be necessary for the justification of the Outstanding Universal Value. The Outstanding Universal Value has

been justified more in terms of the importance and influence of the overall route, rather than in terms of the way the series of nominated assets conveys the influence of the route.

ICOMOS recognises that the sites that make up the serial nomination illustrate the variety of functions and urban and architectural typologies linked to the route. As set out before, further justification on the pertinence of the selection of sites is needed in order to better establish the conditions of Integrity of the property.

In relation of the wholeness and intactness of the selected sites, ICOMOS considers that further justification of the definition of the boundaries of the nominated sites and buffer zones is needed.

Authenticity

ICOMOS considers that the authenticity of the individual nominated properties along the Camino Real de Tierra Adentro relates to the way they manifest attributes that contribute to the Outstanding Universal Value. This is not clearly set out in the nomination in terms of how the sites might be seen as essential attributes and how they contribute in a substantial way the Outstanding Universal Value.

ICOMOS considers that the conditions of integrity and authenticity could be justified on the basis of Paragraph 25 (iv) of Annex 3 of the *Operational Guidelines* but further justification on the selection of the nominated sites and of their boundaries is needed.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design;

This criterion is justified by the State Party on the grounds that the Camino Real de Tierra Adentro was the first terrestrial route traced by the Spaniards in the "Indies", today the Americas. With its mercantile objective, it became one of the most important routes to bond the Spanish Crown with its northern domains, rich in gold and silver. Along it lies tangible evidence of work in mines and haciendas, merchant trading, military, evangelism and the administrative structure designed to control the immense Indian territory from the Spanish metropolitan hub, but adapted, of necessity, to the local environment, materials and technical practices.

There is intangible evidence too of the interchange - in language, music, the arts, crafts, customs and religious practices. The metropolis bonded with the broad territories of the viceroyalty of Nueva España, through

the exchange of products, including biological diversity not present in America and Europe at the time and the “tornaviaje” of ships loaded with silver, ideas, techniques and cultural objects. This interchange occurred through the Spanish Camino Real Intercontinental (of which the Camino Real de Tierra Adentro was a significant branch), exchanging native customs of four continents, taken back and forth by the endless traffic of people devoted to trade, enterprise, religion, politics, militia and construction.

ICOMOS considers that the Camino Real de Tierra Adentro has the capacity to exhibit an important interchange of human values, over three centuries, within the cultural area of North America, on developments in architecture, engineering technology, town planning and more, such as religious, military, agricultural and farming practices. However what needs to be more clearly defined is the precise way each of the nominated serial sites may be seen as attributes that convey the interchange.

ICOMOS considers that this criterion could be justified if a stronger justification on how the nominated sites that make up the series contribute to the outstanding universal value of the property be provided.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the Cultural Route of the Camino Real de Tierra Adentro is one of the most important sections of the Spanish Intercontinental Camino Real, as evidenced by convents, colleges, missions, chapels, parish churches, sanctuaries, cathedrals, hospitals, haciendas, presidios and signorial houses, built along the network of roads.

Initially, construction systems and styles that evolved on the Iberian Peninsula were repeated in Nueva España. However, after a short period of adaptation, an amalgamation of European and native traditions merged into a new and unique architectural expression. In each region of northern México, civil, religious and industrial architecture reflects its relationship with its geographical context and with stylistic canons of the cities of the centre-south and the Spanish metropolis.

Peninsular and Creole Spaniards, as well as mestizos, needed to adapt to the environment, building roads that best fitted the location. Infrastructure, in the form of stone paving, bridges, fords, cuttings and landmarks, along the Camino Real de Tierra Adentro eased the journey for the traffic of droves of mules or convoys of oxen.

The Camino Real de Tierra Adentro represents a deliberate, well structured communication system that intertwined cultural bonds and enabled the transfer of

architectural aspects of the Baroque, neoclassicism and eclecticism. The influence of creative architects extended to the northernmost towns.

ICOMOS considers that the Camino Real de Tierra Adentro has the capacity to be seen as an outstanding example of a cultural route, which includes along its length outstanding examples of buildings, architectural and technological ensembles that illustrate a significant stage in human history - the Spanish colonial exploitation of silver and the transformation of associated rural and urban landscapes. However what needs to be more clearly defined is the precise way each of the nominated serial sites may be seen as attributes that contribute to conveying the significance of the route as a reflection of a period in history.

ICOMOS considers that this criterion could be justified if a stronger justification is provided as to how the nominated sites that make up the series contribute to the outstanding universal value of the property

ICOMOS considers that the criteria and Outstanding Universal Value of the property could be better demonstrated by providing a stronger justification of how the nominated sites contribute to the outstanding universal value of the property as a whole.

4. FACTORS AFFECTING THE PROPERTY

ICOMOS is satisfied that the identification by the State Party of factors affecting each of the ten States along the 1,400km length of the Camino Real de Tierra Adentro and each of the specifically nominated properties is accurate. The evidence provided in the nomination dossier is detailed and clear. Certain broad issues arise and are summarised under the headings below.

Development pressures

Population decline in the northernmost states has led to stagnation and neglect, while in other states there are sharp rises of population in urban areas, as in the City of Durango, placing heavy pressure on fragile historic areas and introducing new activities into historic landscapes.

The most distorting factor for the route itself is the overlapping of new roads over remnant stretches and bridges and the lack of protection along its length, for example, on the stretch of road between the bridge of La Colmena and the Former Hacienda of La Cañada and that of Lagos de Moreno, which has intense traffic.

Tourism pressures

While in many parts of the extensive nominated property tourism numbers are small, visitation may affect some more popular archaeological sites.

Environmental pressures

In some areas, sudden changes in water and weather patterns have the potential to cause abrupt flooding. Arid areas are also vulnerable to wildfire.

Natural disasters

The route is so extensive that it travels through both earthquake and flood prone zones.

Impact of climate change

The route is extensive and the impacts will vary for the distinct bio-regions it crosses. An intensification of environmental pressures and natural disasters is predicted.

ICOMOS considers that the main threats to the property are those of inadequately controlled development, including the overlapping of new roads over historic remnants of the route, the disturbance of landscape settings and physical neglect on privately owned property.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

Since the property is nominated on the basis of a collection of tangible components, no general buffer has been created for the continuum of the route, but rather separate buffer zones are described and mapped for the series of nominated properties by which the property is described.

With the exception of the Protective Town of San Miguel and Sanctuary of Jesús Nazareno Atotonilco, the properties in the series, that are already inscribed World Heritage sites, are identified by nominated areas alone, namely the Historic Centre of City of México; the Historic Centre of City of Querétaro; the Historic Centre of City of Guanajuato and adjacent mines and the Historic Centre of the City of Zacatecas.

ICOMOS considers that the buffer zones identified for most of the properties are both appropriate and adequate. ICOMOS has noted above that the boundaries separate hacienda churches from haciendas and in places are difficult to 'read' in an urban context, with small churches being separated from their urban context.

Many of the sites of the nomination are dependent on landscape structures far beyond the buffer zone. Future impacts to those larger landscapes may adversely impact the nominated sites over time. There is a need to define the settings of the sites beyond the buffer zones, including views, and to consider appropriate protection.

ICOMOS considers that generally the boundaries of the nominated areas and buffer zones are adequate. Nevertheless, ICOMOS invites the State Party to consider the definition and protection of settings, especially in the case of landscape related to the nominated sites.

Ownership

Ownership of the sixty nominated properties along the route varies from Federal to State to Municipal to private. The small State of Hidalgo provides an example of that distribution. It has two properties nominated within it:

- In the former Convent of San Francisco in Tepeji del Río and bridge, both the Convent of San Francisco and the bridge are in Federal ownership.
- For the Stretch of Camino Real between bridge of La Colmena and former hacienda of La Cañada, the bridges of Colmena, Tautla, La Cañada and the Temple of Santiago de Tautla are in Federal ownership; the Estate of Cañada is privately owned and the Town Square (in front of the temple of Santiago) is in Municipal ownership.

Protection

Legal Protection

Articles under the Political Constitution of the United States of Mexico (specifically 25, 26, 27, 73 and 115) set out the legal grounds and responsibilities for urban planning and development across the three levels of government concerned – federal, state and municipal. These responsibilities include heritage protection. Of relevance are three general laws that support this legal framework – the General Law of Human Settlements; the General Law of Ecological Equilibrium and Environmental Protection and the General Population Law.

Further, also at federal level, a new law is proposed for the Protection of Cultural Routes, enabling the declaration of cultural routes such as the Camino Real de Tierra Adentro. ICOMOS notes that, relevantly, the United States of America, in 2000, under Public Law 106-307 of the 106th Congress enacted an 'Act to amend the National Trails System Act to designate El Camino Real de Tierra Adentro as a National Historic Trail'.

The states, through which the Camino Real de Tierra Adentro runs, have independent laws on human settlements, urban development, territorial demarcation and tourism. They commonly include provisions for heritage conservation.

There are several notable properties, located in nominated areas, that are privately owned and in jurisdictions where no municipal preservation ordinance exists.

The nomination dossier is very specific about noting the ownership of each site and identifying the protections offered by federal, state or municipal laws. In instances where there is no protection measure available, the dossier makes specific references for possible protection measures or suggests alternative options for consideration. If the policies or recommended actions of the nomination dossier are undertaken as noted, the nomination sites should be sufficiently protected. An example is the Mine of Ojuela that is privately owned and the nomination dossier notes that the site is “*lacking of measures*” for local protection. The nomination dossier recommends the Municipality of Mapimi work with the State Institute of Urban Development and the State Institute of Culture to develop necessary protection measures.

In terms of archaeology, the sites and particularly the road itself are less well protected. Archaeological investigations of the cultural route, in general, appears to be limited due to laws and policies that favor pre-Hispanic sites and more traditionally acknowledged sites such as churches, haciendas, etc. Several parts of the route appear to have been re-surfaced or re-aligned without any archaeological investigation.

ICOMOS recommends that the State Party give consideration to review laws and policies regarding archaeological investigations to ensure that the maximum opportunities to learn about the conveyance of people and ideas over the Camino Real de Tierra Adentro are supported by archaeological investigation.

Traditional Protection

The community and authorities acknowledge the value of traditional protection, but its application is uncertain.

Effectiveness of protection measures

There is to date no specific protection for the overall route but, for the many components that have protection that is both appropriate and effective. The documentation provided by the State Party on protective measures for the nominated properties within each of the ten states includes a column headed ‘Suggestions’. ICOMOS considers that those suggestions are well-founded and require action. In addition, no further overlapping of new routes on existing stretches and bridges of the Camino Real de Tierra Adentro should be permitted, with controls over both vehicular traffic and the uses of immediately adjoining buildings.

ICOMOS considers that considerable legal protection is in place and that the protective measures for the protected sites are generally adequate. ICOMOS invites the State Party to continue its work of extending legal protection and protective measures to all the nominated sites.

Conservation

Inventories, recording, research

The centres of National Anthropology and History Institute (CINAH) throughout the route have different projects on its tangible and intangible heritage. Among them are:

- CINAH Aguascalientes, a historical essay
- CINAH Chihuahua, Catalogue of Documentary Sources
- CINAH Durango, Tangible Heritage
- CINAH Guanajuato, Terms of Reference for the Project of the Camino Real
- CINAH Zacatecas, Inter-relation of the ornamental and iconographic typologies of the religious architecture in the Camino Real.

Each state has an historical monument catalogue, which includes an evaluation of the state of conservation of the property and the construction date and is regularly updated.

Present state of conservation

ICOMOS considers that the conservation condition of most of the 60 nominated properties is generally good. It is satisfied that the detailed comments by the State Party on the very varied conditions in each of the ten States and on the state of conservation for each identified property are accurate.

Certain broad issues arise – for instance, the problem of population decline and consequent neglect of maintenance for built structures prevails in the northernmost states. Also, the former haciendas are at risk of suffering considerable damage, with annexed constructions in bad condition and, as private property, have insufficient protection. Some bridges need repairs to parapets.

There are also problems with the conservation of the historic surfaces of the road in some places, such as near Zacatecas. Small trees are growing in the historic roadbed. Over time their roots will damage and destroy the historic pavement stones. ICOMOS recommends that conservation guidance is provided from representatives of INAH to ensure that all actions and activities undertaken best preserve and protect the historic roadbed.

Active Conservation measures

Examples are several professional rehabilitation and restoration projects at different stages of implementation, such as the conversion of the former hacienda Pabellon de Hidalgo into the Museo de la Insurgencia or the restoration of the cloister of the former college of Nuestra Señora de Guadalupe.

Maintenance

Maintenance is generally adequate on the series of properties selected to represent the Camino Real de Tierra Adentro.

Effectiveness of conservation measures

Conservation measures are generally adequate on the series of properties selected to represent the Camino Real de Tierra Adentro that are in one of the three levels of government ownership. Some privately owned properties lack effective conservation measures.

In its stretches through open countryside, the route is affected by changes to its natural landscape, which acts as context and visual guide and displays the different geographical characteristics of the route. Although preventive measures have been stipulated, road stretches and bridges continue to be the least protected components of the nominated property.

ICOMOS considers that conservation conditions and measures are generally satisfactory, with no urgent measures needed.

Management

Management structures and processes, including traditional management processes

The National Anthropology and History Institute (INAH) has four substantive responsibilities: protection and conservation of cultural heritage; cultural investigation; promotion of cultural heritage and professional formation.

The nomination dossier sets out the management arrangements for each of the ten States concerned as well as describing the factors affecting each specifically identified property.

Policy framework: management plans and arrangements, including visitor management and presentation

The Project for a Management Plan for the Camino Real de Tierra Adentro has been envisaged by accord since 1994 and is supported by INAH. It has led to various activities - symposia and research on regional bases, such as the region of southern Zacatecas with Aguascalientes or the region of North Durango with

South Chihuahua. In 2009, a further workshop was held in the City of Durango. Commitments have been at the three levels of government to establish a Trust for monitoring and financial management purposes, to be chaired by a state government representative.

Many sites are not visitor ready (lacking paved roads, toilets and basic site identification) and others (caves of rock art and some religious sites) are sensitive or fragile. ICOMOS recommends that the State Party develop a Comprehensive Visitor Management Plan addressing the marketing and presentation of CRTA sites, visitor readiness and carrying capacity of sites, authorized centers for the dissemination of visitor information for the cultural route, and a comprehensive plan for site interpretation.

Risk preparedness

No formal specific risk preparedness measures are identified.

Involvement of the local communities

The nomination dossier stresses the link between the settlements along the route and the expressions of local communities and sees cultural tourism that might flow from inscription as a benefit to local communities.

Resources, including staffing levels, expertise and training

Because of the extreme geographic and socio-economic diversity along the length of the route, human and financial resources available to the 60 nominated properties are equally diverse. ICOMOS supports strategies outlined in the nomination dossier to overcome shortages. Mexico is well served on human resources in terms of academic, intellectual and professional expertise in the fields required to competently administer the components.

Effectiveness of current management

ICOMOS considers that, for such a complex serial property, the management systems for the majority of its nominated components are adequate. ICOMOS also considers that the overview role of the National Anthropology and History Institute (INAH) is appropriate. In the supplementary material provided, the State Party has indicated that the National Conference of Governors has committed to support the project of the Camino Real de Tierra Adentro through the formation of a coordinating work group.

There is as yet, however, no overall coordinated formal management formal framework for all components.

ICOMOS considers that management for the individual nominated components is adequate. ICOMOS recommends completion and implementation of the Management Plan for the Camino Real de Tierra

Adentro project and the establishment of an overall coordinated management mechanism, as requested by paragraph 114 of the *Operational guidelines for the Implementation of the World Heritage Convention*. ICOMOS also recommends that a Comprehensive Visitor Management Plan be developed.

6. MONITORING

The State Party identifies three general criteria for elaborating the key indicators:

- The Camino Real de Tierra Adentro has been a seed for social, economic and cultural innovation, therefore inhabitants and government must take charge of its protection, conservation, promotion and management as a whole;
- The material wealth of its 60 sites is considered an element to promote sustainable regional development;
- Communities are to express the valuable immaterial diversity, the legacy of cultural exchange, in order to reaffirm local and regional identities.

ICOMOS considers that the key indicators presented by the State Party are appropriate and effective monitoring periods have been defined. They are grouped under the headings of Territorial; Urban; Architectural; Environmental Landscaping; Social; Cultural and Historic.

At Federal government level the National Institute of Anthropology and History (INAH) is responsible for monitoring, conservation and restoration of cultural property through its Directorate of World Heritage and its State level INAH centres, which coordinate monuments, archaeology, anthropology, permits and research on cultural heritage.

Each state has an historical monument catalogue, which includes an evaluation of the state of conservation of the property and the construction date.

ICOMOS considers that the monitoring processes put in place are appropriate.

7. CONCLUSIONS

ICOMOS considers that what underpins the Camino Real de Tierra Adentro was the international silver trade and its association with the trade in mercury. Furthermore this trade was linked closely to deliberate planned colonisation of the northern territories.

The outcome of this highly profitable process was the development of mines, and the construction of the road and bridges, the establishment of multi-ethnic towns, with elaborate buildings that reflect a fusion of Spanish

and local decoration, an agricultural revolution in the countryside centred on large hacienda estates with churches, many under the control of the church, the irrigation of land and the improvement of pasture, and the movement of peoples up and down the road, facilitated to a great degree initially by settlements of muleteers, all of which led to the development of a distinctive culture along the route. Ultimately the wealth of silver led to massive economic development in Spain and other parts of Europe and a period of great economic inflation.

The time span, during which the route was built distinctively on the wealth of silver mining, spans from the 1520s to the time when the Spanish Empire ceased to have the monopoly of the silver trade in Mexico and Peru and when other mines in North America were developed.

In terms of selecting properties for nomination either singly or in groups, ICOMOS considers that a clearer rationale needs to be set out for how each site can be said to contribute necessary attributes of Outstanding Universal Value in a substantial way.

Some of the sites proposed in the current nomination would seem to have the capacity to contribute to a more clearly defined route, as they contribute a specific attribute - such as the remains of the route; the five arched 16th century bridge of La Quemada. For other sites, the rationale for their selection is not quite clear - such as how the 18th century bridges have been chosen and whether all are needed, how one building of a former hacienda can be seen to reflect the importance of the hacienda process. It would be helpful to set out the range of attributes that are considered necessary to convey Outstanding Universal Value as a basis for deciding which sites might be seen as exemplars.

How the nominated property relates to the five existing World Heritage sites is not entirely clear. The Statements of OUV for the individually inscribed properties will not be the same as for the Camino Real de Tierra Adentro if it is inscribed. ICOMOS therefore considers that these properties need to remain separate from any serial inscription of the cultural route, although clearly linked to its development.

ICOMOS also considers that there needs to be clarity over links between the Camino Real de Tierra Adentro, as a Silver Route, and *The Mercury and Silver Binomial*, *Almadén, Idrija and San Luis Potosí* nomination that is related to other nominated sites.

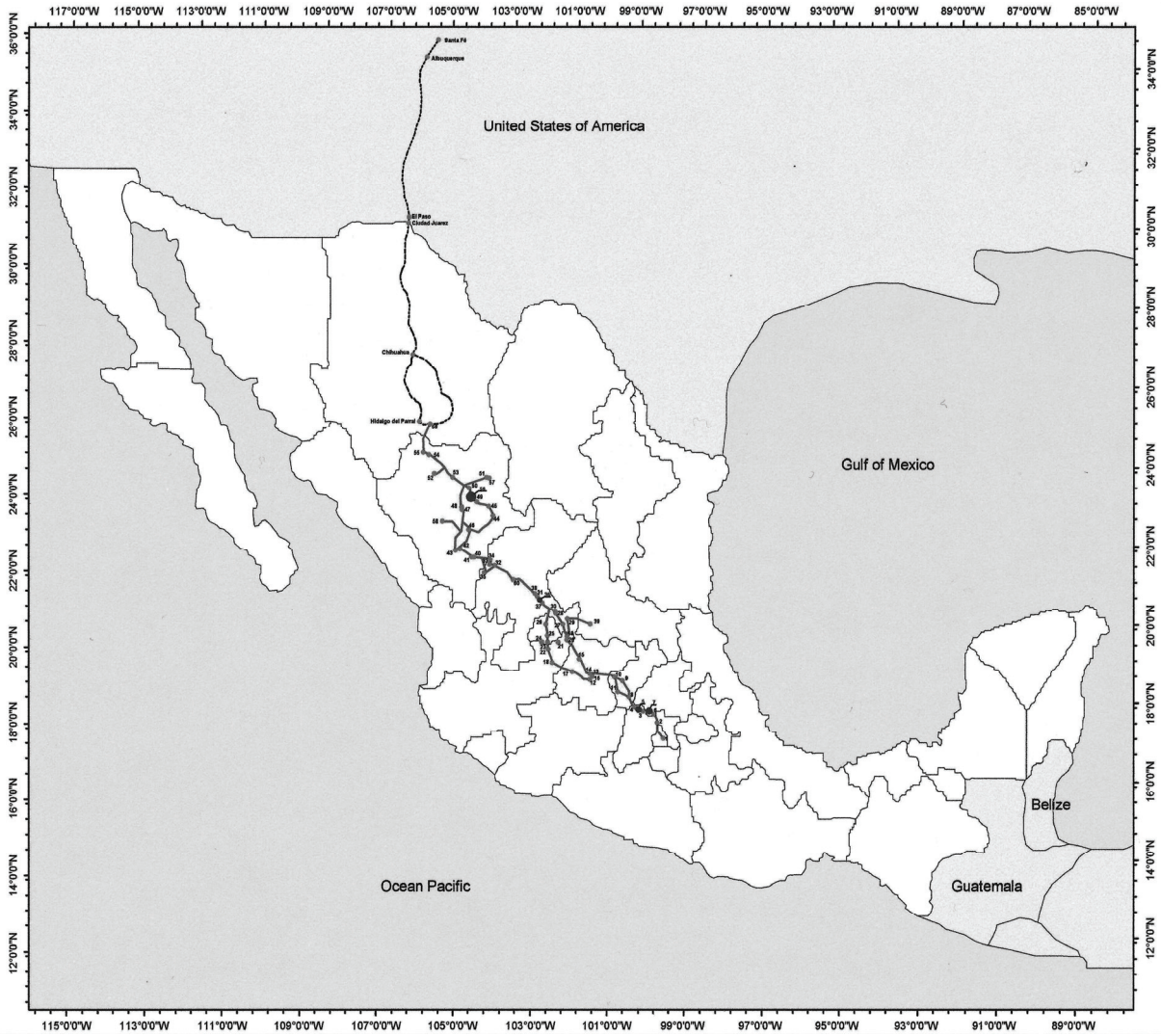
Extensive serial nominations such as this one cannot in ICOMOS's view be open ended and have to be put forward on the basis of a tightly chosen selection that can be justified on the basis of an ensemble of sufficient attributes rather than an extensive catalogue of attributes where the end is not defined. There is therefore a need for a more structured approach that clearly sets out how and why a combination of sites

might reflect the distinctive significance of the Camino Real de Tierra Adentro and how these sites have been chosen to be exemplars of certain manifestations of the route.

Recommendations with respect to inscription

ICOMOS recommends that the nomination of Camino Real de Tierra Adentro, Mexico, be **referred back** to the State Party in order to allow it to:

- Strengthen the comparative analysis in order to establish the importance of the Camino Real de Tierra Adentro in the framework of the Spanish Royal Intercontinental Route;
- Further justify the selection of sites that make up the nomination to clearly define how they contribute to conveying the outstanding universal value of the property;
- Define a methodology for choosing sites that might be seen as exemplars of certain facets of the manifestations of the Camino Real de Tierra Adentro;
- Re-consider the inclusion of the five already inscribed World Heritage properties;
- Clarify the relationship between the Camino Real de Tierra Adentro and *The Mercury and Silver Binomial. Almadén, Idrija and San Luis Potosí* nomination;
- Define and protect the setting of the nominated sites beyond the proposed buffer zones when related to landscape structures;
- Put in place legal protection for all the individual sites;
- Establish an overall coordinated management system that encompasses all the sites, as required by paragraph 114 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.



Map showing the location of the nominated properties



Zacatecas, historic ensemble of City of Sombrerete



Historic Centre of Mexico City, church and square of San Agustín



Aguascalientes, former hacienda of Pabellón de Hidalgo



Querétaro, former hacienda of Chichimequillas



Hidalgo, stretch of Camino Real between bridge of La Colmena and former hacienda of La Cañada



Guanajuato, bridge of La Quemada

São Francisco Square in São Cristóvão (Brazil) No 1272

Official name as proposed by the State Party:

The São Francisco Square in São Cristóvão Town

Location:

São Cristóvão
State of Sergipe

Brief description:

São Francisco Square, in the town of São Cristóvão, is a quadrilateral open space surrounded by substantial early buildings such as São Francisco Church and convent, the Church and Santa Casa da Misericórdia, the Provincial Palace and the associated houses of different historical periods surrounding the Square. This monumental ensemble, together with the surrounding 18th and 19th century houses, creates an urban landscape which reflects the history of the town since its origin. The Franciscan complex is an example of the typical architecture of the religious order developed in north-eastern Brazil.

Category of property:

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a *group of buildings*.

1. BASIC DATA

Included in the Tentative List: 6 September 1996
(as Franciscan Convents of Northeast Brazil)

International Assistance from the World Heritage Fund for preparing the Nomination: None

Date received by the World Heritage Centre:

21 June 2006
1st February 2010

Background: This is a referred back nomination (32 COM, Quebec, 2008).

A first nomination dossier was examined by the World Heritage Committee at its 32nd session (Quebec, 2008). At the time, ICOMOS recommended to defer the examination of the nomination.

The World Heritage Committee adopted the following decision (Decision: 32 COM 8B.42):

The World Heritage Committee,

1. Having examined Documents WHC-08/32.COM/8B and WHC-08/32.COM/INF.8B1,

2. Refers the nomination of São Francisco Square in São Cristóvão, Brazil, back to the State Party in order to allow it:

a) to reorient the comparative analysis in order to more convincingly demonstrate similarities and differences with other properties in Brazil and in the wider region;

b) reconsider the proposed boundaries of the nominated property in order to include other sectors of the São Cristóvão historic centre that might contribute to the potential Outstanding Universal Value of the property. In determining the boundaries of the nominated area and the buffer zone, it is recommended that the State Party take into account the geographical, historical, urban, architectural and cultural factors that have shaped the structure and the urban landscape of São Cristóvão over the centuries. This could enable a more accurate identification of cultural values and define boundaries of areas that can clearly express them.

3. Recommends, in order to enhance the conservation and management of the property, that:

a) a complete statement on the Integrity and Authenticity should be drafted for this property, based on the values of the property and the various requirements set out in the Operational Guidelines and the Nara Document on Authenticity;

b) more specific protection measures should be approved and implemented at the local level, including the approval of the Urban Planning Code;

c) the State Party should continue to implement and improve conservation programmes to ensure the long term conservation of the property;

d) the management structure and procedures should be improved by the development and implementation of a management plan for the nominated property;

e) the management system of the property should be extended to include a better articulation between the different levels of government, greater participation of community associations and other stakeholders in the development and implementation of plans, visitor management, and the increase, diversification and improved skills of the staff involved in the management of the property;

f) the State Party should define and implement a monitoring system for the long term state of conservation for the property, including key indicators and designation of a monitoring organization.

On February 2010 the State Party submitted a revised nomination that includes:

- A revised statement of integrity and authenticity although this has not separated the two concepts.
- Extracts from various federal laws and a draft code for urban planning.

The boundaries of the nominated area have not been reconsidered. The nominated area on the plan is the same as nominated in 2006, although the nominated area is said to be 3,0ha compared to 62,0ha in 2006. The buffer zone is the same size and the areas agree.

Consultations: ICOMOS consulted its International Scientific Committee on Historic Towns and Villages.

Literature consulted (selection):

Barros, Ana Paula, de Holanda, Frederico and Medeiros, Valério, *The Myth of the Intention: The Portuguese Urban Heritage Overseas* in Koch, Daniel, Marcus, Lars and Steen, Jesper (eds) *Proceedings of the 7th International Space Syntax Symposium*, 2009.

Bazin G., *L'Architecture religieuse Baroque au Brésil*, Paris, 1956.

De Solano F. (Coordinator), *Estudios sobre la ciudad iberoamericana*, Madrid, 1983.

Gutiérrez R., *Arquitectura y Urbanismo en Iberoamérica*, Madrid, 1983.

Kubler G. and Soria M., *Art and architecture in Spain, Portugal and their American dominions*, Baltimore, 1959.

Technical Evaluation Mission: 18-25 August 2007

Additional information requested and received from the State Party: ICOMOS sent a letter to the State Party on 18 January 2008 on the following issues:

- Further justification on the choice of São Francisco Square as emblematic of an historical centre, and further explanation of the reasons which distinguish this square from other ensembles in Brazilian and Latin American historic cities;
- Further demonstration of the specificities of the Franciscan Convent in comparison with other Franciscan complexes in North-Eastern Brazil and the wider Region;
- The time frame for the approval and implementation of the Urban Planning Code for São Cristóvão.

On 22 February 2008 ICOMOS received additional information provided by the State Party on the requested issues.

Date of ICOMOS approval of this report: 17 March 2010

2. THE PROPERTY

Description

The town of São Cristóvão is located 21 km from Aracajú, the capital city of the State of Sergipe. The town is located on the top of a hill next to the Paramopama River. The layout and form of the overall city is seen to reflect a variation to the general rules for the layout of colonial cities laid down by the Spanish King Filipe's Ordinances, in that it has responded to topography and local politico-military interests.

The upper town allows surveillance and protection and is where the headquarters of the civil and religious powers are established; while the lower town houses the harbour, the factories and the low income population.

What has been nominated is São Francisco Square, the main open space in the upper town. It extends to 51metres by 73 metres and is paved with stone slabs. The square is a quadrilateral open space surrounded by the monumental São Francisco Church and convent, the Santa Casa de Misericórdia Church and the Provincial Palace. The architectural ensemble is completed by five houses of the 18th and 19th centuries around the Square.

The nominated property thus consists of the following structures:

- São Francisco Church and convent - Church and Santa Casa da Misericórdia
- The Provincial Palace

These are considered separately:

São Francisco Church and convent

The Franciscan Convent ensemble defines the northern side of the Square, The wide square in front of the convent is considered to be a distinctive feature, not only in São Cristóvão but also taking into account other Franciscan convents and other squares. The monastery was authorised in 1657 and begun in 1693. The cloister has six arcades on each side. It originally housed the Treasury. After being abandoned for many years, it was almost totally reconstructed in 1902. The elements that make up the Franciscan Convent are organised on different levels. The church with the narthex is projected forward in relation to the convent, while the *Ordem Terceira* church constitutes the most recessed built element. This plan sequence contributes to the aesthetic appeal of São Francisco Square. A cross stands in the centre of the Square, its design characteristic of the Franciscan Order.

Church and Santa Casa da Misericórdia

The Church and Santa Casa da Misericórdia form the eastern perimeter and date to the founding of the town. However the current church with a simple facade and

Baroque ornamentation was constructed in the 18th century.

The Provincial Palace

The two-storey building of the former Provincial Palace (now the State Historic Museum) defines the southern boundary of the Square. The precise date of the original building of the palace is not known. It was however reconstructed in 1826, after the independence of Brazil. Until the capital was moved in 1855, it served as the residence for the President of the Province of Sergipe. The two-storey building of the Provincial Assembly completes one of the corners of the Square.

A group of five houses constitutes the fourth side of the square, to the west.

The nominated property and the buffer zone together correspond to the historic centre of São Cristóvão, which is protected by the National Institute for Historic and Artistic Heritage (IPHAN).

History and Development

São Cristóvão was the old capital of Sergipe del Rey; it demonstrates the occupation processes of the region and the development of towns founded during the reign of King Philip II, during the 60-year period when Portugal was under Spanish domain.

The modes of territorial occupation and settlement used by Spain and Portugal in their American colonies between the 15th and the 17th centuries were distinctive. Portugal established a maritime trade network, and was able to occupy coastal territories in Africa and Asia prior to establishing trade and colonial settlements in Brazil. Portugal occupied the Brazilian coast, founding port cities as connection points with Portugal and its other colonies. The urban plans of these settlements respected the topography by adapting the layouts to local conditions.

The history of São Cristóvão is related to the colonisation of Sergipe, when due to the strong resistance of the indigenous people, it was vital to establish a constant communication between Salvador and Olinda, the two most important urban centres of the colony. It was also crucial to secure free access to the main rivers, often blocked by French smugglers.

In order to strengthen the colony in its conflicts with the Brazilian Amerindians and the French smugglers, Cristóvão de Barros founded the city of São Cristóvão, on the isthmus formed by the Poxim River, in the present-day Aracajú region. The land was granted to him by King Philip II with the expectation that it would be divided among the colonists, encouraging the settlement process. The town was moved in 1594-95 and again in 1607 to its present location.

São Cristóvão became the capital of Sergipe, the administrative and commercial centre between Salvador and Recife, and the departure point for the colonisation of the hinterland up to the mid-19th century.

In 1855, the state capital was transferred to the city of Aracajú. São Cristóvão, with its churches, convents and secular mansions, remains as a testimony to the past of Sergipe and Brazil.

In 1938, São Cristóvão was declared an Historic Monument by the State government. Between 1941 and 1962 many monuments were individually protected, and in 1967 the Architectural, Urban and Landscape Ensemble of São Cristóvão was registered at the federal level in the Archaeological, Ethnographic and Landscape Protection Book.

3. OUTSTANDING UNIVERSAL VALUE, INTEGRITY AND AUTHENTICITY

Comparative Analysis

The analysis compares the Franciscan buildings to those of other inscribed properties: in Quito (Ecuador, historic centre inscribed on the World Heritage List in 1978), Lima (Peru, Franciscan complex inscribed on the World Heritage in 1988, and the historic centre inscribed in 1991), Santiago (Chile) and Havana (Cuba, historic centre inscribed on the World Heritage List in 1982). These architectural ensembles were based on the Spanish urban design, and all have their main facades open to atriums or square (such as Quito) depending on their specific relationship with the urban form. These open spaces are in proportion to the size of the buildings. They therefore have similarities to São Cristóvão.

The Spanish towns reflected well defined chequered plans with defined uses, accesses and spaces as set out in the Philippine code. Portuguese planning by contrast was more responsive to topography but overall the Portuguese authorities had fewer resources. During the brief unification of the two crowns there was no complete fulfilment of the order in Brazil. São Cristóvão is an example of the partial process.

Franciscan urban ensembles in Brazil are similar to the Spanish as a consequence of the Order's organization and rules. Apart from some specific architectural features, the main difference lies in the urban context. Since the town of São Cristóvão was founded during the period when Spain and Portugal were ruled by the same Crown, Spanish codes for urban patterns were employed, especially the use of a regular grid. In contrast, Portuguese towns were usually founded on the basis of less rigorous plans, more in accordance with topography. In this sense, São Francisco Square in São Cristóvão is considered by the State Party a unique structure if compared with other Brazilian colonial

squares, since it is related to the Spanish urban solutions.

The comparative analysis also includes an analysis of religious ensembles constructed by the Franciscan Order and located in north-eastern Brazil: Joao Pessoa, Igarassu, Olinda, Recife, Irojuca, Marechal Deodoro, Penedo, Praca Sao Francisco, Cachoeira, Sao Francisco do Conde, Salvador and Cairu.

The comparative material is summarised in a table according to the following attributes: context within the urban space, construction and design elements, characteristics of the façades, interior ornamentation, single tower and position in the façade, and prominent kitchen chimney.

What emerges from the detailed analysis – presented in tabular form – is that although some of the squares and atria in front of the churches have been compromised, quite a number survive. São Cristóvão's square is not the most distinctive or the grandest but can be said to be in complete harmony with uniformity in design.

What are also highlighted are the characteristics that the group has in common and the differences between the group as a whole and monasteries in other places such as Spain, Portugal.

The overall group of monasteries in north-eastern Brazil, represent unprecedented solutions in terms of the way the convents and the urban spaces in front of them 'interfered' with the regular urban grain, and also in terms of the size of the buildings and their grand cloisters. The oldest complex at Olinda served as a model for those that followed. In only a few, such as Recife, Olinda and Joa Pessoa, were the churches richly ornamented, most were lacking in decorative elements. The facades of the churches have a gallery entrance which developed from those of Ipojuca (Pernambuco) and Cairu (Bahia) to the most significant, synthesis of this complex, that of Joao Pessoa (Paraiba). The groups of monasteries came to be seen collectively as the Franciscan School of the north-east.

ICOMOS considers that the analysis is not sufficient to demonstrate the uniqueness or exceptionality of the São Cristóvão Franciscan complex in relation to other similar structures located in north-eastern Brazil. The comparison table provided by the State Party shows that there are not substantial differences between the ensemble in São Cristóvão and other similar complexes, and indeed the overall group can be seen to have value.

With regard to São Francisco Square, its adjacent monumental buildings and accompanying domestic architecture, ICOMOS agrees that it is exceptional in plan if compared with other Brazilian colonial towns, where more irregular urban layouts prevail. However, this feature does not constitute a sufficient argument demonstrating the potential Outstanding Universal Value of the property, since it is a common situation in Spanish

American colonial historic centres, several of which are already inscribed on the World Heritage List. And in terms of the individual buildings, these too cannot be said to be exceptional either in terms of their survival, design or function.

While recognising the importance of the property as a coherent and harmonious ensemble at the national level, ICOMOS does not consider that a case has been made either in terms of demonstrating a gap in the already inscribed list, or in terms of demonstrating that no other ensembles of squares and buildings exist that have comparable assets, that would allow consideration of this property on the World Heritage List.

ICOMOS does not consider that the comparative analysis justifies consideration of this property for inscription on the World Heritage List.

Justification of the Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- It is an example of a homogeneous urban ensemble made up of public and private buildings that preserve the forms and proportions of the colonial period;
- It represents a unique moment in the history of Brazil by preserving the layout created at the time Portugal and Spain were under the same crown;
- The layout of the square reflects Spanish laws and King Philip's ordinances in a Brazilian context;
- The architecture expresses the cultural and social structures, and the importance of the religious life during the different historical periods of the development of the town, including the Portuguese colonization of the region;
- The architectural design and styles characterize the culture and society of the region at the time of its colonization;
- The Square reflects the exceptional vitality of an open public space, complete in its urban configuration, illustrating its history over four centuries and adapted to its uses as a place for the cultural manifestations and celebrations of the daily routines and evolution of that society.

ICOMOS considers that all of the above points describe the square and set out what the nominated space is and how it reflects its history, social development and use. What however is not captured is why the property is considered to be outstanding in global terms rather than in Brazil or in a regional context, in terms of exceptionality, or the influence it might have had.

Integrity and Authenticity

Integrity

The nomination dossier includes a paragraph under the heading "Integrity and/or Authenticity". Although an amplified paragraph has been provided in the re-submitted nomination dossier, the text deals more with cultural significance rather than integrity and authenticity. It is said that the urban layout preserves the city's integrity and the permanence of its perimeter and its facades give it distinction.

ICOMOS notes that the statement on Integrity provided by the State Party is mainly related to the historical sequence of the urban space and the buildings that surround it, stressing the important role of the ensemble as a testimony to cultural development over three hundred years.

Interiority relates to how far all the attributes needed to convey outstanding universal value are within the nominated area as well as to whether any of these are under threat. These have not been considered in the text provided as requested in the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS also considers that the São Francisco Square and related buildings constitute a fragment of an urban ensemble and landscape that has kept much of its original urban and architectural components. The attributes nominated are only a part of a larger urban whole that could be said to be of value.

Overall, ICOMOS considers that the integrity of the nominated property has not been demonstrated, according to the definitions and items included in the *Operational Guidelines for the Implementation of the World Heritage Convention*. ICOMOS considers that the attributes nominated only form part of a wider urban landscape that could be seen to be of value. Therefore in terms of wholeness, integrity has not been demonstrated. However, in terms of intactness, ICOMOS considers that the attributes nominated are not under threat.

Authenticity

As noted above, the nomination dossier includes a short text under the heading "Integrity and/or Authenticity". This text related to Authenticity states that the authenticity of the square stands out for design environment, technical, use, function, historical and cultural context.

ICOMOS considers that the Square and associated buildings within the nominated property are authentic, in terms of the way they portray their historical and social significance within the life of the town. ICOMOS notes that a number of the major buildings that form São Francisco Square have been rebuilt, restored and/or adapted to new uses as museums and offices over time.

Works to the Square itself have retained its characteristics while improving the infrastructure, amenity and security for pedestrians. The complex of residential buildings generally retains its typological characteristics, roof forms and facades.

However ICOMOS notes that what is not addressed is how the specific attributes of the nominated area as a group convey potential outstanding universal value. If the configuration of the square is said to reflect the way the Spanish ordinances were specifically met in Brazil, then what has not been demonstrated is how what survives reflects specifically the creation of the square rather than its evolution over time.

Overall, ICOMOS considers that the urban and architectural fabric of São Francisco Square and associated historical buildings are authentic, and that it continues to function as a focal point of social and civic life in the town. However ICOMOS considers that what has not been set out is how the ensemble as a whole conveys the suggested outstanding universal value.

ICOMOS considers that the conditions of integrity and authenticity have not been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv).

Criterion (ii): to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the urban ensemble of São Francisco Square represents one of the finest examples of European architecture adapted to a colonial city in the tropics. The Square is an example of the urban structures derived from the Ordinances of King Philip II, at a time when Portugal and Spain were under the same crown. The Franciscan Convent is characterised by a spatial organization adapted to the climate and to the urban scheme.

The application of criterion (ii) is thus supported by the State Party by stressing the importance of the architectural features as an adaptation of European trends to a specific geographical region in Latin America.

ICOMOS considers that to justify this criterion it would be necessary to show not only how the town adapted the Philippine Ordinances to local conditions in an exceptional way but also how this adaptation in turn had influenced.

What the analysis provided in the nomination has shown is that the adaptation of the Philippine plan is exceptional in Brazil, but not in the wider geo-cultural region where

several other Franciscan convents, following a model established at Olinda also portray similar characteristics. Moreover what has not been demonstrated is how São Francisco Square did itself exert influence elsewhere – in terms of demonstrating an interchange of ideas.

ICOMOS considers that this criterion has not been justified.

Criterion (iv): to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that São Francisco Square is a place of traditional and cultural manifestations throughout its history. The Square is a place where gatherings, celebrations, folklore, collective religious rituals and musical performances take place. It is a focal point and landmark for the town, and a space for the representation of religious and civil forces.

While recognising the role of São Francisco Square as a social landmark of the town and a place for important cultural and social manifestations, ICOMOS considers that the statement proposed by the State Party for the application of criterion (iv) rests on the use and social significance of the Square, but does not demonstrate the Outstanding Universal Value of the ensemble from an architectural or urban point of view, in terms of its relationship to a significant period in human history, as set out in the *Operational Guidelines for the implementation of the World Heritage Convention*.

To justify this criterion it would be necessary to show how the ensemble of buildings and square as a whole were of exceptional architectural merit and were also linked to an historical period that was of world-wide significance. ICOMOS considers that the ensemble of buildings is harmonious and has a coherence of materials and form. It cannot be said to be exceptional in terms of reflecting notable forms, materials decoration or in terms of being all of a single historical period related to the development of the square. The buildings have evolved over time and cannot now be said to reflect one period in history.

ICOMOS considers that this criterion has not been justified.

ICOMOS does not consider that the criteria for inscription on the World Heritage List and the Outstanding Universal Value of the property have been justified at this stage.

4. FACTORS AFFECTING THE PROPERTY

Development pressures

While the pressures associated with urban growth have been controlled by the Urban Plan, ICOMOS considers that the proximity of São Cristóvão to the State capital, Aracajú, could expose the town to risk factors associated with the development of the capital city.

Aracajú has absorbed most of the economic activities of São Cristóvão, restricting the future economic growth of the town. This situation poses risks to the built heritage and to the social and economical sustainability of São Cristóvão, due to possible population changes.

São Cristóvão is recognised as an important resource for the State of Sergipe, and the State Party should ensure that the conservation of heritage occurs in an integrated way, within the broader framework of social and economic development.

Visitors / tourism pressures

According to the State Party, São Cristóvão has a relatively low level of tourism activity that causes no pressures on the nominated property.

ICOMOS notes that, due to the proximity of São Cristóvão to Aracajú, visits to the town are short and the small income generated does not benefit the local community. On the contrary, tourism represents an expense for the local government, which must offer a clean, secure and properly maintained site. Given that São Cristóvão is potentially attractive for tourism for its architectural and historical heritage and for its intangible heritage (e.g. religious festivities, arts festival). ICOMOS considers that the State Party should ensure that future tourism planning aims to provide direct benefits to the local population.

Environmental pressures

There are water pollution, garbage disposal and sanitation problems for the town.

ICOMOS considers that the lack of sanitary infrastructure and solid waste disposal is a risk factor for the quality of life of São Cristóvão's population. The State government has initiated specific studies aimed cleaning of the river for sanitation purposes. The revised nomination dossier states that implementation of measures to protect the river have been delayed.

ICOMOS notes that the town does not have fire fighting facilities, and that the nearest facility is located in the city of Aracajú. ICOMOS recommends that the State Party provide the necessary infrastructure for protection against fire.

Natural disasters

There are occasional floods in the town, but these do not reach the upper town, where the nominated property is located.

Impact of climate change

The nomination dossier does not include reference to the impact of climate change on the property. ICOMOS believes that the location of São Cristóvão in the tropics makes it vulnerable to the impact of storms and heavy rains, something that should be considered in risk preparedness plans for heritage conservation.

Risk preparedness

The nomination dossier does not include reference to risk preparedness plans.

ICOMOS considers that the main threats to the property are related to the relationship between São Cristóvão and Aracajú that could cause loss of population, and social and economic decline. Pollution of the river, the lack of sanitation infrastructure and fire fighting facilities also constitute risks to the integrity of the monumental ensemble. The lack of risk preparedness planning to address these threats to the long-term conservation of the property is a concern.

5. PROTECTION, CONSERVATION AND MANAGEMENT

Boundaries of the nominated property and buffer zone

The nominated property includes the Square and the surrounding blocks. The proposed buffer zone coincides with the boundaries of the area protected by the Institute for National Historic and Artistic Heritage (IPHAN).

ICOMOS notes that, beyond São Francisco Square and the surrounding urban blocks, the historic centre of São Cristóvão is also characteristic of a colonial Brazilian town reflected in urban, architectural and environmental values, and in the intangible heritage. Therefore, the nominated area constitutes only a small part of the historic centre and does not coincide with the whole area protected by the Institute for National Historic and Artistic Heritage (IPHAN). Religious complexes such as Carmo, the Main Church, and the Irmandade do Amparo dos Homens Pardos Church are outside the boundary of the nominated property. Similarly, ICOMOS considers that there are many examples of domestic architecture in the historic centre of the town that have similar values to the domestic buildings within the nominated area.

Regarding the buffer zone, ICOMOS considers that it could be amended to take into account significant perspectives, the setting and the important relationship with the water system. There are other areas of cultural heritage importance for the city that could be incorporated into the buffer zone, such as the area developed in the 19th and 20th centuries for industrial factories and labour housing. The natural areas that surround the site could also be added to the buffer zone, especially those that constitute the historical access to

the city by river, recognising the importance of recovering this historical component of the urban landscape.

ICOMOS considers that the boundaries of the nominated property include only part of the historic centre of the town. The boundaries of the proposed buffer zone should be revised in order to include significant perspectives, the natural setting, the relationship with the water system and areas of heritage value associated with the evolution of the town over the 19th and 20th centuries.

Ownership

The nominated property consists of buildings owned by the local, State and national governments, the Archdiocese and many private owners. In São Francisco Square, the Archdiocese owns the Franciscan ensemble and the local government owns one building, the State government owns two buildings and the Institute for National Historic and Artistic Heritage (IPHAN) owns five buildings. The remaining houses are in private ownership.

Protection

Legal Protection

The nominated property is protected at national, state and local levels. At the national level, the first protective measures were introduced between 1941 and 1944 with the protection of isolated monuments. The architectural and urban ensemble was protected by the Federal government by procedure 785-T-67 of 31 January 1967, in the framework of Decree – Law 25 of 30 November 1937. The authority responsible for implementing the legal protection is the Institute for National Historic and Artistic Heritage (IPHAN). The 18th Regional Superintendence of IPHAN includes Sergipe State.

At the State level, the ensemble was registered as Historic Monument by Decree Law 94 in 1938, supported by Article 134 of the new State Constitution. In 1967, the Architectural, Urban and Landscape ensemble of São Cristóvão was registered on the Archaeological, Ethnographic and Landscape Protection Book, on page 10, number 40.

At the local level, the 1979/80 Master Plan which directed the growth of the city, urban expansion and zoning and establishes measures for conservation and enhancement of cultural heritage, division and uses of land and construction prescriptions was revised in 2009.

The Urban Planning Code for São Cristóvão establishes guiding principles for urban policy defined in collaboration with the local community. The revised nomination provides details of this but not when it was approved.

The buffer zone corresponds to the historic centre of the town of São Cristóvão and is protected at state and national levels. The historic centre has been declared historic monument by Decree-Law 94 (1938) of the State of Sergipe and national monument by federal law 7489 (1986). These protection instruments ensure the effectiveness of the buffer zone to protect the values of the nominated properties.

Effectiveness of protection measures

ICOMOS considers that the national protection combined with local development plans and planning codes provide adequate mechanisms to avoid impacts on the values, integrity and authenticity of the nominated property, if the Urban Planning Code is in force.

While noting the protection provided at the national level, ICOMOS considers that the protective measures at national level, supplemented by those at local level are adequate for the protection of the property, if the Urban Planning Code is in force.

Conservation

Inventories, recording, research

The Inventory of Immovable Assets developed as a national programme of the National Institute for Historic and Artistic Heritage (IPHAN) has been completed. In São Cristóvão, 450 properties in the protected area have been documented. The Inventory of Integrated and Movable Assets has 1269 assets in the Art Museum, the Historical Museum of Sergipe, churches and private collections. Recently, IPHAN completed the first stage of the Inventory of Cultural References for registering the intangible heritage of the State. Copies of inventory cards are included in the revised nomination.

Present state of conservation

According to the State Party, the public and religious buildings are in good condition and the private houses are in satisfactory condition. The inventory concluded in 2006 indicates that 33% of the buildings are in good condition, 42% in satisfactory condition, 25% being restored and 0% in poor condition.

ICOMOS considers that the monuments and open spaces included in the nomination property exhibit a satisfactory state of conservation.

Active Conservation measures

Some monumental buildings are being restored in the framework of the *Monumenta* Programme, funded by the Inter-American Development Bank, among them Santa Cruz Convent and Church, the Courthouse, São Francisco Square, Imaculada Conceição Home, the Historical Museum of the State of Sergipe and some

private properties. Between 2004 and 2006, restoration works included Rosario Church, the Franciscan Convent, São Francisco Square, Largo do Rosario and Largo do Amparo.

The nomination dossier describes projects to be implemented during 2007, among them the removal of lamp posts, electricity and telephone wires and improvements to the circulation and parking in the historic centre. Other projects include improving public spaces, such as Getúlio Vargas Square, works in the surrounding area such as Bica dos Pintos, and improvements to the water quality of the Paramopama River.

While noting the benefits of these projects, ICOMOS is also aware that there have been some difficulties for owners to secure subsidies through the *Monumenta* Programme, and it has often funded work on facades only. In this context, it is possible to conclude that these programmes need to be further augmented to ensure the long-term conservation of the nominated property.

Recent projects include: the improvement project of the Museum of Sacred Art (located in the São Francisco complex), the completion of the restoration of the former *Ouvidoria*, the lighting improvement project for São Francisco Square, the restoration of the square's pavements and the provision of urban furniture. ICOMOS congratulates the State Party for its constant efforts to improve the physical conditions and state of conservation of the nominated property and adjacent areas, and encourages it to continue with these kind of actions.

ICOMOS considers that the nominated property exhibits an adequate state of conservation. ICOMOS further recommends that the State Party continue to implement and improve conservation programs to ensure the long term conservation of the property.

Management

Management structures and processes, including traditional management processes

At the national level, the National Institute on Historic and Artistic Heritage (IPHAN) is responsible for the protection and management of protected properties. IPHAN has regional units (Superintendencies); one of them, with headquarters in the city of Aracajú, includes the State of Sergipe.

IPHAN is responsible for the physical conservation of heritage, and the local government is responsible for land use and compliance with planning regulations. However, without an approved conservation plan for the nominated property, there is no framework to guide these decisions, which often depend on the technical judgement of the evaluator.

The newly established Undersecretary of State for Cultural and Historical Heritage, which came into being in 2009, will support cultural heritage interests in the State of Sergipe. The Department is also linked strategically to other national departments.

Policy framework: management plans and arrangements, including visitor management and presentation

According to the information supplied by the State Party, there is no Management Plan for the nominated property, although one is in preparation. Indeed, the State Party reports in the additional information that the Participative Management Plan is currently under development by private consultants. The project was initiated in July 2007 and is expected to be finished on 30 June 2008 (a detailed timeframe of the successive steps of development was provided). ICOMOS appreciates that the Management Plan is under development and recommends that the State Party approve and implement it once it is finished.

Currently, the management of the nominated property is ensured by means of a number of different plans that are in place.

- *Master Plan, 2009*

The São Cristóvão Urban Master Plan establishes the urban policies, the urban perimeter, the conservation of historic and natural heritage, the definition of activities, subdivision of land, and standards of construction. Urban policies are defined on the basis of community consultation. Principles and rules regarding heritage conservation include the definition and additional limitations for properties and areas protected by Federal Law. There are several laws which contribute to the protection of the nominated property, among them municipal Law 08 of 6 June 1979, which regulates works done on buildings in São Francisco Square.

Other existing programmes are:

- *Training for tourism employment.* The “Friends of São Cristóvão” project, initiated in 2005, trains young people to act as tourist guides. Currently, 20 teenagers take history, tourism, English and environmental education classes, while receiving monthly allowance benefits.
- *Sustainable recovery of the historic heritage of São Cristóvão.* The *Monumenta* Programme of the Ministry of Culture, sponsored by the Inter American Development Bank and UNESCO, funds projects in São Cristóvão that will have direct or indirect effects on the local economy, education and culture, facilitating the involvement of the local population. The aim is to stimulate the economy by improving cultural tourism, expanding employment opportunities and supporting heritage education. Some

relevant projects funded by this programme are described above in the section on “Conservation”.

ICOMOS notes that these programs place a strong emphasis on physical conservation of cultural heritage. In order to ensure an adequate quality of life for the local population, a closer relationship between planning instruments concerning conservation and development is required.

With regard to visitor management and presentation of the property, the State Party reports on the “Friends of São Cristóvão” project discussed above, but no information on tourism facilities and presentation is included in the nomination dossier.

Involvement of local communities

According to the State Party, the historic centre of São Cristóvão is inhabited by approximately 1750 people (out of 71 572 in the municipal district) and 40 of them live within the nominated property. The nominated property is highly recognised and valued by the local community, which uses São Francisco Square as one of the liveliest spaces in town. The urban plan defines the guiding principles for urban policy, which is based on community consultation.

ICOMOS considers that the involvement of local communities is in a relatively early stage of development and can be improved over time. In order to guarantee the participation and involvement of all stakeholders, a stronger awareness by citizens of the responsibilities to care for cultural heritage is required; thus it is necessary to implement programmes of community awareness and participation and to provide adequate and effective financial resources.

Resources, including staff levels, expertise and training

The municipal Secretariat of Construction, Urbanism and Environment has a total of 155 employees and the municipal Secretariat of Culture and Tourism has 38 employees. The 18th Regional Superintendence of the National Institute for Historic and Artistic Heritage (IPHAN) has 16 employees (including 4 trainees). The nomination dossier does not include specific information on staff training and skills of these organisations.

ICOMOS notes that the main financial resources for the conservation of the nominated property are provided by state agencies, although the legislation encourages financial support by private enterprises.

ICOMOS considers that added resources for the updating of staff skills, increases in the number of staff members involved in conservation and management of the property, and the inclusion of different disciplines (engineering, archaeology, art conservation, etc.) are needed.

ICOMOS considers that the management structure and procedures could be improved by the development and implementation of a management plan for the nominated property, which was expected for completion by June 2008. ICOMOS considers also that the management system of the property should be extended to include a better articulation between the different levels of government, greater participation of community associations and other stakeholders in the development and implementation of plans, visitor management, and the increase, diversification and improved skills of the staff involved in the management of the property.

6. MONITORING

The State Party states that the public and religious buildings are in a reasonable state of conservation, but the key indicators are not included in the nomination dossier.

Concerning administrative arrangements, the 18th Superintendence of the Institute for National Historic and Artistic Heritage (IPHAN), the *Monumenta* Programme, and the State and local governments participate, jointly or separately, in restoration works in the protected area.

ICOMOS notes that it is mainly the Institute for National Historic and Artistic Heritage (IPHAN) which carries out monitoring and control actions. These actions are quite limited due to minimal staff members and financial resources.

ICOMOS considers that no systematic monitoring system is currently in place for the nominated property. ICOMOS recommends that a systematic monitoring programme be implemented, including the identification of key indicators.

7. CONCLUSIONS

The revised nomination dossier provides some amplification of the first dossier in terms of supplementary text on description, integrity and authenticity, and protection. The boundaries remain unchanged as do the justifications for the criteria. Small amendments have been made to the proposed justification for outstanding universal value.

What this re-presentation has confirmed is that the São Francisco Square together with the Franciscan convent is one of a group in north-east Brazil that can be seen to reflect an overall coherence that is differentiated from monasteries in Spain, Portugal and elsewhere in terms of their urban squares or atria some with monumental stone crosses, the interface with the surrounding urban plan, their galleried entrances, elaborate cloisters, lack of ornamentation and set back bell towers.

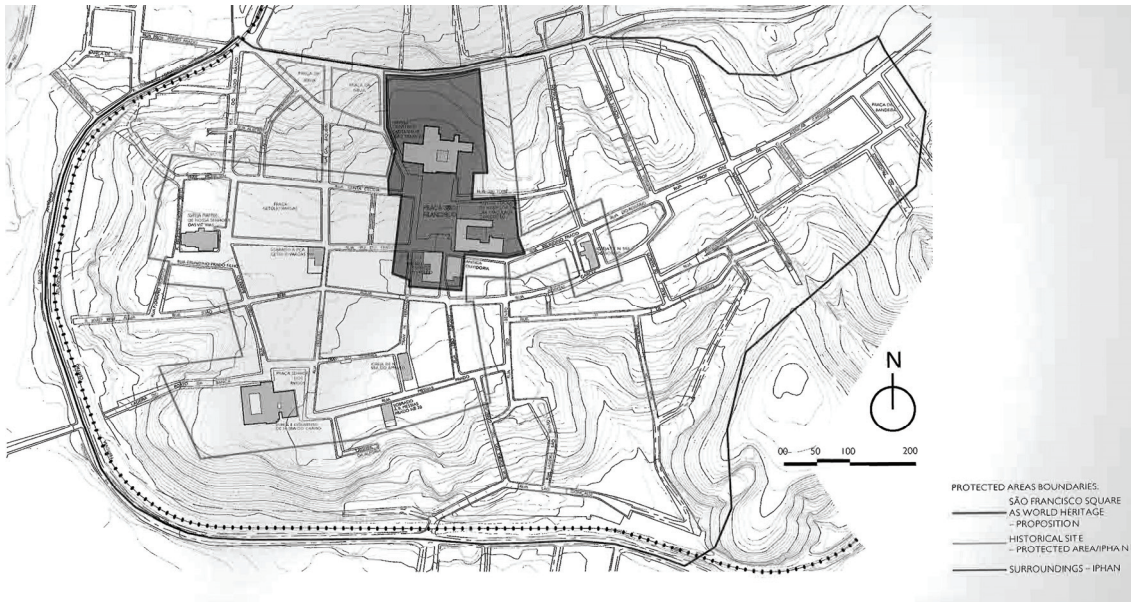
Many of these complexes have evolved and changed over the years and none survive as built. Several can be seen to have components that are similar to São Cristóvão. What has been demonstrated is that although the relationship between the monastery and square of São Cristóvão persists, the combination of plan and buildings, although visually attractive, harmonious and coherent, is not exceptional within the north-eastern group of monasteries or more widely.

Recommendations with respect to inscription

ICOMOS recommends that the examination of São Francisco Square in São Cristóvão, Brazil, to the World Heritage List, be **deferred** in order to allow the State Party to:

- Reconsider the proposed boundaries of the nominated property in order to include other sectors of the São Cristóvão historic centre that might contribute to the potential Outstanding Universal Value of the property. In determining the boundaries of the nominated area and the buffer zone, it is recommended that the State Party take into account the geographical, historical, urban, architectural and cultural factors that have shaped the structure and the urban landscape of São Cristóvão over the centuries. This could enable a more accurate identification of cultural values and defined boundaries of areas that can clearly express them;
- Define a complete statement on the Integrity and Authenticity of this property, based on the requirements set out in the *Operational Guidelines* and the Nara Document on Authenticity;
- Ensure that the urban Planning Code has been approved;
- The management structure and procedures should be improved by the development and implementation of a management plan for the nominated property;
- The management system of the property should be extended to include a better articulation between the different levels of government, greater participation of community associations and other stakeholders in the development and implementation of plans, visitor management, and the increase, diversification and improved skills of the staff involved in the management of the property;
- Define and implement a monitoring system for the long term state of conservation for the property, including key indicators and designation of a monitoring organization.

ICOMOS considers that any revised nomination with revised boundaries would need to be considered by an expert mission to the site.



Map showing the boundaries of the nominated property



São Francisco Square: aerial view



Aerial view of the convent



São Francisco Monastery



Historical museum