

ICOMOS

2014

Evaluations of Nominations of Cultural and Mixed Properties to the World Heritage List

ICOMOS Report for the World Heritage Committee
38th ordinary session, Doha, June 2014

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2014

Evaluations of Nominations of Cultural and Mixed Properties

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I Introduction

ICOMOS Analysis of nominations

In 2014, ICOMOS was called on to evaluate 42 nominations.

They consisted of:

- 27 new nominations
- 1 referred back nomination
- 1 deferred nomination
- 2 extensions
- 1 nomination submitted for processing on an emergency basis
- 10 minor modifications/creations of buffer zone

The *geographical spread* is as follows:

Europe and North America

Total: 20 nominations, 15 countries
10 new nominations
1 referred back
1 deferred
1 extension
7 minor modifications/creations of buffer zone
(19 cultural properties, 1 mixed property)

Latin America and the Caribbean

Total: 3 nominations, 8 countries
2 new nominations
1 extension
(3 cultural properties)

Arab States

Total: 5 nominations, 5 countries
3 new nominations
1 nomination submitted for processing on an emergency basis
1 minor modification/creation of buffer zone
(5 cultural properties)

Africa

Total: 4 nominations, 4 countries
3 new nominations
1 minor modification/creation of buffer zone
(4 cultural properties)

Asia-Pacific

Total: 10 nominations, 12 countries
9 new nominations
1 minor modification/creation of buffer zone
(8 cultural properties, 2 mixed properties)

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 in preparing the nomination, for example to complete the legal protection process, finalise a management plan or undertake additional research.

ICOMOS wishes to point out that the *Resource Manual for the Preparation of Nominations*, of which an electronic version is now available on its website and on the World Heritage Centre website, is at the disposition of States Parties to help them prepare nomination dossiers. Thanks to the World Heritage Capacity-Building programme, the manual is available in several languages (Arabic, English, French, Portuguese and Spanish).

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 indicates whether or not the comparative analysis is complete and whether or not the analysis justifies consideration of the property for the World Heritage List.

If the nomination is considered incomplete or insufficient according to the parameters indicated above, ICOMOS requests additional information from the State Party, checks 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 Lists, and consults the ICOMOS network of experts to improve its understanding of the nomination.

ICOMOS wishes to point out that its role is to evaluate the properties on the basis of the information provided in the nominations (i.e. the dossiers), and on the basis of on-the-spot assessment and additional studies. Similarly, it evaluates the protection, conservation and management of the property **at the time of the nomination** and not at some unspecified 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.

2. ICOMOS evaluations

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 therefore aims to be as helpful as possible to States Parties, whatever the final recommendation proposed.

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

The answers provided by States Parties have in many cases confirmed, or contributed to the adoption of, the final recommendations made by ICOMOS.

3. "Referred back" nominations – "Deferred" nominations

At the request of the World Heritage Committee, ICOMOS and IUCN presented 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.

ICOMOS wishes to once again express its concerns about the difficulties raised when a "deferred" recommendation is changed into a "referred back" recommendation, which does not allow the advisory bodies to carry out an appropriate evaluation of nominations which are in many cases entirely new.

ICOMOS has moreover carried out two advisory missions for "referred back" properties, at the request of the World Heritage Committee at its 36th and 37th sessions.

This process is not covered by the *Operational Guidelines* and its implementation may prove to be complex. However, ICOMOS has welcomed the

opportunity to work constructively with the States Parties and considers that working on upstream processes could enable this type of collaboration before a dossier is submitted for examination.

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.

4. "Minor" modifications to boundaries

The number of such requests has greatly increased. They originate either from monitoring, the retrospective inventory or periodic reporting.

The examination of these requests involves a considerable workload 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 States 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 States Parties to submit a separate request complying with the procedures set out in the *Operational Guidelines for the Implementation of the World Heritage Convention* (annexe 11) and within the prescribed deadlines, i.e. 1st February at the latest.

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.

ICOMOS suggests moreover that an extension of the calendar for the evaluation of such requests should be considered, to bring it into line with the calendar in force for new nominations, which would open up the possibility of dialogue and exchange of information with the States Parties.

5. Serial nominations and extensions

ICOMOS wishes to point out that the *Operational Guidelines* of November 2011 (paragraph 137) validated a change in the approach to serial properties. Serial nominations should not consist merely of a catalogue of sites, but should instead concern a collection or ensemble of sites with specific cultural, social or functional links over time, in which each site contributes substantially to the Outstanding Universal Value of the serial property as a whole.

ICOMOS wishes to encourage States Parties to give consideration to the implications of this change when preparing serial nominations.

This year, ICOMOS has examined 12 serial nominations, including 257 monuments, ensembles and sites. These nominations 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 repeats its suggestion, supported by the Jade Tabet¹ review, that the World Heritage Committee give consideration to an extended timeframe for these kinds of nominations.

A specific evaluation format was set up in 2009 for the serial nominations and extensions. ICOMOS explicitly informs the Committee of 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 properties?
- d) Are the separate components of the property functionally linked?

¹Tabet J., *Review of ICOMOS' working methods and procedures for the evaluation of cultural and mixed properties nominated for*

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.

6. Development projects

To address the growing need to identify development projects within World Heritage properties during the evaluation cycle, ICOMOS has included in its letters to the States Parties a specific question intended to bring to ICOMOS' attention any development projects that are planned within the nominated property or in its vicinity, to ensure that comprehensive information is received concerning these potential projects. This has been introduced to respond to growing concern felt by the World Heritage Committee about such development plans and projects. ICOMOS has once again suggested that during the nomination evaluation procedure the Committee should apply provisions similar to those stipulated in 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 [...]".

ICOMOS points out that it has drawn up a document entitled "Guidance on impact assessments for cultural World Heritage sites", which was made available to the World Heritage Committee at its 34th session, and can be consulted on its website. This guidance has been translated into several languages and ICOMOS urges States Parties to make use of it.

7. New initiatives

As part of a process of reflection launched about mixed properties, ICOMOS and IUCN have developed a project with financing from the *Christensen Fund* entitled "Connecting Practice", to explore a truly integrated approach to the natural and cultural heritage in the context of the World Heritage Convention.

ICOMOS has moreover launched a pilot project with ICOMOS Norway, IUCN and ICCROM to identify and deepen an understanding of "good practice" approaches based on Rights in the world heritage system.

inscription on the UNESCO World Heritage List, Paris, ICOMOS, 2010.

8. Transnational serial nominations

This evaluation cycle examined simultaneously two cultural itineraries of worldwide importance (the Silk Roads and the Qhapaq Ñan), which were submitted as transnational serial nominations. Their evaluation was a challenge for the advisory body, which had to adapt some of its evaluation mechanisms (missions, meetings with States Parties) and worked intensely, within the limits of its resources and the calendar, to clarify the questions that emerged during the evaluation process.

ICOMOS wishes to congratulate the States Parties on the efforts made to prepare these nominations, and sees in the themes and challenges considered a return to the fundamentals of the World Heritage Convention.

The monitoring of the state of conservation of properties of this type is a considerable challenge, which could enable experimentation with specific tools adapted to such properties.

ICOMOS wishes to stress the importance of involving the advisory bodies in the upstream processes for the preparation of nominations of this type, and is available for upstream involvement at strategic development level for these vast and complex transnational serial nominations.

9. Upstream process

ICOMOS, at the request of the World Heritage Committee, has contributed to work further on the pilot projects selected in conjunction with the World Heritage Centre. Unfortunately, because of a lack of resources, ICOMOS has been unable to review and provide advice concerning certain draft nomination dossiers received by the Centre on 30 September 2013.

ICOMOS has extended the length of the ICOMOS World Heritage Panel meeting in order to examine the missions and projects developed by ICOMOS for the purpose of upstream processes.

Terms of reference for the advisory missions have been drawn up by the advisory bodies and will be made available to States Parties on the ICOMOS website shortly.

Furthermore, ICOMOS wishes to draw attention to paragraph 122 of the *Operational Guidelines* which invites States Parties to “contact the Advisory Bodies and the World Heritage Centre at the earliest opportunity in considering nominations to seek information and guidance”, and in particular the

relevance of this paragraph in connection with the preparation of the nomination dossier for mixed properties and serial properties.

ICOMOS is prepared to make its expertise available for the development of the upstream process in preparing and following up nomination dossiers, as far as this is possible with the resources available.

The activities in which ICOMOS has been involved in this respect (advisory missions, meetings, consultations), organised sufficiently in advance, have already had positive outcomes for some nominations.

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* (latest revision in October 2012). This document is available on the ICOMOS web site: www.international.icomos.org.

This policy makes public the existing procedure, and sets out the fair, transparent and credible approach ICOMOS adopts in fulfilling its world heritage remit, and the way it avoids 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 two or three 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, of representatives of ICOMOS International Scientific Committees, and of experts who are invited each year depending on the nature of the properties nominated (rock art, 20th century heritage, industrial heritage, etc.). TICCIH and DoCoMoMo are also invited to participate in discussions in which their expertise is relevant. To a large extent, Panel members participate by drawing on their own financial resources. The Panel, whose terms of reference are available on the ICOMOS website, represents the various professional, geographic and cultural sensibilities present at the international level. It prepares the ICOMOS recommendations for each nomination on a collegial basis.

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, and to check which additional information requests should be sent to States Parties, ICOMOS uses a check box tool, which is included in this volume.

In October 2013, a specific session of the World Heritage working group was organised with the advisers to ensure consistency of approach on all aspects throughout all evaluations.

An external review of the principles, methods and procedures used by ICOMOS in evaluating nominations was carried out in 2009. The final report and the ICOMOS response were made available to the World Heritage Committee at its 34th session.

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, etc.) is prepared in order to assist the work of the advisers on the specific item of comparative analysis.

b. Consultations: Experts are consulted to express 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* (July 2013), § 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 38th session, around a hundred experts were consulted.

c. Technical evaluation missions: As a rule, ICOMOS calls on a person from the region in which the nominated property is located. In certain exceptional circumstances, often in cases in which the nature of the property is unusual, the expert may not originate from the region concerned. The objective of the missions is 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 particularly 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).

39 experts representing 22 countries took part in field missions as part of the evaluation of the 32 nominated properties, which in turn represented 37 countries.

3 advisory missions were organised between August and October 2013 at the request of the World Heritage Committee at its 36th and 37th sessions.

Technical evaluation missions were carried out jointly with IUCN for four mixed property nominations.

This year ICOMOS and IUCN took part in a conference call held during the ICOMOS panel

meeting, just before the IUCN panel. ICOMOS and IUCN have also exchanged information about draft recommendations concerning mixed property nominations.

ICOMOS received comments from the IUCN concerning three cultural landscape nominations. These comments have been included in the evaluations and taken into account by ICOMOS in its recommendations.

2. Evaluations and recommendations

a. ICOMOS World Heritage Panel: Draft evaluations (in either English or French) were prepared on the basis of the information contained in the nomination dossiers, mission reports, consultations and research. They were examined by the ICOMOS World Heritage Panel at a meeting in Paris from 1 to 6 December 2013. The Panel defined the recommendations and identified the additional information requests to be sent to the States Parties.

b. Additional information request: Additional information requests for some of the nominated properties were sent to the States Parties by 31 January 2014, in accordance with the normal procedure. All documents received by 28 February 2014 were examined by the World Heritage Working Group at its meeting on 5 and 6 March 2014.

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 at its 38th session in June 2014.

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 States Parties

ICOMOS makes every effort to maintain dialogue with the States 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.

ICOMOS is in favour of this dialogue. The replies provided by the States Parties have often provided confirmation or assistance in the adoption of the final recommendations made by ICOMOS.

ICOMOS recommendations are made available to the members of the World Heritage Committee six weeks before the beginning of the session. ICOMOS is at the States Parties' disposal for discussions and explanations about its recommendations. However, time constraints are a problem, and ICOMOS is in favour of fuller discussions about how this dialogue may be improved.

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 5 and 6 March 2014.

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. 10 requests were submitted by the States Parties concerned before 1st February this year. At the request of the World Heritage Centre, all requests have been examined and included in the following document: WHC-14/38.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 2014

ICOMOS

Check tool recommendations

Comparative analysis	Integrity	Authenticity	Criteria	Selection justified (series)	Boundaries	Protection property	Protection buffer zone	Conservation	Management	Threats addressed	Mission required	Conclusion
√	√	√	√	√	√	√	√	≈	≈	≈	No	Inscription
√	√	√	√	√	≈	X	X	≈	≈	≈	No	Referral
√	√	√	√	√	X	X	X	X	X	X	Yes	Deferral
○	√	√	○	√							Yes	Deferral
○	○	○	○	○							Yes	Deferral
X	X	X	X	X							-	No inscription



OK - Good



Adequate - Can be improved



Not demonstrated at this stage



Not OK - Not adequate

The grid does not give all possible combinations, but only the lowest benchmarks below which a nomination moves to another category.

This tool is to be used jointly with the table summarizing the ICOMOS recommendations.

Cultural and Mixed Properties
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Cultural and Mixed Properties

Nominations by category

New nominations (27)		
Argentina, Bolivia, Chile, Colombia, Ecuador, Peru	C 1459	Qhapaq Ñan, Andean Road System
China	C 1443	The Grand Canal
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Iraq	C 1437	Erbil Citadel
Israel	C 1370	The Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves
Japan	C 1449	Tomioka Silk Mill and Related Sites
Kyrgyzstan / China / Kazakhstan	C 1442	Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tianshan Corridor
Malawi	C 1201	Mount Mulanje Cultural Landscape
Myanmar	C 1444	Pyu Ancient Cities
Netherlands	C 1441	Van Nellefabriek
Portugal	N/C 1454	Arrábida
Republic of Korea	C 1439	Namhansanseong
Saudi Arabia	C 1361	Historic Jeddah, the Gate to Makkah
Spain	C 1445	Cultural Landscape of Valle Salado de Añana
Tajikistan / Uzbekistan	C 1460	Silk Roads: Penjikent-Samarkand-Poykent Corridor
Turkey	C 1452	Bursa and Cumalıkızık: The Birth of the Ottoman Empire
Turkey	C 1457	Pergamon and its Multi-Layered Cultural Landscape
United Arab Emirates	C 1458	Khor Dubai (Dubai Creek)
United States of America	C 1435	Monumental Earthworks of Poverty Point
Viet Nam	N/C 1438	Trang An Landscape Complex
Zambia	C 1429	Barotse Cultural Landscape
Extensions (2)		
Mexico	N/C 1061 Bis	Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche [renomination and extension of the "Ancient Maya City of Calakmul, Campeche" (Mexico)]
Spain	C 522 Bis	Jaén Cathedral (Extension of the "Renaissance Monumental Ensemble of Úbeda and Baeza" (Spain))
Referred back nominations (1)		
Russian Federation	C 981 Rev	The Bolgar Historical and Archaeological Complex
Deferred nominations (1)		
Italy	C 1390 Rev	The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato

Nominations submitted for processing on an emergency basis (1)

Palestine	C 1492	Palestine: Land of Olives and Vines - Cultural Landscape of Southern Jerusalem, Battir
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Cultural and Mixed Properties

Geographical spread of nominations

Africa			3 States Parties, 3 nominations
Ghana	C 1409	Tongo-Tengzuk Tallensi Cultural Landscape	
Malawi	C 1201	Mount Mulanje Cultural Landscape	
Zambia	C 1429	Barotse Cultural Landscape	
Arab States			4 States Parties, 4 nominations
Iraq	C 1437	Erbil Citadel	
Palestine	C 1492	Palestine: Land of Olives and Vines - Cultural Landscape of Southern Jerusalem, Battir	
Saudi Arabia	C 1361	Historic Jeddah, the Gate to Makkah	
United Arab Emirates	C 1458	Khor Dubai (Dubai Creek)	
Asia – Pacific			11 States Parties, 9 nominations
China	C 1443	The Grand Canal	
India	C 922	Rani-ki-Vav (The Queen's Stepwell) at Patan, Gujarat	
Iran	C 1456	Shahr-i Sokhta	
Japan	C 1449	Tomioka Silk Mill and Related Sites	
Kyrgyzstan / China / Kazakhstan	C 1442	Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor	
Myanmar	C 1444	Pyu Ancient Cities	
Republic of Korea	C 1439	Namhansanseong	
Tajikistan / Uzbekistan	C 1460	Silk Roads: Penjikent-Samarkand-Poykent Corridor	
Viet Nam	N/C 1438	Trang An Landscape Complex	
Europe – North America			12 States Parties, 13 nominations
Czech Republic / Slovakia	C 1300	Sites of Great Moravia: The Slavonic Fortified Settlement at Mikulčice and the Church of St Margaret of Antioch at Kopčany	
France	C 1426	Decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc, Ardèche	
Germany	C 1447	Carolingian Westwork and Civitas Corvey	
Israel	C 1370	The Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves	
Italy	C 1390 Rev	The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato	
Netherlands	C 1441	Van Nellefabriek	
Portugal	N/C 1454	Arrábida	
Russian Federation	C 981 Rev	The Bolgar Historical and Archaeological Complex	
Spain	C 522 Bis	Jaén Cathedral (Extension of the "Renaissance Monumental Ensemble of Úbeda and Baeza" (Spain))	
Spain	C 1445	Cultural Landscape of Valle Salado de Añana	
Turkey	C 1452	Bursa and Cumalıkızık: The Birth of the Ottoman Empire	
Turkey	C 1457	Pergamon and its Multi-Layered Cultural Landscape	
United States of America	C 1435	Monumental Earthworks of Poverty Point	

Latin America and the Caribbean

8 States Parties, 3 nominations

Argentina, Bolivia, Chile, Colombia, Ecuador, Peru	C 1459	Qhapaq Ñan, Andean Road System
Costa Rica	C 1453	Precolumbian chiefdom settlements with stone spheres of the Diquís
Mexico	N/C 1061 Bis	Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche [renomination and extension of the “Ancient Maya City of Calakmul, Campeche” (Mexico)]

Cultural and Mixed Properties
Numerical Index of the evaluations

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C 522 Bis	Spain	Jaén Cathedral (Extension of the “Renaissance Monumental Ensemble of Úbeda and Baeza” (Spain))	300
C 922	India	Rani-ki-Vav (The Queen’s Stepwell) at Patan, Gujarat	125
C 981 Rev	Russian Federation	The Bolgar Historical and Archaeological Complex	Add
N/C 1061 Bis	Mexico	Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche [renomination and extension of the “Ancient Maya City of Calakmul, Campeche” (Mexico)]	42
C 1201	Malawi	Mount Mulanje Cultural Landscape	58
C 1300	Czech Republic / Slovakia	Sites of Great Moravia: The Slavonic Fortified Settlement at Mikulčice and the Church of St Margaret of Antioch at Kopčany	208
C 1361	Saudi Arabia	Historic Jeddah, the Gate to Makkah	89
C 1370	Israel	The Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves	240
C 1390 Rev	Italy	The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato	307
C 1409	Ghana	Tongo-Tengzuk Tallensi Cultural Landscape	50
C 1426	France	Decorated cave of Pont d’Arc, known as Grotte Chauvet-Pont d’Arc, Ardèche	220
C 1429	Zambia	Barotse Cultural Landscape	67
C 1435	United States of America	Monumental Earthworks of Poverty Point	291
C 1437	Iraq	Erbil Citadel	79
N/C 1438	Viet Nam	Trang An Landscape Complex	23
C 1439	Republic of Korea	Namhansanseong	183
C 1441	Netherlands	Van Nellefabriek	250
C 1442	Kyrgyzstan / China / Kazakhstan	Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor	151
C 1443	China	The Grand Canal	110
C 1444	Myanmar	Pyu Ancient Cities	170
C 1445	Spain	Cultural Landscape of Valle Salado de Añana	260
C 1447	Germany	Carolingian Westwork and Civitas Corvey	229
C 1449	Japan	Tomiooka Silk Mill and Related Sites	141
C 1452	Turkey	Bursa and Cumalıkızık: The Birth of the Ottoman Empire	270
C 1453	Costa Rica	Precolumbian chiefdom settlements with stone spheres of the Diquís	339
N/C 1454	Portugal	Arrábida	32
C 1456	Iran	Shahr-i Sokhta	134
C 1457	Turkey	Pergamon and its Multi-Layered Cultural Landscape	280
C 1458	United Arab Emirates	Khor Dubai (Dubai Creek)	101
C 1459	Argentina, Bolivia, Chile, Colombia, Ecuador, Peru	Qhapaq Ñan, Andean Road System	320
C 1460	Tajikistan / Uzbekistan	Silk Roads: Penjikent-Samarkand-Poykent Corridor	194
C 1492	Palestine	Palestine: Land of Olives and Vines - Cultural Landscape of Southern Jerusalem, Battir	Add

Cultural and mixed properties
Technical evaluation mission experts

State Party	ID number	Name of the property	Field mission	Date
New nominations				
Argentina, Bolivia, Chile, Colombia, Ecuador, Peru	C1459	Qhapaq Ñan, Andean Road System	Argentina: Ángela Rojas (Cuba)	Sept.-Oct. 2013
			Bolivia: Michael Romero Taylor (USA)	Oct. 2013
			Chile: Rubén García Miranda (Uruguay)	Sept.-Oct. 2013
			Colombia: Cecilia Calderón-Puente (Mexico)	Oct. 2013
			Ecuador: Cecilia Calderón-Puente (Mexico)	Oct. 2013
			Peru : Tamara Blanes (Cuba)	Sept.-Oct. 2013
			Michael Romero Taylor (USA) Ángela Rojas (Cuba)	Oct. 2013 Nov. 2013
China	C 1443	The Grand Canal	Rima Hooja (India) Dong-Jin Kang (Rep. of Korea)	Sept. 2013
Costa Rica	C 1453	Precolumbian chiefdom settlements with stone spheres of the Diquís	Niklas Schulze (Mexico)	Sept. 2013
Czech Republic / Slovakia	C 1300	Sites of Great Moravia: The Slavonic Fortified Settlement at Mikulčice and the Church of St Margaret of Antioch at Kopčany	Margaret Gowen (Ireland)	Sept. 2013
France	C 1426	Decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc, Ardèche	José Antonio Lasheras (Spain)	May 2013
Germany	C 1447	Carolingian Westwork and Civitas Corvey	Adriano Boschetti (Switzerland)	Sept. 2013
Ghana	C 1409	Tongo-Tengzuk Tallensi Cultural Landscape	Ntsizi November (South Africa)	Sept. 2013
India	C 922	Rani-ki-Vav (The Queen's Stepwell) at Patan, Gujarat	Zhang Jie (China)	Oct. 2013
Iran	C 1456	Shahr-i Sokhta	Marco Baioni (Italy)	Nov. 2013
Iraq	C 1437	Erbil Citadel	Samir Abdulac (France)	Aug. 2013

State Party	ID number	Name of the property	Field mission	Date
Israel	C 1370	The Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves	Georgios Toubekis (Germany)	Oct. 2013
Japan	C 1449	Tomioka Silk Mill and Related Sites	Zhao Feng (China)	Sept. 2013
Kyrgyzstan / China / Kazakhstan	C 1442	Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor	Kyrgyzstan / Kazakhstan: Jae-Heon Choi (Rep. of Korea)	Sept. 2013
			China: Lynne DiStefano (Canada) Kazuya Yamauchi (Japan)	Oct. 2013
Malawi	C 1201	Mount Mulanje Cultural Landscape	John Kinahan (Namibia)	Sept. 2013
Myanmar	C 1444	Pyu Ancient Cities	Susan McIntyre-Tamwoy (Australia)	Oct. 2013 Jan. 2014
Netherlands	C 1441	Van Nellefabriek	Jörg Haspel (Germany)	Oct. 2013
Portugal	N/C 1454	Arrábida	Ana Luengo (Spain)	Oct. 2013
Republic of Korea	C 1439	Namhansanseong	Gurmeet Rai (India)	Sept. 2013
Saudi Arabia	C 1361	Historic Jeddah, the Gate to Makkah	Mohammed Hamdouni (Morocco)	Sept. 2013
Spain	C 1445	Cultural Landscape of Valle Salado de Añana	Massimo Preite (Italy)	Sept. 2013
Tajikistan / Uzbekistan	C 14602	Silk Roads: Penjikent-Samarkand-Poykent Corridor	Chahryar Adle (Iran)	Uzbekistan: Aug. 2013 Tajikistan: Oct. 2013
Turkey	C 1452	Bursa and Cumalıkızık: the Birth of the Ottoman Empire	Álvaro Gómez-Ferrer Bayo (Spain)	Oct. 2013
Turkey	C 1457	Pergamon and its Multi-Layered Cultural Landscape	Cynthia Dunning (Switzerland)	Sept. 2013
United Arab Emirates	C 1458	Khor Dubai (Dubai Creek)	Giancarlo Barbato (Italy)	Oct. 2013
United States of America	C 1435	Monumental Earthworks of Poverty Point	Gabriel Cooney (Ireland)	Sept. 2013
Viet Nam	N/C 1438	Trang An Landscape Complex	Christophe Sand (France)	Aug. 2013
Zambia	C 1429	Barotse Cultural Landscape	Karel Bakker (South Africa)	Oct. 2013
Extensions				
Spain	C 522 Bis	Jaén Cathedral	Pierre-Yves Caillault (France)	Oct. 2013

State Party	ID number	Name of the property	Field mission	Date
Renomination and extension				
Mexico	N/C 1061 Bis	Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche	Barbara Arroyo (Guatemala)	Sept.-Oct. 2013
Referred back nominations				
Russian Federation	C 981 Rev	The Bolgar Historical and Archaeological Complex	Zsolt Visy (Hungary) Britta Rudolff (Germany) Willem Willems (Netherlands)*	Sept. - Oct. 2012 Aug. – Sep. 2013
Deferred nominations				
Italy	C 1390 Rev	The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato	Cristina Castel-Branco (Portugal)	Sept. 2013

* Advisory mission recommended by the World Heritage Committee at its 37th session

III Mixed properties

A Asia - Pacific

New nominations

B Europe – North America

New nominations

C Latin America and the Caribbean

Extensions

Trang An (Socialist Republic of Viet Nam) No 1438

Official name as proposed by the State Party

Trang An Landscape Complex

Location

Ninh Binh Province, North Viet Nam
Socialist Republic of Viet Nam

Brief description

At the southern edge of the Red River delta, Trang An is a dramatic towering Karst limestone landscape interspersed by a network of flat valleys, some flooded, and framed by sheer, almost vertical, cliffs.

Exploration of some of the higher level caves that punctuate parts of this landscape have revealed archaeological evidence for seasonal human activity from the Late Pleistocene to the Early-Middle Holocene periods, spanning more than 30,000 years.

This evidence is beginning to chronicle the way early human groups adapted to far-reaching environmental changes at the end of the last glacial period, and, with further work, might provide a reference for understanding the process of adaptation to, and re-colonization of, landscapes under changing conditions.

The property also includes Hoa Lu, the ancient capital of Viet Nam in the 10th and 11th centuries, as well as temples, pagodas and scenic areas of rice paddy fields, villages and sacred places.

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* (July 2013) 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 significance and ICOMOS the cultural significance.]

1 Basic data

Included in the Tentative List

30 September 2011

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

17 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

A joint ICOMOS/IUCN technical evaluation mission visited the property from 10 to 19 August 2013.

Additional information requested and received from the State Party

None

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The visually spectacular Trang An karst limestone landscape rises from the vast flat coastal floodplains of the Day and Van Rivers.

The property covers 6,172 hectares. It is mainly made up of three contiguous protected areas. These are the Hoa Lu Ancient Capital, the Trang An-Tam Coc-Bich Dong Scenic Area along the Sao Khe River, with fields for rice and other crops and farming villages, and the Hoa Lu Special-Use Primary Forest, where excavations of a series of limestone caves in recent years have provided evidence for seasonal human activity between the 1,000 and 33,000 BCE.

Most of the property is said to be uninhabited and in a natural state. However those parts of the property that are cultivated are home to around 14,000 people.

Over many millennia, the Trang An massif (along with the much wider south east coast of Asia) was subject to wildly fluctuating climatic and environmental conditions, especially as a result of three marked fluctuations in sea level during the late Pleistocene-Holocene period between around 130,000 to 30,000 BP. Trang An was at times surrounded by sea and at other times was well inland.

The recent archaeological research has revealed evidence of seasonal settlement in several caves from c. 30,000 to 12,000 years BP, during the Last Glacial Maximum and marine regression. It has also shown how people adapted their gathering of food between sea and inland resources as the sea level rose and fell.

Also in the property, mainly along the Sao Khe River are the remains of the Hoa Lu Ancient capital and hundreds

of temples, pagodas and shrines dating from different periods, as well as rice fields and villages. It should be noted that in the nomination dossier details of the temples, pagodas and traditional way of life are provided under criterion (vii). Although IUCN is considering that criterion, attention is given in this report to these cultural aspects.

These aspects are considered separately:

- Caves
- Hoa Lu Ancient capital
- Temples, pagodas and shrines
- Rural landscapes and villages

Caves

Since 2007, archaeological investigations have been undertaken in 9 of the 29 caves that have been identified in the limestone massifs of the nominated area. Results are said to have revealed evidence of seasonal use by prehistoric people over a 30,000 year time span, from around 1,200 BP at the Moi cave (*hang*) back to at least 24,438 BP at the high altitude Trong cave and around 33,000 BP at the Mai da Ong Hay rock-shelter.

There is evidence that during this time, people hunted both large animals such as cattle and small ones such as monkeys and giant squirrels. At the beginning of this period, there is also evidence for the use of used basalt pebble tools, at Hang Trong, and from 12,000 years ago tools made mainly of limestone. The remains of seasonally available seeds, fruits, vegetables and tubers, and particularly mountain and freshwater snails, suggests seasonal use of the caves. And evidence for fire suggests that food was cooked.

As well as these three sites, the main caves and shelters so far investigated are the Boi, Thung Binh 1, Thung Binh 2, Thung Binh 3, Thung Binh 4, Nui Tuong, Ang Noi, and Da Mang caves, and the Oc, Vang, and Cho rock shelters. These are all within the Special Use Primary Forest Zone in the west of the property.

While these archaeological investigations have been underway, geologists have been taking core samples to investigate the history of geological and environmental changes during the same time period, working on a 10m thick sediment layer deposited since the beginning of the Holocene period.

The outcome of the fusion of evidence emerging from the work of archaeologists and geologists, is knowledge of long-term human interaction with the environment, from the extreme end of the Pleistocene to the Holocene, through cycles of substantial environmental change linked to massive changes in sea levels and climatic conditions. Trang An is said to be one of the longest, most securely dated and already most intensively studied such sequences in Viet Nam which are beginning to show how people reacted to these environmental changes.

ICOMOS notes that this work has currently only been directed at a small proportion of the potentially rich cave resources of the Trang An massif and is still continuing. The lowest levels in the caves so far investigated have not yet been reached and there are many other caves that could be investigated. It cannot therefore be claimed that the full potential of Trang An has yet been revealed or understood.

Hoa Lu Ancient capital

Hoa Lu, in the north of the nominated property, served as a political capital for 42 years during the Dinh Dynasty from CE 968 to CE 1010. Subsequently, it became an important regional centre. In the 13th and 14th centuries CE, Hoa Lu as a military citadel, defended the nation's frontier against invaders from both Mongolia and China.

In the late 16th and early 17th centuries some temples including Linh Coc temple and the temple of the Dinh-Le emperors were rebuilt and others such as Bich Dong temple built anew. In 1788, during the resistance war against the Chinese, the original ramparts was strengthened and new ramparts constructed.

The remains of both the Inner and Outer Citadels cover an area of around 300 ha (3.0 km²). Today, the citadels no longer exist, and few vestiges of the 10th century buildings apparently remain. Many temples and tombs have been reconstructed either in the 16th and 17th centuries or more recently 'aided by physical excavation, exposure and in-situ preservation of foundations and other structures'.

ICOMOS notes that although annotated photographs are supplied in the nomination dossier, very few descriptive details have been provided for this area.

Temples, pagodas and shrines

Within the nominated property there are said to be hundreds of historic pagodas, temples, and shrines dating from different historical periods. These include two temples of King Dinh and King Le with their traditional wooden architecture, the Nhat Tru Pagoda with its Buddhist scriptures carved on the temple's stone pillars in the 10th century, and Thai Vi Temple of the Tran Dynasty. There are also imperial dragon stone beds, and scared dog statues dating from the 17th century CE.

ICOMOS notes that few specific details are provided on this aspect of the property. However it is understood that these cultural sites are mainly along the Sao Khe river area, in the vicinity of the Hoa Lu ancient capital. Some temples are now in ruins, others have been reconstructed from ruins with modern materials, while yet others in the main tourist area have been completely restored, in order to make them more attractive to visitors. This overall work is still in progress largely funded by pilgrims.

Rural landscapes and villages

The nomination dossier states that the 'abundant archaeological evidence is complemented and supported by a rich supply of historical and cultural information, manifest in structures such as temples, pagodas and palaces, and in more intangible elements of cultural heritage such as folklore, festivals and handicrafts'.

On the extensive alluvial flats in the nominated property and extending beyond into the buffer zone, are rice paddy fields, villages and canals. The picturesque qualities of these fields are much in evidence in the photographs within the nomination dossier.

ICOMOS notes that although the precise extent of this rural landscape is not made clear in the nomination dossier, what is made clear is that the majority of the nominated area is uninhabited and in a natural state. The cultivated landscape along the Sao Khe River thus covers only a very small part of the nominated area.

History and development

The early pre-history of the area is outlined above.

From around 4,000 BP, there is evidence that the caves were used less frequently and, as the sea levels dropped, people began settling in the margins of the area and particularly in the coastal dunes.

From the 2nd century BC to 10th century AD, Viet Nam in general and Trang An in particular were under Chinese domination.

Following the collapse of the Chinese Tang dynasty at the beginning of the 10th Century, and the emergence of the Southern Han dynasty, a Viet Nameese noble, Ngo Quyen, seized power over what is now the north of Viet Nam in a battle at Bach Dang river in AD 938 and established his capital at Co Loa (now in Hanoi). This event concluded the 1000-year period of Chinese domination in Viet Nam, opening the era of national independence for the country. However, after his death a civil war ensued that lasted for 20 years ending when one of the warlords defeated the others and established what is regarded as the first imperial monarchy in Viet Nam with a short lived capital at Hoa Lu. Forty-two years later the capital was moved back to Co Loa.

Between 1407 and 1427, Viet Nam was invaded by China and became the Chinese province of Jiao Zhi but under the Le Dynasty (1428-1527) regained its independence.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The property is compared to four inscribed World Heritage properties: the first two, Hoi An Ancient Town

(Viet Nam), and Town of Luang Prabang (Lao), are suggested on the basis that they were inscribed under criterion (v). This does not bring any valid comparisons. The second two are Ban Chiang Archaeological Site (Thailand) and Archaeological Heritage of the Lenggong Valley (Malaysia). Ban Chiang is noted as representing a specific and well defined archaeological culture which is quite different to the Trang An caves which are related to human-environmental relationships over time rather than a specific culture. There are more similarities with the Lenggong valley, although here the research has primarily been focused on the past 10,000 years and particularly on the making of lithic tools, in contrast to the focus on behavioural adaptation at Trang An.

Comparisons are made with five Tentative Lists properties. Two of these are in the Philippines: the Archaeological sites of the Cagayan Valley, and the Tabon Cave complex. The Cagayan Valley research is also partly related to behavioural adaptation but is seen as dealing with habitation on islands rather than, as at Trang An, a landscape that is only sometimes surrounded by the sea, nevertheless it is suggested that this valley could produce material that is complementary to Trang An. Similar material in terms of human response to the changing environment might also be provided at the Tabon cave but this research has not yet been published and it appears that it might not be as continuous as at Trang An.

The three other sites are Badah-lin and associated caves, Myanmar, Con Moong cave, Viet Nam, and Prehistoric Caves in Maros Pangkep, Indonesia. Of these, the Con Moong cave, only 25 kilometres from Trang An, is seen to be the most similar, in terms of revealing behavioural patterns but it is considered unlikely to contain the same breadth of evidence as Trang An.

More relevant are three others sites not so far included in Tentative Lists. These are the Niah cave, Malaysia, Lang Rongrien, Thailand, and Song Gupuh, Indonesia. All of these are important sites with on-going archaeological investigations. They are all seen as sites where human adaptation to the environment is important but there reflect distinct differences. For instance the Niah cave deal with a rain forest area, but most importantly all three have revealed considerable archaeological richness linked to specific time frames and specific sites.

The comparative analysis reveals with emerging importance of archaeo-environmental studies in south-east Asia and further afield. The sites mentioned are all a reflection of the richness of evidence for early human settlements in this region and for the potential for sites to reveal ways in which people reacted to changing environment over time. At Trang An, the main emphasis is on this link, with the archaeological evidence linked to geological research. At some of the other sites the main focus is on substantial archaeological evidence for one

or more specific sites and/or specific periods that may also reveal environmental parameters.

ICOMOS considers that the main difficulty with this comparative analysis lies in the fact that the work at Trang An is comparatively recent, that there is the potential for it to continue, and that overall the field of environmental-archaeological research is a rapidly developing one which needs to be considered in terms not only of sites in south east Asia but also further afield.

The case is being made that Trang An can be seen as contributing to an understanding of human response to changing environments in a very specific coastal area, whereas other sites are producing material on different localities and types of geology and ecology. Given the current state of knowledge, with only limited excavations at some caves, it is difficult to say that Trang An will prove in the long term to be a defining moment in our knowledge of human response to climatic variations, and thus seen to be of outstanding importance.

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

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 archaeological evidence of human habitation in the massif, extends back in time some 30,000 years and shows how early human forager-hunter peoples, occupied the massif probably on a seasonal basis, and adapted to changing climate and environments from the time of the last glacial maximum through the turbulent transformations at the end of the glacial period, during which time the massif was incrementally and sometimes rapidly inundated by the sea.
- The Trang An property is now recognized as being outstanding in Southeast Asia as an exceptionally rich repository of information for demonstrating human-environment interaction in Late Pleistocene and Holocene time period.
- In historic times the inhabitants of Trang An continuously evolved their cultural identity in close harmony with the natural landscape, establishing the first three dynasties of the independent feudal Viet Nam more than one thousand years ago and the country's first political capital.

ICOMOS considers that the currently excavated caves have not produced finds that have dramatically altered our knowledge of human settlement in south-east Asia; much earlier and more substantial finds have been made elsewhere in the region. The distinctiveness that is being put forward for Trang An is evidence for the link between archaeological finds and geological and environmental change over time. This has been demonstrated through

the way excavated materials display how food gathered by the seasonal users of the caves changed as sea level rose and fell from land to sea resources and then changed again as sea levels decreased.

The relationship between archaeology, geology and climate change is a rapidly emerging subject area which has the potential to reveal evidence for the way early communities adapted to their changing environments. Bringing together the two disciplines of archaeology and geology does however highlight differences in approaches to geological and archaeological time and thus chronological accuracy. There is also the issue as to how far this type of evidence needs to be related to tectonic movements as well as to other parameters.

In terms of assessing value, the issue is how exceptional the evidence is from Trang An in relation to other evidence from this region and from other parts of the world. The results from Trang An are of interest but the project is still in its early stages. The scientific information provided in the nomination dossier is highly variable in quality and quantity and is in some places contradictory. Although some work has been published, the results have not yet been the subject of a substantial publication that would allow them to be tested alongside other sites.

In 10 years' time this picture may well have changed. In the meantime, ICOMOS considers that the case is not proven for Trang An being seen as a defining site in terms of our knowledge of human adaptation to the environment in relation to settlement in this region.

Integrity and authenticity

Integrity

The boundaries of the property encompass not only archaeological sites, but also the remains of Hoa Lu, shrines and temples and also agricultural land and villages.

As set out above, the cultural criterion (v) relates only to the archaeological evidence. In terms of archaeological attributes, the boundaries do not closely follow the disposition of cave sites. Most of these are in the west of the property and some are currently outside the boundaries.

In terms of the boundaries including all the necessary attributes, then ICOMOS considers that these are at the moment not entirely satisfactory.

In terms of the integrity of individual archaeological sites, the evidence in some of the caves appears to be threatened by the lack of backfilling after excavations in the recent years and the lack of satisfactory supports for excavated faces. The lack of protection has led to the collapse of soft sediment, causing the irretrievable loss of information in unexcavated areas.

There are also issues connected to the setting of these caves in relation to concrete paths (see below).

The integrity of the overall property is adversely affected by a range of facilities and infrastructure arrangements for tourists. These include new roads and enlarged tunnels through the mountains.

Authenticity

The authenticity of the archaeological evidence is highly vulnerable in some excavated caves due to the lack of adequate support or back filling.

In terms of the overall authenticity of the property, it is difficult to say that the overall landscape clearly reflects the way human communities responded to their environment over time. This relationship between people and changing climatic conditions has emerged from only nine caves and even in these is it as a result of analysis of comparative evidence. The landscape cannot be said to reflect these changes in any meaningful way.

Of concern in terms of threats to authenticity are the changes taking place to parts of the landscape for tourist development and to the current arable landscape (see below).

ICOMOS considers that the conditions of integrity and authenticity have not been met at this stage.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criterion (v) (and natural criteria (vii) and (viii)).

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 Trang An is an outstanding locale for demonstrating the way that humans interacted with the natural landscape and adapted to major changes in the environment over a time period spanning more than 30,000 years. This continuous cultural history is strongly associated with the geological evolution of the Trang An limestone karst massif since the end of the last glacial period, during which it experienced marked changes in sea levels and in climatic conditions, as revealed in paleo-environmental records.

Although the nomination includes other cultural sites such as Hoa Lu ancient city and numerous temples, pagodas and shrines that are included as part of the justification for Outstanding Universal Value, they are not included in the justification for this, the only cultural criterion.

ICOMOS notes that the detailed archaeological analysis presented in the nomination dossier relates to excavations at nine caves in the Special Forest reserve (out of 29 caves so far identified as having the potential for further research). Although evidence from some of these extends back to 30,000 this is not the case for all the excavated sites, some of which contain evidence dating back only some 5,000 years.

The evidence from these caves is beginning to provide evidence on the way communities reacted to dramatic environmental climatic change over many millennia that affected the coastal regions of south-east Asia. This research is comparatively recent – work started in 2007 – and still has not been the focus of substantial publications and comparisons with other work in the same region and elsewhere. Clearly Trang An is at the forefront of sites where the archaeological evidence is not producing substantial finds that are related to defining archaeological cultures, but rather evidence over a long time span that is related to environmental and climatic changes. This is an emerging field and clearly Trang An has the potential for further research over the next decade or so. What has so far not been demonstrated is how Trang An can be seen to show in a defining way these archaeological-environmental relationships.

This focus on how communities adapted to their environment over time also brings up the difficulty as to how the property might reflect the evidence that has been discovered. Given the very large difference in sea levels between the Holocene period and today it is not possible to establish a clear link between the sites as they are now and the dynamics of adaptation to climate change that excavations have revealed.

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

ICOMOS does not consider that the conditions of authenticity and integrity been met at this stage nor has the criterion been justified.

4 Factors affecting the property

The development of facilities for visitors appears to be moving forward rapidly. Currently around one million tourists visit the property annually but this number is growing in particular amongst foreign tourists.

The focal point for tourist groups from Viet Nam and Asia is the new Trang An Scenic Landscape Visitor Centre. On an island, this is a series of modern buildings in traditional architectural style, with car parking space built on land fill. The centre serves as the starting point for the traditional sampans (rowing boats) operated by local people that take visitors on circuits around the site. Some 1,500 boats contribute to the daily life of about 7,500 families. In the southern part of Trang An Scenic

landscape, which tends to attract Western visitors, are a further 1,100 boats, managed by different companies.

Also in order to facilitate the passage of tourists both in boats and motorized vehicles tunnels through the rocks are being drilled or enlarged. Also within a fully protected area (the Hoa Lu Special-Use Forest) a long 2-3m wide concrete path – running to several kilometres, and including hundreds of steps – has been constructed to the foot of the Hang Trong cave. It has been funded by a private tourism company in spite of the fact that the protective legislation does not allow unauthorized access to the protected area.

Perhaps the greatest impacts have been caused by a new road within the protected area of the ancient capital of Hoa Lu, and by new resort currently under construction within the property. This is the Tam Côt luxury 'Eco lodge' complex and it consists of large blocks of brick buildings that have a high negative visual impact.

A further negative change within the property is the creation of raised embankments on the paddy fields. These are apparently being created to allow either the construction of houses or the planting of trees, both of which would have a significant impact on views of the traditional farmed landscape.

In the buffer zone on the Tam Côt tourist circuit, a large multi-story hotel is under construction, next to tall telecommunications towers, and together these could impact adversely on views in the first part of the tourist circuit. Also a huge religious complex is being completed on 200 acres at the north-west boundary of the property next to the Bai Dinh pagoda. A large bridge is also under construction on the river marking the northern boundary of the property.

From the above it is difficult to understand how protective arrangements for the property and the buffer zone are being managed, in relation to the stated visual importance of the property (and its natural value), and also the sensitivity of the archaeological layers. These changes are already irreversible in certain zones.

The integrity of some of the excavated caves is now threatened by the lack of backfilling of excavated archaeological sites by researchers in recent years. This lack of protection for excavated sections has led in some irretrievable loss of information in unexcavated areas.

The caves are mostly in remote sites which is beneficial to their conservation. There is concern that new paths, as mentioned above, and new signs on the archaeology that have recently appeared, could lead to undesirable access to the caves which are not in any way in a state to be visited.

Natural disasters of various types could well be extremely harmful to archaeological evidence. There is a need for this subject to be addressed and consideration

given as to whether and how preventive measures might be identified and put in place.

ICOMOS considers that the main threats to the property are lack of adequate regulation for development of facilities for tourism and reconstruction.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundary encircles the major limestone massif and appears adequate to encompass the main aspects of geology.

As currently drawn, the boundary encompasses a mixture of archaeological cave sites, the ruins of Hoa Lu, temples, pagodas and rural agricultural landscapes.

The boundary is thus not clearly related to the archaeological evidence of the caves, the main attributes put forward for the cultural criterion as some of these are beyond the current boundary, and some parts of the property are quite unrelated to the justification for criterion (v).

Surrounding the entire property is a buffer zone of 6,268 hectares, which consists mainly of farms and small villages. The boundaries of this appear unrelated to the cultural value of the property and do not appear to constrain development – as outlined above.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are not adequate in terms of being related to the cultural attributes being put forward for the justification of criterion (v).

Ownership

The entire property is nationally owned.

Protection

The Hoa Lu ancient capital was classified as a historic monument in 1962, covering an area of 314 hectares. In 2012, the site was placed on the list of Special National Heritage as was the Trang An-Tam Coc-Bich Dong Scenic Landscape.

The Hoa Lu Special-Use Forest reserve covering an area of 3,375 hectares has protection for biodiversity conservation and environmental protection. It is thus not protected for its archaeological significance although this is the part of the property where nearly all the key archaeological sites are located.

Given the extreme sensitivity of the archaeological sites already excavated and the large number that potentially hold further valuable evidence, ICOMOS considers that these sites need specific national protection for their cultural value, beyond the protection they currently have

as part of an ecological area. ICOMOS notes that a project has been defined to determine and establish boundaries surrounding caves that have important archaeological resources and excavations, to prevent any damage or loss, and this would clearly be a prerequisite to putting in place legal protection.

ICOMOS considers that the legal protection in place is not adequate at this stage and needs to be strengthened to give protection to the archaeological sites.

Conservation

At the Trong cave, excavated areas were not covered after excavation and this has led to progressive erosion of stratigraphic sections and a rapid loss of parts of the scientific value and authenticity of the site. Similar problems have been experienced in other caves and need to be actively addressed.

The nomination dossier lists a project to protect cultural deposits in caves from disturbance due to roof collapse and from water and this also needs to be implemented.

An overall conservation plan for all the excavated areas needs to be developed and implemented.

There is also need for all this work to be brought together within an excavation strategy that, on the basis of surveys, could identify potential areas for excavation as well as those areas best studied with non-interventionist measures. Such a strategy could also define conservation approaches, as well as the protection and long term management implications of excavated areas.

ICOMOS considers that on the basis of detailed surveys, the caves and rock shelters of archaeological importance, and other associated archaeological sites, need to be given national protection for their cultural value. An excavation strategy should be developed to manage the overall approach to the study of the caves and shelters. There is also a need to improve the conservation of both excavated and unexcavated sites through the development and implementation of a conservation plan.

Management

Management structures and processes, including traditional management processes

The Trang An Landscape Complex Management Board, appointed by the provincial government in 2012, has responsibility for day to day management of the property. In addition to its primary management role, its tasks include monitoring of the state of conservation of the cultural heritage and the natural environment, surveillance and mitigation of threats, and management of tourism activities and services. Under the Management Board, there is a department directly in charge of the Hoa Lu Ancient Capital.

The Board is headed by a director and three deputy directors and works with five separate departments for Collaboration, Research and Environment, Environmental Protection, Project Management; Administration. More than 70 people are employed by the Board.

For the Trang An part of the nominated property, the Board works in partnership with a private company that has been given a 70 year lease.

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

A management plan was submitted with the nomination dossier. This has been authorized by the Provincial Authorities. There is also a Master Plan on the preservation, restoration and promotion of the Hoa Lu Ancient Capital (2000-2015) which was approved in 2003.

A Management Board for the property was set up in 2012. It is headed by a Director with three Assistant Directors and works with five separate departments: Cooperation, Research and Environment, Environmental Protection, Project Management and Administrative.

The Management Plan is basic in respect of the archaeology of the site and not nearly specific enough in terms of how the archaeological sites should be protected, conserved and managed. Nor does it appear effective in terms of managing the wider property.

Development in and around the property related to tourism as outlined above is already impacting adversely on the property. If this is intensified, it could have significant and irreversible consequences on the authenticity of the property.

Measures proposed to address these threats do not appear to be sufficient and also local authorities do not appear to fully understand the potential and actual negative impact on the overall property.

Involvement of the local communities

Although the nominated area is home to many thousands of people and some benefit from tourism through their involvement with the provision of boats, there is no evidence in the nomination dossier of the aim to involve local communities in the overall management of the property in a way that allows them to have the potential to benefit from its future development.

ICOMOS considers the management system for the property does not appear to be robust enough to meet the challenges affecting it in terms of tourism development and protection of the archaeological resource.

6 Monitoring

Monitoring indicators are proposed but those for the archaeological sites are passive rather than active and propose to measure illegal disturbance or removal of artefacts and damage to cave surfaces. Similarly indicators related to development, including land clearance include recording the number of illegal constructions or activities. Monitoring is every two years or sooner if illegal activities are found.

ICOMOS considers that the monitoring of such a sensitive archaeological landscape needs to be undertaken on an on-going basis and to be part of the routine job of Park rangers. Recording transgressions needs to be done but monitoring overall needs to aim to ensure that no transgressions occur.

ICOMOS considers that the monitoring arrangements need to be more finely tuned to the needs of the site and carried out regularly as part of the task on property staff.

7 Conclusions

From a cultural perspective the reasons for nominating this property are confusing. The boundaries enclose some 29 caves, rock shelters and other archaeological sites mainly in the areas of forested limestone pinnacles in the west, while in the north there are the remains of Hoa Lu, capital of Viet Nam for short period in the 10th and 11th centuries, and groups of temples and paddies from more recent centuries, and in the east the scenic landscape of rice paddy fields, villages, canals and lagoons between karst limestone cliffs, where some 14,000 people live.

Justification for criterion (v), the sole cultural criterion, is related to the excavations in nine of the caves, while the scenic cultural landscape is related to natural criterion (vii). The remains of Hoa Lu and the numerous temples and pagodas are not related to any of the criteria.

From a cultural perspective, the boundaries do not relate in a meaningful way to the archaeological record so far uncovered in nine caves. The remains of Hoa Lu and the scenic landscape of rice paddies are not relevant in a nomination for a series of archaeological sites that relate to habitation by communities in the Late Pleistocene to the Early-Middle Holocene periods.

In terms of assessing the value of the archaeological record, ICOMOS considers that interesting material has emerged from the few caves so far examined. In a couple of sites the record of habitation evident extends back as far as 30,000 BP and overall when this material is integrated with geological data, evidence is beginning to emerge to show how over time small communities of people changed their food gathering habits in response to dramatic changes in sea levels and local ecology.

Some of the evidence put forward in the nomination dossier is however confusing and at times contradictory.

The excavations have been undertaken comparatively recently starting only in 2007. So far work in the caves that have been examined has not yet reached the lowest strata of debris. Excavations are continuing and will in time extend to others of the 29 potentially rich archaeological caves so far identified. Although some work has been published, a more substantial publication would be needed based on further research and refinement of the geological/archaeological interface if Trang An were to be seen as an outstanding site in relation with evidence for adaptive behaviour of early communities.

ICOMOS considers that once a further body of archaeological work has been undertaken, then further reflection would be needed on how Trang An might be put forward for cultural criteria and on how appropriate boundaries might be defined. Such a reflection would need to consider the protection of the archaeological record as well as how the property might convey its archaeological importance in relation to climate change and adaptive behaviour.

8 Recommendations

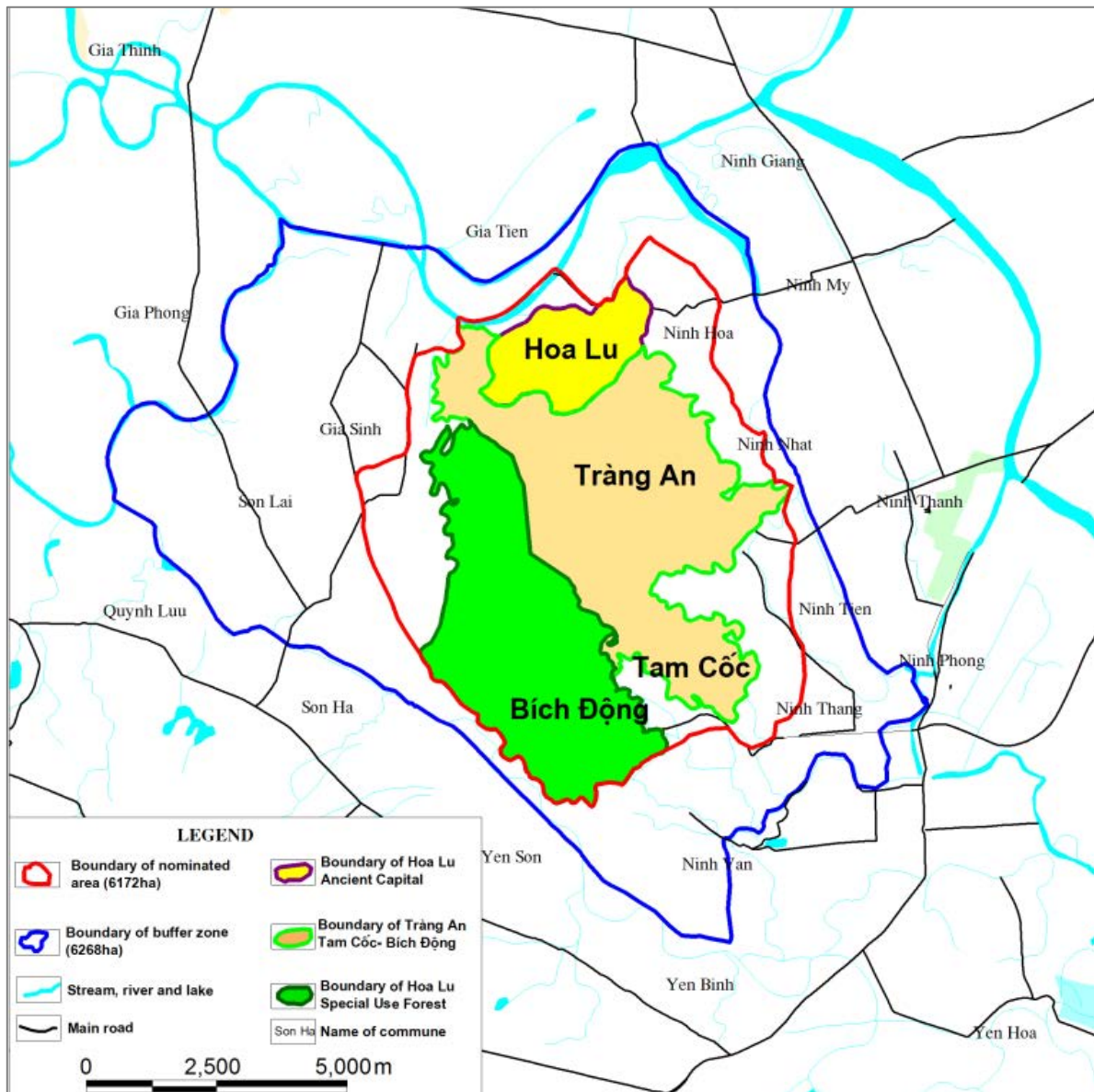
Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Trang An Landscape Complex, Socialist Republic of Viet Nam, to the World Heritage List in relation to cultural criteria be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Continue its archaeological and geological research in the nine caves and shelters so far studied and in others of the twenty-nine further caves and shelters identified as holding potentially significant archaeological material, based on a detailed excavation strategy;
- If a substantial publication of the results of this further work can demonstrate the way that Trang An might be seen as an exemplar site related to the way communities adapt to changing climatic conditions, then:
 - Consider re-nominating the property but within a boundary that clearly considers the archaeological record;
 - Provide national protection for the archaeological sites and their essential setting;
 - Ensure adequate conservation of excavated and unexcavated archaeological sites;
 - Put in place stronger management arrangements to ensure the protection and

appropriate presentation of the archaeological sites and appropriate visitor management arrangements.

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



Map showing the boundaries of the nominated property



View of the landscape



Rock shelter



Overview of the King Dinh temple



Thai vi festival

III Mixed properties

A Asia - Pacific

New nominations

B Europe – North America

New nominations

C Latin America and the Caribbean

Extensions

Arrábida (Portugal) No 1454

Official name as proposed by the State Party

Arrábida

Location

District of Setúbal
Portugal

Brief description

Situated on the southern end of the Setúbal Peninsula, south of Lisbon, between the estuary of the Sado River and Cape Espichel, Arrábida comprises the homonymous range, a small mountainous chain reaching some 500m a.s.l., stretching from East to West. To the south sheer cliffs plunge into the ocean, while on the northern side hillsides are less steep and suited to cultivation and settlement. Inhabited since Palaeolithic times, Arrábida contains diverse traces of its long human occupation: archaeological sites, defensive and religious structures, recreational estates and agricultural units. Today, much of Arrábida's territory is protected for its natural values and it has become a renowned seaside and nature tourism destination.

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*.

[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

26 November 2004 (as a natural property)

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

This is a new nomination.

Consultations

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

Technical Evaluation Mission

A joint ICOMOS-IUCN technical evaluation mission visited the property from 1 to 5 October 2013.

Additional information requested and received from the State Party

No additional information was requested from the State Party, who however on 18 November 2013 transmitted an updated (October 2013) draft version of the management plan, and further material concerning the quarrying activity, regulation of natural protected areas, and thematic maps illustrating the different layers of protection enjoyed by the nominated property and its buffer zone.

The information provided has been integrated into the relevant sections of this document.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Arrábida is located on the southern side of the Setúbal Peninsula, which is delimited by the estuaries of the river Tejo to the north and of the river Sado southwards, whilst eastwards and southwards it faces the ocean. The nominated property encompasses the southern slopes of the Arrábida range, a relief system formed by three lines of elevations oriented East-North East to West-South West. This triple mountainous system is particularly evident in the eastern part of the property. The morphogenesis of this chain has determined its shape: to the south sheer cliffs plunge into the ocean, while on the northern side, the elevations are less steep and form hillsides suited to cultivation and settlement.

Geologically the region is varied and comprises tectonic formations of calcareous-dolomitic nature from the Jurassic to the Miocene, giving rise to various geological manifestations, e.g. karstic formations, and lithological phenomena, like the Arrábida breccia, a much-valued type of stone, much used in baroque architecture and still commercially exploited. The lithological richness of the area still maintains a commercial relevance, as attested to by the active quarries located in the buffer zone.

The relief and its orientation affect climatic conditions: towards the sea the climate is more temperate and stable, although humid winds may occur, whilst inland, summer can be very hot and dry.

Morphology, the nature of the soil and the climate influence the vegetation types: 22 different landscape vegetation units have been identified. They include different sorts of scrubs, naturalised pine woods and oak woods, abandoned agricultural land, semi-natural grassland, unirrigated orchards, and plantations.

Agricultural activities are limited to the inland valleys and the western plateau and include vines and, to a lesser extent, olive cultivation, fruit orchards, and wheat.

The territory of the nominated property falls under three densely inhabited municipalities: the large urban centre of Setúbal (approx 90,000 inhabitants just in the city) situated outside the eastern edge of the nominated property and its buffer zone; the town of Palmela (approx 58,000 inhabitants in the entire municipality) at the north-eastern limit of the Arrábida property; and the smaller town of Sesimbra (more than 37,000 inhabitants within the whole municipal territory), located by the coast and completely surrounded by the nominated property, although not included in it. Within the nominated property and its buffer zone several villages and hamlets are scattered where the geography allows for human settlement.

The nominated property contains several traces of prehistoric human occupation: a number of caves have been studied, yielding a considerable quantity of finds attesting to human occupation since the Lower Palaeolithic (500,000 BP) with *Homo heidelbergensis* (Baia dos Lagosteiros), through to the Final Middle Palaeolithic (40,000 BP – Gruta da Figueira Brava) with evidence of *Homo neanderthalensis*. The Neolithic saw the spread of human occupation in the area as attested to by several caves with archaeological traces (6,500–4,900 BP – Lapa do Fumo, Lapa do Bugio, Alto de São Francisco, and the hypogea of Quinta do Anjo).

The Chalcolithic period (4,900 – 3,800 BP) is represented by the settlements of Rotura, Outeiro Redondo and Castro de Chibanes; the latter, possibly associated with Quinta do Anjo during its earlier phase of occupation, was also used by the Romans up to the Imperial period and considerable remains of this fortified settlement still survive.

The Roman period (2nd century BC – 5th century AD) is represented particularly by Creiro, a facility for fish processing, which was part of a larger manufacturing district extending along the Arrábida coast, and also beyond the limits of the nominated property.

Traces of the Islamic occupation can be found at the Alto de Queimada site, a former *alcaria* (settlement) possibly occupied previously by the Romans.

Thank to its strategic position and its exposed morphology, Arrábida has always been a natural defensive outpost. This function is attested to by the remains of fortified sites dating from the Bronze Age onwards, as well as by castles and fortresses built and remodelled over the centuries by the rulers of the times according to their defence requirements. The majority of the surviving remains of this centuries-long defensive function exhibit configurations dating back to the 17th century, when King Joao IV reinforced the strategic coastal defences of Portugal, after independence was regained.

Probably the most prominent among these structures is the Castle of Palmela. An Islamic stronghold, it became the seat of the Order of Santiago from the 12th century AD until 1834, when religious orders were abolished in Portugal. Other fortresses still survive to the present day, e.g. the medieval Sesimbra Castle, the 17th century São Teodosio/do Cavallo Fort, Santiago fortress also in Sesimbra, the 16th century São Felipe Fort overlooking Setúbal, Santiago do Outão Fort, and Santa Maria da Arrábida fortress, which was built in the 17th century on the site of the homonymous convent.

The isolation of the area favoured the establishment of religious complexes, e.g. the 16th century Arrábida convent, a large Franciscan monastery built on the steep slopes of the Arrábida hills facing the sea, or the 18th century pilgrimage site of Cabo Espichel Sanctuary, a large compound including a church, hostels, the Casa da Opera, the aqueduct and the Casa de Agua. The religious heritage includes also the churches built within fortified compounds, e.g. at the castles of Sesimbra and Palmela.

The favourable climate and the rich vegetation also made the Arrábida hills particularly attractive for recreation and a number of estates were established in the area. They featured peculiar architectural types and gardens but were also provided with productive units for agriculture. The most prominent are: Calhariz Palace – Palmela House, the palace of the Dukes of Aveiro, Bacalhoa Estate and Palace, Quinta da Torres Palace, Esteval Estate.

The rural built heritage also comprises utilitarian structures, e.g. wind and corn-mills, or waterworks to channelize and store water (Casa de Agua – Cabo Espichel Sanctuary).

Arrábida plays witness to intangible manifestations of a religious nature: processions or *círios* are widespread and some are peculiar to the Estremadura region, e.g. in the rotation system of organisation which involves several parishes and gave rise to oral expression of faith. The *Círio* of the Senhora da Arrábida was first mentioned in 1728, while the *Círio* of the Senhora do Cabo possibly dates back to the 14th century. The 19th century witnessed a diffusion of processions: the Ancient *Círio* of Setúbal, or the *Círio* of the Rich, was established in 1839, followed in 1892 by the New *Círio* of Nossa Senhora da Arrábida, soon known as the *Círio* of the Poor. In 1845 the *círio* of Azeitão was also established.

Further expressions of intangible heritage mentioned in the nomination dossier relate to everyday life, e.g. traditional fishing methods, ship and boat building, and cheese and wine making.

History and development

Material evidence suggests that the earliest human occupation in the area comprising the nominated property dates back to the Middle Palaeolithic and the Mesolithic,

although it is during the Neolithic and the Chalcolithic that human presence spread and impacted on the vegetation cover through extensive agro-cultural practices.

If during the Neolithic period the settlement pattern was more sparse, the Chalcolithic period featured more compact, fortified hamlets, which were abandoned during the Bronze Age (23rd -9th centuries BC). The Iron Age saw the first long-distance commercial exchanges in the area and settlements began again to be fortified.

Romanization started in the 2nd century BC and Roman occupation lasted until the 5th century AD. Evidently, contact between the Romans and the indigenous population was peaceful and left a number of traces.

Late antiquity witnessed instability, uncertainty and urban decay, and life returned to subsistence and settlements moved again to hilltop sites. German tribes invaded the peninsula which was then taken over by the Visigoths. These were expelled following the Islamic conquest (beginning of the 8th century AD), which marked Arrábida territory out as significant as one of the frontier areas in the Islamic administrative land subdivision of the Iberian Peninsula. The colonisation pattern comprised forts, watchtowers, *ribats* (places with both religious and defensive connotations), complemented by rural units. This pattern of settlement was imprinted on the territory and was integrated into the subsequent territorial organisation, as in other areas of the Iberian Peninsula.

In the second half of the 12th century, the Christian Reconquest reached Arrábida and villages were granted their own charters. To ensure the protection of this land, the Friar Knights of Santiago were offered a strategic headquarters in the Castle of Palmela and the entire territory was reorganised and fortified in the 13th century.

In the 15th century, the Castle of Palmela became the permanent headquarters of the Order of Santiago, to ensure the control both of religious orders and of the area. Economic and demographic expansions of the Arrábida urban centres characterised the 15th and 16th centuries. Setúbal in particular gained in importance as a port for ocean-going vessels and a salt producer. Also farming witnessed a period of prosperity: the order of Santiago restructured the exploitation of its land possessions to agriculture and forestry, granting tenants permanent leases.

After the restoration of the independence of Portugal, the defensive system of Arrábida was strengthened: existing strongholds were upgraded and new ones constructed. Along with the fortifications new recreational-utilitarian estates developed, contributing to the land control system.

During the 19th century agricultural activity was modernised and increased, and grape cultivation and wine making spread all over the region.

The end of the 19th century witnessed early debates on the need to protect the forest resources from agricultural activity, which was rapidly expanding, and from technological progress. Nevertheless, in the first years of the 20th century, the first bathing facility was established in Setúbal, the Cement Company of Portugal was founded, and quarries were opened in Outão to supply the raw material for cement production.

During the dictatorship (1926-1974) agriculture and livestock breeding, especially for cheese production, increased again. However, in the 1960s, industrial development reached inland in Arrábida, causing a reduction in farming, whilst coastal areas chose seaside tourism as an economic asset.

During the 1970s-80s, Portugal saw the return of democracy, which was, however, accompanied by several social problems. Arrábida witnessed major waves of immigration and this led to illegal building activity, the consequences of which still represent a problem for the area. In 1976 the Arrábida Natural Park was created to protect its natural and cultural assets. In 1998 and 2003 the boundaries of the Natural Park were extended to encompass further areas containing important marine biotopes, geological, floristic and landscape features.

Since the 1980s until the present day, several protective and promotional actions have been undertaken to enhance the tangible and intangible heritage of Arrábida.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The State Party has carried out the comparative analysis with 11 mixed World Heritage properties from the Mediterranean region and one further site, on the basis of the following key comparative factors: the sub-regional area (Mediterranean-Atlantic), the geological, speleological, and marine components, and the historic, cultural and spiritual dimensions.

The selected World Heritage properties are: Ibiza, Biodiversity and Culture (Spain, 1999, (ii), (iii), (iv), (ix) and (x)), Wadi Rum Protected Area (Jordan, 2011, (iii), (v) and (vii)), Tassili n'Ajjer (Algeria, 1982, (i), (iii), (vii) and (viii)), Pyrénées – Mont Perdu (France/Spain, 1997, 1999, (iii), (iv), (v), (vii) and (viii)), Meteora (1988, (i), (ii), (iv), (v) and (vii)), Mount Athos (1988, (i), (ii), (iv), (v), (vi) and (vii)) both in Greece, Göreme National Park and the Rock Sites of Cappadocia (1985, (i), (iii), (v) and (vii)), Hierapolis-Pamukkale (1988, (iii), (iv) and (vii)) both in Turkey, Gulf of Porto: Calanche of Piana, Gulf of Girolata, Scandola Reserve (1983, (vii), (viii) and (x)), The Causses and the Cévennes, Mediterranean agro-pastoral Cultural Landscape (2011, (iii) and (v)) both in France, Natural and Cultural Heritage of the Ohrid region (Former Yugoslav Republic of Macedonia, 1979, 1980,

(i), (iii), (iv) and (vii)) and the Calanques near Marseille in France.

ICOMOS firstly notes that the comparison of Arrábida with the selected World Heritage properties has not been discussed but only presented in a synthetic table which is not accompanied by any comment or argument that explains how the nominated property stands out in respect to the sites selected for comparison or how the combination of value and attributes that characterises Arrábida is not already represented on the World Heritage List nor is it found in other cultural landscapes that could in the future be nominated.

In relation to the cultural dimension of Arrábida, ICOMOS considers also that some other cultural properties inscribed or nominated as cultural landscapes should have been examined. They are: Cilento and Vallo di Diano National Park with the Archeological Sites of Paestum and Velia, and the Certosa di Padula (1998, (iii) and (iv)), the Costiera Amalfitana (1997, (ii), (iv) and (v)), Portovenere, Cinque Terre and the Islands (Palmaria, Tino et Tinetto) (1997, (ii), (iv) and (v)), all in Italy.

The aforementioned properties exhibit patterns of human occupation and adaptation similar to those that have occurred in Arrábida but also represent the outstanding results of the combination of specific, and in some cases prominent, natural features, adapted or modified by human factors to produce an exceptional coherent whole in which the landscape layout and the surviving associated cultural resources illustrate outstandingly this interaction.

Further similar properties that should have been considered in the analysis are the World Heritage Cultural Landscape of the Serra de Tramuntana (Spain, 2011, (ii), (iv) and (v)), or the Mediterranean shores of the Pyrénées (Spain-France), and Plasencia-Monfragüe-Trujillo: Mediterranean landscape (Spain) proposed for inscription respectively in 2007 and 2012 and withdrawn by the States Parties, on the basis of ICOMOS evaluations. The first two sites share commonalities with the nominated property in terms of geography and morphology, human occupation and settlement pattern, socio-economic and cultural transformations, as well as development pressures; whilst the third one could have been a useful comparison with regard to pastoralism.

ICOMOS further observes that no properties from the Tentative Lists have been examined. However, a number of them could have been useful comparative samples to assess whether the nominated property has the potential for inscription on the World Heritage List in comparison with other candidates. These are: Ancares-Somiedo (Spain), The natural and architectural ensemble of Blidinje (Bosnia-Herzegovina), The Area of the Prespes Lakes: Megali and Mikri Prespa with Byzantine and post-Byzantine monuments and the broader region of Mount Olympus (Greece) for the spiritual values associated with natural features.

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

Justification of Outstanding Universal Value

Arrábida is considered by the State Party to be of Outstanding Universal Value as a mixed property because of its beauty, the geological processes of its formation, which have resulted in an exceptional landscape where geological, ecological and floristic richness contribute to producing a clear geographical individuality, which is the fruit of the joint work of Nature and humans. According to the nomination dossier, Arrábida bears witness to a long-lasting human presence since the Palaeolithic, by means of a wide range of cultural resources, e.g. archaeological sites, chapels, monasteries, sanctuaries, castles and fortifications as well as through intangible religious manifestations.

Whilst the natural dimension of the nomination is assessed by IUCN, ICOMOS observes that the arguments put forward in the justification for inscription and concerning the cultural aspects have been stated but not demonstrated; they also appear fairly unsubstantial and generic.

ICOMOS notes that, in fact, such a justification could suit several places across the Mediterranean region and does not appear specific to Arrábida, as the sequence of human occupation is common to other areas within this geo-cultural basin and so are the resulting associated cultural resources.

ICOMOS further notes that the nomination dossier describes at length the cultural features of the property but does not provide stringent arguments to demonstrate that Arrábida may be considered a unique or exceptionally representative example of a property in which natural and cultural aspects make up one coherent whole with a perceivable specificity.

On the contrary, the cultural resources enumerated and described in the nomination dossier to support the proposed justification appear unconnected to each other and do not give rise to a specific character. Furthermore, the cultural landscape mosaic has not been described or characterised with regard to the historic and cultural processes which have occurred in the region. Only the natural and semi-natural vegetation units have been described but not related to the role played by human occupation in determining the current vegetation units.

Integrity and authenticity

Integrity

The State Party holds that the nominated property contains all the key elements necessary to maintain the ecological integrity and processes. Human interaction with the natural environment has shaped in a harmonious manner the landscape and its unique features. The

continuous human occupation is attested to by both tangible and intangible heritage resources.

ICOMOS considers that the size of the nominated property is not a matter of concern with regard to integrity. However, the relationship of individual cultural resources with their setting, dynamic functions and traditional activities, that characterise a living landscape, make distinctive its character, and sustain its continuing evolution, have not been analysed and the integrity of the nominated property from a cultural perspective has not been assessed in all its relevant aspects.

ICOMOS further observes that areas damaged by quarrying activities and urban development outside the nominated property but included in the buffer zone not only negatively affect the visual integrity of Arrábida but also indicate that current economic and social trends in the wider area no longer sustain the traditional processes that made up the significance of the property, despite recent efforts to revitalise traditional activities. While some of the damage to the landscape could be repaired, although only with substantial political engagement and conspicuous technical and financial efforts, and also only in the long term, e.g. in the case of depleted quarries; for other areas, e.g. built up areas, rehabilitation appears to be very problematic, for social reasons, and is *de facto* improbable.

Authenticity

The State Party holds that the major attribute demonstrating the authenticity of the property is vested in the origins of its name. The association between the landscape and tangible heritage features and the intangible spiritual, religious and manufacturing traditions conveys the significance and specificity of Arrábida.

ICOMOS believes that the name of the property – Arrábida – and its origins cannot be held as specific to the nominated property. As a matter of fact, places with similar names – Arrábida, Rabida, Rabita – do exist in the Iberian peninsula and they have often undergone a similar pattern of evolution.

ICOMOS observes that the authenticity of the individual cultural monuments is adequately documented; however this does not contribute to the overall authenticity of the entire nominated property. Attributes and other sources of information that would make understandable and credible the proposed value of Arrábida have not been identified and documented sufficiently through scientific and historical references so as to demonstrate the specificity of the nominated property and to support the proposed justification for inscription.

In ICOMOS's view, the importance of the intangible dimension at Arrábida has been stated but not substantiated by specific material evidence or robust scientific and historical references that could support the claimed exceptionality.

Spiritual and religious associative dimensions have been described in length but the information provided has not determined that they may be considered distinctive to this area and outstanding in their manifestations.

In conclusion, 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 (iv) and (vi) and natural criteria (vii), (viii), (ix) and (x).

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 Arrábida contains outstanding heritage features that illustrate various stages of human history and occupation of the area since the Lower Palaeolithic, with traces of *Homo neanderthalensis*, the Neolithic, Chalcolithic (7,500 – 5,000 BP), Imperial Roman, Islamic (8th–12th centuries AD) and Post-Islamic periods, attested to by several archaeological sites and remains, as well as architectural monuments.

ICOMOS considers that the nominated property as a whole should fulfil the criterion, but the proposed justification for inscription refers only to individual heritage resources and not to the entire nominated property and does not provide adequate explanation as to how these resources support the claims to justify the criterion.

Additionally, ICOMOS notes that the structure of the landscape has not been described, nor its consistency explained in relation to its natural and historical factors, so the cultural resources described in the nomination dossier remain unrelated to each other. They do not make up a system and cannot demonstrate that Arrábida as a whole outstandingly illustrates significant stages of human history.

ICOMOS believes that the lack of a comparative analysis that examines the assumed specificities of Arrábida as a whole and not as a sum of individual, separated heritage objects, against relevant examples, further weakens the arguments put forth to justify this criterion.

Finally, ICOMOS considers that the cultural heritage resources described in the nomination dossier, although certainly important at the national, and possibly at the sub-regional level, do not stand out at the global level.

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 its geographic features and its isolation have determined a special, sacred character for the nominated property that is also attested to by cults, legends and religious events rooted in ancient beliefs, as well as by still-active traditional production practices, e.g. Azeitão cheese making, wine making, and shipbuilding, which have been handed down from one generation to another.

ICOMOS firstly considers that the World Heritage Convention is a property-based convention and therefore it is the property, through its attributes, that should make explicit its direct and tangible association with events or living traditions bearing outstanding universal significance. In this case the justification proposed for this criterion is not grounded in specific tangible evidence; rather it refers generically to the geographical setting or to intangible practices (e.g. wine or cheese making). Furthermore, traditional agricultural products are not placed in relation to specific places and/or autochthonous species or varieties, therefore the relation to the features of the local territory of these products appears fairly weak. Finally, ICOMOS notes that the Azeitão cheese results from the 19th century importation of a tradition from another region of Portugal, therefore it appears to be too recent to be considered distinctive of Arrábida.

ICOMOS further considers that the associative aspects of the nomination have not been sufficiently documented on the basis of robust historical scientific references that point out their presumed exceptionality.

On the contrary, the description provided of intangible attributes, and particularly of religious manifestations, would suggest that, although certainly contributing to the sense of place of the property, they share many similarities with analogous expressions traceable in other areas throughout the Mediterranean.

ICOMOS considers that this criterion has not been justified.

In conclusion, ICOMOS considers that the conditions of integrity raise substantial concerns in terms both of their ability to express adequately the significance of the property as a whole and of the adverse impacts caused by development and quarrying activities. With regard to the conditions of authenticity, ICOMOS considers that the attributes do not support credibly the proposed justification for inscription of the nominated property. ICOMOS further does not consider that the proposed criteria have been demonstrated.

4 Factors affecting the property

With regard to the cultural aspects, the State Party considers that the threats to the natural features of the nominated property should also be taken into consideration when looking at the landscape. These include the ongoing quarrying activity, building development pressures, the intensive use of coastal areas and the construction of facilities for outdoor activities. Abandonment of traditional farming, replaced by intense pastoral activity, also contributes to the loss of landscape features. The nomination dossier goes on to provide details of the factors affecting specific cultural heritage sites, which can be summarised as weathering, erosion, anthropogenic pressures caused by an increase in tourism, as well as on the measures established to counteract the above-mentioned threats.

ICOMOS notes that the nominated property is located only 45 minutes away from the Lisbon metropolitan area, with its 2.5million inhabitants; additionally, while the 12,750.41 ha of the nominated property counts 1,955 inhabitants, its much smaller buffer zone (7,547.42ha) has 13,770 residents. Additionally, the municipal territories of Setúbal, Palmela and Sesimbra, included within Arrábida, total approx 210,000 inhabitants. Therefore the nominated property is prone to intense population pressure. Local authorities have also identified some problems of illegal building activity (mainly additional housing for residents and second residences for outsiders) which they have been trying to resolve.

ICOMOS considers that quarrying activity represents one of the most significant impacting factors for the integrity of the property. There are three major areas of exploitation in the buffer zone: Zambujal (47ha, with three quarries, one of which is still active); Achada/Calhariz (224ha in total out of which 52ha is under recuperation); Outão, in Setúbal (nearly 100ha), which is still active. Since 2007 quarrying licencing compulsorily requires that exploitation requests be accompanied by environmental/landscape rehabilitation plans; also, no further licences can be issued in the area. However, although active quarries cannot expand in surface area, they can in depth. Additionally, information has been provided that an inert waste deposit in one of the Zambujal sites was licenced in 2010 with a life expectancy of 16 years.

ICOMOS considers that, although the quarrying sites are all located in the buffer zone, their visual impact goes well beyond the boundaries of the buffer zone and undermines the visual integrity of the nominated property as well. Their obtrusiveness may reduce once they are closed and landscaped; however, since licenses are issued on an extracted volume basis (and not on a time basis), it is difficult to estimate how long their activity could last, given the present economic crisis.

Tourism also may easily become a threat for the nominated property: its vicinity to Lisbon makes it attractive and the Tourism Board in Lisbon is promoting the peninsula of Setúbal as a new tourist destination. The

nomination dossier does not specifically address tourism issues, and no clear provisions for the location of tourism facilities have been defined in the planning tools. This, coupled with the geographic conditions of the area, suggests that an increase in tourism may cause encroachment on the nominated property, impacting directly on its scenic values through intensive use of the coastal areas and uncontrolled development of outdoor activities.

Abandonment of traditional farming and associated landscape maintenance practices also increases the probability of fire hazard.

Despite the measures put in place by the State Party which represent positive steps for the safeguarding of the nominated property, ICOMOS believes that ongoing development trends and pressures cannot be easily addressed due to the vicinity of the Lisbon metropolitan area and the current plans for the development of the Setúbal Peninsula.

ICOMOS considers that the main threats to the property are urban development pressure and the tourism industry. They are on the verge of increasing radically due to the tourism-oriented development policy chosen for the Setúbal Peninsula and the lack of adequate corrective measures. Quarrying activity also undermines the integrity of the property and may possibly jeopardize the geo-morphological and hydrological balances of the area. Counteracting these factors requires a clarification of the development objectives and the stringent implementation of the protective measures in place.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property have been defined primarily on the basis of the geological and natural landscape identity of the area, already recognised as Arrábida-Espichel Natura 2000 Network Site and the Arrábida Natural Park. Areas exhibiting significant cultural values have been adjoined to the nominated property, whilst the ones not in accord with the individuality of Arrábida or characterised by a lower level of integrity have been kept outside the nominated property but included in the buffer zone.

ICOMOS observes that the boundaries of the nominated property have been determined on the basis of natural values and have not taken into due account cultural heritage, whilst a considerable weight has been given to the issues posed by degraded areas. On the basis of the additional maps provided by the State Party on 18 November 2013 it appears that the limits of the nominated property and of the buffer zone do not consider the perimeters of areas protected for their cultural values.

Additionally, ICOMOS notes that cultural heritage objects included in the nominated property and mentioned in the dossier appear unrelated to the natural aspects, an exception being some caves bearing archaeological traces. Furthermore, the nomination dossier does not articulate in a specific way on the basis of scientific or historical documentation how the natural environment has influenced human occupation throughout the centuries or how the use of natural resources has imprinted the development of the cultural and social dynamics. Therefore cultural and natural heritage remain separated from each other and do not form an integrated whole.

ICOMOS notes that the buffer zone has not been designed with the aim of achieving an effective protection of the nominated property, rather it includes many degraded areas (quarries, densely-built up urban areas) which cause considerable pressures on it, as well as significant visual disturbance.

In summary, ICOMOS considers that the boundaries of the nominated property and of the buffer zone have not been delineated in a manner so that the cultural dimension is adequately integrated into the proposed mixed property, nor has the buffer zone been designed to provide an additional layer of protection to the nominated property as required by the *Operational Guidelines*.

Ownership

The nominated property is predominantly in private ownership; only 3% of the land belongs to public authorities. The distribution of privately-owned land is also very uneven in the area, in that there are some very large properties (>100ha up to 1,200ha, in the case of Calhariz Estate), the sizes of which by far supersede the average dimensions of other estates.

Protection

At the national level, protection is granted to the site by virtue of its natural values; in 1971 the Reserva da Serra da Arrábida was created (Decree nº 55/71), and later on, in 1976, the Parque da Serra da Arrábida was established (Decree nº 622/76). In 1998, the Marine Reserve was created (Decree nº 23/98). In 2003, the Parque Natural da Arrábida was extended to include West Sesimbra and Cape Espichel (Decree nº 11/2003), alongside the Marine Reserve. This final declaration also partially includes the Natura 2000 Arrábida/Espichel site (PTCON00010). Presently, the area covered by the Natural Park protection includes around 91% of the nominated property, and about 80% of the proposed buffer zone.

The remaining percentage outside the Natural Park protection area is covered by both the Natura 2000 site (to the west), and heritage protection areas (to the east, in the Palmela district). With regard to the cultural heritage values as considered in the nomination, many of the archaeological areas and buildings located on site are classified as National Interest, Public Interest or Municipal Interest, according to Law nº 107/2001 which

determines the policy for the protection and enhancement of Cultural Heritage. This law also makes buildings automatically benefit from a general protection zone, and should have a special area of protection.

Planning instruments relevant for the protection of the property include: the Spatial Plan for Arrábida Natural Park (POPNA), which aims for the protection of the natural landscape and cultural values of the park, and its sustainable development through participatory means. The regulations of the plan contain different protection regimes according to the natural values of each identified zone and provisions for the protection of archaeological heritage; the Sectorial Plan for the Natura 2000 network (PSRN2000); the Regional Spatial Planning of the Territory (PROT-AML), which is a strategic spatial plan for territorial development; the Regional Forest Spatial Planning for Lisbon's Metropolitan Area (PROF-AML); the Coastal Spatial Planning of Sintra-Sado (CSP Sintra/Sado) that regulates the use of coastal areas and of the shoreline; and the Inter-municipal Forest Fire Prevention Plan (NFFP) which sets up a strategy and operational measures to strengthen fire prevention and combat capacity at the municipal level.

Finally, the *Planes Directores Municipales* of the municipalities integrate into the planning instruments guidelines established at the national and regional level. They are the primary mechanism for regulating the development of new buildings and the alteration of the existing ones, thus establishing the spatial organization of the municipal territory.

ICOMOS considers that the rationale for the protection of the nominated property is based on the natural values of the site, whilst cultural heritage is protected individually and not as an integral part of the proposed mixed property. Also, the planning instruments contain provisions which address primarily the natural aspects of the nominated property, with the exception of the POPNA which looks at measures for the protection of archaeological heritage.

ICOMOS notes that municipal planning instruments have not been able to prevent the development of dense urban agglomerations characterised by intrusive constructions which currently undermine the visual integrity of the nominated property, even if they are limited to the buffer zone.

In conclusion, ICOMOS considers that the legal protection in place is focussed mainly on natural values, whilst cultural heritage is protected on an individual basis, and is not extended to the wider setting which is part of the nominated property or of the buffer zone. ICOMOS considers that the protective measures for the nominated property have not prevented the negative effects of urban and building development pressures.

Conservation

As far as the state of conservation of the cultural heritage components is concerned, ICOMOS observes that at present most individual monuments are adequately preserved. Though inventorying and documentation is an ongoing task, and much still remains to be done, many of them are well inventoried and documented.

Archaeological remains appear to be the best investigated amongst the cultural heritage items. Although many sites have had interventions decades ago, in recent years municipalities have combined efforts to recover and to develop scientific research.

This scientific endeavour seems also to be extending to other cultural monuments, such as military and religious architecture, which is overall in a good state of conservation, thanks to the works undertaken in the last few years.

ICOMOS observes that conservation of individual monuments or ensembles seems to be moving in the right direction, as proven by the good quality of the scientific work resulting from the integration of different scientific partners. The same could be said for many of the sensitive ongoing restoration projects, e.g. at Sesimbra and Palmela Castles or at Creiro archaeological site.

Nevertheless, ICOMOS notes that there seems to be lacking a comprehensive understanding of the landscape. A more in-depth scientific analysis of landscape features, patterns, non-monumental heritage assets, e.g. the productive agro-pastoral systems, wind or corn mills, wine cellars, or other characteristic structures, their uses as well as their dynamic functions, is necessary to establish the framework for the comprehension of the specificities of this property and ensure its adequate protection.

In conclusion, ICOMOS considers that documentation and conservation efforts have focussed on individual cultural heritage objects but have not addressed adequately the landscape features and processes which remain largely undocumented and not protected effectively.

Management

Management structures and processes, including traditional management processes

A Memorandum of Understanding was signed in January 2013 between the Association of the Municipalities of the Setúbal Region (AMRS), the Institute of Conservation of Nature and Forests (ICNF), and the municipalities of Setúbal, Sesimbra and Palmela with a view to developing and implementing a management network and a structure which will integrate the different levels of public administrations, representatives of civil society and other stakeholders. The projected management structure

includes an executive committee, with management responsibilities (e.g. setting up strategic objectives, ensuring their implementation, reviewing the management system, granting necessary resources), an operational technical committee, formed by members of the staff of the authorities which signed the above mentioned Memorandum of Understanding, and a scientific council with an advisory role.

ICOMOS firstly observes that it is not clear whether the executive and technical committees and the scientific council have been established and made operational or when this will occur.

ICOMOS then observes that the management framework in place is constituted mainly of an array of legal protective instruments which however are not accompanied by a coherent set of protective and planning measures effectively implemented and monitored. The draft management plan (October 2013) does not succeed, at present, in producing an integrated managerial system able to address both the natural and the cultural dimensions of the nominated property.

Additionally, ICOMOS notes that a more comprehensive approach to the property management and its current issues is necessary to achieve effectiveness. Finally, prioritization of the activities needs revision and implementation of the projected actions should be speeded up, to effectively address the exigencies and factors affecting the nominated property.

With regard to budgeting, ICOMOS notes that what is presented is a list of available funding programmes but no analysis is provided of the financial needs for the projected measures nor of how their cost will be covered.

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

In the nomination dossier a pre-plan was presented as a tool to guide management before the proper plan is completed. It is expected to remain in force for two years, which is the timeframe for the completion of the management plan. The pre-plan sets out the road map for the development of the management plan.

On 18 November 2013 the State Party sent a draft of the Management Plan for the nominated property dated October 2013. The document defines the vision for the property in the long-term and sets up the objectives to be pursued, the agency responsible for each objective and the heritage features concerned. For each strategic goal, specific prioritised actions, the respective implementation body, the status of realization and monitoring body have been identified. Monitoring indicators have also been established.

ICOMOS first notes that the draft management plan (October 2013) appears to be more a roadmap to elaborating a plan than an operational instrument,

however it represents a step forward in sustaining the significance of the nominated property.

A strategic visitor and tourism strategy, which is much needed for the area, is lacking; no data are available on the carrying capacity of the property or on the number and type of visitors (current, expected, desired). No corrective measures to reduce the repercussions of tourism which, over the last fifty years, has impacted on the coastal areas and the shoreline, seem to have been put in place. On the contrary, the nomination process has further mobilised local actors in the promotion of tourism.

At any rate, an interpretation and presentation strategy seems to have been set up, based also on the scientific work carried out until now, as well as the creation of an 'Arrábida brand', both focussed on the World Heritage Nomination, which include the offer of related Arrábida products.

ICOMOS observes that despite the work already accomplished in this sector, much remains to be done, in particular with regard to a strategy for rural tourism that shows the landscape and promotes local products, including information kits to be distributed amongst tourism enterprises.

Involvement of the local communities

The nomination process has seen the involvement of several stakeholders as well as the local communities, who strongly support the project. This extensive participation of local authorities, communities, and economic actors has contributed to creating conditions favourable for bridging the gap between the management carried out by the Natural Park based on principles of nature conservation, and the one of the municipalities based on territorial and building development. This combination of goals, however, needs a long-term political commitment and clear strategies to be achieved.

ICOMOS considers that the managerial structure needs to be formally set up and made operational with adequate professional skills, resources and powers. Special attention is needed for the landscape aspects of the nominated property, which have not been integrated into the management process, and for reliable budgeting.

In conclusion, ICOMOS considers that the management system should be reinforced in general and extended to include consideration of the landscape features and processes, in order to overcome the dichotomy between management of protected nature and of urban territories.

6 Monitoring

The draft management plan foresees an array of indicators for each objective aimed at verifying their achievement. For each indicator a timeframe is provided as well as a means of verification.

ICOMOS firstly notes that baseline data in many sectors related to the cultural values of the property are still absent and their identification and collection is an utmost priority.

Finally, in the absence of a fully operational management structure, the verification programme outlined in the draft management plan appears more like a desk exercise than a realistic tool to sustain management effectiveness.

In conclusion, ICOMOS considers that a permanent comprehensive programme for periodic monitoring is missing and should be set up in order to assist in management.

7 Conclusions

Arrábida is a picturesque, mainly humanized environment exhibiting interesting geomorphological and paleontological features and diverse cultural resources. The sequence of rocky cliffs plunging into the sea strengthens the impression of isolation and remoteness of the area. The natural values of Arrábida have been recognised both at the national and the European level, with the creation of a Natural Park and its inclusion in the Natura 2000 network. The history of its human occupation follows a pattern common to the Mediterranean region and is attested to by a varied range of individual archaeological sites and monuments.

ICOMOS recognises that the State Party has initiated a challenging undertaking with this nomination and has made a considerable effort to combine in one document the information already existing on the natural and cultural heritage of the area. This represents an important step forward towards an improved understanding of the property which should be followed by further research in order to achieve an adequate level of comprehension of Arrábida and to ensure an effective management that integrates the natural and cultural dimensions.

ICOMOS observes that Arrábida exhibits cultural values that are undoubtedly important at the national level and possibly at the Iberian regional level, however, it does not carry global importance to justify inscription in the World Heritage List.

In addition, the conditions of integrity of the nominated property appear fairly weak and are of concern.

Firstly, the rich lithological resources - the Arrábida breccia and the limestone – were early on recognised as economically important and have been intensely exploited, particularly in the 20th century, unfortunately with a negative impact on the integrity of the property. The quarrying districts – which will still be active for decades to come - have opened large wounds in the landscape and their rehabilitation cannot be foreseen yet.

The beauty of the region has also contributed to the early development of tourism, the effects of which, however,

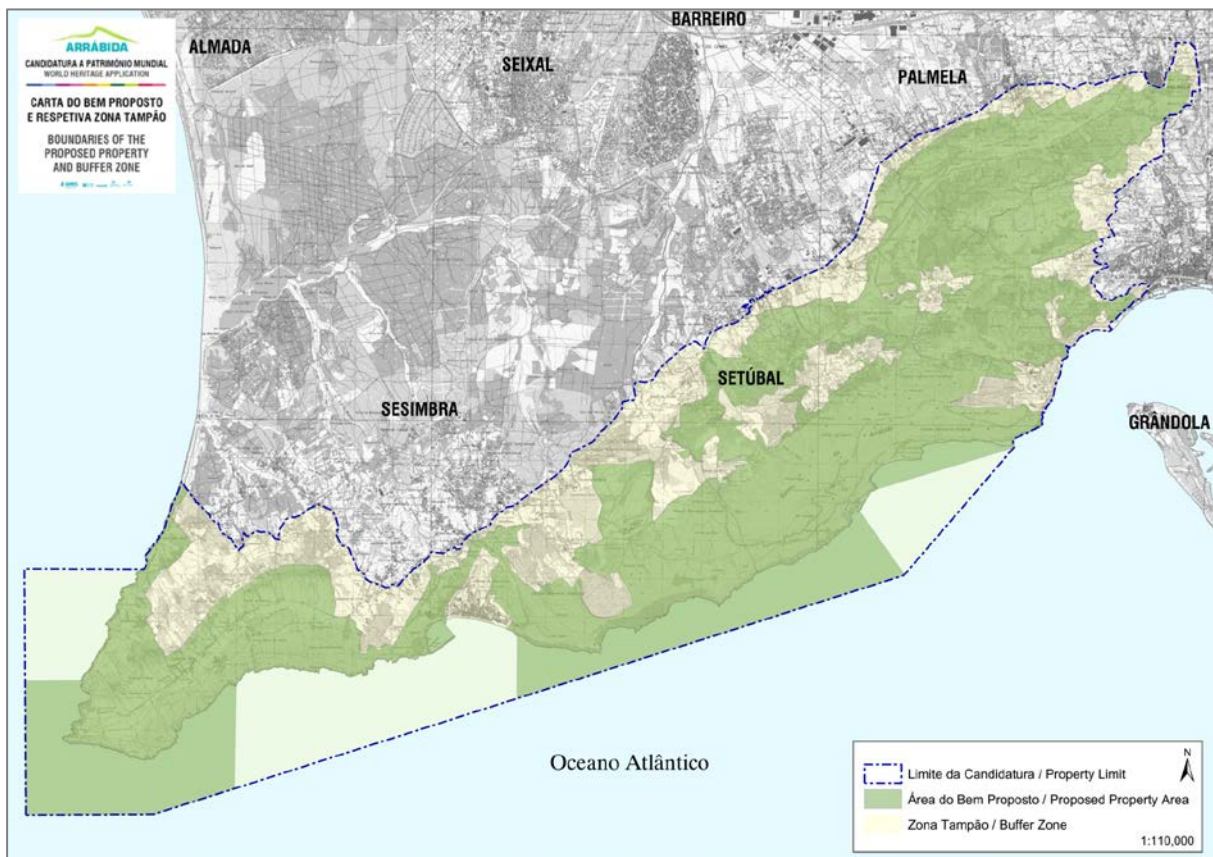
have grown with little control since the 1960s, resulting in obtrusive building development with large holiday compounds and the spread of facilities for outdoor activities.

Both urban and tourism pressures do not appear easily containable at present, considering the vicinity of Lisbon metropolitan area and the tourism-focussed development strategies in place for the area.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that Arrábida, Portugal, should **not be inscribed** on the World Heritage List.



Map showing the boundaries of the nominated property



The Arrábida coast



Castle of Palmela



Cabo Espichel Sanctuary



Quinta das Torres Palace

III Mixed properties

A Asia - Pacific

New nominations

B Europe – North America

New nominations

C Latin America and the Caribbean

Extensions

Calakmul (Mexico) No 1061 bis

Official name as proposed by the State Party

Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche

Location

State of Campeche, Yucatan Peninsula
Southern Mexico
Mexico

Brief description

Visible primarily from the air, Calakmul is an important Maya site set deep in the tropical forest of the Tierras Bajas of southern Mexico. The city played a key role in the history of this region for more than twelve centuries. Its imposing structures and its characteristic overall layout are remarkably well preserved and give a vivid picture of life in an ancient Maya capital. Tucked away within the surrounding tropical forest are the remains of many more ancient Mayan cities and towns together with evidence of reservoirs, raised fields, channel systems and causeways, testifying to the agricultural practices of the Maya.

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*.

[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 November 2001

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

23 January 2013

Background

This is a renomination on the basis of natural criteria and extension of the "Ancient Maya City of Calakmul, Campeche" inscribed on the World Heritage List on the basis of cultural criteria (i), (ii), (iii) and (iv) at the 26th session of the World Heritage Committee (26 COM, 2002) (Decision 26 COM 23.18).

The proposed additional criteria are the natural criteria (ix) and (x).

A retrospective statement of Outstanding Universal Value was adopted by the World Heritage Committee at its 37th session (Phnom Penh, 2013).

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

A joint ICOMOS/IUCN technical evaluation mission visited the property from 29 September to 5 October 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 25 September 2013 requesting additional information relating to the proposed boundaries, identification of cultural sites within the proposed extended area, protection and management of the cultural attributes within the extended area, and the visual quality of the ceremonial centre. A response was received on 30 October 2013, on 18 and 27 November 2013, and further information was provided on 28 February 2014. The information has been incorporated below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The currently inscribed site of Calakmul is located within the Calakmul Biosphere Reserve, which was created in 1989 and is the largest in southern Mexico. It comprises three large groups of structures. To the west there is a large group of platforms with buildings on them around open spaces. A similar, slightly smaller, group lies to the east. In between these is the central zone, covering a roughly square area, in which very large public open spaces and the dominant Structure II are the main elements. Between the central and eastern groups but seemingly distinct from them is the large pyramidal Structure I. This is slightly smaller than Structure II, but having been built on a natural eminence it is more or less the same height. The structures in the central zone date from all the periods of occupation of the site, indicating continuity of occupation over some 12 centuries from the 4th century BCE. A barrel-vaulted chamber within Structure II containing a frieze decorated with large painted stucco masks is the earliest building known from Calakmul, and is believed to be the earliest stone structure in the region. Calakmul is especially noteworthy for the large number of stelae that have been found on the site. These both establish the history of the site and are key elements in its layout, being carefully sited in regular lines or groups in front of the stairways and main facades of the pyramidal structures. This property area is 3,000 ha.

Extension

The renomination proposes an extended property area of 331,397 ha (it is shown on the maps as 331,764 ha), which includes the already inscribed property and its surrounding tropical forest, currently part of the inscribed property's buffer zone. The proposed new property area is in turn surrounded by a proposed buffer zone of 391,788 ha, which together with the new property area totals the area of the entire Calakmul Biosphere Reserve: 723,185 ha.

The extended property represents the territorial space used, exploited and managed by the Maya of Calakmul for over two thousand years. According to the nomination dossier it includes vestiges of more than 250 sites of ancient Mayan cities and towns with a large number of stelae *in situ*; royal and other tombs containing a rich variety of ornaments, ritual pottery vessels and many jade masks. It also includes remains of reservoirs, raised fields, water channels and causeways, indicative of Mayan agricultural practices. This Calakmul hinterland testifies to the influence of the Mayan civilisation centred at Calakmul over more than twelve centuries from the 4th century BC, which related to political organisation and cultural development in the region stretching from Copán in the south-east, Edzná to the north, and Palenque to the west, intensified by Calakmul's relationships and rivalry with the other major Mayan centre at Tikal in Guatemala.

However ICOMOS notes that very little information is provided on the cultural attributes in the nomination dossier.

ICOMOS also notes that the map provided does not indicate 250 sites within the nominated property area, and according to the additional information the nominated property includes Calakmul and 37 recorded surrounding sites. These are 12 large centres (Altamira, Balakbal, Calakmul, Champerico, Dos Aguadas, El Gallinero, El Zacatal, La Muñeca, Los Hornos, Oxpermul, Uxul and Yaxnohcah), 9 medium centres (Candzibaantún, Cheyokolnah, Chicaanticaanal, El Laberinto, Las Delicias, Las Tuchas Bravas, Los Tambores, Olvidado and Pared de los Reyes), 6 minor centres (Buenfil, Chanarturo, El Chismito, La Retranca, Los Escalones and Marihuana) and 11 small sites (Aguada Laberinto, Aguas Amargos, Cerros de Yeso, Chilar, Chumbec, Dos Caobas, El Cerrón, Naachtún Noroeste, Piedra Rota, Puerto Mexico and Villahermosa). Within the buffer zone 10 archaeological sites have been recorded including one major centre (Altar de los Reyes), 5 medium centres (Akalpetén, Doble Plaza, El Diablón, Once de Mayo and Unachillilbé), 2 minor centres (Dos Naciones and La Misteriosa Sur) and 2 small sites (Cantera and Los Tamborcitos). The large centres include temple pyramids and other buildings arranged around plazas, with ball courts and sculpted monuments, many with inscriptions. The medium centres contain monuments and inscriptions but are smaller in volume; the minor centres may have smaller structures than the medium centres, or sometimes larger but fewer structures. Some may be outliers of larger centres such as the relationship between El Chismito and

Los Tambores. Small sites do not have plazas and contain lower apparently residential mounds, and sometimes pyramidal structures. It is proposed that the large centres developed in the Late Preclassic (c 300BCE-250CE) and Classic (250CE-850CE); the earliest being in the southern part of the property.

The map provided with this list shows the buffer zone boundary running through the centre of Akalpetén in the north, Once de Mayo in the east, another site shown on the map but not listed called Plan de Ayala also in the east; and Dos Naciones is actually shown outside the boundary. This map shows many more centres outside the buffer zone boundary, and another map provided by the State Party showing the distribution of Mayan sites across the whole of Campeche State, indicates that the greatest concentration of these sites is in fact outside the nominated property area.

ICOMOS notes that the State Party has said that current knowledge of the distribution of archaeological sites within the area is restricted due to difficulties of access meaning that portions are still not surveyed. However ICOMOS considers that there are problems with the property and buffer zone boundaries in that the selection of sites to be included in the property has not been explained in terms of their relationship with Calakmul. Also the boundary should not pass through sites.

ICOMOS also notes that recent investigations within the property inscribed in 2002 have revealed mural art that has changed scholarly understandings of artistic conventions among the Maya. It also provides otherwise undocumented evidence of market exchanges among the ancient Maya and the cultural/religious spatial context of those exchanges. ICOMOS also notes that some stelae depict animals and plants providing evidence of Mayan use of these resources.

In the additional information provided by the State Party on 28 February 2014 further details were provided about stelae found at Candzibaantún and Altar de los Reyes – the latter said to be unique due to the 13 emblem glyphs (names of dynasties) contained there. However ICOMOS notes that Altar de los Reyes is outside the nominated property boundary. The State Party also provided description of the Petén and Rio Bec architectural styles found at the various sites, stating that the significance of these in reflecting the ever changing political geography including the role of the Kaan dynasty can only be discovered through further research.

History and development

Evidence of Mayan occupation of the heavily forested Tierras Bajas region, heartland of the Mayan world which is now divided between Mexico and Guatemala, dates from 1000 BC. By the Late Pre-Classic period Calakmul had become one of the two dominant cities in the region, the other being Tikal. Excavations have shown that they flourished in a state of almost continual warfare with each other during the Classic period (250 –

850 AD) until around 900 AD when population density reached its historical peak of up to 100 inhabitants per sq km. Evidence within the nominated extended Calakmul property indicates that use of the land during this period involved terraces; elevated fields and hydraulic channels; sacred orchards (*huertos*); family orchards (*huertos familiares*) and forestry systems such as slash and burn (*milpa*), still widely used today. Around 750 AD old alliances between different groups of Maya started to crumble and by 1000 AD the civilisation had collapsed. It is thought that a number of factors contributed to the collapse including over-population and severe drought exacerbated by deforestation. The decrease in population and absence of intensive farming following the collapse allowed recovery of the tropical forest, which subsequently encroached upon the decaying Mayan structures.

In its additional information the State Party has proposed that the presence of large monumental sites in the Mirador Basin south of the nominated property in Guatemala Petén dating to the mid-first millennium BCE indicates that the migrations and cultural influences radiated from there into south-eastern Campeche. The date corresponding to 396CE recorded on 3 stelae at Candzibaantún is the earliest date so far recorded on the Maya monuments in Mexico. In the Classic period the area was overwhelmed by the Kaan dynasty, which moved their capital from Dzibanché to Calakmul in the Late Classic period c 636CE. Several sites within the property show evidence of Kaan hegemony, and it was during this dynasty that Calakmul was predominant until suffering defeats in military conflict with Tikal in 695 and 736CE. On the basis of this information ICOMOS considers that if the proposed extension is to reinforce significantly the outstanding universal value of Calakmul, it should at least be shown to include important Kaan centres.

From the early 16th century contact with Europeans following the Spanish conquest population in the area decreased further due to epidemics and famine. The indigenous people known as *Cehaches* had relatively large settlements surrounded by ranches in the 17th century, but the nominated property area, being land beyond Spanish control was occupied by a nomadic indigenous population that fluctuated according to the harvest cycle. The area continued to be a zone of refuge for indigenous people into the 19th century. Its forestry resources were recognised but not exploited due to lack of access. The area was declared an unpopulated zone by the government at the beginning of the 20th century.

In the early 20th century latex exploitation led to the establishment of rubber tapper camps in Campeche, some of which developed into permanent settlements. The remains of the city of Calakmul were discovered in 1931 and recognised as one of the most important cities of the Maya civilisation. While the immediate environs of the city remained untouched, exploitation of the forestry resources in the wider area greatly increased from 1940-60. When demand for latex fell away, the land began to

be cleared for cultivation and cattle ranching by traditional slash and burn methods. Timber exploitation increased and a network of roads was created. The nominated property area however remained inaccessible and with the influence of the concepts of ecological balance and environmental protection the Calakmul Biosphere Reserve was decreed in 1989, in order to protect the extensive wooded mass of tropical forest. From 1993, the Calakmul Archaeological Project (PAC) undertook studies of the Calakmul city site and it was inscribed on the World Heritage List in 2002.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The nomination dossier justifies the extended Calakmul area on natural criteria only. However it notes that of the 24 properties analysed, nine have archaeological sites, two of which, the nominated property and Tikal National Park, Guatemala (1979, criteria (i), (iii), (iv), (ix) and (x)) contain archaeological remains of two of the most important contemporary cities of the Maya culture. ICOMOS notes that within the Tikal National Park, only the remains of dwellings scattered throughout the surrounding countryside are recorded apart from the ceremonial city centre. Within the nominated extended Calakmul property however, much wider archaeological evidence of the hinterland activities that supported the ceremonial and political centre has been discovered, as well as many of the largest Mayan centres yet documented. ICOMOS considers that in this respect the other World Heritage inscribed Mayan site of similar period to Calakmul and Tikal at Palenque, Mexico (1987, (i), (ii), (iii), and (iv)) is also not directly comparable in that, although the property includes the surrounding tropical jungle, any archaeological remains within it apart from the ceremonial centre which might testify to the way of life of the Maya, have not been recorded. The Mayan sites of Copán (1980, (iv) and (vi)) in Honduras and Quiriguá, Guatemala (1981, (i), (ii) and (iv)) do not include any surrounding hinterland. Sian Ka'an (1987, (vii) and (x)) includes 23 archaeological sites and a 24km Mayan artificial canal, but the property was inscribed for natural values only. The World Heritage inscribed Mayan sites of Chichen-Itza, Mexico (1988, (i), (ii) and (iii)), and Uxmal, Mexico (1996, (i), (ii) and (iii)), are of a later period so are also not directly comparable. ICOMOS considers that it would be useful however to know how Calakmul interacted with its hinterland and the value of the landscape to the already inscribed property.

The table provided by the State Party in the additional information compares the extended Calakmul property with Kakadu National Park, Australia (1981, 1987, 1992, (i), (vi), (vii), (ix) and (x)); Historic Sanctuary of Machu Picchu, Peru (1983, (i), (iii), (vii) & (ix)); Río Abiseo National Park, Peru (1990, 1992, (iii), (vii) (ix) and (x)); Ecosystem and Relict Cultural Landscape of Lopé-Okanda, Gabon (2007, (iii), (iv), (ix) and (x)) and Mount Emei Scenic Area, including Leshan Giant Buddha Scenic

Area, China (1996, (iv), (vi) and (x)) as well as Tikal, and concludes that as a whole, the extended nominated area is unique in preserving evidence of intensive population growth and evolution of social complexity conditioned by successful adaptation to the natural setting and accompanied by technological achievements and cultural development reflected in the architecture, hieroglyphic writing, sculpted monuments and fine arts.

The proposed extension was not mentioned in the comparative analysis for the first nomination, but the nominated property was described as being part of an extensive ancient settlement set in a tropical forest.

ICOMOS considers that the comparative analysis could justify consideration of this proposed extension for 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 mixed property for the following reasons related to cultural value:

- More than 250 vestigial sites of ancient Mayan cities and towns, containing stelae in situ, royal and other tombs with ornaments, ritual pottery vessels and jade masks provide unique evidence of a rich, vanished civilisation.
- The great city of Calakmul represents exceptional testimony to the interchange of influences for more than twelve centuries in political organisation and cultural development in a vast area of the Maya region.
- The structure and floristic composition of the forests are extraordinary evidence of the long interaction between man and nature.

The justification for the inscription of the first nomination was:

- Calakmul contains the largest number of stelae found in situ and an impressive series of tombs, some royal. The assemblage of ornaments, ritual ceramic vessels and jade masks excavated at the site provide unique evidence of a rich, vanished civilisation.
- The large city of Calakmul represents outstanding testimony of the exchange of influences over more than twelve centuries in political organisation and cultural development over a vast area of the Maya region.

ICOMOS considers that this justification should be extended to deal with the cultural remains in the extended nominated property area and cover discoveries since 2002 within the previously inscribed property.

Integrity and authenticity

Integrity

The integrity of the proposed extension is problematic in terms of whether it includes all elements necessary to reinforce the outstanding universal value of the already inscribed property because it has not been established whether all the sites related to Calakmul within its immediate sphere of influence are included within the boundary. ICOMOS was not able to visit all the sites that are within the boundary, and has had to rely on the findings of archaeological surveys carried out in 2008. These report evidence of looting at some sites. However the State Party maintains that the sites are generally protected by their inaccessibility and are visited regularly by staff of the National Institute of Anthropology and History (INAH). ICOMOS considers that the fact that these sites are buried within the tropical forest means that relationships between them and Calakmul cannot be perceived, and they are vulnerable to deterioration processes caused by overgrowth.

Authenticity

Calakmul and the other sites within the nominated property as extended were part of a settlement system that depended on the surrounding ecosystem for its supporting agricultural and forestry activities. Evidence of these still exists in the form of raised fields, channels and reservoirs. ICOMOS considers that these attributes need to be recognised in order to for the proposed extension to be seen to truthfully express its outstanding universal value in terms of location and setting as well as form and materials.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have not been met at this stage.

Criteria under which inscription is proposed

The proposed extension is nominated on the basis of cultural criteria (i), (ii), (iii) and (iv), the same criteria as for the existing World Heritage property and natural criteria (ix) and (x).

Criterion (i): *represent a masterpiece of human creative genius;*

This criterion is justified by the State Party on the grounds that the many commemorative stelae at Calakmul are outstanding examples of Maya art, which throw much light on the political and spiritual development of the city.

ICOMOS notes that this is the same wording as for the existing world heritage property. New wording was provided in the additional information provided on 28 February 2014. ICOMOS considers that an insufficient amount of information about the stelae in the nominated extension has been provided either in the nomination dossier or in the additional information to significantly reinforce this criterion. The further information provided on

28 February 2014 with details of stelae at Candzibaantún and emblem glyphs at Altar de los Reyes go some way towards remedying this. However Altar de los Reyes is outside the nominated property boundary.

ICOMOS considers that while more information has been provided in the additional information of 28 February 2014, it has still not been explained how the attributes of the proposed extension significantly reinforce this criterion.

Criterion (ii): *exhibit and 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 within a single site Calakmul displays an exceptionally well preserved series of monuments and open spaces representative of Maya architectural, artistic, and urban development over a period of twelve centuries.

ICOMOS notes that this is the same wording as for the existing world heritage property. New wording was provided in the additional information of 28 February 2014, which included further information on the attributes of sites in general but referred in particular only to Altar de los Reyes which is outside the nominated property boundary.

ICOMOS considers that the attributes of the proposed extension have not been demonstrated to significantly reinforce this criterion.

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 the political and spiritual way of life of the Lowland Maya cities is admirably demonstrated by the impressive remains of Calakmul.

ICOMOS notes that the wording has been slightly changed to refer to the Lowland Maya cities instead of "Maya cities of the Tierras Bajas region". New wording was provided in the additional information of 28 February 2014 which included further argument relating to evidence of the decline in population in the 9th -10th centuries.

ICOMOS considers that the justification for this criterion needs to be able to be expanded to say that the political, spiritual, economic and social way of life of the Lowland Maya cities is admirably demonstrated by the impressive remains of Calakmul with its mural art, stelae, associated settlements, agricultural areas and water management systems within the surrounding tropical forest, as referenced in the nomination dossier and the additional information but insufficiently documented.

ICOMOS considers that the attributes of the proposed extension have not been demonstrated to significantly reinforce this criterion.

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 Calakmul is an outstanding example of a significant phase in human settlements and architecture.

ICOMOS notes that the wording has been slightly changed from "human settlement and the development of architecture" to human settlements and architecture. New wording was provided in the additional information of 28 February 2014, which included further information on the architectural styles found at some of the sites. It was stated that further research is required into how these might reflect the political geography of the area. ICOMOS considers that the additional information goes some way to reinforcing this criterion and notes that the area of Kaan hegemony is particularly relevant to Calakmul since it is stated that the Kaan capital was moved from Dzibanché to Calakmul in the late Classic period. However the location of Dzibanché is not shown on the boundary map.

ICOMOS considers that the attributes of the proposed extension have not yet been demonstrated to significantly reinforce this criterion.

In conclusion, ICOMOS considers that conditions of authenticity and integrity have not been met at this stage and that the proposed extension could reinforce significantly criteria (i), (ii), (iii) and (iv) but this has not been demonstrated at this stage.

4 Factors affecting the property

The proposed extension is not subject to development pressure. Tourist numbers are low, around 300 per month. The current Calakmul property is 60 km from the entrance to the Reserve and the other sites are not easily accessible. The property is four hours by vehicle from the nearest airport. The nomination dossier refers to an increase in population in the region but there are no inhabitants within the property. However some isolated archaeological sites have been looted. There are 2,625 inhabitants within the buffer zone.

Traditional slash and burn agriculture is practised in the region together with extensive livestock farming. Local communities also practice subsistence hunting and poaching. Other pressure comes from forest extraction and associated forestry camps. Water extraction in the surrounding region for human consumption has the potential to affect reservoirs in the property.

Threats include hurricanes and forest fires. There is a comprehensive Fire Management Plan for the nominated property and its buffer zone (the Calakmul Biosphere Reserve) which uses fixed and mobile terrestrial detection, as well as aerial and satellite detection.

ICOMOS considers that the main threats to the cultural values of the property are looting and decay.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

It is not clear on what basis the boundaries of the proposed extension were established. In response to ICOMOS' query the State Party has said that the boundaries take into account appropriate physical (topographical and hydrological), social (land ownership, population, communication routes), cultural and administrative factors. The cultural factor is the presence of an abundance of archaeological sites that provide invaluable information on the diverse aspects of Maya culture and its evolution in the central lowlands of the Yucatan peninsula.

ICOMOS considers that clearly many Mayan sites lie outside the property boundary and the basis for the selection of sites included in the property has not been explained. In the additional information provided on 28 February 2014 it was stated that the area of the property is "where the six natural and cultural criteria bind and concentrate because it holds the highest ecological integrity, which provide protection to the cultural elements located in it". However on the basis of the additional information provided on 28 February 2014, ICOMOS considers that sites mentioned as being attributes in support of the justification including Altar de los Reyes and Dzibanché would need to be included within the property boundary.

The buffer zone boundary coincides with the boundary of the Biosphere Reserve. ICOMOS notes that it runs through the centre of two of the named sites (Akalpetén and Once de Mayo).

In conclusion, ICOMOS considers that the boundaries of the proposed extension and of its buffer zone are not adequate at this stage.

Ownership

The property is owned primarily by the Federal government with 88.5% being public lands including the existing World Heritage site and 11.5% owned by forestry agencies.

The Biosphere Reserve as a whole including the property and buffer zone is 48.4% State-owned and 49.6% communal-owned, with 2% being privately owned.

Protection

The Calakmul Biosphere Reserve including the nominated property was established by Presidential Decree in 1989 and is protected as a natural area.

The existing Calakmul World Heritage property is protected under the Federal Law on Monuments and Archaeological, Artistic and Historical Zones, 1972. According to the State Party's response to ICOMOS' query, the archaeological sites discovered within the nominated property are included in the record system and automatically protected under that Law.

ICOMOS considers that the existing World Heritage site of Calakmul is effectively protected. However the other archaeological sites within the proposed extension that are recorded in the inventory of sites of Campeche State are vulnerable to looting and would appear to require better Federal archaeological protection by being officially declared as archaeological zones. The whole proposed extension requires protection as a natural and cultural zone at the Federal level.

In conclusion, ICOMOS considers that the legal protection in place is not adequate at this stage.

Conservation

The sites so far discovered within the proposed extension have been recorded in an inventory and data base as part of a project being undertaken to do this for the whole Campeche State since 2007. This project 'Development and use of a 4D GIS to support the conservation of the Calakmul site (Mexico, WHP)' is providing an information management system for the conservation authorities (natural and cultural) of the Biosphere Reserve and Archaeological Urban Centre of Calakmul.

A conservation programme is being implemented at the existing World Heritage property on the stucco masks and frieze and mural paintings but there is no conservation programme for the archaeological sites within the proposed extension outside the existing World Heritage site.

In response to ICOMOS' query regarding trees growing in the Calakmul ruins the State Party has said that those supporting the structures have had to be retained.

ICOMOS considers that the existing Calakmul World Heritage property is well maintained and conserved but was unable to visit all the other sites within the proposed extension. These are mostly unexcavated but with ruins and stelae exposed and are in need of a conservation programme.

In conclusion, ICOMOS considers that conservation is not yet adequate in that a conservation programme needs to be put in place for the cultural sites within the proposed extension.

Management

Management structures and processes, including traditional management processes

The Biosphere Reserve is managed by the Ministry of Environment and Natural Resources (SEMARNAT), through the National Commission for Natural Protected Areas (CONANP) supported by the National Institute of Ecology (INE) with regard to wildlife, and in collaboration with the Campeche State Government, the Municipality of Calakmul, and the Ministry of Social Development (SEDESOL). An Advisory Body comprising representatives of government and non-government organisations, academic institutions and local communities advises the Director of the Reserve.

The archaeological sites including the existing world heritage site are managed by the National Institute for Anthropology and History (INAH), which is an agency of the National Council for Culture and the Arts (CONACULTA) and the Ministry of Public Education (SEP) working through its Campeche Regional Office. According to the nomination dossier there is close and constructive collaboration between the INAH Campeche Regional Centre and the administration of the Biosphere Reserve, and the INAH site management team also has close and cordial relationships with the small indigenous communities within the Reserve.

The management team for the archaeological sites is headed by a senior archaeologist who is supported by professional staff including archaeologists and architects and 14 permanent on-site staff including custodians and maintenance personnel. Workers are recruited and trained on short term contracts from the small settlements within the Reserve to work on specific conservation and restoration projects at the existing world heritage site.

A diagram is given in the nomination dossier showing the management structure for the Biosphere Reserve but this does not show the involvement of INAH.

ICOMOS considers that there could be closer communication between the archaeologists working in the proposed extension outside the existing World Heritage site and the professionals responsible for the natural areas.

The nomination dossier described funding programmes relating to the natural values of the site but not relating to the cultural values. ICOMOS notes that the conservation programme at the existing world heritage site has ongoing funding but there is no funding programme for the other archaeological sites within the proposed extension.

Risk preparedness focuses on fire prevention as described above.

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

The Strategic Guidelines for the National Programme on Natural Protected Areas 2007-2012 (reformulated every six years) provide the policy framework for the Annual Operating Programme for the Biosphere Reserve including the proposed extension. The general objectives of the Calakmul Biosphere Reserve Management programme do not include any relating to the cultural sites, but these are covered in the particular objectives. The archaeological area of the existing World Heritage site of Calakmul has a Management Plan (1999) which requires updating, but the archaeological sites within the proposed extension itself do not have a Management Plan. Co-operation between Mexico, Guatemala and Belize on the protection of adjoining natural areas is being pursued. However nothing is mentioned about the cultural sites, although the Mirador archaeological region south of the Mexican border in Guatemala includes many sites that share similar characteristics to those from southern Campeche.

A visitors' centre located some distance from the existing world heritage site provides a brief and general introduction to the site. In the nomination dossier this is described as a 'Culture for Conservation Centre' with four rooms for permanent exhibits from the pre-Hispanic era, a room for Calakmul biodiversity and another for the Maya era. From there a path takes the visitor to the existing world heritage site which can be explored by different routes, taking a maximum of seven hours. The other archaeological sites within the proposed extension are not open to the public.

ICOMOS notes that the signage could be improved and does not include mention of the surrounding sites in the region or the connections to the Guatemalan region.

Involvement of the local communities

Local communities are involved through the Advisory Body and directly with the INAH Campeche Regional Centre in management of the Reserve. ICOMOS notes that a group of researchers is working with the communities around the property to rescue traditional ways of planting and growing crops. ICOMOS also noted that the communities were consulted through a community meeting about the proposed extension boundary and its proposed declaration as a protected zone.

ICOMOS considers that the Management Plan for Calakmul the already inscribed property should be extended to cover the cultural sites of the proposed extension.

ICOMOS considers that special attention is needed for the protection, conservation and management of the archaeological sites and for the proposed extension's cultural value as a whole.

In conclusion, ICOMOS considers that the management system for the property should be extended to include more directly the authorities responsible for the conservation, protection and management of the archaeological sites. Furthermore, ICOMOS recommends that the Management Plan for the already inscribed site of Calakmul be updated and extended to cover the cultural sites of the proposed extension.

6 Monitoring

The nomination dossier describes a monitoring system for the natural values but makes no mention of the cultural values.

ICOMOS considers that a monitoring system is required for the cultural sites within the proposed extension.

7 Conclusions

ICOMOS considers that the justification for the proposed extension as provided in the nomination dossier is not appropriate on its own because it deals neither with the cultural remains in the extended nominated property area, nor does it cover discoveries since 2002 within the previously inscribed property. However the additional information, particularly that provided on 28 February 2014, goes some way towards remedying this. The integrity of the proposed extension is problematic in terms of whether it includes all elements necessary to reinforce the outstanding universal value of the existing World Heritage site because it has not been established whether all the sites related to Calakmul within its immediate sphere of influence are included within the boundary. ICOMOS considers therefore that the condition of integrity has not been met as the boundaries are not adequate. The condition of authenticity could be met if all the attributes demonstrating that the proposed extension were part of a settlement system that depended on the surrounding ecosystem are considered. ICOMOS considers that the proposed extension could reinforce significantly criteria (i), (ii), (iii) and (iv) and meet conditions of authenticity and integrity, but this has not been justified and demonstrated at this stage. The justification for criterion (iii) needs to be expanded to include all attributes. It should be able to say that: the political, spiritual, economic and social way of life of the Lowland Maya cities is admirably demonstrated by the impressive remains of Calakmul with its mural art, stelae associated settlements, agricultural areas and water management systems.

ICOMOS considers that the sites other than the already inscribed site within the proposed extension area are mostly unexcavated but with ruins and stelae exposed and are in need of a conservation programme with an identified funding source and appropriate personnel. The archaeological sites other than the already inscribed site within the proposed extension are vulnerable to looting. The whole for the proposed extension requires protection

as a natural and cultural zone at the Federal level and a management plan is needed for the proposed extension as a whole, including the cultural sites. ICOMOS considers that the management system for the property should be extended to include more directly the authorities responsible for the conservation, protection and management of the archaeological sites and a monitoring system is required for the cultural sites within the proposed extension.

ICOMOS considers that the proposed extension is a positive initiative by the State Party to recognise and understand better the significance of the property and reinforce its protection.

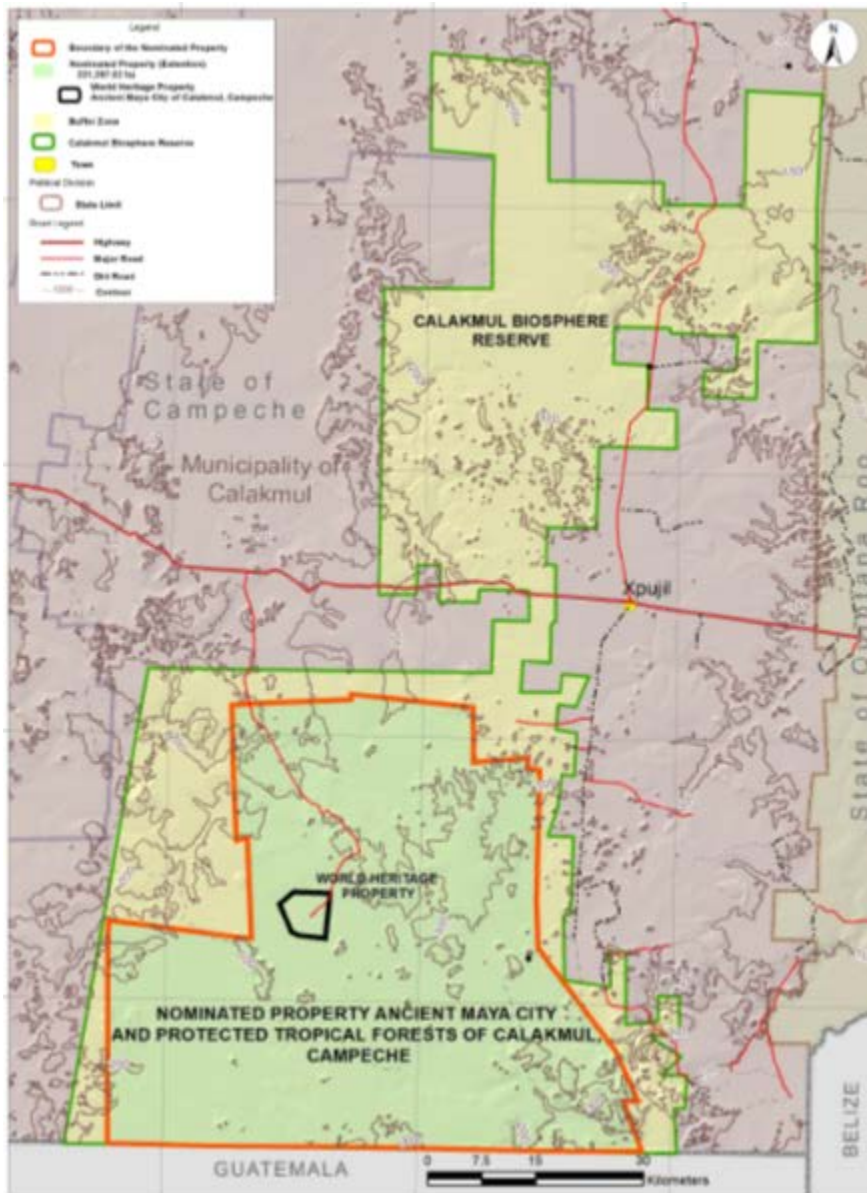
8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the proposed renomination and the extension of the Ancient Maya City of Calakmul, Campeche to include the Protected Tropical Forests of Calakmul and become the Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche, Mexico, to the World Heritage List in relation to cultural criteria, be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Ensure that the revised boundaries of the proposed extension include the identified cultural sites within and around it that relate to Calakmul;
- Expand the justification for the proposed extension to cover all the cultural attributes and demonstrate how they reinforce significantly the value of the existing World Heritage site of Calakmul;
- Provide legal protection at the Federal level for the cultural sites within the proposed extension;
- Extend the management system to involve more directly the authorities responsible for the conservation, protection and management of the cultural sites;
- Update the Management Plan for Calakmul and extend it to cover the cultural sites within the proposed extension;
- Develop a monitoring system for the cultural sites within the proposed extension.

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



Map showing the boundaries of the proposed extension



Aerial view of the inscribed site "Ancient Maya City of Calakmul, Campeche"



The Calakmul archaeological site



Mural painting in Structure I



Stucco mask in Structure II

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

Tongo-Tengzuk Tallensi Cultural Landscape

(Republic of Ghana)

No 1409

Official name as proposed by the State Party

Tongo-Tengzuk Tallensi Cultural Landscape

Location

Upper East Region, Talensi-Nabdam District
Republic of Ghana

Brief description

The Tongo-Tengzuk Tallensi cultural landscape, sheltered within the clustered granite hills of northern Ghana, is that part of the Tallensi lands that is lived in by the Tengzuk clan.

Within the intensively cultivated agricultural landscape of this densely populated area, are a few remaining clusters of flat-roofed traditional earthen buildings, and four earth shrines, sheltered by groves of natural woodland, that are sacred to the Tallensi but also visited by pilgrims from outside the local area.

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* (July 2013) paragraph 47, it is also a *cultural landscape*.

1 Basic data

Included in the Tentative List

17 January 2000

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

30 January 2013

Background

This is a new nomination. ICOMOS commented on a draft when this nomination dossier was submitted to UNESCO in September 2011 for a review and completeness check.

Consultations

ICOMOS consulted its International Scientific Committees on Cultural Landscapes and on Earthen Architectural Heritage and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 25 to 30 September 2013.

Additional information requested and received from the State Party

None

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

In and around the clustered granite boulders of the Tongo hills in northern Ghana, the Tallensi are settled agriculturalists who also keep a few cattle, sheep and goats.

Rising out of the savannah, the Tongo Hills extend to some 7km by 3km. A small area of these hills has been nominated covering around 5 sq km and lived in by around 2,500 people. This is mainly the area of the Tengzuk Tallensi clan, while people of the Wakii clan live in the hills in the buffer zone.

The Tallensi resulted from the merging of two groups of people, the Tallis who claim to have lived in the area since antiquity, and the Namooos who took refuge in the hills around 350 to 400 years ago. This duality is reflected in Tallensi religious and social structures. Religion is composed of earth cults and ancestral cults; while power is vested in both chiefly clans and ritually oriented clans. The management of the resulting tensions traditionally compensated for the lack of a centralized structure in Tallensi society.

ICOMOS notes that what has been nominated is a complex cultural landscape involving shrines, woodland, houses, villages, and agricultural terraces. Although the disposition of the settlements, footpaths, shaded spaces, sacred groves, cattle kraals and granaries is said to be in accordance with the Tallensi cosmological system and socio-political structures, neither of these is described in detail or illustrated.

The nomination dossier provides more detail on the sacred groves and shrines and the sacred associations of the rocks and forests, but even this is sparse. Although there is a rich literature on the Tallensi, what is lacking in the description is a sense of the complexity of the traditional interaction between people and nature, how this is reflected in the landscape, and how far it might still be considered to be robust.

The nominated property consists of the following:

- Earthen architecture
- Arable cultivation
- Forests
- Earth and Ancestral Shrines
- Archaeological sites

These are considered separately.

Earthen architecture

Traditional Tallensi homesteads consisted of clusters of earth walled circular houses with in some areas the roofs being flat and in others thatched. The flat earthen roofs were multifunctional, designed to withstand the destructive force of Sahel winds. Although these houses have been well studied, few details are provided in the nomination dossier to suggest how they were distinctive in terms of layout, construction or siting. Mention is only made of the small home-based family shrines outside the main entrance that are seen as a mirror of the public earth shrines situated in the sacred groves.

Although the nomination dossier states that the clusters of houses amongst the rocks create a landscape of extraordinary beauty, that the local architecture blends seamlessly into the natural environment, and that the homesteads and earth shrines together form the sacred landscape, the information provided in images and texts suggests that the buildings today are a shadow of what once existed. Only around the Nyoo shrine do the traditional flat-roofed circular earth built forms persist and even these are not regularly maintained – see below.

Traditionally the siting and arrangement of houses would have reflected the occupants' social position in society and new houses built as new families emerged. Forty years ago, it was stated that the dispersed pattern of house distribution in the Tongo plains, although conditioned by topography, was determined by the Tallensi kinship organisation and reinforced by its system of beliefs. A map of the area drawn then was seen to be a diagram of the prevailing social structure. This dynamic tradition appears no longer to be extant and the remaining circular houses are being preserved as monuments to an old way of building.

The nomination dossier mentions Bonchiig and Kpatari clan settlements associated with the Nyoo, Bona'ab and Tona'ab shrines, while a chief's compound, known by its ancestral name "The Goldana" in Bonchiig section, is said to be occupied by a total number of 349 people all from the royal family. No details have been provided of any of these buildings. ICOMOS noted that there are five other additional settlements associated with the Bonchiig, Kpatari, Samiit, Sakpee, Nanchieyir, Gundaat and Tamboog clans about which no information has been made available.

Thus the extent of the settlements is unclear, as is the extent of the traditional buildings in relation to those that are now of modern materials.

Arable cultivation

The Golib deity is said to regulate the agricultural life of the Tallensi but few details have been provided as to the scope and extent of the agricultural system nor of the known deep relationship between farming, clans and land tenure, or of the way religion pervades this aspect of life.

Although the property is nominated as a living cultural landscape that is said to have retained its traditional settlement pattern and land-use inherited from a distant past, ICOMOS notes that its characteristics are not clearly defined.

Terracing of the rock slopes is briefly mentioned in the text as a way of retaining water for effective agricultural use, while the rock surfaces are said to be used for threshing, pounding, and grinding of grains and sheanuts.

Nowhere in the nomination dossier are there plans, photographs or other details of land use patterns, nor is information provided on the social systems that support the way the land is cultivated.

Forests

The dossier states that in a landscape that has otherwise been considerably deforested, the Bonaab shrine stands out as 'an island of preserved vegetation thanks to the prohibitions and taboos attendant with the administration of these shrines'. No further details of the woodland are provided. It is understood that it mainly remains around the shrines, but even here it is a vulnerable resource – see below.

Earth and Ancestral Shrines

As well as ancestral shrines, there are earth shrines – sacred areas within cluster of granite boulders and traditionally sheltered by groves of natural woodland. There are many such earth shrines in the Tongo Hills and some are visited by people from outside the Tallensi clans. Four are in the nominated area.

The Bona'ab shrine was a focal point for the resistance against the British. The Tona'ab is said to be famed for its curative powers and its associations with benevolence for agriculture and fertility. Pilgrims attracted by its healing powers decorate its surviving grove of trees with pieces of cloth, beads, and cowries. However, except for one colonial administrator's description in 1911 on p.29 there is no detail of these fertility rituals. There are no indigenous accounts or gendered accounts presented in the nomination dossier. Women are noticeably absent.

The principal ritual festival for the communities' takes place at these shrines, The Nyoo earth shrine, the third largest in the Tongo Hills with remnants of a grove, is associated with the Golib festival that marks the start of the rainy season. The fourth earth shrine is the Zong for which no details are provided.

Earth priests are in charge of the shrines and ensure that everyone visiting performs rituals before being allowed access.

It is claimed that the significance of the shrines 'is underpinned by its competitiveness in a global political and religious landscape in which the cause of the world religions of Christianity and Islam predominate. As guarantors of human continuity the Shrines share a common thread with these latter religions.' What this means is not clear in terms of adherents.

Ancestral shrines can be small conical earthen structures near the entrance to a house, or larger conical structures dedicated to a common ancestor of a lineage.

The shrines are said to have wide appeal which transcends national boundaries and to attract pilgrims from neighbouring Burkina Faso and Togo, although the number of visitors to the shrines annually is low, around 600.

Archaeological sites

Archaeological research has been taking place in the Tongo hills since 2004 in caves, and at the foot of the hills, but also more recently at the Nyoo shrine even though this is an active sacred place. This work has revealed standing and recumbent stones, stone arrangements and apparent sacrificial areas without any physical remains. The mission was informed that the local community stopped this excavation at the level where 13 stone slabs were unearthed. A mid-11th century date has been associated with material for the arranged stones, while much earlier dates of mid-3rd to mid-8th centuries has been obtained for the standing stones.

History and development

The Tongo hills have for centuries formed part of a 'buffer' between the contrasted kingdoms of Mossi to the north and Dagomba and Mamprugu to the south.

The Tallensi merged two groups of people, the Tallis who claim to have lived in the area since antiquity, and the Namoos who took refuge in the hills around 350 to 400 years ago.

In the 19th century the shrines in the Tongo hills became the focal point for people resisting the advance of British when, after the defeat of the Asante kingdom in 1874, they turned northwards from the forests near the coast to the savannah areas. The Tongo Hills came to be known as the last outpost of resistance to colonial rule.

In 1911 the British attacked and forced the montagnards to climb down. An exclusion zone was declared around the hills, the use of the shrines banned and the local communities removed. It was not until 1935 that the Tallensi were allowed back at the same time as the Asante confederacy was recognised. The traditional social, economic and spiritual systems were reinstated and the shrines once again performed their central role in society.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis only provides comparisons between the nominated property and three inscribed properties. These are the Matobo Hills, Zimbabwe (2003, criteria (iii), (v) and (vi)), Sacred Mjikenda Kaya Forests, Kenya (2008, criteria (iii), (v) and (vi)), and the Koutammakou, the Land of the Batammariba, Togo (2004, criteria (v) and (vi)).

In the case of the first two occasions, it is observed that these properties do not contain traditional homesteads, while in the case of the third it does have homesteads, but does not have prominent shrines which attract visitors from across national borders.

ICOMOS notes that no comparisons are offered with other landscapes, particular within West Africa which have similarities in terms of both traditional buildings and sacred groves and earth shrines that reflect places of restricted use and high value to those communities. Within Ghana, this pattern is not uncommon.

ICOMOS considers that what the comparisons have not provided is an idea of how this Tallensi landscape can be seen as an exceptional manifestation of a landscape pattern that is found to a greater or lesser degree within many rural communities in West Africa.

ICOMOS considers that the comparative analysis has not justified 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 Tongo-Tengzuk Tallensi cultural landscape is a living landscape that has managed to retain its traditional human settlement pattern and land-use inherited from a distant past.
- The shrines are manifestations of a powerful religious complex exerting influence on the Tallensi and neighbouring communities.
- Archaeological excavations have provided time depth for this religious tradition.

- The expulsion and subsequent re-settlement of the Tongo hills in 1935 is recognised as a watershed in 20th century history of this area.

ICOMOS considers that the case has not been well made for the distinctiveness or the exceptional character of the overall landscape in a regional or in a wider African context, nor how the overall landscape can be seen to hold together as a social and cultural unit. Little is presented on the evolution of the Tallensi cosmological system or its impact on the landscape and settlement layout.

Although three of the shrines still have a strong regional influence, the overall cultural and social systems and traditional cosmological practices are not robust enough to allow the area to be considered as a thriving cultural landscape whose traditional practices may be sustained over time. The area nominated is a small island within a buffer zone that shows marked changes from traditional management.

Integrity and authenticity

Integrity

Although the nomination states that the boulder of the Tongo Hills form an effective barrier between the nominated area and the land beyond, what has not been demonstrated is how the size of the nominated area is adequate to enclose a landscape that could be seen as a robust reflection of traditional practices.

A fundamental part of integrity is the need to show that the attributes that convey potential Outstanding Universal Value (both physical attributes and on-going traditional processes) are in good condition, and that deterioration is contained. In the case of the traditional architecture this cannot be said still to reflect a thriving tradition, nor have individual buildings been maintained (see below). Some of the shrines appear to be overgrown and there is concern that the sacred groves of trees around them are highly vulnerable to deforestation.

In terms of the overall landscape which is held together by agriculture which involved 98% of the population, this did not feature prominently enough within the nomination dossier to allow consideration of its contribution to integrity.

Authenticity

Due to the deterioration of the traditional buildings, and the apparent lack of on-going traditional maintenance, ICOMOS considers that it cannot be said that the landscape reflects distinctive earthen architectural traditions. Although the shrines are still the focus of important rituals amongst the Tallensi community, and are visited by small number of pilgrims from outside the immediate area, there is concern that migration to the towns is breaking the oral traditions that underpin these beliefs and practices and giving them great vulnerability.

The groves of trees surrounding the shrines are also vulnerable to the pressures of agriculture and exploitation for timber and medicinal herbs. Currently the traditional sanctions and taboos do not appear to be strong enough to counter these threats.

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 (v) and (vi).

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 unique architectural design of the Tallensi earthen homesteads is metaphor for the extended family based on kinship affiliation. The earth shrines and the homesteads together form a Tallensi sacred landscape.

ICOMOS considers that in respect of the houses the above justification could have held good one or two generation ago when the landscape was a physical reflection of the network of family and kinship links, with rooms in individual houses built to reflect needs and allegiances of individual people. Today the clusters of circular, flat-roofed buildings that make up some Tallensi homesteads are fragile reminders of past practices. As well as traditional buildings practices having to a degree atrophied, so has the flexibility that once characterised these settlements.

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 Tallensi landscape is the embodiment of a religious tradition that reflects a 'stateless' society in which religious structures contributed to social cohesion.

ICOMOS considers that although the three earth shrines are still actively revered by both local communities, it has not been demonstrated how religious traditions pervade everyday life and the overall landscape. Other than the prohibition on the use of thatch for roofs in view of its fire risk, there is no evidence given of how the Golib deity regulates all aspects of agricultural life, or of how the sacred nature of groves near shrines is effective in preventing deforestation.

The shrines are said to attract pilgrims from neighbouring countries, albeit in low numbers of around 600 per annum. There are no details presented of the 'wide constituency of adherents' to the Tallensi shrines who are undertaking fertility rituals, nor any indication of their pilgrimage routes. There is no clear justification for the outstanding significance of the Tallensi sacred landscape.

ICOMOS considers that this criterion has not been justified.

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

4 Factors affecting the property

Although it is stated in one part of the nomination dossier that the Tallensi continue to build and maintain the earthen homesteads employing traditional techniques, this was not substantiated. ICOMOS found that most of the traditional structures were wholly deteriorated or have deteriorated sections as many have absentee owners and are no longer used. Indeed elsewhere the nomination dossier describes the erosion of the earthen architecture, with clusters of circular buildings with thatched or corrugated sheet-metal roofs giving way to rectangular brick or concrete block buildings with roofs of concrete tiles or corrugated sheet-metal.

The nomination dossier states that there is a need for a comprehensive regime to be put in place for the maintenance of the traditional buildings. It also states that it is not clear for how much longer controls on the use of materials and the shape of buildings can be upheld within the context of modernity and development. It acknowledges that maintaining the traditional buildings is a conservation 'nightmare'.

ICOMOS considers that what is not clear is whether traditional skills to sustain these buildings still exist and whether on-going building and maintenance can still be said to be part of a family tradition that reinforces social cohesion.

Although the nomination dossier states that the Tongo hills are highly deforested due to a high demand for domestic firewood, ICOMOS was told that this was incorrect.

Nevertheless the tree cover around the shrines does appear to be vulnerable to agriculture and new development. And the wider landscape in the buffer zone appears to be deforested and denuded through agricultural exploitation. These pressures are acknowledged in the text of the nomination: 'there is a genuine concern that the unique ecological and cultural properties of this landscape will be undermined if greater protection is not provided', and: 'While the demand for

domestic firewood remains high the Tong Hills are heavily deforested outside the limits of the shrines'.

In recent years quarrying was started in what is now proposed as the buffer zone. This has caused tensions between two Tallensi clans, the Wakii, who live in the buffer zone, and the Tengzuk who live in the nominated area. In the late 1980s the Wakii gave permission to a quarry company for a site on the boundary between the lands of the two clans and the Tengzuk protested as they wished the area to remain a tourist attraction. The matter was pursued by the courts. (Details of this matter have been published). According to the nomination dossier, the initial quarry has ceased operation and this was confirmed by the ICOMOS mission and the quarry company has now moved its operations away from the nominated area – but no details of the site has been provided.

The lack of a government order or legislation to guarantee no future mining operations would seem to expose the nominated site to threats of future granite quarrying.

A further development threat to the proposed cultural landscape is the increasing number of modern structures, especially in Kpatari and other Tallensi settlements, except the Bonchiig area. On the way to the Chief's courtyard, ICOMOS noted some new modern developments that are either being constructed or are completed, such as the residence of the Chairperson of the Ghana Olympic Committee next to the modern school building.

Although currently numbers are low, the State Party has placed great emphasis upon further tourism support and development at Ghana's many castles and forts, national parks, beaches, nature reserves, landscapes and World Heritage sites.

In this context, ICOMOS is of the view that the current inadequate legal framework for the nominated property (see below) will not be enough to control tourism development.

Furthermore there are constraints that will inhibit successful tourism such as the lack of adequate training for tour guides, the lack of adequate documentation of the proposed property on-site or at the nearest Bolgatanga Museum and inadequate infrastructure.

Overall a tourist development plan is needed that clearly acknowledges the key characteristics of the area and has resources for its implementation. The lack of a plan or a functioning management plan means that few controls are currently in place to guide development with the result that some hopeful inhabitants are putting up some tourist infrastructure where they wish.

Although fire wood appears to be the main threat to the groves of trees surrounding the shrines, and to village buildings, there is a lack of risk preparedness measures for the nominated property.

ICOMOS considers that the main threats to the property are unregulated development, the atrophying of traditional practices and the lack of a structure within which the overall sustainable development of the property might be taken forward.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

From the small scale map provided, it appears that the boundary of the nominated area does not follow area, natural features in a way that could be recognised on the ground. Instead it cuts across contours.

The boundary appears to be the line that divides the Tengzuk clan who live in the nominated area, from the Wakii who live in what is proposed as the buffer zone.

Overall the boundary encloses a comparatively small area of some 5 sq km – which in many ways is too small to be a sustainable social and economic unit.

The buffer zone boundary encompasses a large part of the Tongo hills and is more logical in its relationship to topography, but has little protection to make it effective (see below).

ICOMOS considers that the boundaries of the nominated property are too small to allow for the local community to sustain and enhance traditional practices; the boundaries of the buffer zone are adequate.

Ownership

The Tongo-Tengzuk Tallensi landscape is state owned land that is designated as communal land under the custodianship of the Chief of Tongo.

Protection

ICOMOS was informed that, contrary to the text in the nomination dossier stating that the property is a National Heritage site, it does not enjoy any national conservation status. Despite this, ICOMOS was assured by the State Party that legal protection for the nominated property is expressed in the definition of “antiquity” in section 30 of the National Museum Decree of 1969. However, it was not explained how this protection manifests itself at a practical operational level.

Protection of the property could be enhanced once the 2005 draft Ghana Museums Bill and the Ghana Monuments and Sites Bill, are enacted. They are currently being reviewed and no timeline has been provided for their passage into law.

Within the property traditional practices should be the main means whereby the landscape and its key characteristics and processes are sustained. The nomination dossier does however suggest that these

practices are no longer robust enough to succeed unsupported by other mechanisms and unless some of the fundamental causes of their decline are addressed.

Buffer zone

As neither the nominated property nor the buffer zone enjoys any formal protection, the buffer zone is merely a line on a map and does not guarantee any additional protection to the property. The only existing mechanisms are traditional ones. And as has been indicated above disputes between the Wakii and the Tengzuk would appear to suggest that traditional approaches may in some circumstances favour quarrying.

ICOMOS does not consider that the legal protection in place is currently adequate.

Conservation

Most of the earth structures appear to need attention. Their condition indicates that the skills and expertise of the local community do need strengthening, as cement has been introduced to deal with cracks in the earth structures which is not a sustainable approach. Overall there appears to be a lack of traditional knowledge and skills as well as difficulties on putting in place sanctions to ensure that some buildings survive.

There is an urgent need for capacity building in earth building skills for the local community.

The Tona’ab and Bona’ab Shrines appear to be mostly in good condition. For the woodland groves around them, traditional practices include taboos against cutting trees near the three main shrines. Whether the groves of trees around these shrines have been heavily deforested could not be clarified by ICOMOS, as the statement in the nomination dossier to that effect was said to be an error with deforestation only being allowed at Nyoo where the dance festivals are undertaken.

Although the whole landscape has been nominated, there is neither description nor documentation on the farming systems that are the main agents of change.

Although the traditional houses have been the subject of much research, including a recent PhD thesis, no official documentation appears to have taken place. No formal documentation of the landscape has taken place either and thus the degree of change over the last few decades in for instance the cover and composition of the forests cannot be ascertained.

ICOMOS considers that the lack of active conservation measures is a cause for concern.

Management

Management structures and processes, including traditional management processes

Ghana Museums and Monuments Board (GMMB) will be the management authority for the nominated property and will work with the Tallensi traditional structures to ensure the protection of the nominated Tongo-Tengzuk Tallensi Cultural Landscape. The Bolgatanga District Assembly (equivalent to a region or province) is the closest level of government that will be responsible for infrastructure both within and around the nominated property.

The GMMB gives policy direction on research and tourism through the Monuments and Sites Division and the Regional Museum on Bolgatanga. The GMMB sees its role as providing technical advice to the Tallensi community. This advice appears to be concentrated on disseminating knowledge of the shrines and 'sound methods for protecting the property'. However during the ICOMOS mission, the State Party could not clearly explain what regulatory mechanisms will be applicable both in the property and its buffer zone to ensure protection.

Traditional management would appear to underpin this nomination. The Tallensi have long been famed as a model of a 'traditional, stateless society' and one with a duality between chiefs and priests that has in the past established a beneficial creative tension. The nomination dossier focuses very little on the strengths of the traditional systems and on how these might be better supported by national institutions such as the Ghana Museums and Monuments Board. More information is needed on these traditions and how they might contribute to the protection of the cultural landscape.

Weaknesses in traditional practices have been acknowledged in the conservation/management plan – see below. This is especially weak in respect of traditional buildings. Except for the bachelor homestead and the Chief's homesteads, the inhabitants have discretion to use whatever materials or to build whatever structure they like in both the buffer zone and the nominated property. ICOMOS noted a number of modern structures such as the one built by the Chairperson of the Ghana Olympic Committee and the school building. Clearly this discretion poses a potential threat.

ICOMOS considers that what is not clear at all is how traditional practices relate to the wider landscape in terms of arable cultivation.

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

A Conservation/ Management Plan was prepared for the area in 2013 but was developed outside the context of the World Heritage Convention. Although there is no

mention of sustaining the potential Outstanding Universal Value of the property, its implementation might improve on management and address the acknowledged shortcomings of the traditional management system. It should also provide a cycle of short, medium and long-term actions which currently do not exist.

If the property is put forward as a living cultural landscape there is the expectation that the key processes associated with that landscape will be sustained in a living way. The key processes are associated with architecture, farming, forestry and religion. These traditional processes need to be clearly described, including details of community and individual responsibilities and how overall the landscape can be seen to hold together as a social and cultural unit.

Currently the Management Plan only details the priestly structure that relates to part of the landscape.

This plan has yet to be implemented.

As set out above, there is no active visitor management in place. There is also a lack of information about the property and its assets and value.

Involvement of the local communities

Although the involvement of the local communities should be at the heart of the preparation of this nomination dossier, it is not clear from the information provided how this has been achieved.

In conclusion, ICOMOS considers that much more work is needed in order to have in place a working management system that aims to sustain the value and attributes of the landscape through supporting and enhancing traditional practices.

ICOMOS considers that the management system for the property is currently not adequate to sustain the value of the property, nor does it appear to meet the needs and aspirations of the local communities.

6 Monitoring

No formal indicators relating to the potential Outstanding Universal Value have been developed within the framework of the Management Plan. However six indicators have been formulated that cover quarrying, traditional buildings, re-afforestation, and number of visitors, household waste and the sanctity of festivals. These need to be extended to encompass traditional processes related to buildings, agriculture, forestry and other attributes of the overall landscape such as the perceived beauty that is mentioned in the nomination dossier.

ICOMOS considers that the monitoring indicators could be improved and extended to relate to the cultural processes that underpin the landscape.

7 Conclusions

What is being nominated is a complex cultural landscape in a fertile area around the Tongo Hills, where for several centuries (apart from the time the communities were forcibly moved from the hills) Tallensi people have lived and intensively cultivated the land.

This is a landscape that even two generations ago could be seen as a map of the structure of Tallensi society with homesteads spread across the landscape in a way that expressed people's position in society, the links between them and the sacred areas upheld by long standing beliefs and taboos. It was also a landscape that had great visual harmony - as is expressed in the nomination dossier in terms of the way the architecture blends seamlessly with the natural environment.

What is clear from the documentation provided is that this landscape no longer looks like that; the structure is fragile, suffering from migration to the towns with the resultant lack of younger people to be the custodians of traditional practices, particularly related to traditional buildings. This weakening of traditions, combined with the pressures of agriculture, is now impacting on the ability of chiefs and priests to sustain traditional taboos and thus on the sacredness of spaces such as natural woodland.

The nominated area is small and not large enough to be a sustainable economic unit. Around the hills, in the buffer zone many changes have taken place, including quarrying, and there does not appear to be the possibility to create a large socio-economic unit that might have the power to put in place a forward looking model of development built on traditional practices, and might also be able to demonstrate Outstanding Universal Value.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Tongo-Tangzuk Tallensi Cultural Landscape, Republic of Ghana, to the World Heritage List be **deferred** in order to allow the State Party to:

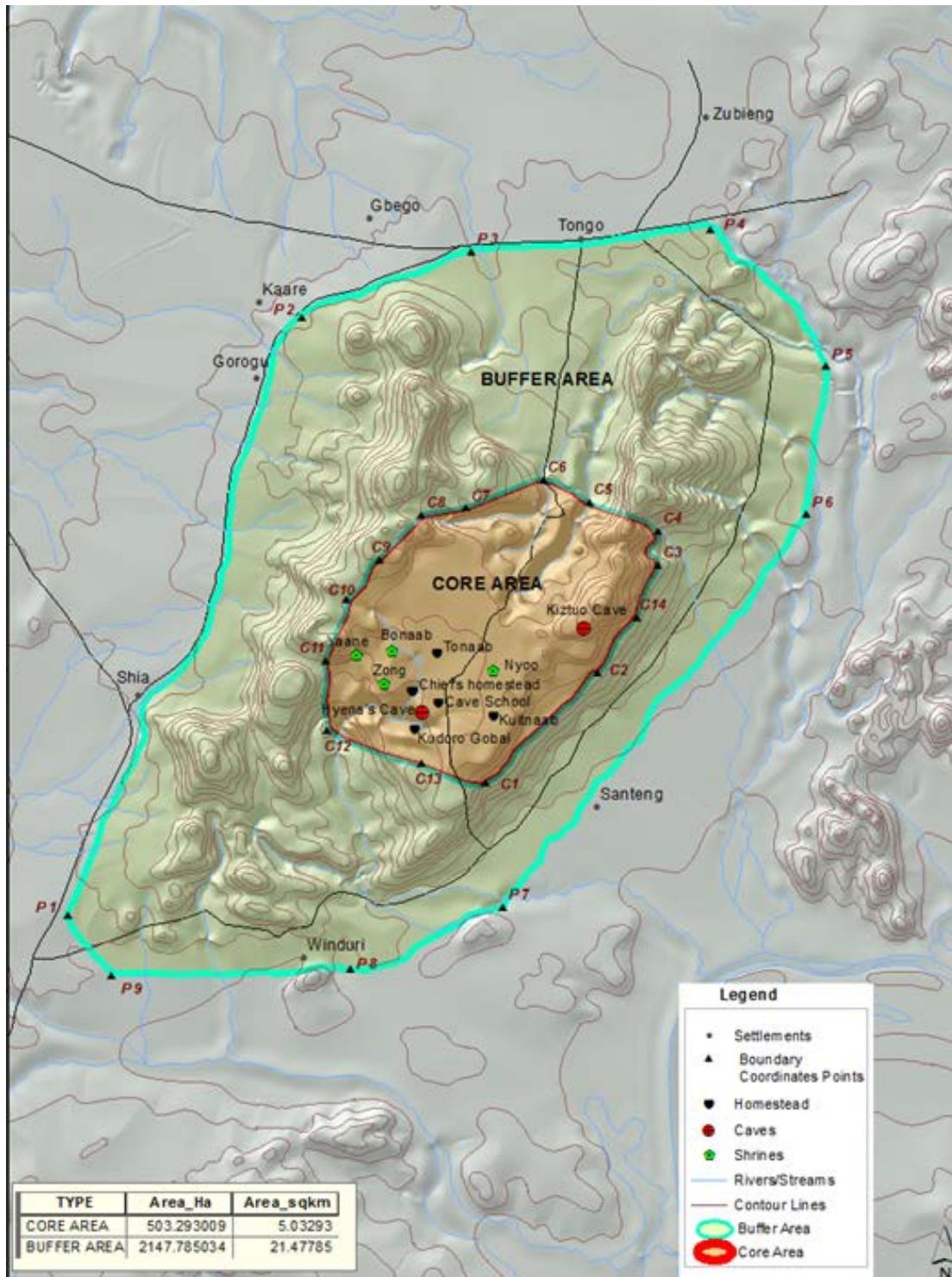
- Develop, through survey and research, a database of the overall Tallensi cultural landscape and its context in order to allow a fuller understanding of its distinctiveness, structures and challenges;
- If adequate protection can be put in place to defeat major threats, if management measures can be put in place to provide a framework within which

traditional practices associated with building, farming, and forestry practices can be supported and encouraged through an appropriate collaborative management system, if capacity building for local committees on earthen architecture can begin to reverse the decline of the traditional buildings, and if overall good conservation practices can be put in place, then consider re-nominating the property.

ICOMOS considers that such a new nomination would need to encompass a large enough area to provide a sustainable socio-economic unit, that might be able to harness the benefits of cultural tourism and promote ways for farmers to add value to their local produce, and would need to cover all aspects of the cultural landscape not just the shrines.

In addition, any new nomination would need to include an augmented comparative analysis.

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



Map showing the boundaries of the nominated property



View of the Tongo hills



Homestead



The Chief's homestead



Stone arrangements

Mount Mulanje Cultural Landscape (Malawi) No 1201

Official name as proposed by the State Party

Mount Mulanje Cultural Landscape

Location

Mulanje District, Phalombe District
Malawi

Brief description

Mount Mulanje, which rises sharply from the surrounding Chiradzulu plains in southern Malawi, is a mountain characterized by grasslands on its elevations and forests in ravines and on slopes. The material evidence of Mount Mulanje is indicative, rather than monumental, and its cultural references are embedded in the natural features, such as forests, open grassland, rock pools, waterfalls, rock shelters or drawings. The mountain demands a strict code of behaviour from visitors and guardians, protecting and sustaining its cultural and natural resources. It is associated with conceptions of afterlife and perceived as the habitat of the ancestors.

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* (July 2013) paragraph 47, it is also a *cultural landscape*.

1 Basic data

Included in the Tentative List

17 May 2000 (as Mulanje Mountain Biosphere Reserve to be nominated under criterion (x))

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committees on Intangible Cultural Heritage, Cultural Landscapes, Rock Art and Archaeological Heritage Management as well as several independent experts.

Comments about the evaluation of this landscape were received from IUCN in December 2013. ICOMOS carefully examined this information to arrive at its final decision and its March 2014 recommendation; IUCN also revised the presentation of its comments in accordance with the version included in this ICOMOS report.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 9 to 17 September 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party on 25 September 2013 requesting additional information with regard to the justification of Outstanding Universal Value, the physical attributes which carry the proposed Outstanding Universal Value, the existence of an inventory of cultural heritage expressions on Mount Mulanje, and the protective and management mechanism that the Forestry Department offers to the cultural heritage resources. The State Party provided additional information in response to the questions raised on 5 November 2013. The information provided is included under the relevant sections below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Mount Mulanje lies to the south-east of the city Blantyre in the wider belt of the Miombo woodlands close to the border of Mozambique. The nominated area of 642.5 square kilometres is one of the largest inselbergs in the world, its peaks reaching up to above 3000 MASL. Its boundaries correspond to those of the Mulanje Mountain Forest Reserve. It is well known for its endemism and complex biotic evolutionary history, in particular during the era of glaciations when the mountain became refuge to various tropical biota. The cliffs surrounding its high plateau are amongst the highest in Africa.

Mount Mulanje is known as a dangerous place, associated with the disappearance of people and supernatural occurrences. The species variety and the complex mosaic of habitats are also however highlighted as key characteristics of the mountain, with emphasis on the various traditional medicinal plants that can exclusively be found on this mountain. These herbal medicines are closely tied to the spiritual aspects of the mountain and their collection and use is integrated into ritual practice. At least 69 endemic plants have been identified on the mountain, several of which are used for medical purposes. Only for a small fraction of these plants have biochemical-pharmaceutical tests been conducted to understand their medical influence, while for most species further research is still needed.

Mount Mulanje is a living associative cultural landscape linked to the Mang'anja (Nyanja), Yao and Lhomwe people. The mountain features not only as a symbol but as the centre of associated belief systems. Its climatic conditions, in particular sudden weather changes, add to the sense of danger conveyed by the mountain and the often heavy mists create an atmosphere of mystery. While stories, ritual and spiritual associations are linked to the entire mountain, a few places are ascribed special significance. In the additional information provided at the request of ICOMOS, the State Party highlighted some of these places, such as Dziwe la Nkhalamba Pool, a scenic water pool believed to be inhabited by both friendly and unfriendly spirits and one of the most important shrines within the property where the community offers sacrifices. Other places include an archaeological site near Dziwe la Nkhalamba showing 14th century ceramics used for ritual sacrifices and the Machemba Hill shelter, a 12m-wide rock shelter containing several geometric rock art paintings.

Specific ceremonies, songs and prayers are undertaken before and during journeys to the mountain. Mount Mulanje is personified as a dangerous but at the same time benevolent power. It is ascribed the ability to cause rain and hence fertility, to heal diseases, to withhold visitors for limited or unlimited time and to move the earth and cause hazard and death. These beliefs, and the associated rituals, transcend the younger religions of Christianity and Islam that were established in the region and hold together all communities residing around Mount Mulanje.

The property also contains two types of formal cultural heritage sites, one of which is registered as a national monument. These are architectural sites like the Fort Lister, a former military post created to suppress the Indian Ocean trade of enslaved people and included on the national register, and colonial mansions as well as several archaeological sites related to the Late Stone Age (3rd century CE) and Iron Age (4th – 5th century CE).

History and development

Mulanje Mountain documents relatively little human interference with the natural setting and hence gives evidence to only a few characteristic stages of cultural history. Archaeological materials and rock drawings point to a possible occupation or at least ritual use of Mount Mulanje in the Middle and Late Stone Age (ca 30000 BC – 300 CE). Likewise, Iron Age (from 300 CE) activities are documented through Nkope type pottery finds.

In the 17th century kingdoms were founded in Malawi. In the 19th century violent trade of enslaved people affected movements and settlements in the region. The Mang'anja people took refuge on Mulanje's slopes while Yao communities, which had moved southwards, settled in the vacated plains. In 1865 David Livingstone, explorer and missionary, was the first European to write about Mount Mulanje. His efforts led to the establishment of the Presbyterian Mission at Mulanje in

1890. To suppress the Indian Ocean trade of enslaved people two forts were built, Fort Lister, also the seat of the local government, and Fort Anderson.

Mulanje was listed as a protected area in 1927 called the Mulanje Mountain Forest Reserve. In 2000 Mulanje was declared a Biosphere Reserve under UNESCO's Man and Biosphere programme. At present, Mulanje is also a popular hiking destination and huts as well as hiking paths exist in different areas and guide to almost all peaks of the mountain.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis is organized according to three themes: island mountains (or inselbergs), centres of endemism in the Afromontane Region and sacred mountains. The latter is by far the most detailed analysis presented both in a regional and global context. The comparative analysis concludes that while Mount Mulanje is both a significant inselberg and component of a mountain region of high endemism, it does share these characteristics with others and should be compared on the basis of its spiritual values which lie at the centre of the justification for Outstanding Universal Value.

Under the thematic approach 'sacred mountains', Mount Mulanje is compared to a notable number of sacred mountains, many of which have acquired World Heritage Status. These include Mount Olympus, or Mount Athos in Greece, (1988, (i), (ii), (iv), (v), (vi), (vii)), Mount Fuji (Fujisan, sacred place and source of artistic inspiration), Japan (2013, (iii), (iv)), as well as Mount Agung in Bali, Indonesia. More closely examined are those sacred mountains which, according to the State Party, have several similarities, or are comparable for their intangible associations.

Uluru, part of Uluru-Kata Tjuta National Park, Australia (1987, 1994, (v), (vi), (vii), (viii)), also a residual inselberg, is considered most comparable as it features notably in the local aboriginal people's thoughts. It is also believed to be inhabited by spirits of ancestral beings and it shares being a traditional subsistence system with cultural links to the environment. The comparative analysis admits that the cultural continuity of Uluru is likely longer standing than at Mount Mulanje but it is also noted that Mulanje has greater ecological significance related to the cultural values, in particular the medicinal plants. The uKhalamba Drakensberg, part of Maloti-Drakensberg Park, Lesotho/South Africa (2000, 2013, (i), (iii), (vii), (x)), a mountain range of great natural beauty, is subject to substantial religious, mystical and cultural connotations. Here however, according to the State Party, the traditional ritual practices have not been sustained with a comparable continuity.

Mount Kenya, Kenya (1997, 2013, (vii), (ix)) is also compared for its ecological processes and mountain flora. Like for Mount Mulanje, mystical associations are attributed to Mount Kenya, but according to the authors not in the same intensity and without associations to healing traditions. Several other mountains are compared including Le Morne Cultural Landscape, Mauritius (2008, (iii), (vi)); Mount Taishan, (1987, (i), (ii), (iii), (iv), (v), (vi), (vii)), Mount Emei (1996, (iv), (vi), (x)) and Mount Wutai (2009, (ii), (iii), (iv), (vi)), all in China; the *Sacri Monti* of Piedmont and Lombardy, Italy (2003, (ii), (iv)) and Sulaiman-Too Sacred Mountain, Kyrgyzstan (2009, (iii), (vi)).

ICOMOS considers that the State Party's emphasis on comparison of the intangible associations which lead to rituals and to the practices of sustainable use of resources is useful. However, ICOMOS also considers that several comparable African sites which show similar spiritual associations and sustainable management practises have not been considered. These include other sites in Malawi, like the Chongoni Rock-Art Area (2006, (iii), (vi)), the Matobo Hills in Zimbabwe (2003, (iii), (v), (vi)); Mapungubwe, South Africa (2003, (ii), (iii), (iv), (v)) and Tsodilo, Botswana (2001, (i), (iii), (vi)).

ICOMOS considers that the conclusion arrived at in the nomination dossier that Mulanje is arguably unique in the sub-Saharan geo-cultural region, has not yet been adequately justified. On the contrary, it seems that a number of African sites with analogous geomorphology are related to traditional systems of land use and have spiritual associations with related ritual practice. ICOMOS considers that it has not been demonstrated how the Lhomwe, Mang'anja and Chewa peoples' intangible associations differ from those of other sacred mountains and mountain ranges in sub-Saharan Africa.

ICOMOS considers that the comparative analysis needs to be augmented, in particular with regard to the sub-Saharan context where spiritual associations underpin management systems for a number of mountain sites.

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

Justification of Outstanding Universal Value

The State Party repeatedly highlights that the key and most significant aspects of Mulanje Mountain are its intangible values, closely associated with and giving significance to the physical cultural and natural heritage located within its boundaries. However, the mountain itself, in the State Party's view, is more than simply a vessel for these intangible values, as it is the origin of the belief system and it creates and sustains them.

In addition to the above general emphasis on the intangible aspects, the nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Mountain is seen as an exceptional example of a system where the needs of man and nature are combined in mutual benefit, and which provides the rules and traditions that have protected the mountain and its eco-system in the past and which continue to do so.
- Mount Mulanje provides nutrition and healing via its potent medicines as well as shelter but is also very dangerous and violent if its codes are not adhered to by visitors.
- The mountain personifies the respect that all humans once had for nature and it epitomises the dynamics between spiritual associations and natural qualities.

ICOMOS considers that the justification provided does not illustrate the uniqueness or exceptionality of Mount Mulanje in comparison to other traditional management systems with longstanding customs that also created sustainable symbioses between human spiritual use, sustenance and conservation of natural resources. Such systems do not seem rare in sub-Saharan Africa and it remains to be illustrated in which way the social mechanism such as rites and taboos in Mulanje can be said to be of Outstanding Universal Value.

ICOMOS considers that the comparative analysis needs to be strengthened at a regional level to highlight the special relationship of all living beings residing on and around Mount Mulanje that would demonstrate Outstanding Universal Value. ICOMOS considers that it might also be worthwhile exploring Mount Mulanje's qualities with regard to natural heritage criteria as initially envisaged in the tentative list entry. Although it would be the exclusive responsibility of ICOMOS's sister Advisory Body IUCN to evaluate the application of natural criteria, ICOMOS takes note of the advice of IUCN that the inclusion of Mount Mulanje in the latest World Heritage biodiversity gap analysis "Terrestrial biodiversity and the World Heritage List: identifying broad gaps and potential candidate sites for inclusion in the natural World Heritage network" as one of the most irreplaceable protected areas for species conservation, suggests that it has high potential to meet criterion (x). The State Party may further wish to explore the potential application of other natural criteria related to the site's geological formation as one of the largest mountain massifs in Southern Africa or its ecosystems, including several endemic plant and animal species. ICOMOS therefore recommends strengthening the justification for Outstanding Universal Value on the basis of the site's natural as well as cultural attributes.

Integrity and authenticity

Integrity

The property comprises the whole mountain massif and includes all major elements to express the proposed Outstanding Universal Value. It comprises an area of 642.5 square kilometres. Likewise, the integrity of Mount Mulanje's setting is undeniable; the smooth upper slopes rise above the forest and bush-covered foothills giving the

mountain strong and characteristic features. So far, there has not been any development in the area which disturbs the impression of the mountain's silhouette. ICOMOS considers that Mount Mulanje has a very high degree of wholeness and intactness.

Mount Mulanje does however – to some extent – suffer from adverse effects of development and neglect, and not all deterioration processes are adequately controlled. Examples to be mentioned are the general inadequacy or absence of soil erosion controls, signage including warning signs or the not yet fully-prevented threat of illegal logging. In addition, officially sanctioned mining prospects are currently underway which pose severe potential threats to Mount Mulanje. ICOMOS considers that illegal logging and mining prospects in the property reduce the condition of integrity as being free of adverse impacts and they need to be strictly prevented to maintain the integrity of the property.

Authenticity

The State Party argues that Mount Mulanje meets authenticity based on its oral evidence and the continuing understanding of the site's meaning amongst the local residents. As authenticity rests in the oral tradition, the attributes of Mount Mulanje differ slightly from community to community and are expected to change over time. The nomination dossier further highlights that the mountain has been the subject of several literary works and movies.

ICOMOS considers that the material cultural testimonies on Mount Mulanje are free of human interference and hence are likely to be highly authentic. It is difficult to identify the authenticity of the intangible associations as long as their exact nature and the physical attributes they are related to remain so little defined. ICOMOS considers it likely that additional information sources of authenticity would need to be analysed and exposed to demonstrate that authenticity has been met, including the information sources of use and function, spirit and feeling, location and setting, as well as traditional management systems. ICOMOS considers that although the property may have the potential to demonstrate authenticity, the attributes of Outstanding Universal Value need to be better defined to identify and analyse the most suitable information sources, which may demonstrate authenticity.

ICOMOS considers that the conditions of integrity and authenticity have not been demonstrated at this stage.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (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;*

Criterion (iii) was not suggested by the State Party, however ICOMOS would like to highlight that criterion (iii) has been interpreted to recognize unique testimony

of cultural traditions related to the interaction of people and their land, in particular for specific cultural traditions aimed at the management of natural resources in a harmonious concept reflecting the mutual exchange of the provisions of nature and the protective mechanisms of their guardians.

ICOMOS considers that based on a more detailed identification of the cultural heritage resources of the property, as well as the specific nature of the traditional management and protection system, such interpretation of criterion (iii) might have the potential to recognize an exceptional testimony at Mount Mulanje.

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 Mount Mulanje reflects a significant stage in human history in its traditional belief system and its adaptation over time. Both aspects are said to be inextricably linked to the cultural landscape. Linkages comprise not only the respect for the place but also its protection by the communities the mountain sustains with food, medicine and other resources.

ICOMOS considers that it is difficult to assess how Mount Mulanje Cultural Landscape can be seen as a type of landscape which reflects a significant stage in human history considering that the intangible values associated to Mount Mulanje are better understood in terms of their continuity and adaptation over time rather than in terms of a specific moment in history. ICOMOS considers that it is questionable that this traditional management and belief system has remained entirely undisturbed since pre-colonial times to which it is referenced, in particular as the nomination dossier highlights its continuous evolution over time.

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 people residing around Mount Mulanje utilise its natural resources, notably medicinal plants, and trade these far beyond the local context. This system is said to be under pressure as the result of irreversible changes related to environmental degradation and economic modernisation. Nevertheless

the interaction with the mountain is said to be representative of a traditional subsistence system.

ICOMOS considers that many African communities have highly valued traditional systems to regulate access, manage the use and maintain respect for both natural and cultural resources. However, what remains to be illustrated is how Mount Mulanje Cultural Landscape can be considered outstanding in this context. In addition this justification seems to be affected by processes in which influences of international culture have changed the traditional guardian roles and hence have changed the mechanisms that have supported the appreciation and protection of the mountain.

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 Mount Mulanje is considered the creator of life in which people seek refuge in times of danger. It is the location of afterlife and dwelling ground of the ancestors and endowed with great powers of healing. Mount Mulanje requires a specific code of conduct based on rituals and respect of its resources, and might cause harm and tragedy if these are disregarded.

ICOMOS considers that the cultural traditions of the Mang'anja, Yao and Lhomwe people underpin the spiritual value and ritual practice associated with Mount Mulanje. However, it needs to be illustrated in more detail how these spiritual traditions as well as the traditional management system for natural resources might be said to be of Outstanding Universal Value and how they are associated to tangible expressions in the property. ICOMOS considers that this criterion might be justifiable following a more detailed analysis and description of the spiritual and management traditions and the attributes they are associated with.

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

In conclusion, ICOMOS does not consider that the conditions of integrity and authenticity and the criteria have been justified at this stage.

4 Factors affecting the property

About 28 million tons of bauxite deposits are suspected to be found in the mountain massif and mining, according to a first assessment by a Canadian company, and was assessed as economically viable but would need a considerable one-time investment. While the State Party seems well aware that mining cannot be permitted within

a World Heritage Property, an exploration license for areas within the property has been granted and remains valid until 2014. During its technical evaluation mission, ICOMOS consulted the responsible authorities in the Ministry of Mining, who indicated that the government of Malawi had no intention of excluding Mount Mulanje from mining prospects in the future. The original prospecting lease covered the complete property and large parts of the buffer zone but it has subsequently been reduced to roughly two thirds of the property. The scale and impact of potential mining activities as well as opportunities for rehabilitation remain unknown. However, ICOMOS would like to highlight that IUCN in its review of the property considered an official statement from the State Party committing to refrain from any mining activities essential, given the clear position adopted by the World Heritage Committee to consider mining incompatible with World Heritage status.

Further potential development pressures, for now on a very limited scale, could arise from human encroachment and agricultural expansion. At present the human settlements and agricultural areas are restricted to the buffer zone. IUCN in its evaluation has further noted that the on-going logging activities of the endemic Mulanje Cedar pose negative impacts and could possibly lead to the species' extinction, if continued.

Mount Mulanje is a key watershed area and any changes to its ecological functioning may have consequences for a far wider area than the nominated property. Climate change phenomena in the region are expected to lead to a decrease in rainfall on the mountain, which will not only increase the probability of bush fires, already a common and dangerous phenomenon during the dry season, but also to put the water resources of the wider region at risk. The capacity of the department of Forestry to fight bush fires is limited and has further declined in recent years due to shortage of resources.

Landslides and avalanches have been recorded, such as in March 1991, when two days of heavy rain led to an avalanche on Michese Mountain that swept away an entire village. The proximity of Mount Mulanje to the seismically active East African Rift indicates a significant risk of earth tremors or even earthquakes. Population growth and an increasing shortage of arable land has led to the establishment of settlements in high risk areas, such as at the foot of steep and unconsolidated slopes, which increases the risk for loss of life in case of major land slides or earthquakes.

At present the number of visitors to the property is relatively low and visitor access is controlled at the few established access points to the property at which visitors are required to register their presence, declare their intended hiking route and period of visit. It is established practice that foreign visitors are accompanied by local guides. However, it is difficult for visitors to judge the competence of the guide or adequacy of service charge as no standards or qualification systems are established. Since the guides are the only source of instruction on

suitable behaviour on Mount Mulanje, standards need to be established to ensure responsible visitation in the long term.

ICOMOS considers that the main threats to the property are prospected mining and resource extraction including deforestation, as well as bush fires, landslides and irresponsible visitation.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The property boundary encompasses an area of 642.5 square kilometres and is at the same time the boundary of the Mulanje Mountain Forest Reserve, overseen and managed by the Malawi Government Department of Forestry. It includes the complete mountain starting from the steep cliffs up the high plateaus and mountain peak. The boundaries have been delineated based on trigonometric surveys and appear on all relevant government maps available for the area. The size of the property seems adequate and the boundaries are logically set around the slopes of the mountain.

The buffer zone of additional 851 square kilometres is circumscribed by the main ring road around the mountain massive, a feature easily recognizable in the landscape. Given that the road was built to connect villages and not to surround the mountain at equal distance, the width of the buffer zone varies considerably between around 1km to the east – where it extends closest to the border of Mozambique – and 10km to the south. At its narrower sections the buffer zone would benefit from some enlargement, however there seems to be restrictions as a result of the international border with Mozambique. ICOMOS encourages the State Party to explore options extending the buffer zone until at least the international border which would correspond to a minimum distance of 4km from the property.

ICOMOS considers that the boundaries of the nominated property are adequate and that its buffer zone is clearly indicated but might benefit from enlargement in its narrower sections.

Ownership

The property is completely under state ownership with a few privately built mountain huts remaining on state owned land. The buffer zone combines multiple ownerships, the large majority of which is customary-owned land of the local communities and freehold land of tea estates.

Protection

The property is protected as the Mount Mulanje Forest Reserve, initially proclaimed in 1927 and at present governed by the Forestry Act of 1997. This act provides a legal instrument to regulate the management of the

property. Supporting legislation for this protective status includes the National Environment Action Plan of 1994, the National Environment Policy of 1996, the National Forestry Programme of 2001, the Land Policy of 2002 and several others. One architectural structure, Fort Lister, is protected as a national monument on the basis of the Monuments and Relics Act of 1992.

Specific cultural values, fears and taboos act as traditional protection mechanisms at Mount Mulanje. The obligatory restraint in utilizing its natural and cultural resources but also the ritual practices required before entering and benefitting from the resources add significant protection which is widely respected and adhered to.

The various levels of protection of the property effectively protect the natural resources and prevent development in the proposed property boundary. The difficulty of the established protection level is that the protection is not compliant with the aims of the World Heritage proposal and does not necessarily cover what is likely to be the attributes of the property. These attributes are likely best protected by traditional protection but here the general application seems to vary from community to community and while some emphasize certain supernatural sanctions, others may not consider these and continue resource extraction.

The implementation and endorsement of protection in Mount Mulanje Cultural Landscape is shared among three partners, the Department of Culture, the Department of Forestry and the private Mount Mulanje Conservation Trust. Of these, the first appears completely passive, while the second is driven by the strong activity of the third partner. The Mount Mulanje Conservation Trust is also the only partner that dedicates financial resources to the enforcement of legal and traditional protection.

ICOMOS considers that while the traditional protection remains strong and largely effective, adequate legal protection tools need to be applied to protect the cultural components and attributes of Mount Mulanje Cultural Landscape.

Conservation

Many of the cultural attributes in Mount Mulanje Cultural Landscape remain undefined or at least are not described in a formal inventory. Although in response to ICOMOS' request for additional information, an inventory of intangible heritage traditions in Malawi – mostly not related to Mulanje Mountain – and an inventory of medicinal plant species was provided, it is obvious that a baseline for future conservation activities needs to be identified through systematic identification and documentation of cultural heritage attributes.

The present state of conservation of tangible cultural heritage on Mulanje is widely neglected and no initiatives of documentation or conservation seem underway. The natural resources which provide the basis for intangible cultural heritage traditions seem better preserved but are threatened by illicit deforestation of the Mulanje Cedar

which is being combated by the Forestry Department. The preservation and safeguarding of the intangible cultural heritage, emphasized as key to this nomination dossier, is difficult to judge as no data on its viability was provided.

Conservation at Mount Mulanje is most often interpreted as preventive measures in the field of awareness-raising and training for the traditional management techniques, and is driven by the Mulanje Mount Conservation Trust. The Trust runs conservation workshop in schools, public outreach programmes, provides hiking guides, nursery propagation for indigenous plants and many other activities. While these activities are essential, ICOMOS considers that several of the physical cultural heritage resources would require active conservation, in particular those subject to regular visitation.

ICOMOS considers that systematic identification and documentation of cultural heritage is needed as a basis for conservation activities. ICOMOS further considers that the preventive conservation, awareness-raising and training activities undertaken by the Mulanje Mountain Conservation Trust are essential and that conservation of tangible cultural heritage in the property is equally necessary and should be emphasized.

Management

Management structures and processes, including traditional management processes

The property is managed as a private-public partnership of three bodies: the Department of Culture – in particular its subsections on Antiquities and Arts, Crafts and Museums – the Forestry Department and the Mulanje Mountain Conservation Trust. The private trust seems to be the most active of the three partners and has taken a clear lead and initiator role in management processes. It was established in 2001 as an independent non-governmental endowment trust and is funded through the World Bank. The Department for Forestry is mandated to manage watersheds and biodiversity through co-management of the forest reserves and the Department of Culture is responsible for both tangible and intangible cultural heritage expressions.

While this partnership seems to work in principle, the governmental departments in this partnership are less involved and visible than the conservation trust. ICOMOS considers that while the work of the trust is important and in some areas – such as awareness-raising and outreach programmes to the local population – does exemplary work, it has neither have the expertise nor mandate to manage the cultural heritage resources of the property. ICOMOS considers it essential that the Department of Culture plays a more active role in the management of the property. It may be necessary to provide additional financial resources and increase the training and skill of its staff to allow it to fully commit to this responsibility.

Traditional management processes are relevant in terms of the sustainable usage of natural resources and the State Party has proposed the traditional management system at Mount Mulanje as justification for Outstanding Universal Value. In this context it is unfortunate that the nature, organization and responsibilities of the traditional management system have not been described in the nomination dossier. ICOMOS understands that the traditional management is based on knowledge transmission within the communities, predominantly by elders or specifically designated teachers of the ritual practice and spiritual associations. ICOMOS considers that these practices differ from community to community and further analysis and description is required to determine their role and function in property management.

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

The Mulanje Mountain Forest Reserve Management Plan (2008-2012) was prepared under the coordination of the Department of Forestry with the aim to ensure sustainable utilization of the Mulanje Mountain Forest Reserve. Its objectives are further concerned with the conservation of water catchments and soil, protection of biodiversity, the generation of economic resources through the Reserve and increased stakeholder involvement. However, IUCN in its evaluation highlights that the management plan does not sufficiently address the issue of managed and illegal logging of the endemic Mulanje Cedar species, which should be a management property in the context of natural heritage values.

The management plan also does not address any of the cultural aspects put forward as the cultural significance of the property and it does not include aspects related to the conservation and management of both tangible and intangible cultural resources. However, the compilation of a baseline survey on the cultural heritage resources in the property is being foreseen as part of the management processes, which ICOMOS agrees to be essential.

ICOMOS considers that management approaches differ between cultural landscapes and forestry reserves and that the management plan is only adequate for the latter. It remains insufficient regarding all cultural aspects of property management and does not systematically document or reference the traditional knowledge that most cultural management processes are currently built on.

At present interpretation and presentation at Mount Mulanje cultural landscape is inexistent with the exception of a few public signboards in and around Mulanje settlements, prepared for awareness-raising by the conservation trust. The only source of information on Mount Mulanje are human guides, however there is no general training or certification for them and the quality of services provided differs considerably from one guide to another. ICOMOS recommends that a training program and a system of licensing guides be developed.

Involvement of the local communities

The lack of reference to and interaction with traditional management practices in the management plan and current official management system increases difficulties in terms of community involvement. ICOMOS considers that the official and traditional management of the property should work hand in hand but are currently disconnected activities, which could highly benefit from shared approaches and synergies. ICOMOS recommends that the three official management partners establish closer ties with the community elders to integrate the traditional and spiritual management practices in the overall property management in a meaningful way.

ICOMOS considers that the management system and plan should be extended to include cultural heritage aspects more prominently and recommends that official management processes and agencies partner with the traditional management approaches on the basis of spiritual associations.

6 Monitoring

The State Party presents a number of monitoring indicators related to environmental policies, pressure on forestry biodiversity, and community support. As for the management system and plan discussed above, ICOMOS notes that monitoring indicators for cultural heritage are notably absent. ICOMOS recommends giving high priority to the development of monitoring indicators for the traditional management system and spiritual associations to observe the viability of intangible aspects associated to the heritage resource. In addition the indicators provided would benefit from expansion and should be improved not only on a general level to cover cultural heritage aspects but also to include specific quantifiable indicators, timeframes for the monitoring activities and responsibility to undertake such monitoring procedures.

ICOMOS considers that the monitoring system needs to be focused on cultural heritage and improved to include specific indicators, timeframes and institutional responsibilities.

7 Conclusions

Mount Mulanje Cultural Landscape integrates a range of spiritual values and ritual practices, which may have potential for recognition as associated values in relation to criteria (iii) and (vi). ICOMOS considers however that further information is needed as to how these spiritual traditions as well as the traditional management system for natural and cultural resources can be said to be of Outstanding Universal Value and how they are associated to tangible expressions in the property. ICOMOS considers that it is important in this context to provide further justification illustrating the uniqueness or exceptionality of Mount Mulanje in comparison to other

traditional management systems, in particular in sub-Saharan Africa. Several sites in a regional context sustain a comparable symbiosis between human spiritual use and sustenance as well as conservation of natural resources. The specific role and function of Mount Mulanje in comparison to these requires to be demonstrated.

Not a single development disturbs the impression of the mountain silhouette of Mount Mulanje Cultural Landscape and ICOMOS considers that the property has a high degree of wholeness and intactness. However, officially sanctioned mining prospects are currently underway which pose severe potential threats to Mount Mulanje, and which need to be revoked to preserve the integrity of the property. The property proposed is of adequate size but its buffer zone would benefit from further expansion of its narrower sections towards the east.

Legal protection of the property effectively covers the natural resources with the exception of mining prospects which remain a potential threat. However, in ICOMOS' view, this protection does not cover what is likely to be the attributes of the property presented under cultural heritage criteria. While the traditional protection emphasizes cultural elements, this form of customary protection varies from community to community. ICOMOS considers that the official and the traditional property protection as well as management approaches would benefit from shared approaches.

ICOMOS recommends that the three official management partners establish closer ties with the community elders to integrate the traditional and spiritual protection and management practices into the overall property protection and management. The current management plan does not address the cultural aspects in particular the spiritual and traditional systems of guardianship. ICOMOS considers that a baseline survey on the cultural heritage resources, as foreseen in the management plan, is an important starting point to integrate cultural heritage management concerns in the management system but will also assist in compiling the information needed to illustrate in what way Mount Mulanje can be seen as outstanding in a global context.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Mount Mulanje Cultural Landscape, Malawi, to the World Heritage List be **deferred** in order to allow the State Party, with the advice of ICOMOS, IUCN and the World Heritage Centre, if requested, to:

- Strengthen the justification of criterion (vi) and explore the applicability of criterion (iii) to illustrate in more detail how spiritual traditions as well as traditional management approaches for cultural and natural resources might be said to be of Outstanding

Universal Value and illustrate the tangible attributes these are associated to;

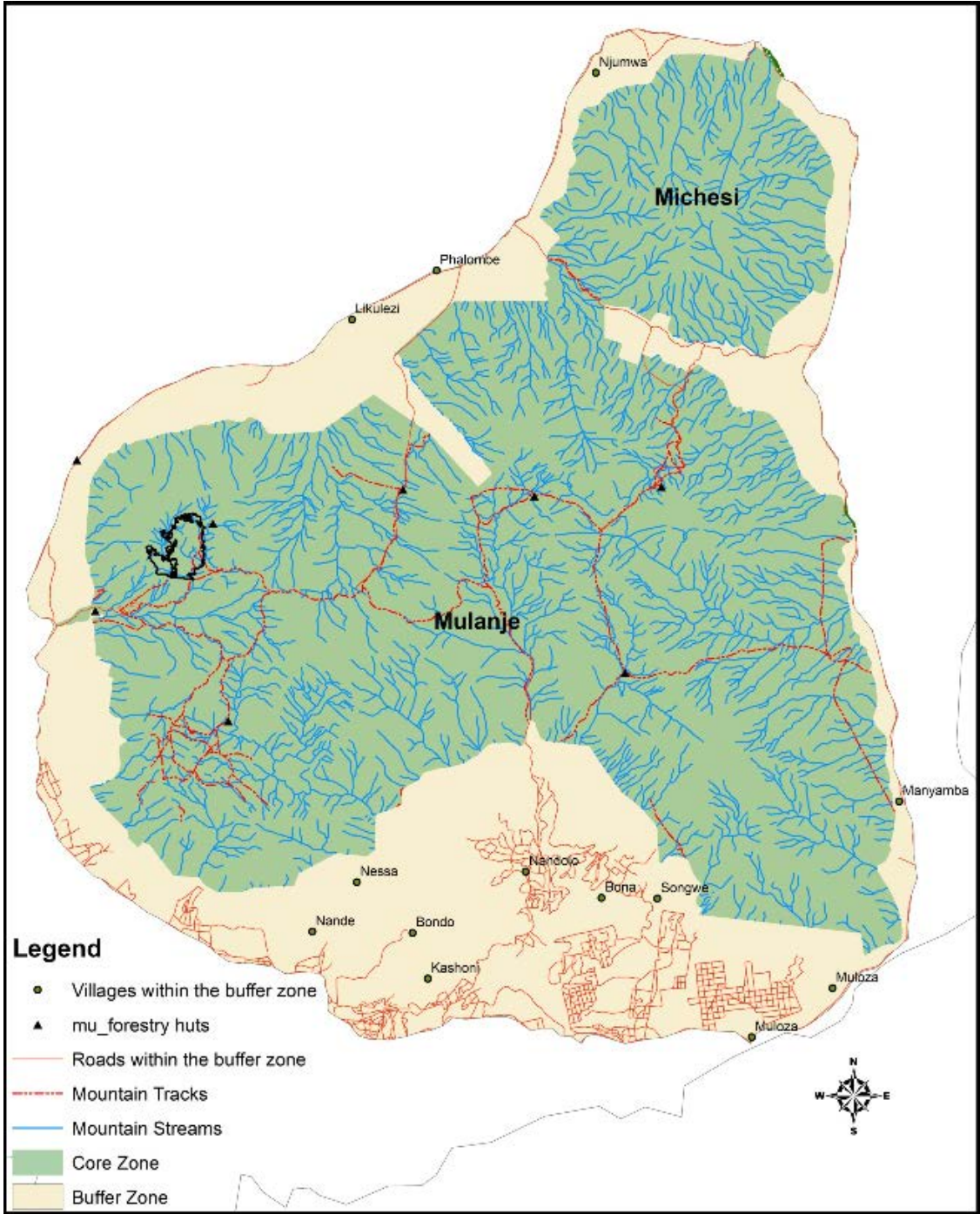
- Identify in relation to the identified attributes of Outstanding Universal Value the information sources of authenticity;
- Augment the comparative analysis, in particular at a regional level, to highlight the specific aspects of cultural guardianship at Mount Mulanje that would demonstrate Outstanding Universal Value;
- If such studies suggest that a robust case could be made to justify the Outstanding Universal Value of the property, then:
 - Initiate documentation and conservation activities for tangible cultural heritage resources, in particular those subject to regular visitation;
 - Analyse and describe the traditional management mechanisms and establish closer ties between the three official management agencies and community elders in view of integrating the traditional and spiritual management practices in the overall property management;
 - Promote a more active role of the Department for Culture in the management of the property, including – if necessary – additional financial resources and training to enable staff to fully commit to this responsibility;
 - Explore options of extending the buffer zone towards the east;
 - Immediately revoke the mining exploration license and declare the government's long-term intention to not initiate mining activities in the property.

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

Additional Recommendations

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

- Developing a training program and a system of licensing for local guides to ensure consistent quality standards in guiding services;
- Improving the monitoring indicators, including for the traditional management and spiritual associations, to observe the viability of intangible aspects associated to the heritage resource;
- Exploring the qualities of Mount Mulanje with regard to natural heritage criteria as initially envisaged in the tentative list entry.



Map showing the boundaries of the nominated property



Aerial view of Mount Mulanje



View of Mount Mulanje from the east



Dziwe la Nkhalamba



Rock shelter

Barotse Cultural Landscape (Zambia) No 1429

Official name as proposed by the State Party

Barotse Cultural Landscape

Location

Western Province
Zambia

Brief description

The gently undulating floodplain of the Zambezi River has been shaped by the Lozi people over the past 400 years, through the building of mounds for houses, palaces and Royal graves, and as the result of an agro-pastoral system, based on the annual movement of people and animals to higher ground in advance of the rising floodwaters.

The nominated property consists of the heartland of this system. There are two capitals, Lealui and Limulunga, between which the Litunga ceremonially moves at the head of his people at the beginning and end of the wet season. The graves of twenty-one previous Litungas are important centres of religious and ritual practices that reflect a communal response to both the norms of society and the forces of nature. Around the mounds in the floodplain are fields, cultivated with traditional as well as more recently introduced crops, and a network of canals many built between 1780 and 1916 to improve transportation, water control and water supply. Most of the dry season villages are around the edge of the nominated area.

The higher pasturelands where animals are grazed are not included in the property nor are the wet season 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* (July 2013) paragraph 47, it is also a *cultural landscape*.

1 Basic data

Included in the Tentative List

10 March 2009

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

25 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committees on Cultural Landscapes and on Intangible Cultural Heritage and several independent experts.

Comments about the evaluation of this landscape were received from IUCN in December 2013. ICOMOS carefully examined this information to arrive at its final decision and its March 2014 recommendation; IUCN also revised the presentation of its comments in accordance with the version included in this ICOMOS report.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 15 to 22 October 2013.

Additional information requested and received from the State Party

ICOMOS on 30 September 2013 requested additional information on various aspects of the property including boundaries, agriculture, palaces and road construction. The State Party responded on 1 November 2013 and details from this response are included in this report.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The 2,574 km Zambezi river, the fourth longest in Africa, rises in the north of Zambia, then traverses eastern Angola, Namibia, Botswana, Zimbabwe and Mozambique, from which it empties its waters into the Indian Ocean.

The Barotse Cultural Landscape lies either side of the river during the early stages of its journey in the west of Zambia. Up-river of the Victoria Falls, the flood plain stretches for some 120 miles and is 25 miles across at its widest.

The boundaries of the property encompass about 20% of this low lying flood plain which is crisscrossed with smaller rivers and canals and interspersed with *dambos* (shallow wetlands), lakes and pools. To the eastern side of the flood plains are dry forests and to the west *miombo* woodlands.

Historically, Barotseland was larger than the currently proposed property. Much of the hinterland is located in the proposed buffer zone.

The flood plain is intensively cultivated. Above the fields rise man-made low mounds on which are constructed houses, palaces and royal graves.

During the wet season between January and June the river floods the plains and whole communities move with their animals and belongings to settlements on higher ground. The receding floodwater deposits silt provides essential fertiliser for the fields.

To the north of the property in that part of the buffer zone that covers the Liuwa National Park, the flood plain is grazed by large herds of migrating wildebeest and other wild animals. This was formerly a royal hunting ground for the Lozi rulers.

The property extends to 7,966 sq kilometers and has a buffer zone of 59,168 sq kilometers, which includes to the north of the property the Liuwa National Park.

About 10,000 people with some 10,400 cattle live in 108 villages along the eastern and western boundaries. ICOMOS notes that there is a lack of clarity as to which are in the property but it certainly includes at least part of two towns of considerable size, Mongu and Senanga.

Although the property is nominated as a living, evolving cultural landscape, not all aspects of the integrated cultural landscape are described in the nomination dossier. More emphasis is given to site specific Royal palaces, graves and sacred sites than to the on-going traditional economic and social interactions between the wider communities and their environment over time. Little information is provided on the dynamic organization of families, clans and larger community groups, nor how they collaborate and have collaborated over time to farm and graze the landscape in a persistent way. As a result the living cultural traditions of the Lozi people are barely described and few details are provided on how the proposed boundaries relate to the disposition of peoples in the landscape.

There is also a lack of clarity as to the robustness of those traditions that are described and whether what is set out as a living landscape survives only in the memory of the Lozi and in academic documentation, or exists only in a weak form.

The property consists of the following:

- House mounds
- Palace mounds
- Mounds for royal graves with their associated rituals
- Agricultural land, agro-pastoral systems and trans-humance ceremonies
- Canals
- Sacred lakes, lagoons, groves and forests

These are described in turn. As no mapping of these key aspects of the landscape has been provided, their number and disposition is not known.

House mounds

The house mounds appear to have been formed over several centuries from accumulation arising due to habitation and also from deliberate building up of soil to raise the houses above the level of the flood waters.

Families live on these mounds during the dry season to allow them to farm the surrounding flood plains. ICOMOS notes that no information is provided on the disposition of these mounds or their overall number or how they form villages. Nor is it clear how they relate in social and economic terms to the family structures or the way fields are allocated. Traditionally houses were cluster of circular thatched buildings. The nomination dossier does not set out any details of these houses nor suggest whether any survive.

It is not clear what proportion have been abandoned as dwellings. Some former house mounds are now marked by trees especially mango trees and are used as burial places.

Many villages are also located on the edges of the flood plains but it is not clear how many of these are within the nominated area.

ICOMOS noted that the villages generally follow a concentric plan, with a communal space in the centre. The houses are mostly traditional, but with modern structures becoming more prevalent. At present these ensembles still have a great degree of integrity, but taking into account the development pressures on the urban periphery of the floodplain, these could soon reflect the processes of acculturation and change.

Palace mounds

The Lozi had twin capitals, a dry season one on a mound in the flood plain and a second wet season capital on higher ground, both in the north of the territory.

In the plains, Naliele was the first capital of the Lozi during the reign of Mulambwa (1790-1825). Of the palace, nothing apparently remains, although the mound is still in existence. The current capital Lealui was built by Litunga Sipopa (1864-1876) and completed by Litunga Lewanika (1878-1916). The current wet season capital is Limulunga. No details are provided of when this was founded or of any earlier wet season capitals.

There was also a southern dry season capital for the second-in command at Nalolo and a complementary wet season one at Mooyo Village in Senanga. It is not clear if these are in the nominated area.

Each of the palaces consists of the *kwandu* (palace), *limbetelo* (drummers' house), *kamona* (induction house),

kashandi (the visitors' pavilion), *lilenge* (Litungas' private house), and *nanda* (Queen's house). The whole palace complex was traditionally surrounded by reed fences (*imilombwe*) that denote the presence of royalty.

Lealui palace

The *kwandu*, built in 1890, was reconstructed in 2004 and only some of the timber poles are original. This frame building with a double row of hardwood timber columns supporting the massive grass roof, is the only palace building still constructed partly in traditional materials.

Limulunga palace

All the buildings were constructed by the British in the 1930s. They are of white-washed brick with tile roofs.

Nalolo palace

The *kwandu* constructed between 1887-89, is supported on hardwood vertical poles with timber trusses and is currently under rehabilitation. Concrete blocks are being used for the walls as opposed to traditional adobe.

Mounds for royal graves with their associated rituals

There are over twenty-two royal graves in the nominated area. Prominent among these are those of Mulambwa, Lubosi Lewanika, Mwanawina I and III, Sipopa, Ilute Yeta and Imwiko.

The grave of the female ruler, Mbuyuwamwambwa, who led the migration of people into the area is now the place where enthronement ceremonies start.

Each Litunga selected the location of the mound for his burial place before his death. The royal graves are located at the centre of their mounds within a reed fence called *limbwata*. The graves are identified by two Y-shaped poles that denote the entry point into the inner chamber. Special trees were planted around them. Every royal grave has a lagoon nearby where the barge used by the departed Litunga is sunk. These lagoons are connected to canals to allow for the movement of the departed Kings.

The royal graves have villages surrounding them, some with modern houses built in modern materials. Around the grave of the Litunga Lewanika (1885-1916), the village houses are still in traditional style with hand plastering and some fine thatching, while those near the grave of the first Litunga, Mboo Muyunda, are in modern materials, the earlier traditional village having been destroyed by fire in 2010.

The royal graves represent centres of mystical power. It is believed that those buried in them are grantors of plenty: good crops, many calves, and many children.

Agricultural land, agro-pastoral systems and trans-humance ceremonies

The silt deposited by the flood waters made the flood plains extremely fertile and this is reflected in the

intensive agriculture that was and is practised, some permanent and some on a rotational basis.

Traditionally there were eight types of cultivation: mound gardens on loamy soil for maize, inter-planted with sorghum; dry margin gardens at the edge of the plain, fertilised by cattle for bulrush millet and cassava; moist margin gardens for maize, cassava, fruit trees, sugar cane, tobacco and vegetables; clay gardens in depressions for maize; drainage gardens along the *dambo* margins also for maize and sweet potatoes; and *mikomona* raised ridges for root crops.

This food production was supplemented by crops from permanent fields on the high grounds above the plains. ICOMOS notes that no details have been provided as to how these fields related to the disposition of houses, nor how land was divided between communities of farmers nor how this reflected social and cultural systems. It is understood that formerly all land was vested in the king, but his rights were limited in various ways. Farmers had the right to pasture, net fishing in deep waters, stabbing fish along the banks and killing birds and game.

Each year as the flood waters of the river rise in the wet season, there is an annual migration of people and animals to higher ground settlements. The migration is led by the Litunga in a large decorated royal barge on which music and songs celebrate the triumph of the community over the natural environment.

For up to nine months of each year in the wet season families lived in villages sited above the flood level. These villages and their associated grazing grounds are outside the nominated area.

No details are provided as to whether the social structures of the lowland villages are reflected in the layout of the higher level villages.

Canals

Canals were primarily constructed to provide drainage for the arable fields but they were also used for transportation, irrigation, flood control, fish stocks and as sources of water for humans and livestock.

The Lozi must have created canals from the time of their earliest settlements as without water management any sizable settlements would not have been feasible. A massive extension of the canal system was undertaken between 1780 and 1916 (see history). The unlined canals are dug out of the clay subsoil and until the late 1880s, were dug with wooden tools.

The canals are divided into primary, secondary and tertiary channels. The primary ones are the *Mwayowamo*, the *Musiyamo* and the *Liabwa la twelufu*. The *Mwayowamo*, constructed from 1887-89, is the principal canal linking Lealui to Limulunga.

At their greatest extent, the canal system across the whole of the Lozi flood plain extended to around 1,000km in length, with some canals up to 5 metres in width. ICOMOS notes that it is not clear what percentage survive or what length is in the nominated area, nor how far the system works as an overall integrated hydrological network.

Sacred lakes, lagoons, groves and forests

All royal graves are considered sacred and near them are sacred groves and also lagoons (see above). Some lakes associated with royalty are also considered to be sacred.

Former hunting grounds of the Litunga and forests that were sources of timber for royal barges are also considered sacred or have restrictions associated with their use.

ICOMOS notes that no details are provided as to the location or number of sacred lakes and forests. It is also clear that some major royal hunting grounds are outside the boundaries of the property to the north in the National Park.

History and development

Although the plains were settled in the Stone and Iron Ages, the connection of the area with the Lozi spreads back around four hundred years.

The Lozi is a collective noun for around 25 different peoples that live in the nominated area but who are also spread out in the wider Western Province. It is generally accepted that the Lozi migrated with a number of related leaders to their current area as part of Luba migrations from central Africa in the first half of the 17th century. They displaced the Andonyi people who tradition states were living on the plains.

The first ruler called *Mbuyuwambwa* is believed to have been the daughter and wife of the god, *Nyambe*. She later abdicated the throne in favour of her son *Mboo*, who extended his domain by conquering the neighbouring tribes. Lozi history is characterized by such expansionary conquests and the absorption of other peoples under their rule to gain land and cattle.

The centralization of the Kingdom was achieved by the fourth Litunga Ngalama, the grandson of Mbuyuwambwa. He extensively expanded the Kingdom by defeating breakaway groups. During his reign, the Lozi Kingdom was no longer restricted to Kalabo district, but came to dominate the flood plain.

For thirty-four years in the 19th century, the Lozi were ruled by the Kololo after a military defeat. After the restoration of Lozi rule, the next Litunga established Lealui as the capital.

During the reign of the 14th Litunga, the influence of the Lozi spread widely into the present day north-west and

southern provinces of Zambia. At the height of their power, before it was diminished in colonial times, the Lozi held sway over some twenty-five other peoples numbering around half a million people.

3 Justification for inscription, integrity and authenticity

Comparative analysis

ICOMOS notes that the comparative analysis is brief. It compares the property to the Rideau Canal, Canada (2007, criteria (i) and (iv)), the Seventeenth-Century Canal Ring Area of Amsterdam inside the Singelgracht, Netherlands (2010, criteria (i), (ii) and (iv)), and the Canal du Midi, France (1996, criteria (i), (ii), (iv) and (vi)). The conclusion drawn is that further the Barotse Cultural Landscape canals stand out from the other canals from the point of view of transhumance. They are the only canals in the world that are associated with the mass movement of people characterized by ritual practices particularly during the Kuomboka Ceremony.

Within southern Africa, the property is compared with Richtersveld Cultural and Botanical Landscape, South Africa (2007, criteria (iv) and (v)), where the Nama also practice transhumance but the difference is seen to be the association of the Lozi with floods.

The Lozi are the only known people in the world who practice transhumance as a result of living in a floodplain.

ICOMOS considers that the comparative analysis is insufficient to fully demonstrate that there are no other similar properties that might be nominated for the World Heritage List.

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

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 Barotse cultural landscape demonstrates an ingenious system of constructing mounds for houses and canals for transportation, drainage and flood control.
- It is associated with the spiritual beliefs of the Lozi people.
- It has Royal grave mounds distributed across the landscape that act as centres of spirituality.

ICOMOS considers that the overall cultural landscape of the flood plains and the bordering higher ground is distinctive and of value for wider reasons than the site specific mounds and canals and associated spiritual beliefs. The landscape is a reflection of complex long-

standing agricultural and pastoral traditions of the Lozi people and their social and economic organisation. This was a system of Royal patronage with families organised into villages on the plains.

Their land management revolved around dry season cultivation of the flood plains, drained by canals, house mounds to provide protection from the wet season floods, and migrations to higher ground in the wet season.

Currently the nomination dossier only provides sketchy details as to how this complex landscape functioned in terms of the processes that shaped and shape the lives of those who live there and how it relates to the wider Lozi domains.

In order to set out how and why this cultural landscape might justify Outstanding Universal Value, there is a need for more in depth assessment of its structure and attributes – both tangible and intangible processes, associations and beliefs.

At the present time, Outstanding Universal Value has not been demonstrated.

Integrity and authenticity

Integrity

ICOMOS considers that from the information provided in the nomination dossier, the rationale for the boundaries is not clear. The flood plain cultivation and transhumance practices of the Lozi people appear to extend well beyond the nominated boundaries. A more fundamental issue relates to the fact that the settlements, fields and grazing areas to which the Lozi migrate in the wet season appear to be excluded from the nominated area as do certain royal hunting grounds to the north. It is therefore not possible to confirm that the boundaries encompass all the attributes related to the distinctive system of land management practices by the Lozi or reflect an area where these attributes can be said to be most robust.

In terms of the vulnerability or otherwise of the attributes, information is lacking. Some of the text of the nomination dossier is written in the past tense and it thus appears that certain practices are no longer extant. Almost no details are provided on the settlements and thus it is unclear how the boundaries encompass the communities of people who work the land. However it is stated that 'traditional architecture has also not been spared by elements deterioration due to a breakdown in traditional aspects dealing with communal maintenance practices'. The current agricultural processes are mentioned as being vulnerable to new crops such as rice which are unregulated, while canals are acknowledged as lacking the necessary maintenance to allow them to function optimally.

Furthermore there is concern that major developments such as mining and road building could threaten the integrity of the landscape - see details below.

Authenticity

The statement of authenticity in the nomination dossier reflects a limited number of attributes: canals, mounds, royal graves and the Kuomboka ceremony all of which are stated to be in continuing use.

ICOMOS considers that these four aspects cannot be said to sum up the authenticity of a living, dynamic rural landscape. If the canals, graves, mounds and annual ceremony all survive, this would not ensure the sustainability of the traditional processes, cultural systems and beliefs that have combined to shape this landscape over several centuries.

Authenticity needs to be related to people and processes as much as to their outcomes in landscape terms.

As such, the property would appear to be vulnerable to changing ideas and aspirations and to new beliefs. Reassurance is needed that such vulnerabilities are understood and acknowledged and have been fully debated amongst the communities concerned as a means of developing appropriate mitigation measures. See further discussion on this below.

ICOMOS considers that the conditions of integrity and authenticity have not currently been met at this stage.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii), (iv) 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 practice of transhumance, involving the annual movements of people from the flood plains to higher grounds associated with royal rituals, and the complex of royal graves, mounds and lagoons constitute a unique testimony to the living cultural tradition of the Lozi.

ICOMOS considers that for this criteria to be justified there needs to be a much clearer understanding of the many complex cultural and social traditions that make up the transhumance system that is practiced by the Lozi and a much clearer justification as to how these have shaped the landscape over time and continue to shape the landscape in an exceptional way.

A transhumance system goes beyond the grandiose annual Kuomboka ceremony and the site specific royal graves, settlement mounds and canals: it is the social, cultural and economic forces that bind communities together in a communal annual migration between the

flood plains and the higher ground, and the value of the very specific types of agriculture that are practiced on the fertile plains that in effect provide the impetus for this system. It also includes the sacred veneration of places and the spirituality of nature that both constrain and enhance collaboration. All these combine to define the Lozi traditions that are at the heart of this nomination. How they are reflected in the landscape and where they persist most strongly needs to be better understood and in particular the essential link between dry and wet season settlements, fields and grazing grounds. Such a transhumance system cannot be conveyed by only one half of the process – that is the flood plain fields alone.

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 over four hundred year old mounds and man-made canals illustrate significant stages in the evolution and technical history of the landscape and the ingenuity of people in relation to transportation, flood control and land reclamation.

ICOMOS considers that the overall Lozi cultural landscape needs to be seen as an on-going, dynamic cultural tradition of land management involving transhumance, land drainage to allow arable cultivation and navigation, and settlement mounds as well as the social, political and cultural structures that have allowed a communal response over some 400 years. It then needs to be shown how the landscape developed by this creative system to master the flood plains can be understood to reflect a specific period of history – in this case the migrations of the Lozi people and their consolidation of the flood plain territory that has had a marked impact on the history of the region.

ICOMOS further considers that such a justification needs to be made on the basis of a much more detailed analysis of the cultural landscape and its scope, extent, and specificities in tangible as well as intangible 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 landscape is inextricably and tangibly linked with the annual historic Kuomboka Ceremony when royal barges and small boats accompanied by traditional music mark the start of the transhumance

migration to higher ground at the beginning of the wet season.

ICOMOS considers that one single annual ceremony, although of great significance for local communities and now hugely popular with tourists, cannot be said to imbue the whole nominated landscape and its communities.

This one ceremony could be seen though as the pinnacle of much wider panoply of traditional beliefs and spiritual associations that are fundamental to the land management system that allows the Lozi to cultivate the flood plains. ICOMOS considers that more details need to be provided as to the extent and dynamism of such traditional practices in relation to the agro-pastoral transhumance system.

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

ICOMOS does not consider that the conditions of authenticity and integrity and criteria have been justified at this stage.

4 Factors affecting the property

The regular maintenance of canals is probably the key determining factor for the survival of the agricultural and mound building traditions in the flood plain landscape. For many years traditional management of the canals has been neglected, or given little emphasis. Although traditional skills to clear the canals still survive they are apparently no longer robust enough to keep the waterways in use.

The Management Plan mentions canals being clogged and impacted on by development and the absence of on-going maintenance. The apparent lack of conservation and maintenance of these water courses is a cause for concern. It also impacts on agriculture as waterlogged land reduces yields.

ICOMOS considers that what is also unclear is the hydrological relationship between those canals within the nominated area and those beyond, and whether lack of maintenance of those upstream outside the nominated area could have a devastating impact on the viability of those within.

The Management Plan further mentions a multi-million pound canal dredging programme which has been approved. This will be carried out by dredging machines. At the same time the Management Plan also states the need to revert to the traditional system of maintenance which ensured periodic dredging. ICOMOS considers that clarification is needed that the major project will not have the effect of hastening the demise of traditional practices and ties.

The introduction of rice, allied to a concrete canal built with international funding in 1991, is beginning to cause changes in the structure of farming. Rice takes much more water than maize and other traditional crops. ICOMOS was also told though that the government had no policy to stimulate rice farming.

Overall the loss of traditional practices is the greatest issue in relation to the viability of the overall land management systems. Currently the details provided in the nomination dossier are not extensive or specific enough to allow understanding of whether the lack of traditional practices for canals has reached a crisis point or whether the agricultural system itself has been weakened by the introduction of new crops or by migrations of people away from the area.

Although the nomination dossier states that the proposed area is devoid of major infrastructure development except for electricity pylons and associated grid lines from Mongu in the east to Kalabo in the west, ICOMOS noted the high visual intrusion of the high voltage power lines. These power lines run down the eastern edge of the property, as well as traversing it from east to west alongside the new main road across the plain. They pass right beside the Lealui palace and the harbour where the Kuomboka ceremony starts. Overall the power lines running alongside the road also have a very large visual impact on certain grave mounds and on the wider landscape.

It would be extremely costly to alter the existing routes. Furthermore, electrification of villages could in the future cause more visual impact.

Up until now, no Environmental Impact Assessment or Heritage Impact Assessment has been included in the process for assessing electrification projects.

ICOMOS notes that new 'ZICTA' telecom towers are to be constructed in the property in the very immediate future. These will cause high visual impact.

ICOMOS also noted that there was a Minister of Works directive stating that telecom towers should be positioned as near as possible to palaces.

There is already a proliferation of telecom towers on the east periphery of the property that have adverse visual impacts.

Large scale and rapid development of the urban centres on the eastern boundary and partly in the property is beginning to have negative impact on the overall landscape.

Mongu (which is partly in the property) and Senanga are growing rapidly with urban sprawl being the main characteristic. There are already a few tall buildings in Mongu and an expansion of these could have a highly negative visual impact.

Senanga has an airstrip and is showing signs of urban sprawl. The river passes next to the town and there are views over the plains with high scenic quality. ICOMOS considers that there is a need for development guidelines. As Limulunga is a destination for cultural tourism that is likely to increase, this town also needs development guidelines.

The main airport is also within the property. Its expansion due to a growth in tourism would have visual impacts and cause an increase in noise levels over the cultural landscape.

Within the property there is considerable evidence of deforestation, most probably due to the need for charcoal. ICOMOS observed a great deal of deforestation in the property, as well as on the higher land edging the floodplains. The threat appears to be growing and ICOMOS considers that currently it is not being addressed satisfactorily.

The degradation of forests has a marked visual impact on the landscape. The declining number of trees also impacts on boat building, as the source of timber is reduced, and also on the canals as a result of the forests no longer being large enough to filter run off from the hills, with the result that silt ends up in the water courses.

The nomination dossier states that a major road embankment built through the flood plain was apparently partly washed away and that an amended design is now under construction. No details have been provided.

The ICOMOS technical evaluation mission provided clear details of the new road that had been constructed through the property and of the very considerable impact that this has had. The road is almost complete and would be difficult to change or mitigate at this late stage.

The doubling and heightening of the east-west road from Mungo was not mitigated nor was it made subject to an HIA or EIA for the cultural environment.

The road is located near to the mission, the harbour and Lealui palace and has pronounced visual impact on the wider landscape. The road has also caused archaeological and environmental damage. It will as well alter the use of the canals. There is no definition or analysis of the archaeological damage caused by this development. A remnant of the smaller road embankment has been abandoned.

ICOMOS was told that it would be difficult to introduce changes at this stage. However, the National Heritage Conservation Commission (NHCC) will require that the excavation quarries, borrowing pits and spoils be rehabilitated.

The new road will allow large buses to traverse the plains and the use of canals could become more local.

There are other new roads around the property near grave mounds, such as at Nanikelako, the grave mound of the Litunga Lewanika (1885-1916) where there is also a new bridge. Both of these detract from the sense of sanctity of the site.

Although not mentioned in the nomination dossier, it is understood that mining is being explored within the property.

The Management Plan also identifies blocks of land for oil and gas exploration in the property and in the buffer zone. It further states that an Environmental Impact Assessment has been undertaken but this did not take into account the nomination proposal or any cultural aspects.

ICOMOS considers that such mining and extraction would have a severe impact on the integrity of the cultural landscape. The State Party needs to state categorically whether gas/oil extraction and/or refining and or mining will be entertained in the property and its buffer zone.

Fire is clearly a key threat and has destroyed recently a village around one of the graves.

Little evidence for risk preparedness was provided in the nomination dossier. ICOMOS observed that there is very little risk preparedness at Lealui palace, but heard that a draft plan is being prepared to be presented to the *Kuta* (traditional court).

It is understood that the annual Kuomboka ceremony is now a sponsored event and advertising banners are something of a visual intrusion in the landscape at the beginning and end of the ceremony.

ICOMOS considers that the main threats to the property are major infrastructural development, telecom and high voltage power lines, unregulated urban development, extension of the existing airport, mining, oil and gas extraction, and the weakening of traditional agricultural, forestry, construction and canal maintenance practices.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

ICOMOS considers that the logic for the definition of the boundaries is not clear in terms of why certain parts of the landscape are included and others not, as the areas subject to annual inundation are larger than the area included in the boundary. Exclusion of areas upstream from the nominated area could put the site at risk, through limiting control over the management of water sources to ensure the quality of water coming into the system. It is also essential that where a river is the boundary the outer bank is included, to a point related to

high water levels, so as to allow control of the river water.

The nominated area does not include the wet season settlements and grazing grounds at the higher level above the flood plains and thus excludes a crucial element of the transhumance process.

It is also not clear if the boundary relates to clear physical points on the ground or has been marked in some way. The current description is difficult to follow in places and lacking in GPS coordinates. For instance in several places the boundary is said to run 'through' a settlement without making it clear if it included or not. The resolution of the maps provided does not help to clarify these issues.

The boundaries needs to be reviewed to reflect more clearly the cultural traditions of the Lozi, and the adequate representation of the key attributes that might justify Outstanding Universal Value, including both the physical shape of the landscape and the communities and their traditions that sustain that landscape.

How far local communities have been involved and consulted in the process of delineating boundaries is not clear.

The nomination dossier proposes a buffer zone on the map of the proposed property. ICOMOS was made aware that this buffer zone would only be declared once it was known if the property was inscribed on the World Heritage List.

A buffer zone is essential to protect the setting of the property from urban and industrial development - see below.

IUCN notes that: "the natural values of this property are important at an international level as recognised by its Ramsar status." As these natural values are not adequately considered in the nomination, they recommend that: "options to harmonise the property with the Ramsar listing of the area should be considered."

IUCN also recommends that: "the boundary of the property should be reviewed and potentially extended to incorporate the entire wetland system, in order to strengthen the integrity of the wetland and hydrology of the site."

ICOMOS notes that these recommendations would need to be considered alongside a full review of the cultural attributes in the wider floodplain.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are not satisfactory at the present time and need further justification and clarification.

Ownership

All land in the country is vested in the President of the Republic of Zambia on behalf of all the people of the country.

Nevertheless, traditional rulers including the Litunga still have a say on matters pertaining to land within their area of jurisdiction.

According to the Lozi tradition, all land and the cultural and natural resources in Barotseland are entrusted to the Litunga.

Protection

The nominated area was gazetted as a national heritage site in 2013.

The buffer zone exists only as a line on a map and will not come into force until the property is inscribed. ICOMOS notes that it is not clear what protection will be put in place for this zone to protect the rural landscape from the impacts of rapid urban growth and industrial development. Currently, although parts of the buffer zone have environmental protection, the vulnerable edges of the nominated area lack protection that would control development threats.

Traditional protection is the main method of protection that is stressed throughout the dossier. The strength of this in relation to the current pressures for change is not high. There is a lack of support for the traditional management from other instruments and frameworks that could relate to pressures outside the direct control of communities. The symbiotic relationships between traditional management and other forms of protection are not in place.

There is also concern that the traditional management systems themselves in relation to the dynamic traditional functions of the landscape are not as effective as they might be in sustaining the distinctiveness of the landscape.

ICOMOS considers that the legal and traditional protection in place is not currently adequate.

Conservation

The current level and state of documentation of the nominated property is very low, and not a satisfactory base for the future management of the property. The last inventory and photographic documentation of significant buildings was carried out in 1992 and only half the sites were covered. There is no inventory, either visual or otherwise of grave mounds, graves and custodian villages, villages on mounds, agricultural and forestry areas, or the other aspects of the cultural landscape. Although there are some maps of the canals there is no documentation that identifies which canals are the earliest canals, which canals date from which era of canal building, if any canals have already disappeared, or if all early canals have survived. The villages and paths on the flood plains were mapped in 1985, but the

names and location of villages have changed, and some may no longer exist.

There is clearly a need for a multi-disciplinary team to map and record the landscape and its associated processes as a matter of urgency. Such a database could include the movable property in the palaces for which there is also currently no inventory.

The main palace building at Lealui has intact walls and windows but the roof is in a ruinous state – partly due to the use of a large valley in the thatch roof.

Conservation of the palaces will need to acknowledge their ongoing use, and the hybrid nature of the architecture with traditional layout and modern materials. ICOMOS considers that there is a need for a conservation plan to ensure that the historic layers are conserved and to determine the capacity for and limits of change.

ICOMOS noted that the grave mounds were in fair condition, but most are in need of regular, cyclical upkeep that is a requirement of such vernacular buildings.

As the introduction of new crops such as rice could radically change the structure and form of the agricultural landscape, it is necessary for the Management Plan to stipulate the regulation and monitoring of the extent of rice farming in order to ensure that traditional crop farming is sustained as a key element of the traditional landscape of the nominated property.

Many of the canals are silted up and impassable. Although the local communities still maintain some of the channels in a traditional way, opening up the larger channels will need mechanical help.

The nomination dossier does not contain an action plan to contain the threat of deforestation.

ICOMOS considers that the present state of conservation of many inter-related aspects of the landscape is a cause for concern as it reflects a breakdown of traditional practices. The over-exploitation of the forests leads to the silting up canals and this in turn reduces yields of crops and farmers suffer.

Management

Management structures and processes, including traditional management processes

The national Chiefs Act establishes the authority of the Litunga in the nominated area. The Barotse Traditional Legal System is in place for jurisprudence in the Barotse region. Both underpin the Barotse Royal Establishment (BRE) Traditional Management.

It is important to note that the current political status of the BRE and its relationship with the State Party is a fundamental aspect that governs the manner of management of the nominated property. If this was to change in the future, it would fundamentally influence the management.

In operational terms it is proposed that the BRE should be in charge of the management of the property through a Site Management Committee, and it would be advised by a multi-institutionary committee that reports to the Minister of Chiefs and Traditional Affairs. ICOMOS considers that there is a need to review this structure to ensure that it includes adequate technical experts and representatives of local communities.

The basic overall difficulty with this structure is that the interaction between the national and traditional protection systems is not clearly defined, particularly how the former provides a framework to sustain the latter.

Traditional management should underpin this nomination. The discussion of it in the dossier is however slight and its key importance appears to be under-estimated as a management tool. There is little mention of the importance of traditional forestry, agricultural and canal maintenance practices. Nor is the importance of belief systems, including taboos, set out as an essential element in the management and conservation of the landscape resources. For instance canals linking sacred lagoons to the river system allow the spirit of the departed king to travel and also keeps them clear of other purposes.

Communal practices should have been highlighted as an important element in the conservation and management system. Unless they are recognised as such, there is a risk they will lose their relevance and have to be replaced by alternative arrangements that could be more costly and less effective, and could lessen the key role of local communities.

There are however tensions between traditions and modernity. Although valuing the traditional approaches is at the heart of the nomination, the area is also subject to an influx of new ideas from Angola to the west and from the denser urban areas to the east. The *Litunga* Lewanika has introduced western elements in his palace and dress, and this approach is cited as a rationale for a syncretic approach to embracing new cultural products, including discarding the vernacular architecture for more durable materials.

Currently there appears to be no policy that could begin to set the limits of acceptable change beyond which the traditional approaches would cease to exist.

There is an urgent need for discourse on limits of change for all elements of the landscape, and the processes that underpin it, as well as for an audit on traditional conservation and management processes in

order to understand more clearly how and to what degree they might be sustained.

The nomination dossier states that “it is clear that due to changing circumstances, the traditional management system required the backing of some form of firm and enforceable legal protection in order to protect cultural and natural heritage resources in the proposed BCL”. ICOMOS considers that a firm supportive framework is needed, but also a clearer understanding that the cultural heritage of the Lozi landscape involves traditional practices and processes embedded in local communities.

From the information provided in the nomination dossier, it is not clear how local communities have been consulted and involved in the overall nomination process, in particular in discussions on how persistent traditional practices might be sustained.

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

A management plan was submitted with the nomination dossier. This is an aspirational document and one that does not clearly relate to the specificities and challenges of the property. Its appropriateness, adequacy and efficacy, has yet to be tested in reality.

There are however shortcomings in the scope of the plan and its implementation.

Currently there is no clear management structure for implementing the plan, although a relationship between national NHCC and the BRE has been established. The plan has no components on how traditions might be maintained and change managed, nor on how the relationship between local communities and property management will be nurtured and sustained, or on how local communities might influence the future of the property through participatory decision-making processes.

In terms of scope and content, the plan also needs much more detailed policies and strategies to address:

- Large-scale infrastructure in the property
- Restrictions on mining and oil and gas extraction
- Land Use plan for the property
- Development guidelines and planning guidelines overall and particularly for urban areas such as Mungo
- Definition of critical viewpoints that need to be kept open
- Modernization and its limits
- The effects of river pollution and climate change
- Re-afforestation
- The optimisation of the role of canals.

In terms of resources for management of the property, there appears to be an unrealistic emphasis on external funding.

ICOMOS considers that the management of the property is currently not strong enough to meet the considerable challenges that it faces; the management structure and management plan both need strengthening and more clearly defining in relation to the specific needs of the property in relation to supporting traditional management and addressing threats. Management also needs to be more participatory in involving local communities.

6 Monitoring

Adequate baselines for monitoring, and the monitoring processes themselves both remain to be developed. This process needs to be linked to a much clearer audit of traditional processes.

ICOMOS considers that an adequate monitoring process is not currently in place and needs to be developed.

7 Conclusions

The property has been nominated as a landscape that reflects the way traditional agro-pastoral, political and religious processes shaped habitation of the flood plains based on annual transhumance processes.

The landscape is a reflection of complex long-standing agricultural and pastoral traditions of the Lozi people and their social and economic organisation.

Currently the nomination dossier only provides sketchy details as to how this complex landscape functioned in terms of the processes that shaped and shape the lives of those who live there and how it relates to the wider Lozi domains.

The nomination suggests that the most important aspects of the landscape are those relating to the palace and grave mounds and their associated customs. ICOMOS does not consider that these can be disconnected from the overall cultural landscape of fields, villages, canals and forests that traditionally worked as an integrated unit.

What should underpin this nomination is the recognition of traditional practices and the empowerment of local communities. Currently however these fundamental elements are not at the forefront of management, nor are supportive policies in place that might frame links between traditional practices and planning policies and plans.

Some of the traditional practices are strong such as ceremonies related to annual migration and to the royal graves. More practical practices related to the cultivation, maintenance and use of the landscape seem less strong.

If the cultural landscape is to be sustained, there needs to be a clear understanding of its scope and what defines it in terms of its features and the associative processes that shape it. Currently no detailed documentation exists which could act as a baseline for boundaries, protection and management. Also there is no clearly agreed approach as to how this landscape might change in the future while still holding on to what defines its distinctiveness.

Although a management plan has been produced, this has not been clearly focused on the strengths and challenges of the property. These challenges are considerable and currently there is no active process that can define what is and is not acceptable in relation to cultural value.

Unfortunately, the landscape has in parts become degraded – particularly the forests and increasingly parts of the canal structures, both of which impact adversely on the livelihoods of local communities. More fundamentally it is under great threat from infrastructure projects that have been built or are being developed. New roads, pylons and communication towers have a major negative impact on this sensitive open landscape. Within the landscape urban areas are also growing without the benefit of land-use plans. The boundaries also include an airport and areas that have been earmarked for oil and gas extraction.

The logic for the boundaries of this cultural landscape have not been fully established in terms of justifying why certain parts of the plain are excluded that have high cultural associations such as wet season settlements. Given the current major threats from roads, urban development and from mining and oil and gas extraction, the boundaries also lack robustness in terms of enclosing an area that is not under threat.

ICOMOS considers that there is an urgent need to document this cultural landscape in all its facets, including its natural values, as a basis for reassessing boundaries for an area where traditional practices can be sustained through strengthening the traditional roles of local communities, and where further major threats to the landscape from infrastructure projects and unregulated urban development can be controlled and where mining and oil and gas extraction can be halted.

8 Recommendations

Recommendations with respect to inscription

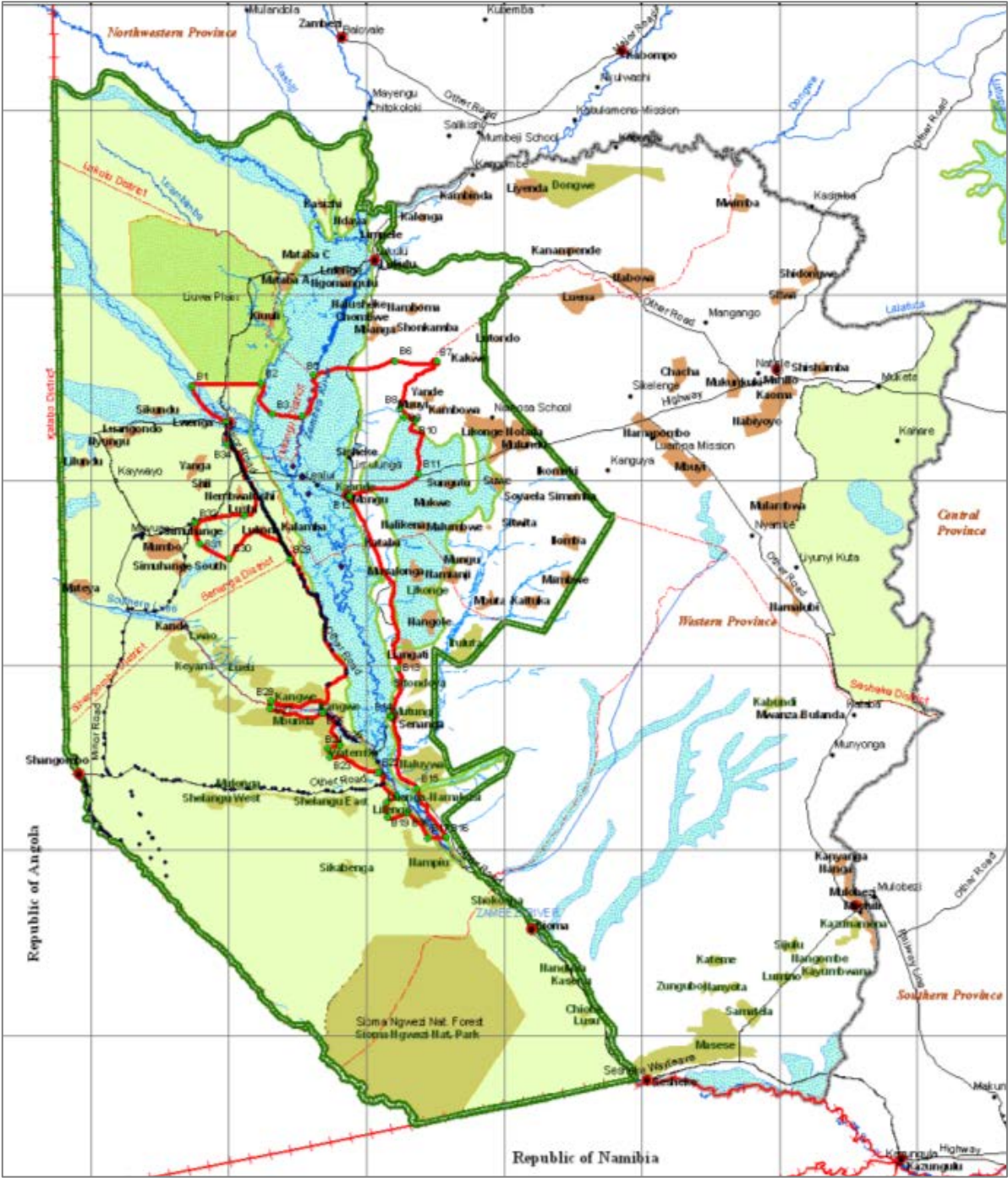
ICOMOS recommends that the examination of the nomination of Barotse Cultural Landscape, Zambia, to the World Heritage List be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Explore whether a revised nomination might be proposed that could be based on:
 - a robust boundary that takes account of the major negative impacts of new roads, and other developments, and excludes urban areas, the airport, and zones for mining and oil and gas extraction, and includes essential attributes that reflect fully the key aspects of the Barotse socio-cultural-political system and its landscape impacts;
 - survey, documentation and recording of the physical manifestations of the wider flood plain cultural landscape including the Liuwa National Park, and all of its traditional land management practices and other traditions;
 - a structured management approach that brings together traditional practices and planning policies and is based on the skills and involvement of local communities, and a clear understanding of the limits of change;
 - a clear vision as to how the landscape might be sustainable in the future, and protected from major developments.

ICOMOS also recommends that, as a matter of urgency, steps should be taken to ensure that further pylons are not installed in the landscape next to palaces.

ICOMOS remains at the disposal of the State Party in the framework of upstream processes to advise them on the above recommendations.

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



Map showing the boundaries of the nominated property



One of the canals of the Barotse Cultural Landscape



Lealui palace



The Litunga on its way to Limulunga during the Kuomboka ceremony



The royal grave of Mwanawina III

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

Erbil Citadel (Republic of Iraq) No 1437

Official name as proposed by the State Party

Erbil Citadel

Location

Kurdistan Region, Erbil Governorate

Brief description

Erbil Citadel is a formerly fortified settlement which has grown up on the top of an imposing ovoid-shaped tell. The continuous wall of tall 19th century house façades still conveys the visual impression of an impregnable fortress dominating the city of Erbil. The citadel features a peculiar fan-like street pattern dating back to Erbil's late Ottoman phase. Written and iconographic historical records document the antiquity of settlement on the site – Erbil corresponds to ancient Arbela, an important Assyrian political and religious centre - while archaeological finds and investigations suggest that the mound conceals the levels and remains of previous 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 *group of buildings*.

1 Basic data

Included in the Tentative List

8 January 2010

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

18 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Historic Towns and Villages and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 24 to 28 August 2013.

Additional information requested and received from the State Party

None

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Erbil, the capital of the Autonomous Kurdistan Region of Iraq, is located in northern Iraq, in a fertile plain lying 420m above sea level between the Great and the Lesser Zab rivers, close to the Iranian and Turkish borders. Erbil has today about 1.3 million inhabitants, is the fourth largest town in Iraq and is one of the economic hubs of the country.

Erbil Citadel, situated today at the very centre of modern Erbil, consists of a formerly fortified urban complex built on top of a 20-30m high irregular oval-shaped archaeological mound (*tell*). It is currently not inhabited.

The defensive walls of the Citadel have not survived: in their place a continuous wall of house façades rises from the outer edge of the urban settlement. Combined with the bare and conical slopes of the mound, they still convey the visual impression of an imposing fortress.

The nominated property features an intricate street pattern with narrow lanes and cul-de-sacs fanning-out from the southern Grand Gate (currently under reconstruction). The dense urban fabric is cut through by a large road, built in 1958, connecting the Grand Gate and the northern Ahmadi Gate, which dates from the 1920-30s.

Today, the urban fabric of 'Erbil Citadel', articulated since the late 19th century into three districts (Saray, Topkhana and Takiya) according to their main urban functions, comprises mainly residential buildings dating back to the 19th – 20th centuries, and, to a lesser degree, to the 18th century. Their typologies and sizes differ according to the family's status and era of construction. Almost all houses have a courtyard, where the plot size allowed an *iwan* (a room with no front wall) and a *tama* (portico) to be inserted. Their supporting structure is in fired-brick masonry, whilst the ceilings and roof structures have a timber frame, as do the *tamas*. Some of the earlier residences exhibit elaborate brickwork, plasterwork, and alabaster detailing.

A few public buildings still survive: the Great Mosque (Mullah Afandi Mosque) has retained almost intact only its *minbar* (a sort of pulpit from which Imams deliver sermons) and the minaret, whilst the present single-domed roof was reconstructed in 1959, replacing the previous multi-domed roof; the *Hammam* dates back to 1775; it was subjected to major works in the 1950s and went out of use during the 1960s; some *takiyas* (buildings used for religious gatherings), and *diwakhanas* (large private mansions used also for community meetings) still exist, but are no longer in use. At the very centre of the town a well – out of use – has survived.

A good part of the Citadel's built fabric today consists of informal shelters and shacks erected since the mid-20th century up until the early years of the 21st century, using available materials taken from vacant buildings.

The tell

Archaeological investigations have confirmed that the artificial mound on which Erbil Citadel stands consists of material remaining from previous earth structures and subsequent occupation levels. It is the second largest tell in the region, after Kirkuk, covering nearly 11ha at the top and over 15ha at the base of the mound. Its height varies between 20 and 32m and decreases towards the centre of the tell.

The mound likely contains the remains of different phases of Erbil and possibly the vestiges of its Assyrian phase: ancient Arbela. In contrast to other tells, the process of mound formation has continued until very recently.

The buffer zone

A portion of the lower city corresponding southwards to the quarters of the old lower city and northwards to the former citadel moat acts as a buffer zone for the nominated property. In its southern section, the buffer zone includes the bazaar, the Arab, Taajeel and Khanaqa districts as well as several protected historic buildings, disclosing a compact urban form dating back to Erbil's Ottoman period, whilst in its northern part, the area of the now-silted ditch houses governmental and administrative detached buildings erected in the 1930's-40s. In the lower city Al-Mudhafariah (known as Choli) Minaret survives as the only above-ground monument dating back to the 12-13th centuries AD.

History and development

Written, documentary, and iconographic sources document Erbil's long settlement history which dates back, according to archaeological discoveries, to the Chalcolithic period (4500 – 3200 BC), although the earliest historical records mentioning Erbil (Urbilum) date from the 23rd – 21st centuries BC.

The city has retained the same name throughout the millennia, although with different inflections – Irbilum, Urbilum, Arba ilu, Arbela, Arbira, Irbil. Arbela functioned as a religious and political centre in the Assyrian period (20th – 6th centuries BC), after Nineveh and Assur, gaining importance during the Middle and Neo-Assyrian periods (13th- 6th centuries BC) as one of the provincial capitals of the empire, along with Kilizi (modern Qasr Shemamok), Idu, Talmushshu and an economic centre with direct ties to southern Iraq, Palestine and Western Iran. A bas-relief from Assurbanipal's North Palace (668- c.630 BC) depicts Arbela city and fortification walls, the acropolis and the Temple of Ištar. Infrastructures for water catchment and distribution were also built (traces of a 22km long underground canal from the Bastura river have been found, although the nomination dossier does not provide information on the topographic location of these remains within the city area).

With the fall of the Assyrian Empire (6th century BC), Persians, Greeks, Parthians, and Romans took control of the region until Sassanid domination prevailed (3rd – 7th centuries AD). Following the conquest of Northern Mesopotamia by Muslims in 642 AD, Mosul grew in importance at Erbil's expense. Centuries of power struggles among different dynasties in the region fragmented the territory into independent emirates. Nevertheless, in this period Erbil became a well-known economic centre: written records attest to the existence of a Qalat, with continuous fortified towered walls, a gate and a moat, whilst the lower city was a separately fortified unit housing a market and other administrative buildings and residences. The Choli Minaret was probably built at the end of this period, shortly before the Mongols took over the region. Following the Ottoman conquest, in the early 16th century, Erbil became a stronghold on the border between the Ottoman and Persian empires and the population sensibly decreased. Erbil Citadel's built fabric and fortifications seems to have suffered major loss in 1743, when the town was besieged by the Persians, as the building periods of most of its existing edifices would suggest.

It is only at the end of the 19th century that Erbil witnessed some signs of recovery; however, until the 1950s, its population remained confined within the Citadel and in the few quarters of the lower city, which at that time was still distinguishable from its rural surroundings.

The 20th century brought several changes to the fabric of the nominated property: in the 1920's-30's the Ahmadi Gate was opened in the northern section of the perimeter houses, and in the late 1950s the southern Grand Gate was demolished to open a new vehicular road which cut through the dense urban fabric of the Citadel from south to north. The Gate was reconstructed in the 1970's-80's; however a large reconstruction project is currently ongoing to reinstate the gate to its former appearance. Physical changes were accompanied by social upheavals: the Citadel's residents began to move away, leaving their houses abandoned. The building stock fell into disrepair and subsequent waves of immigration since the 1960s and then between 1986 and 2006 further contributed to the decay of the urban fabric. Difficult social and health conditions within the Citadel convinced the Kurdish Regional Government to evacuate the Citadel in 2006. The High Commission for Erbil Citadel Revitalisation was established and mandated to ensure full documentation of the Citadel's historic heritage and its revitalisation.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The nomination dossier has developed the comparative analysis focusing on Erbil's peculiarities of being a still living 'citadel town' erected on the top of an archaeological mound. The comparison has firstly examined several examples of tells – most of which are archaeological sites – from across the former fertile

crescent region and central Asia. These were grouped according to different typologies (uninhabited isolated; uninhabited at the outskirts of settlements; occupied by defensive structures in an urban context; occupied by villages grown with no organic evolution; inhabited within an urban context). Erbil would fall into the fifth category and would stand apart from the first two categories as it is still a living town. The analysis has then focused on four examples of tells within living urban settlements claimed to be particularly relevant to the nominated property: the Citadel of the Ancient City of Aleppo (Syrian Arab Republic, 1986, (iii) and (iv)), Kirkuk, Tell Afar and Qalaat al-Madiq – Apamea (Syrian Arab Republic, Tentative List), concluding that Erbil Citadel stands alone for its continuity of settlement, the peculiarity of its street pattern and its urban character.

ICOMOS observes that the present nomination has focused on three aspects of the property: the exceptional long-lived occupation of the site, its continuity of occupation and still surviving urban character. Therefore the comparative analysis should have examined these dimensions against the relevant selected examples and not limited the analysis only to some of them. In this regard, tells which are today archaeological sites would not be fully appropriate parallels in relation to the proposed justification. However, with regard to uninhabited tells, ICOMOS notes that Qalat Sherqat, ancient Assur, or the mounds of Kuyunjik and Nebi Yunus – part of ancient Nineveh - have not been included in the comparison.

As for the comparison carried out with the four examples claimed to be specifically relevant to Erbil, ICOMOS makes the following remarks.

In the case of the Ancient city of Aleppo, the inscribed property comprises, beyond the citadel, also the surrounding lively and multi-layered historic town whose built fabric and monuments bear tangible and exceptional witness to its millennial history. Aleppo citadel, for its part, conserves its circuit of imposing defensive walls. Qalaat al-Madiq exhibits a similar road pattern and its setting is less compromised by urban development, and the remains of the Ancient city of Apamea bear significant tangible witness to the continuity of settlement of the site. Kirkuk would have been the most relevant case and, despite the destruction it has suffered, would have deserved a more analytical examination. Tell Afar retains part of its fortifications, albeit restored, and its ditch.

Although mentioned in the comparative analysis, ICOMOS observes that arguments regarding the *Ancient City of Damascus* (Syrian Arab Republic, 1979, (i), (ii), (iii), (iv) and (vi)) and *Samarkand – Crossroad of Cultures* (Uzbekistan, 2001, (i), (ii) and (iv)) should have been more thoroughly articulated also in relation to their urban fabric and monuments, which bear tangible witness to their several historic phases as well as to their Ottoman past.

ICOMOS notes that the comparison does not encompass other World Heritage properties relevant for this nomination, e.g., Historic Cairo (Egypt, 1979, (i), (v) and (vi)), or the Kasbah of Algiers (Algeria, 1992, (ii) and (v)), both vibrant historic cities with their own citadels exhibiting tangible evidence of a millennia-long history, or the Old City of Acre (Israel, 2001, (ii), (iii) and (v)) which could have been considered for its urban structure and history. At the national level, Khorsabad/dur-Sharrukin, Gir-e-pan and Satu Qala would also have provided the closest parallels to the nominated property.

ICOMOS further believes that, if the derivation of the present urban configuration from the older layouts of the Citadel is not demonstrated through specific association with surviving traces of previous structures, the location on the top of a tell remains a valuable peculiarity which, however, does not justify limiting the comparative analysis to this type of settlement but should be expanded to include other examples of urban settlements with a similar pattern of evolution and historical /typological background.

In this regard, the city of Amedy (Iraq, Tentative List) is claimed to not be comparable due to the fact that it stands on a natural rocky spur; however, examination of its urban fabric and of its evolution could have been deepened. Additionally too, the Citadel and Walls of Diyarbakir (Tentative List of Turkey) could have been considered in relation to its historical and geo-cultural background.

On the other hand, a privileged focus on residential architecture and urban fabric, details of which have been provided in the nomination dossier, would have required the development of an ad-hoc comparative analysis that examined this specific aspect of the nominated property against other relevant examples.

In conclusion, ICOMOS observes that the comparative analysis reflects some lack of clarity in the nomination as it has considered several properties that do not appear particularly relevant for this nomination but has not deepened the comparison on all aspects of the nominated property when examining the closest parallels. Some outstanding relevant examples are also missing in the comparison.

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

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 a rare example of an urban settlement which has developed over a period of at least six millennia on the top of an archaeological mound in a continuous process of transformation and accumulation.

- The still clearly legible peculiar urban structure of the Citadel town dating back to the Ottoman period has resulted from the stratification of previous layers of occupation and bears witness to Erbil's long history.
- The millennial continuity of occupation of the Erbil site is also attested to by the remarkable permanence of its name, although under various spellings (Irbilum, etc), in several historic sources since Sumerian times.

ICOMOS considers that this justification is not appropriate for the reasons explained below.

Although many written and epigraphic sources attest to Erbil's antiquity, and archaeological finds suggest the millennia-long occupation of the area, material evidence of occupational continuity is scarce and recently revived archaeological research has pointed out only the potential for further discoveries, also within the larger setting of the Erbil plain. Additionally, for the many periods that Erbil Citadel had historical significance, other excavated sites exist that are of greater importance and bear exceptional testimony to the relevant civilisation (e.g. Nineveh, Aššur, Nimrud or Kalhu).

The nominated property today consists of 19th and early 20th century mainly residential built fabric and a few public buildings, the latter largely transformed, erected on top of an unexcavated tell. The defensive wall system that would justify the appellation of citadel has been replaced by a wall of tall house façades, which happened possibly sometime between the 18th and 19th centuries. The intricate street network fanning out from the Grand Gate appears a peculiar feature but only augmented historical, architectural and archaeological research on the urban structure and surviving buildings may shed light on the relationship between the Ottoman urban structure, the functional partitioning and the earlier phases of the settlement.

ICOMOS further observes that a discussion on the surviving traces of the lower town(s) is missing, despite them being briefly mentioned in the nomination dossier. Additionally, the only standing structure attesting to Erbil's history in the city's most recent affluent period – the Choli Minaret – is located in the buffer zone.

ICOMOS considers that the tangible evidence does not appear sufficient, at this stage, to support the claim of uninterrupted continuity of occupation going back several millennia nor to demonstrate that the actual urban form has been influenced by previous layouts.

Integrity and authenticity

Integrity

The State Party has assessed the integrity of the nominated property from three different perspectives: as an archaeological mound, as an historic urban landscape, and with regard to its built fabric. The assessment

concludes that the main issues concern the built fabric of Erbil Citadel; however the problems have now been identified and are being addressed through an integrated conservation programme.

ICOMOS firstly observes that, according to the proposed justification for inscription, the boundaries of the nominated property do not encompass all the relevant components: the Choli Minaret which attests to Erbil flourishing in the 12th-13rd centuries, is in the buffer zone; and those areas of the lower town, including the bazaar, that were contained within the perimeter of the ancient lower city, have not been included in the nominated property. Besides this, the surviving archaeological remains witnessing different historic layers of the lower town have not been considered as a reference to delineate the boundary of the nominated property or of the buffer zone.

ICOMOS further considers that the interventions carried out during the 20th century – the demolition of the Grand Gate (rebuilt in 1979), the opening of the north-south road, the alteration of the Mosque roof, along with the encroachment upon traditional structures and the erection of shelters using looted building materials (252 shacks out of 588 inventoried buildings) have considerably undermined the integrity of the nominated property. The relocation of all the Citadel inhabitants elsewhere has also unfavourably affected the social and functional integrity of the urban fabric as a traditional organically-evolved urban settlement. The state of conservation of the nominated property remains fragile, despite the work already carried out, whilst the historic neighbourhoods of the buffer zone suffer from disrepair and urban pressure.

ICOMOS observes that while the tell has not been excavated, and should therefore be largely intact, the nomination dossier reports on the deficiencies of the sewerage system built in the 1920s which could have compromised the condition of archaeological remains concealed within the mound.

In conclusion, ICOMOS considers that the conditions of integrity of the nominated property pose considerable concerns in relation to the congruence with the proposed justification for inscription, to the condition of its urban fabric and to its social and functional dimensions.

Authenticity

ICOMOS considers that Erbil Citadel's urban form and built fabric have retained their legibility as part of a 19th-20th century Ottoman settlement on the top of a tell. However, the lack of sufficient physical evidence from ancient periods does not allow extension of this statement beyond the above-mentioned temporal limit. Further field research would be necessary to demonstrate credibly that elements from previous layouts have influenced and survive in the actual urban form and/or built fabric.

Written and epigraphic sources suggesting that Erbil played an eminent role in antiquity lack correspondence

with physical evidence; however the imposing presence of the tell does evoke this long history. The fact that Erbil Citadel is currently uninhabited detracts from its sense of place as a town.

ICOMOS observes that the urban layout and part of the surviving built fabric reflect only the 19th century Ottoman phase of the nominated property but cannot at this stage provide evidence in an understandable and credible manner to previous urban configurations.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have not been met at this stage.

Criteria under which inscription is proposed

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

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 Erbil Citadel contains several layers of human millennia-long occupation and therefore bears exceptional witness to cultural traditions and civilisations that have disappeared. The nominated property would also exemplify a rare case of an urban settlement on the top of a tell which has evolved over time by reshaping the surviving substance of previous layers, until very recently.

ICOMOS holds that, although written, epigraphic and iconographic sources suggest that Erbil has had a long history since earliest times and played important roles in different eras, particularly during the Assyrian period, the tangible archaeological evidence of this ancient past appears currently still scarce and insufficiently elaborated, therefore it cannot appropriately support this claim. Additionally, compared to other uninhabited tells, the nominated property exhibits a limited potential to yield substantial tangible evidence through extensive excavations, due to the desirability to preserve the structures built on top of it as well as its current layout.

The second part of the proposed justification of criterion (iii) would better fit criterion (iv); however the nomination dossier does not adequately relate the property's physical evidence of the 19th-20th century Ottoman settlement with possibly surviving traces of previous layouts.

Additionally, the most recent activity of construction on the tell has not produced outstanding examples of a continuing building tradition; rather it has contributed to encroachment upon the surviving Ottoman edifices.

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 represents an outstanding example of a *tell*, which conceals several layers of human occupation throughout six millennia. The fortified urban settlement erected on the top of the mound has largely retained its physical morphology, determined by previous layouts, as well as several buildings dating back to the 19th century Ottoman period.

ICOMOS observes that, whilst the powerful visual impression of the citadel at the top of the *tell* has been retained, the relation of the peculiar fan-like street pattern with previous layouts has not been demonstrated on the basis of archaeological/ historical evidence. The study of previous house plans, of the use of former foundations, and of the modification of open and closed spaces is necessary to clarify the possible connection with previous configurations.

The replacement of the walls with houses has only been mentioned but not elucidated in relation to the possible emergence of changing needs. The nomination dossier does not explain how, when and at what rate this substantial modification occurred nor does it provide historical and architectural evidence for this change. Neither a construction date, nor any study on the building typology or building materials/techniques in relation to the former walls is provided for the perimeter houses.

ICOMOS finally observes that 19th century Ottoman urban features, i.e. house typology in relation to building technologies, climatic conditions, social structure, public buildings, social articulation in relation to physical configuration (i.e. the Ottoman Topkhana, Saray and Takiya districts are only mentioned but not described) are not documented in the nomination dossier sufficiently to demonstrate an outstanding universal value.

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

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 Erbil Citadel outstandingly represents a traditional urban settlement which has grown up on the top of an archaeological mound featuring a dense built fabric, mainly residential, circumscribed by a continuous wall of houses, which replaced its defensive walls between the 18th and 19th centuries. Subsequent layers

of use since antiquity have reshaped previous surviving layouts in a continuous process of superimposition and transformation.

ICOMOS considers that the first part of the justification for criterion (v) would be more appropriate for criterion (iv). However, the nomination dossier does not provide sufficient arguments explaining how and to what extent the surviving physical evidence of the Citadel's urban fabric supports the justification for this criterion. The contextualisation of Erbil Citadel and of the lower town within their larger territory and the ancient road network would also be needed for a better understanding of Erbil's role in past times and of its interaction with its larger settled environment, the documentation of which is ongoing thanks to recently revived archaeological campaigns in the region. The relocation of the inhabitants makes it difficult to consider Erbil Citadel as an example of an organically evolving 'tell' urban settlement.

ICOMOS considers that this criterion has not been justified.

In conclusion, ICOMOS does not consider that the conditions of integrity and authenticity have been met at this stage and that the criteria have been justified at this stage.

4 Factors affecting the property

ICOMOS observes that the instability and soil erosion of the slope of the archaeological mound and the precarious state of conservation of the historic built fabric within the Citadel are among the most critical factors for the transmission to the future of the nominated property. The poor condition of the nominated property also increases its seismic vulnerability.

Erbil Citadel is owned by the government, therefore does not suffer from direct development pressure from private investors. Urban Design Guidelines for the Buffer Zone of Erbil Citadel have been elaborated to ensure that building development within this area respects the visual integrity of the citadel and its relationship with its setting.

However, ICOMOS notes that the effects of development pressure already visually affect the nominated property and the buffer zone with inappropriate and out-of-scale constructions.

Currently, tourism is not a concern for the nominated property, however, visitor increase may be expected, for Kurdistan has been growing as a tourist destination in recent years. The tourism-oriented regeneration strategy adopted for Erbil Citadel may contribute to intensifying this trend in the nominated property, although not in the near future. However, ICOMOS believes that this approach is likely to affect the traditional character of the nominated property and the sense of place.

Finally, considering the large scale conservation programme undertaken, ICOMOS recommends that a cautious approach and clear guidelines for conservation interventions be adopted to ensure respect for the authenticity of the nominated property and to avoid unevenness in the results of conservation works.

Finally, ICOMOS expresses its concerns regarding the incongruence between the nominated property and its setting and the architectural design chosen for the project of the National Kurdistan Museum which is to be built on an area north of and directly facing the Citadel.

ICOMOS considers that the main threats to the property are soil and structural instability of the mound, the still-fragile condition of the architectural fabric of the Citadel, coupled with possible over-restoration, incongruous buildings and project proposals within the buffer zone (e.g., the project for the Kurdistan National Museum), and strong urban development pressure in surrounding areas.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property (approx 15ha at the bottom of the tell) run around the base of the archaeological mound and comprise the formerly walled settlement on the top of the tell and the tell itself.

The buffer zone (approx 268ha) encompasses a section of the lower city enclosed by the 30-Metre Road or Barzami Nam Str. and comprising also the area of Minaret Park. It consists of two zones, subject to different levels of building and planning regulations, depending on their character. The first one, delimited by the inner ring road, features a still valuable urban fabric and buildings, including the bazaar, and several public and religious structures, whilst the second comprises predominantly modern constructions and affords regulations intended to protect the visual corridors towards the citadel.

ICOMOS considers that the uncertainty in the nomination approach emerging from the comparative analysis has also affected the rationale for selecting the relevant components of the property. For instance, given the proposed justification for inscribing Erbil Citadel on the World Heritage List, which is based on its long-lived continuity of settlement, the boundaries of the nominated property might also have included the Choli Minaret, the only standing structure in Erbil dating back to the 12th-13th centuries AD, and the historic quarters of the lower city, now included in the buffer zone.

Equally, when considering the archaeological potential of Erbil Citadel's setting, the buffer zone has been designed with the visual integrity of the nominated property in mind and has overlooked the archaeological traces, i.e. minor

mounds, and other modifications of the terrain, attesting to the ancient past of the city.

ICOMOS further observes that recent non-destructive archaeological investigations in the urbanised areas of Erbil have been yielding promising results that could provide useful inputs for any reconsideration of the boundaries of the nominated property and its buffer zone.

ICOMOS notes that the 2013 revised version of the Urban Design Guidelines for the Buffer Zone (made available to ICOMOS during the mission) contains a perimeter of the buffer zone which differs from the one contained in the nomination dossier. Clarification on this point is needed.

ICOMOS finally considers that a closer verification of the limits of the currently proposed buffer zone and of its role in protecting and contributing to Erbil Citadel's significance appears necessary.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone reflect the lack of clarity of the nomination approach which would gain from further work so as to better clarify its focus and subsequently outline appropriate boundaries for both the property to be nominated and its buffer zone.

Ownership

The nominated property has been owned by different bodies of the Kurdistan Autonomous Region's government since 2006. The buffer zone comprises mainly privately-owned buildings and areas; however several institutional facilities are in public ownership.

Protection

Erbil Citadel has been formally protected since 1937 under the provisions of the Law for Antiquities and Heritage of Iraq nr. 59/1936, now replaced by Law nr. 55/2002. The reformed law provides for the inventory, documentation and official protection, where appropriate, of antiquities and heritage immovable properties. State competences in this matter have been transferred to the Kurdistan Regional Government and a Regional Directorate of Antiquity was created in the 1990s.

The legislation in force provides that owners are obliged to take care of their properties if registered under the aforementioned law. The current legislation does not foresee financial support for private owners, therefore, in case they cannot comply with their obligations, the Department of Antiquities can substitute for them, provided that the owner renounces his occupation rights to the Department.

Within the framework of the Revitalization of Erbil Citadel Project (see subsequent section), to grant further protection to the Citadel, a buffer zone, which is articulated into two sub-zones – A and B - has been drawn, and covered by planning regulations contained in the *Urban Design Guidelines for the Buffer Zone of the Erbil Citadel* (2011). These aim at increasing the legibility of the historic urban fabric and at controlling the visual impact of urban

development along the main road axes towards the Citadel by establishing height limits for new buildings. They are complemented by a *Conservation Handbook for the Buffer Zone of the Erbil Citadel*, which however has no compulsory status. The Guidelines were adopted in 2011 by the Kurdistan Governorate and are being implemented at the municipality level. A revised version of these guidelines has been elaborated in 2013: they slightly widen the boundaries of the buffer zone to include both sides of ring-road 60, so as to better control construction heights, and provide more details. The revised guidelines have not been adopted yet.

ICOMOS underlines that implementation of the above measures constitutes the key point for an effective protection of the Citadel and its setting and considers that the approval of the drafted revised version of the Guidelines (2013) would improve the protection of the nominated property.

ICOMOS finally observes that, whilst the architectural and landscape aspects have been comprehensively addressed by the Guidelines, the archaeological potential of the buffer zone has not been adequately considered in designing planning and building regulations. Appropriate measures should be set up to ensure that building activity within the buffer zone does not damage buried archaeological traces.

ICOMOS considers that the legal protection in place would benefit from the introduction of aid mechanisms to support private owners in their conservation duties. ICOMOS considers that the protective measures developed for the property are adequate, although appropriate measures to protect buried archaeological remains should be integrated into the *Urban Design Guidelines for the Buffer Zone*.

ICOMOS recommends that all protection measures in place should be carefully implemented to ensure the safeguarding of the nominated property and its setting and considers that the approval of the drafted revised version of the Guidelines (2013) would improve the protection of the nominated property.

Conservation

The state of conservation of Erbil Citadel has been a preoccupation since the 1950s and a number of studies have been elaborated since the 1970s to address this issue. Due to the severe decay problems affecting Erbil Citadel and its built fabric, after its evacuation, in 2007 the High Commission for Erbil Citadel Revitalisation was established and a Memorandum of Understanding with UNESCO's Iraq Office was signed to carry out the Revitalization of Erbil Citadel Project. Phase I of this programme has been completed and Phase II is under completion.

A Conservation Master Plan for the Citadel has been elaborated to manage the progressive implementation of interventions. Within this framework, documentation of the architectural heritage and its condition as well as emergency and stabilisation works on various buildings

have been or are being carried out. In parallel, a comprehensive study of the buffer zone was developed and guidelines elaborated.

ICOMOS notes that much work has been done to document the current conditions of the Citadel's built fabric, identify the problems and prioritize intervention. The task is huge, but the framework to continue the conservation activity has been set up. ICOMOS further observes that, whilst the architectural and urban heritage of the Citadel has received much attention, the stability and conservation conditions of the Citadel mound and of its slopes should have been given priority and should be addressed urgently. A detailed study for a comprehensive conservation project for the immediate setting of the Citadel is also recommended.

Despite the Kurdistan authorities' huge undertaking, ICOMOS observes that much work is still to be done to ensure the preservation of the surviving built fabric of the Citadel and of the buffer zone, and that involving private investors in the process appears crucial for the accomplishment of the task.

ICOMOS finally underlines that the main challenge for the Citadel remains the compatible, equitable and participatory social and economic revitalization and in this regard the proposed revitalisation formulas appear excessively tourism-oriented and do not pay adequate attention to the regeneration of the social fabric within the Citadel.

ICOMOS considers that many efforts have been made to set up a framework for the study and the conservation of the nominated property, but much remains to be done, in particular the stability problems of the mound need to be urgently addressed. ICOMOS notes that the compatible, equitable and participatory revitalisation of the nominated property remains a major challenge and, in this regard, recommends that adequate strategies and tools should be set up.

Management

Management structures and processes, including traditional management processes

The High Commission for Erbil Citadel Revitalisation (HCECR) has been established since 2007 by the Kurdistan Regional Government to manage the nominated property. It comprises a Board of Members acting as a steering committee, a Management Office, and an Advisory Group. However, the current structure of the HCECR has not been defined nor has its mandate been established formally; in addition, its competencies have never been formalised.

Until the creation of HCECR, Erbil municipality granted building permissions within the Citadel, whilst the Directorate of Antiquities continues to maintain its responsibilities with regard to archaeological properties.

The Management Plan suggests the consolidation of both competencies under one single authority - the HCECR.

Implementation of the Guidelines for the Buffer Zone is entrusted to the Licensing and Monitoring Committees with an executive and supervisory role respectively; relevant authorities are represented in both committees.

Financial resources to carry out the revitalization programme have been so far allocated only in modest percentages by the Iraqi national or Kurdistan regional governments, the majority deriving from international agencies and other donors.

ICOMOS considers that HCECR's configuration and role needs to be formalised as soon as possible; coordination mechanisms among the different relevant authorities, commissions and committees are also urgently required in order to ensure effective protection and management.

Given the enormous work still to be done, ICOMOS further recommends that a strategy to develop robust public/private investment partnerships should be elaborated and implemented.

ICOMOS observes that the technical staff of the HCECR management office should be integrated with at least one archaeologist, and one expert in project financing and public/private partnerships. Training programmes for the staff should continue.

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

A Management Plan for Erbil Citadel was completed by 2012. It builds upon previous instruments, particularly the Conservation and Rehabilitation Master Plan and the Urban Design Guidelines for Erbil Citadel Buffer Zone, and examines other strategic plans developed at the regional level. The Management Plan defines a strategy for the nominated property based on 8 different thematic axes, for each of which activities and priorities have been identified, including visitor management.

The Management Plan is complemented by an Implementation Plan that identifies priorities, timelines and budget needs.

ICOMOS notes that the management framework has been envisaged for the nominated property only very recently and under special conditions, thanks to the financial and institutional assistance of the UNESCO Iraq Office and other foreign partners. ICOMOS recommends that a capacity-building strategy for regional and local public institutions be set up to strengthen their long term effectiveness in managing the nominated property.

Involvement of the local communities

The Management Plan recognizes the need to improve Erbil residents' information on and participation in the revitalisation process.

ICOMOS believes that this is of utmost importance for the future and long-term conservation of Erbil Citadel's significance as a heritage and symbolic place. In this regard, ICOMOS recommends that the HCRECR takes into account the role that previous residents may play in the revitalisation process of the Citadel and foresees the return of former inhabitants if they are willing to do so.

ICOMOS considers that, given the complexity and number of the actors involved, special attention is needed for the coordination among the authorities responsible for the nominated property, the buffer zone and the wider city. The huge task of the Citadel's conservation and revitalisation requires that a robust public/private partnership be built so as to involve economic stakeholders, NGOs, and individuals. The viability of, and opportunity to return former inhabitants of the Citadel as permanent residents should also be considered.

In conclusion, ICOMOS considers that the management system should be extended to include a capacity-building strategy for regional and local institutions. Furthermore, ICOMOS recommends that the role, structure and organisation of the HCECR be formalised urgently on the basis of the appropriate legal tools. Extra attention to public engagement, particularly of former residents of the Citadel, in the management process is also advisable.

6 Monitoring

The HCECR is the monitoring authority. The system foresees specific and sectorial monitoring activities, especially concerning the conservation conditions of the built heritage, but also for building activity within the buffer zone.

ICOMOS considers monitoring is a tool that aids site managers to assess the extent to which defined management goals are achieved. In this regard, ICOMOS believes that a comprehensive monitoring system based on management objectives should be set up. Specific monitoring exercises should be part of it.

ICOMOS considers that the monitoring system for the nominated property should be expanded beyond the structural or conservation issues of the built fabric to include all activities foreseen by the Management Plan. Monitoring mechanisms should ensure the effective use of collected data.

7 Conclusions

Erbil Citadel with its elevated position on the top of an impressive artificial mound rising up from the plain in a region which witnessed the birth of the first cities, continues to create a strong visual impression. Abundant written and epigraphic records also evoke the long history of the site which has been documented since Eblaite

times and flourished as a political and religious centre in the neo-Assyrian period. The permanence of its name down the centuries reinforces the idea of a long continuity of settlement.

The nomination proposal appears influenced by these three factors but as soon as tangible evidence is called on to support the claims of the selected criteria, the dossier reveals a certain degree of ambiguity and lack of clarity. The comparative analysis, the boundary delimitations and the arguments put forth in the nomination dossier do not contribute to demonstrating the proposed justification for Outstanding Universal Value at this stage.

In fact, the fragmented surviving built fabric of the nominated property and of the buffer zone bears witness to the most recent period of Erbil's history, between the 18th and early 20th centuries. As for Erbil's previous historic phases, the surviving substance of the nominated property does not support the arguments presented in the nomination dossier nor does it demonstrate to what extent and how previous occupation layouts have determined the present configuration of the Citadel. Further historical, archival and morphological studies as well as archaeology may aid in this regard.

The tell constitutes the only massive physical evidence of ancient occupation phases, but in the absence of systematic archaeological investigations, information on previous levels remains at the potential stage and cannot concur to support the arguments put forth in the nomination dossier. At this stage, little material evidence and scientific documentation exist which demonstrate that the tell conceals important archaeological traces and coincides with the site of the Assyrian Arbela.

The integrity of the nominated property equally poses considerable concerns: most of the components that would make up an historic fortified urban settlement no longer exist or have suffered major transformations. Only a few clusters of 19th century residential buildings survive in precarious and fragmented condition.

ICOMOS congratulates the Kurdistan Autonomous Region for its important achievements in preserving Erbil Citadel. However, it notes that the ambitious conservation and revitalisation programme initiated in 2008 is still at its beginnings and needs a long term political commitment and substantial institutional capacity to be completed.

Some major projects – e.g. the on-going reconstruction of the Grand Gate, based on limited historical and graphic documentation of its pre-1980 configuration, and the Kurdistan National Museum directly facing the Citadel – also arouse concerns regarding the retention of the already undermined integrity of the nominated property and of its authenticity.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Erbil Citadel, Iraq, to the World Heritage List be **deferred** in order to allow the State Party to:

- Deepen the research on the urban-architectural heritage and of the archaeological context of the nominated property and its setting to bring into focus the areas of potential significance of the property in relation to its tangible evidence and complete the comparative analysis, in order to understand whether the property might be considered of Outstanding Universal Value;
- If such a study suggests that a robust case could be made to justify the Outstanding Universal Value of the property, then:
 - Amend the boundaries of the nominated property and of the buffer zone if and where necessary;
 - Formalise through appropriate legal means the role, structure and competencies of the High Commission for Erbil Citadel Revitalisation as the management authority and provide it with adequate and stable financial and staff resources to allow its proper functioning in the long term.

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

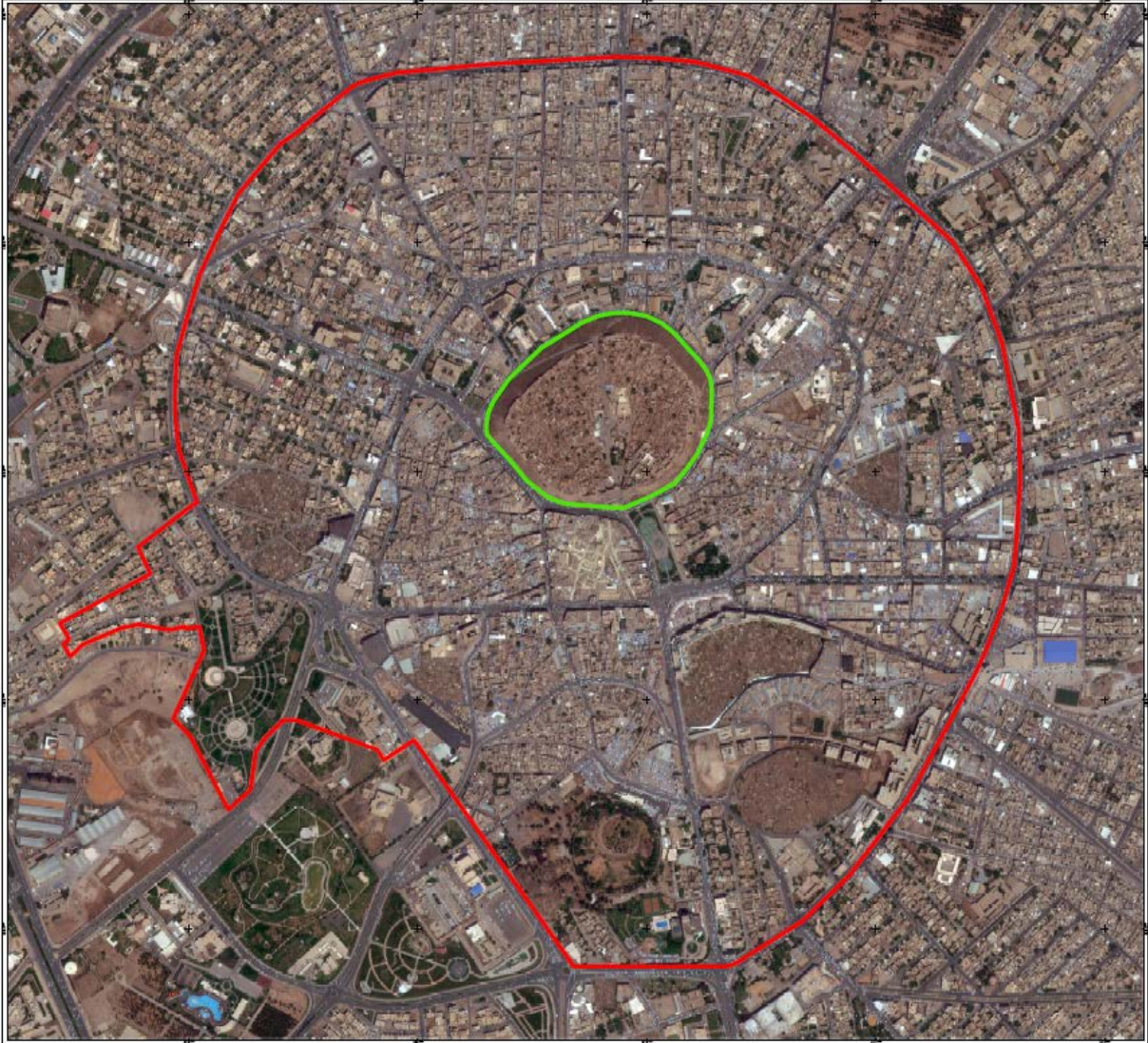
Additional recommendations

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

- Addressing the stabilisation of the slopes of the archaeological mound with the maximum urgency;
- Reconsidering the location of the Kurdistan National Museum or substantially revising the architectural design of the current project to harmonise with the Citadel and its relationship with its setting;
- Surveying, documenting and mapping surviving surface archaeological remains of all types and establishing mechanisms to document and protect buried archaeological remains from building activity;
- Elaborating a strategy to attract private investors and to build a solid public/private partnership to implement the conservation and revitalisation programme;
- Undertaking juridical studies with a view to improving the existing legal framework by introducing mechanisms to support private owners in carrying

out their maintenance duties for their heritage properties;

- Strengthening involvement of former inhabitants and of Erbil's civil society at large in the revitalisation of the Citadel and providing adequate instruments to ensure their effective participation in this process.



Aerial photograph showing the boundaries of the nominated property



Aerial view of the Citadel



The Citadel, mound and south-eastern perimeter



Narrow lane



Courtyard

Historic Jeddah, the Gate to Makkah (Kingdom of Saudi Arabia) No 1361

Official name as proposed by the State Party

Historic Jeddah, the Gate to Makkah

Location

Makkah al-Mukarramah Region
Kingdom of Saudi Arabia

Brief description

On the eastern shore of the Red Sea, Jeddah was a major port for the Indian Ocean trade routes, channelling goods to Makkah. The prosperity that this trade brought led to the development of a multicultural city between the 16th and the early 20th centuries, which attracted merchants from the Maghreb, Arabia and as far afield as India and Southeast Asia.

Jeddah developed a distinctive architectural tradition, a fusion of Red Sea coastal coral building traditions with ideas and crafts from along the trade routes. The pinnacle of its prosperity was at the end of the 19th century when the opening of the Suez Canal and the introduction of regular steam ships extended the trade north to Europe. Wealthy merchant who benefited built elaborate, seven storey tower houses, with oriel windows shielded by pierced and fretted wooden screens known as *roshan-s*.

Jeddah had since the 14th century and maybe earlier acted as a port for pilgrims visiting Makkah from India, and from North, East and West Africa. This role expanded significantly in the late 19th century and is reflected in the accommodation then offered by the city for as many as a 100,000 pilgrims a year.

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*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013), Annex 3, this is also an *inhabited historic town*.

1 Basic data

Included in the Tentative List

28 November 2006

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

A previous nomination was submitted in 2010 for the 'Historical City of Jeddah' that covered a larger area than the current nomination. Following a negative evaluation by ICOMOS, the nomination was withdrawn by the State Party.

Consultations

ICOMOS consulted its International Scientific Committees on Historic Towns and Villages and Earthen Architectural Heritage and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 23 to 26 September 2013.

Additional information requested and received from the State Party

No additional information was requested from the State Party. On 28 February 2014, the State Party submitted two supplementary documents: an Additional Volume to the Nomination Dossier containing Action Plans and Annexes and Guidelines for Building Regulations. Both of these have been taken into account in this document.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The city of Jeddah lies on the eastern shore of the Red Sea, in the Tihana plains between the Hejaz Mountains to the North West and the Asir Mountains to the south-east.

Jeddah's prosperity was based on two distinct and sometimes overlapping roles. It was a major Red Sea mercantile centre between the Indian Ocean trade routes and the Hijaz region and beyond. Secondly it acted as a gateway for pilgrims to Mecca who arrived by sea. Both of these contributed to a vibrant, diverse and prosperous society. The 19th century was the pinnacle of this prosperity, as a result of the building of the Suez canal, which extended the routes to Europe, and the introduction of regular steam ships.

Such was the strategic importance of Jeddah as a trading centre that it attracted merchants not just from the Hijaz, Najd or other parts of present-day Saudi Arabia or the Arabian Peninsula (notably the Hadhramaut), but also from Egypt, Syria, Turkey, the Maghreb, India, Central Asia, Southeast Asia or Africa. And many of these merchants eventually settled there, such was the ease with which newcomers were accepted and assimilated.

The pilgrimage shaped the rhythm of life of the inhabitants of Jeddah, as until the advent of steam ships, the arrival and departure of many pilgrims from the east was dictated by the Monsoon winds. Pilgrims came from West and East Africa as well as from Egypt, North Africa, and the northern Ottoman Empire and at certain times of year, Jeddah became a microcosm of the Muslim world. This is still perceivable today, even though Jeddah airport has largely taken over the role of the harbour.

These two twin strands, trade and pilgrims were reflected in the urban fabric through the provision of caravanserais (although most have not survived), suqs (markets), accommodation for pilgrims (in *wikala-s*, *ribat-s*, tower houses, coffeehouses), as well as in mosques and *zawiya-s* as places of worship.

Although the urban structure of the city in terms of streets, disposition of *ribat-s*, and the constrained plots of the houses, dates back to the 16th century, very few buildings survive from that date – notably parts of two mosques. Most of the remaining historic structures reflect the prosperity of the 18th and particularly the end of the 19th centuries, although the architectural style of the tower houses is reflective of much earlier periods.

The city developed within the confines of an irregular encircling wall, the four gates of which were linked to the main thoroughfares. The city walls were demolished in 1947. Two of the gates have been reconstructed.

What has been nominated is the central part of the historic city Al Balad (around a third of the area enclosed by the city walls) where the evidence for its historic structures is densest. What has been excluded are areas to the east with high rise modern neighbourhoods, and to the west where the old port has been destroyed and its footprint included in a wide area of reclaimed land. The old city has thus lost its crucial link with its harbour.

Today this central heart of the city is no longer the thriving metropolis it once was and many of the houses are abandoned or sub-divided to host tenants, with only a few wealthy trading families keeping a house and maybe a shop as a sign of their attachment to the city.

Some of its buildings are fragile and vulnerable. When the first inventory of historic buildings was undertaken in the 1970s, 1,000 were identified. Since then the pressure for development has taken its toll and a survey in 2010 found only 350 remaining, of which 280 are in the nominated area. Overall, the proportion of historic to new buildings in the nominated area appears to be around 50%.

ICOMOS considers that although the nomination dossier provides a considerable amount of information on the history of the city and its characteristics, including in appendices, the Description section is lacking in specific

details for some types of structures, in terms of precisely what has survived and where.

The property consists of the following:

- Trading axis
- *Suqs*
- Pilgrimage axis and *Ribat-s*
- Mosques and *Zawiya-s*
- Residential quarters – *hara-s* - *Roshan* Tower houses characteristic of the northern part of the city
- Three-four storey houses in southern part
- Mixed residential and commercial areas

Trading axis

The trading axis has survived less well than the pilgrimage axis. Trading goods were offloaded in the port and traded in *suqs* or markets around the city. Huge *wikala-s*, or caravanserais, were constructed for the storage of goods and also provided accommodation for merchants.

The main *suq* near the shore, the *Suq al-Nada* which still houses much wholesale trade notably in clothes and, to the south, the *Suq al-Khasiqiyya*, are not included in the nominated area due to recent development, but both are within the buffer zone.

What is within the nominated area are two *suqs*, *Suq al-Alawi* and *Suq al `Bedawi/Juma'a*. The *Suqs* were single storey structures with long linear rows of shops. Smaller *suqs* could also occupy the ground floor of houses along the street.

It appears that none of the huge *wikala-s* (caravanserais) has survived.

Pilgrimage axis and *Ribat-s*

When the pilgrims arrived mainly by sea, the pilgrimage axis crossed the city from the port in the west, where the pilgrims' boats landed, to the Mecca gate in the east of the town wall, through which pilgrims departed for Mecca.

A large influx of pilgrims had to be accommodated in the city. The poorest slept where they could find a space on benches, roofs, squares etc. The richer pilgrim could rent rooms in large specially constructed buildings known as *wakala-s* or could lodge in private houses. In the 19th century *wakala-s*, mainly in the Yemen quarter in the south, could accommodate as many as 10,000 pilgrims.

Although *wakala-s* are mentioned as part of the justification for Outstanding Universal Value, ICOMOS notes that no details are provided in the nomination dossier as to their survival or location.

Pilgrims also lodged in *Ribat-s*, fortified buildings built originally for defence but also used for merchants as well as pilgrims. The nomination text states that eleven *ribat-s* survive in Jeddah, most of which are closed. Three are in the nominated area and one of these is in use as a shelter for poor widows. The architecture of the *ribat-s* is distinctive: crenelated horizontal facades decorated with stucco work. A programme of restoration is being launched – see below.

Mosques and *Zawiya-s*

Jeddah had mosques in all its main neighbourhoods. The Great Mosque roughly in the centre of the city was demolished in the 1990s and replaced with a new mosque, al-Hanafi. Nine historic mosques are in the nominated area. The two most important surviving mosques architecturally are Masjid ash-Shafe'i and Masjid al-Mi'mar. Masjid ash-Shafe'i was originally constructed in the 13th century, and all except its minaret was reconstructed in 1539 in Indian Mughal style – a clear expression of one of the many influences brought to Jeddah. It is currently being restored. The date of Masjid al-Mi'mar is unknown but it is before 1834.

Details of the other seven mosques are not provided.

The text also mentions *Zawiya-s* – religious schools – as well as other religious and charitable institutions associated with the mosques, but no details have been provided of the buildings that housed them.

Residential quarters – *hara-s* - *Roshan* Tower houses characteristic of the northern part of the city and three-four storey houses in southern part

The houses face outwards and were not built around courtyards. Instead the social spaces were public ones. What is distinctive about Jeddah are the numerous spaces for sociability at different levels, from the coffeehouses to the squares and the seating areas in front of houses. Off the main thoroughfares there are narrower streets, and off these cul-de-sacs or small squares.

The constraints of the urban plots led to tower houses being constructed, particularly in the north of the city. It was this form, with its elaborate timber and plaster decoration that characterised the city and was commented on by many travellers. These tower houses rose to seven stories in height. Those that survive were mainly constructed at the end of the 19th century.

Walls of tower houses were built of coral rubble and lime mortar with horizontal timber reinforcements. The exterior surfaces were protected by a lime plaster often decorated with Sgraffito work particularly at street level. In Jeddah, as well as in Farasan and Zabid, the finest examples of this type of decoration were found. Oriel windows with pierced and fretted wooden screens (*roshan-s*) provided privacy but also drew in air which flowed through the houses and was expelled through roof lights or wind towers. On the elaborately carved

doors, motifs reflected the influence of India and other Asian trading contacts.

The most renowned and famous house of these houses was the Bayt Baghdadi — a mansion built to the south-west of the Pasha Mosque, facing the sea. Built in the 1880s it was one of the finest examples of Jeddah architecture. It was demolished in 1959 in the course of street widening works.

Details of six of these tower houses are provided in the nomination dossier. But ICOMOS notes that it is not stated how many of these tower houses have survived.

In the southern part of the city, the houses were lower, rising to only three or four stories, similar to those built in other coastal cities on both sides of the Red Sea since the 16th century. No details are provided of these houses, nor of how many have survived.

Mixed residential and commercial use

A feature of Jeddah is the intermixture of residential and commercial use. Many houses had shops on the ground floor level. There are said to be around 1300 in the nominated area.

History and development

In the 6th century, the Persians settled in the city and developed the harbour. The role of Jeddah as a major seaport was firmly established in the 7th century AD, when the Arabs seized power.

As Makkah developed as the focus of Islam, and of a great empire, Jeddah became an active trade centre, channelling to the Holy City trade goods from Egypt, Southern Arabia, and India.

Although the importance of Western Arabia diminished with the shifting of the capital to Damascus (under the Umayyad Caliphs) and later to Baghdad (under the Abbasid), Makkah continued to enjoy prestige and prosperity from the annual pilgrimage.

Jeddah's role remained minor until the 10th century, when Fatimid-ruled Cairo eclipsed Abbasid Baghdad. The India trade followed the shift in regional power: and the Red Sea took over from the Arabian Gulf as the main artery of commerce from the Indian Ocean. And Jeddah thus began to develop as a prosperous Red Sea port.

Its prosperity passed through a series of upheavals due to the changing political and economic situation in the Islamic world, particularly during the 12th and 14th centuries, when the city witnessed a loss of population.

After the Mongol conquest of Baghdad in 1258 and the transfer of the capital to Cairo under the protection of the Mamluk Sultans, the Hijaz, as a former province of the Muslim Empire, soon became the object of annexation attempts by Egypt. From 1425, the Mamluk Sultan

stationed a permanent garrison in Makkah and took over the collection of customs duties in Jeddah.

After 1424, Jeddah began to take over Aden as the major harbour, soon becoming the only authorized port of entrance for eastern merchandise in the Arabian Peninsula.

In the 15th century, Jeddah further benefited from the fall of Constantinople to the Turks in 1453. The closure of the Bosphorus, and of the access to the Black Sea terminal ports of the central Asiatic overland routes, made for a brief period the Red Sea route the only safely practicable way for international East-West trade.

The geographic discoveries of the Portuguese mariners Bartolomeu Diaz and Vasco de Gama opened new sea routes that ended the Arab monopoly on the Indian commerce at the end of the 15th century.

A series of fights and naval battles developed in the following years between the Arabs and Indians and the Portuguese. The growing influence of the Portuguese, who sought control over the trade routes in the Red Sea, menaced directly the city of Jeddah. The Portuguese tried to establish unchallengeable supremacy through the whole extent of the Indian Ocean.

In these years, the city of Jeddah began to build a new strong wall to withstand an eventual attack from the Portuguese. Portuguese fleet arrived in front of the city on 13th April 1517. The mission ended in disaster for the Portuguese. They tried again to challenge Turkish control on the Red Sea shores and organized further raids in 1520, 1526 and again in 1541.

Throughout the 16th century, despite the new India route opened by the Portuguese, the Red Sea traffic was kept alive and boats continued to call at Jeddah for transshipment of goods to Egypt and the Mediterranean.

In the 17th century, however, when the Dutch and the English merchants supplanted the Portuguese monopoly and developed the Cape Route (free of Muslim control) transporting huge amounts of spices and other commodities directly to the European markets, Jeddah underwent a period of eclipse.

This period coincided with the arrival in power of the Ottoman Turks who swept over all of the Syrian and Palestinian Mamluk annexed the Red Sea provinces including Jeddah. Ottoman control that rule proved harsh on the Arabian provinces, lasted for four hundred years.

A major change in the city's history is related to the development of the Reform Movement that eventually conquered the whole of Hijaz in 1806, Makkah was conquered by the Najdi forces. The Ottoman Sultan decided to crush the growing influence and power of the Saudis. The military campaign in Arabia proved long and difficult, but finally ended with the destruction of the Saudi capital in 1818.

In 1849, the harsh re-imposition of Ottoman rule over Arabia provoked great discontent in the Hijaz. A *firman* prohibiting the slave trade, issued by Constantinople under European pressure, precipitated widespread subversion in Makkah. Almost ten years later, in 1858, xenophobic disturbances erupted in Jeddah and ended with the French and British consuls, and several other European residents of the city being killed in the riots. These events caused harsh international reactions and the leaders of the revolt were executed.

The opening of the Suez Canal in 1869, and the coming of steamboats that made the wind regime of the Red Sea irrelevant, marked the beginning of a new phase for the development of the city and of the region.

Though Ottoman control over the Hijaz was reinforced, the new waterway stimulated the growth of Jeddah as commercial trading port. Steam dealt a blow to the overland pilgrim routes, but proved a boon to the maritime ones.

Jeddah remained under Ottoman control until 1916, when a revolt in support of Arab self-rule led by the Sharif Hussein Ibn `Ali broke out. This Sharifian campaign, supported by the British, ended with the triumphal entrance into Damascus on 1 October 1918. Following the success of the Arab revolt, the city became the commercial capital of the short-lived Kingdom of the Hijaz. Abdulaziz Bin Saud became the uncontested ruler of the Hijaz and was crowned King of Hijaz in Makkah in 1926. In 1932, he proclaimed his reunited realm as the Kingdom of Saudi Arabia, becoming himself its first King.

With the security achieved under King Abdulaziz, the number of pilgrims and the related trade activities, coupled with oil revenues, greatly increased and Jeddah began developing outside its walls which were demolished in 1947.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis is structured to compare Jeddah in three ways: as a Red Sea city, as an Arab city and as a Hijazi city.

This analysis highlights Jeddah's context as part of a network of cities along the Red Sea Coast. There were other harbours along the eastern shore, such as Yanbu, Al-Wajh, and Qunfudhah, while further south, partially along the Red Sea coast and partially on the Arabian Sea coast, were the urban centres of Hodeidah, Mokha, and Al Mukalla. On the African coast of the Red Sea, the main urban centres were Suakin (built by Jeddah merchants), now in Sudan, and Massawa now in Eritrea, and further south along the East African coast, Lamu and Zanzibar, in what is now Kenya and Tanzania respectively.

Of these Jeddah alone has preserved a large urban area with traditional houses: Suakin has almost completely vanished, earthquakes and wars have destroyed old Massawa; while Yanbu, al-Wajh, Hodeidah and Mokha have lost most of their importance - although some traditional buildings similar to Jeddah do survive. Lamu is inscribed on the World Heritage List as is Zanzibar and although both contain coral buildings, neither exhibit the all elaborate tower houses of Jeddah, rather they reflect a different Swahili style of building.

The main emphasis in the comparative analysis is on the tower houses and proving that nothing similar exists. As well as considering the Red Sea and the East African coast, the analysis also looks at the Arab houses of Cairo, Baghdad and Damascus. In these cities the houses are normally inward looking built around courtyards rather than outward facing as in Jeddah.

In terms of inscribed sites the most useful comparisons are made with Cairo, Sana'a and Shibam which all share some similar architectural characteristics for domestic buildings. One type of Cairo's courtyard houses, the *mashrabiya*, with their extensive wooden patterned screens is seen to have influenced the houses in Jeddah, albeit those in Jeddah had screens made of different types of wood and with different styles of carving. Although having visual similarities in terms of their height, the well preserved tower houses of Sana'a and Shibam are seen to reflect quite different climatic zones.

The final part of the analysis compares Jeddah with other cities in the Hijaz region, notably Makkah, Madinah and Taif. Although very few traditional buildings remain in these cities, it is clear that although the pre-19th century Jeddah style influenced the inland cities of the Hijaz, there is nothing compared to the final flourishing of Jeddah's tower houses existing in the region.

The concentration in the comparative analysis on the tower houses means that there has been no overall analysis of the urban pattern of Jeddah, and particularly the influence of the hajj pilgrims, and no comparisons made in terms of urban form with other towns and cities along the Red Sea and the East African Coast, or in the Hijaz region.

ICOMOS considers that what has been presented needs to be augmented to allow comparisons of the overall idea of Jeddah as a city area shaped by trade and by the numbers of hajj pilgrims that it hosted. The tower houses are one important facet – but the nomination is not putting forward an ensemble of tower houses but rather an urban area of which the tower houses are a part, albeit an important part.

ICOMOS considers that the comparative analysis needs to be augmented in order that the property might justify consideration 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 old city of Jeddah:

- Represents a unique development of the Red Sea architectural tradition characterized by imposing tower houses, decorated by large wooden *roshan*-s, built in the late 19th century by the city's mercantile elites.
- Is the last surviving, urban centre of this cultural region that still preserve its original urban fabric of isolated tower houses, lower coral stone houses, mosques, *ribat*-s, *suqs* and small public squares that together compose a vibrant space.
- Reflects a cosmopolitan population where Muslims from Asia, Africa and the Middle East resided and worked contributing to the city's growth and prosperity.
- Throughout the centuries, has had a symbolic role as a gate to Makkah for Muslim pilgrims reaching Arabia by boat as part of the *hajj* annual pilgrimage.

ICOMOS considers that in essence this justification could be appropriate but it has not been substantiated in the nomination dossier by adequate details of the town planning and buildings to show that sufficient attributes survive. Although the characteristic of the tower houses are set out, the corpus of these buildings is not. The tower houses are the most characteristic structures, but the richness of the overall urban ensemble needs to be better understood through more specific details of its form and layout, and of the distinctiveness of its defined quarters such as the Yemen, Mazloum and Sham quarters. More details are also needed of the architecture of the *suqs*, the seven mosques that have not been described, and the *Zawiya*-s, and *wakala*-s. It also needs to be clearer how these historic elements inter-relate with the overall pattern of the city.

Given that some 50% of the fabric that was standing around 50 years ago has now been lost, including 650 out of 1,000 identified historic structures, there is a need to identify precisely what remains as a basis for future conservation that could ensure adequate integrity.

ICOMOS considers that the Outstanding Universal Value also needs to be linked to a timespan which is reflected in what has survived. ICOMOS considers that the city form that now exists reflects the final flourishing of the Indian Ocean sea trade after the opening of the Suez Canal in 1869 and the introduction of steam ships that linked Europe with India and Asia. This brought enormous wealth to many merchants who built lavishly decorated houses, and it also led to developments of *suqs* and mosques. In addition, the increase in sea going vessels allowed many more pilgrims to make the pilgrimage to Mecca, resulting in an expansion in the provision of accommodation for these visitors.

Integrity and authenticity

Integrity

As the nomination dossier acknowledges, the dramatic growth and transformation of Jeddah over the past 50 years has impacted on its ancient core particularly with the transformation of the harbour and the development of high rise buildings within the perimeter of the old city.

Nevertheless it is suggested that the way the boundary has been drawn has allowed the most altered parts to be 'carved out' and sufficient attributes to be included that are needed to express its value. Large parts of the Yemen, Mazloun and Sham quarters are said to have been able to preserve their overall original structure, and 'notwithstanding some incongruous building that scar the historic core, the property does not have substantial parts that have lost their values'.

ICOMOS considers that this is one of the crucial points with the nomination: whether adequate attributes have been included in the boundaries. From the information available it is difficult to confirm that this is the case. More data is needed on what has survived.

As only 50% of buildings that were in existence 50 years ago still remain, and as over two thirds of historic buildings have been demolished in the same period, ICOMOS considers that at best integrity is vulnerable.

It has to be acknowledged that Jeddah no longer has integrity as an intact historic city. What needs to be clearly and specifically demonstrated is how, within the nominated area that is smaller than the entire city, sufficient remains to allow an understanding of its former role and influence.

ICOMOS considers that it is essential that a detailed survey is provided as the basis for the statement of integrity that clearly sets out what remains in term of urban form and buildings that reflect the once pivotal role of the city in terms of trade and pilgrimage.

The nomination states that the Municipality of Jeddah is preparing a GIS survey of the old city recording all its plots and buildings. The information from this survey together with the update of the 1970 survey of historic buildings, and other studies mentioned, should provide the basis for a precise delineation of what survives in terms of buildings and urban plan, as a basis for integrity and also for future protection and conservation.

As so much has been lost, there needs to be a clear understanding of the integrity of the area nominated related to what survives, and the threshold beyond which its integrity would no longer be intact if further buildings were lost.

Authenticity

The nomination dossier states that the property is an authentic urban environment that conveys an image of

what this commercial Red Sea trade and pilgrimage city used to be.

ICOMOS considers that although its urban layout and some of the fabric in part of the old city still survives, it cannot be said that its former prosperity based on trade or its former strategic role in the *hajj* can be invoked by what now remains. The city is a shadow of the former thriving, prosperous place it used to be with many buildings abandoned or lived in by tenants who do not maintain them. However within the nominated area there are structures, and the remains of the urban layout that could be said to allow an understanding of the city's once pivotal role in the Indian Ocean trade and in the *hajj*. But this understanding will only fully emerge once many of the buildings are nursed back to life.

As with integrity, ICOMOS considers that this link between the urban ensemble and the earlier role of the city must be clearly made and to achieve this, more details are required.

ICOMOS considers that the conditions of integrity and authenticity have not been met at this stage.

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 cityscape of Historic Jeddah is the result of an important exchange of human values, technical know-hows, building materials and techniques across the Red Sea region and along the Indian Ocean routes between the 16th and the early 20th centuries.

Jeddah was for centuries the most important, the largest and the richest among these settlements and today *Historic Jeddah, the Gate to Makkah* is the last surviving urban site along the Red Sea coast still preserving the ensemble of the attributes of this culture: commercial-based economy, multicultural environment, isolated outward-oriented houses, coral masonry construction, precious woodwork decorating the façades, and specific technical devices to favouring internal ventilation.

ICOMOS considers that the heart of historic Jeddah could be seen as a response to the wealth generated by the Indian Ocean trade, that reflect the fusion of diverse cultural strands from this mercantile activity with the local Red Sea culture; it could also be seen to have influenced other inland cities in its hinterland such as Madinah, Makkah and Taif.

In order to justify this criterion, ICOMOS considers that it is essential that the attributes that convey this value are

more specifically defined. As set out under integrity, the historic fabric has been much reduced over the past fifty years and further erosion could reduce its ability to fully convey its value. The attributes thus need to be clearly defined to show what they are (in terms of buildings and urban form), how they are sufficient to reflect the influence that the city once had, and how they will be sustained in the future.

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 *Historic Jeddah, the Gate to Makkah* is the only surviving urban ensemble of the Red Sea cultural world and that its *roshan* tower houses are an outstanding example of a typology of buildings unique within the Arab and Muslim world. The development of the *roshan* tower houses in the second half of the 19th century, illustrates the evolution of the patterns of trade and pilgrimage in the Arabian Peninsula and in Asia, following the opening of the Suez Canal in 1869 and the development of steamboat navigation routes linking Europe with India and East Asia. This gave the city's merchants unique wealth and power that, in turn, permitted the creation of an extraordinary cityscape unrivalled along the Red Sea coasts. The property's major houses, dating from the 19th century, are particularly remarkable for their typology, the quality of their architecture, and their constructive and decorative details. They are the sole remnants of an architectural style born in Jeddah.

ICOMOS considers that although the tower houses are highly distinctive, what is being nominated is more than an ensemble of these grand, sophisticated structures, it is the overall urban fabric of part of the core of historic Jeddah.

This nominated area might have the capacity to be seen as an outstanding reflection of the way Jeddah developed at the end of the 19th century as a result of the wealth generated by the greatly expanded trade resulting from the opening of the Suez canal and regular, faster steam ships, but the specifics of the way the city developed at that time need to be more clearly defined and to encompass not only the tower houses but all other remaining aspects of this urban ensemble as well. ICOMOS considers that it is essential that these aspects of the historic city are clearly and specifically set out to show how in total they could be seen as an outstanding reflection of the final flourishing of Jeddah's prosperity as a trading and pilgrimage city at the end of the 19th century.

ICOMOS considers that this criterion has not been demonstrated 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 *Historic Jeddah, the Gate to Makkah* is directly associated, both at the symbolic intangible level and at the architectural and urban level with the *hajj*, the yearly Muslim pilgrimage to the Holy City of Makkah.

The association with the *hajj* is very evident in the urban structure of the nominated property, that include the traditional souks, the *ribat*-s and the *wakala*-s that used to host the pilgrims; in the architecture, notably in the façades and internal structure of the houses; and in the very social fabric of the city, where Muslims from all over the world mingled, lived and worked together.

The ensemble of these elements, tangible and intangible, is unique in the whole Islamic World.

ICOMOS considers that the Muslim pilgrims played a fundamental role in the development of the city, particularly in the third quarter of the 19th century and the early 20th century when Jeddah experienced an extraordinary prosperity partly from the greatly enhance number of pilgrims arriving by sea, (up to 100,000), and partly from much increased trade.

Since first the construction of the railway, then the opening of the airport at Jeddah, the relationship between the city and the *hajj* has become more symbolic with the special terminal at the airport being the gateway rather than the city, as pilgrims no longer need lodging.

Nevertheless, ICOMOS considers that the city is directly and tangibly associated with the way the *hajj* was conducted over a period of several hundred years and particularly in the final flourishing of the sea-borne pilgrims.

As with the other criteria, ICOMOS considers that more specificity is needed in terms of identifying the influence of the pilgrims on the city and specifically the accommodation that was provided for them such as in *wakala*-s and *Ribat*-s.

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

ICOMOS does not consider that the conditions of integrity and authenticity have been met at this stage and the criteria have been demonstrated at this stage.

4 Factors affecting the property

Due to lack of maintenance and unsympathetic construction processes, many traditional buildings and public spaces are in relatively poor condition. As a result,

many have serious structural problems which are compounded by alterations, internal partitioning, lack of water drainage infrastructure and poor repair work. Some lie unoccupied which adds to their rate of deterioration.

The Strategic Plan acknowledges the lack of adequate conservation expertise and the need for the application of the international principles of 'integrated conservation'.

Another significant risk to the historic buildings of Jeddah is fire, either intentional or accidental. Before the 2011 new regulations came into force which limits the height of new building to that of the pre-existing building, voluntary destruction of buildings through setting fire to them was not unknown in order to allow the construction of high rise replacements buildings.

A fire fighting system has now been installed.

The generally poor social conditions in the old city combined with the lack of maintenance and conservation of the buildings contributes to the negative image of the nominated area and its surroundings and mitigates against the urban fabric being seen as something that is valued and needs to be sustained.

According to information provided to ICOMOS, the proportion of historic building to new ones within the nominated property is about 50%, a statistic supported by the architectural analysis presented in the nomination dossier. Also according to the nomination dossier, there are about forty new buildings in the nominated property, less than half of these being of a height that affects the cityscape. These buildings, built after the 1970 survey, are technically 'illegal', but at the time being that qualification has no practical implication for their future.

New urban regulations – see below – should ensure no further historic buildings are demolished and new buildings respect their context.

ICOMOS considers that the main threat to the property is lack of maintenance and conservation that has led to a high proportion of historic buildings being in a poor or very poor condition, with some being structurally unstable.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the property have been drawn to encompass an area within which the historic buildings remaining are at their most dense. Although this defines an area that is less than the whole old city, it is a reasonably coherent entity.

The buffer zone encompasses the whole of the remaining areas of the historic city and in place areas beyond that.

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

Ownership

The majority of the 1,200 buildings in the property are privately owned and, in the case of houses, are rented out to poor immigrants.

A very small number are publicly owned (by the Municipality, the Saudi Commission for Tourism and Antiquities (SCTA) or other bodies). These include a group of recently restored buildings that now serve as offices the Historical Jeddah Municipality.

Waqf-s, a type of charitable trust, own some properties such as mosques, *ribat-s*, shops and also houses.

Protection

The Antiquity Law, as stated by the nomination dossier, does not include provisions for the protection of "urban heritage." The New Draft Antiquity Law, which would provide a legal basis for that protection, is still under review and has been since 2007.

New urban regulations brought in 2011 ensure protection for existing historic buildings, defined as all buildings prior to 1950, within the perimeter of the old city walls. They also limit the height of new buildings to 22 metres and in addition any new building on the site of a destroyed historic building is limited to the height of the pre-existing building.

For the buffer zone, four protective zones have been delineated, with the first zone enclosing the property and others radiating out beyond. The first zone includes the most historic buildings and these will be protected; in terms of new development this will be less restricted than within the property. In zone two, which contain many high-rise buildings, new regulation aim to reduce the height of further new constructions but also to protect what historic structures remain. Zone three, outside the line of the city walls, contains few historic buildings and will be managed to control heights and densities of new construction. Finally zone four beyond the ring road will be protected to ensure there is no 'uneven' development.

In February 2014, the State Party submitted Guidelines for building regulations to be applied within the nominated property and its buffer zone. These Guidelines do not have a formal legal status; they provide the conceptual and technical basis for the regulations that will be developed by Jeddah Municipality and will be integrated into the Municipal Building Regulations. Such regulations will ensure that all surviving historic buildings in the nominated property and the buffer zone will be preserved and restored according to internationally approved standards. They also set out

principles directing all architectural principles for the restoration of historic buildings, the reconstruction of historic buildings and the construction of new buildings.

ICOMOS considers that the legal protection in place needs to be strengthened and priority should be given to approving the new Antiquities Law that has been under review since 2007.

Conservation

Lack of conservation is the greatest challenge facing the nominated area, coupled with the lack of detailed surveys and inventories of individual historic buildings.

The municipality is planning a GIS survey of the historic buildings that remains from the 1970 survey. This will be a crucial basis for actual conservation work and for planning priority work.

Stabilising and conserving the 280 historic buildings within the nominated property and updating them with modern service is a project of enormous proportions. Given the serious structural problems that many face, ICOMOS notes that there is a need for immediate intervention in some cases. On the other hand, if the character and authenticity of the heart of the old city is to be sustained, then conservation should be done slowly, based on adequate evidence, and using craftspeople trained in traditional skills related to coral, lime mortars, plasters and woodwork, in order to optimising the retention of original fabric, to provide the necessary capacity building and to allow for traditional hand working all takes time.

ICOMOS considers that there is therefore an inherent tension between the urgent need for intervention and the need for interventions to be timely.

Conservation work is now beginning. Work on conserving four houses was started in 2008. These are now used by the Historic Jeddah Municipality, and the Jeddah Unit of SCTA. The supplementary information provided indicates that bidding for future restoration projects has now been started for seven heritage buildings in historical Jeddah within 18 months, and for twenty-seven heritage over 36 months, as well as for urgent consolidation projects for endangered heritage buildings.

It is also acknowledged that a longer term plan is of the utmost importance and the Jeddah Municipality is currently planning a five year programme. Supportive funding will need to be approved in forthcoming government funding plans.

One of the many difficult issues associated with conservation of domestic buildings is absentee owners. In order to address this issue, the supplementary information provided indicated that the Saudi Government is planning to take over these properties and create a special "Trust" in charge of their

management. At this stage no further details have been provided.

The restoration of the Masjid ash-Shafe'i, was begun in 2011 and should be completed by 2013. Preliminary research work for the conservation and rehabilitation of the Masjid al-Mi`mar has been completed and work should start soon.

Agreement has been reached between SCTA and the Ministry of Islamic Affairs concerning the preservation of historic mosques. This agreement allows SCTA, under the supervision of the Ministry of Islamic Affairs, to have responsibility for overseeing the restoration of major mosques across the country, with the restoration work being implemented by the Turath Foundation. The ongoing restoration of Ash-Shafe`i mosque is part of this programme.

A restoration project is also being planned for three *ribats* (Khonji al-Kabeer, Khonji al Sareer and Manoufi) in the nominated property, to be followed by some 8 more in the rest of the old city, to be used as cultural and social venues for the residents of the area. The additional information explains that this programme has been delayed.

The supplementary information states that SCTA is finalizing an agreement with the Ministry of Islamic Affairs for the acquisition of the ensemble of *Awqaf* properties (buildings associated with religious institutions) in Historic Jeddah. Some 115 buildings would be involved, including the 11 ribats.

Funding for these projects is in place – see below.

Some private initiatives are also emerging. The Conservation Society of Architectural Heritage in Jeddah, an association of owners, is considering the restoration of three small houses for use as studios or showrooms.

In terms of capacity building, regular training workshops were carried out on four historic buildings restored by the Municipality in 2008/2010. These were for contractors, workers and some local engineers. However, currently the employees and technical personnel of the Municipality, and of the Historic Jeddah Municipality, have not received specific training in conservation or in site management.

A Conservation Manual has been commissioned from the Ecole d'Avignon.

Overall there is high awareness of the need for appropriate training in traditional building techniques, for employing recognised heritage professionals, for identifying sources of traditional materials and above all to identify, and document sites within the property of historic and archaeological significance.

ICOMOS considers that a detailed road map that sets out how the massive, long-term conservation project to turn round the fortunes of the nominated property, through stabilising and conserving the historic buildings and generating new uses, still needs to be initiated, resourced and approved.

Such a road map will need depend on private initiative as well as public support and the ability of businesses to find innovative investment models. It will also need the support of property owners and the involvement of tenants. It should also be underpinned by detailed surveys and analysis of the properties.

As development of the tourism industry is now seen as a political and economic priority, provision for both visitors and pilgrims is seen as being part of the revitalization of the urban city centre.

ICOMOS considers that the overall conservation of the nominated area is a massive long term project which needs to be supported by a much more detailed road map and underpinned by a detailed database.

Management

Management structures and processes, including traditional management processes

The Municipality of Historic Jeddah is a branch of Jeddah Municipality that was formed in 2010 to coordinate the management of Al Balad, the area formerly within the old city walls. It thus encompasses the nominated area and much of the buffer zone.

This municipality works with the Saudi Commission for Tourism and Antiquities (SCTA) on the day-to-day management of the nominated property.

A property management team is composed of representatives from the Historic Jeddah Municipality and the Jeddah SCTA Unit. This team reports to a Committee under the Governor of the Makkah Region and is supported by a Technical Committee created in 2012. Unlike the arrangements envisaged in 2008, at the time of the first nomination, when the rehabilitation of the city was linked to an overall 'private developer', ICOMOS notes that what is now envisaged are a number of public-private initiatives under the umbrella of the Municipality.

The nomination dossier asserted that the current staff of SCTA Jeddah does not include any Architect and "cannot cope with the complexity of the ongoing projects". At the time of the ICOMOS technical evaluation mission, this lack of expertise was being addressed and arrangements made to fully staff a local SCTA property management office which it is anticipated will be completed by the end of 2013. The supplementary information provided states that a new Director of the SCTA Historic City Office has been appointed and confirms that the office is fully staffed.

The Government has already allocated \$55 million over the next four years for studies, urgent conservation, and current projects, which should ensure that current projects are adequately funded and temporary protection is provided for unstable buildings.

In terms of future resources, the nomination dossier states that the national Government is committed to supporting the on-going and planned programmes on an on-going basis. The supplementary information also states that the Saudi Government is planning the creation of purposely designed "Special Fund" to financially support the revitalization process in Historic Jeddah.

Two national programmes are being developed to support private initiatives. One is the Tamkeem programme that aims to develop local technical, financial and administrative coordination for heritage projects. The second, the Credit programme, provides interest free loans. Currently operating in al-Ghat, it is anticipated that it will be extended to the nominated property.

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

A short management plan was developed in 2008 at the time of the first nomination and this has been implemented since 2010. This plan set out economic, social, heritage conservation and rehabilitation objectives and guidelines for action and the basic management structure which has since been augmented and refined as noted above.

The nomination dossier states that a new management plan is being developed by the SCTA and Jeddah Municipality, and will be implemented with the funds that the Central Government plans to allocate in the coming years.

As the scope and size of the nomination has changed since the first submission, as well as the way rehabilitation and conservation will be organised, ICOMOS considers that the revised management plan needs to be completed and approved as soon as possible to guide the way the substantial challenges that face the property will be addressed.

Jeddah's location between Madina and Makkah and its proximity to Makkah has made the city a principal pilgrimage gateway to the two Holy Cities. Most Hajj and Umrah pilgrims pass through Jeddah either on their way to or following their journeys to the Holy Cities.

According to the statistics gathered by SCTA and the Municipality, the city of Jeddah receives some 12 millions of pilgrims per year. Pilgrims land in the city before reaching Makkah and it is estimated that some 30% of them stopover in the city.

Cultural tourism is at an early stage of development and the number of tourists in the old city is still very limited, although recent Festivals are beginning to attract visitors from other cities within Saudi Arabia. The development of suitable facilities to receive tourists is one of the elements of the plans being developed jointly by the Municipality of Jeddah and the private sector. Three new museums are now being planned (one in the nominated area).

It is stated in the supplementary information, that the SCTA and Jeddah Municipality are finalizing an agreement for the expropriation of 10 historic buildings located along the main historic axes / tourist trails to be restored and reused for tourism-related activities.

Awareness raising programmes are being developed on the SCTA official website to provide an overview of the ongoing and planned projects and of the efforts being paid by SCTA for the revitalization of the nominated property.

Overall the management structure is still in its infancy and has yet to be proved in terms of its effectiveness in driving forward conservation and regeneration programmes. Nevertheless there appears to be strong support at national and local level to make it work.

ICOMOS considers the management system as a structure appears to be satisfactory but has still to be tested in terms of how it might facilitate and drive forward the major conservation work that is needed in the nominated area through fostering public-private initiatives. There is a need to complete, approve and implement the revised Management plan as soon as possible in order that it may be used as a framework for the substantial rehabilitation and conservation work that need to be addressed.

6 Monitoring

Monitoring is a process that has the highest applicability for this property in terms of assessing the full significance of the assets, their stability and state of conservation and future conservation and development projects.

A number of indicators are set out in the nomination dossier related to rate of deterioration, number of fires, number of restoration projects, tourist statistics, etc., most monitored on annual basis. Whereas these might be appropriate for a property where the buildings are adequately conserved, they are in no way adequate for the core of the old city where, it is acknowledged, urgent action is needed to halt degradation, address abandoned and squatted buildings and kick start a massive urban regeneration project.

ICOMOS considers that the first and most urgent monitoring tool relates to putting in place an adequate

database of the historic fabric, the urban plan and the corpus of historic buildings.

ICOMOS notes that the nomination dossier states that the new management plan and the funding promised to implement it will permit the implementation of a monitoring strategy. As monitoring would appear to be of the utmost urgency, this means that the finalisation of the management plan and the allocation of funds to implement it are also urgent.

ICOMOS considers that the monitoring process needs to be underpinned by a detailed database of the heritage assets and put in place in the immediate future.

7 Conclusions

The significance in general terms of Jeddah as a strategic and prosperous port for the Indian Ocean trade, and as a base for sea borne pilgrims on their way to Mecca, especially in its final period of prosperity at the end of the 19th century, has been well set out in the nomination dossier in general terms: what is missing are the specificities.

Only part of the historic city is nominated and within that area much of the urban fabric has deteriorated or disappeared over the past fifty years.

If what is left in the nominated areas is to be seen as a microcosm of the once thriving multi-cultural port city, that reflects all its facets and especially those that underpinned its prosperity: trade and the *hajj*, then the attributes that convey those links must be clearly and specifically set out.

Although the nomination dossier is much augmented since the first nomination, it does not provide the necessary detail to show how what has survived is sufficient to substantiate the proposed value of the nominated area.

ICOMOS considers that such a detailed database must be provided to show the specific and precise details of the surviving historic built fabric, not only for the aesthetically remarkable tower houses, but also for the dense accumulations of lower houses, the ensembles of structures that related to trade, religion and the accommodation of pilgrims, and for the overall urban form and its division into clearly defined quarters.

The nominated area is now a pale reflection of the prosperous city it once was. Many of its buildings which were built to reflect the wealth and influence of its successful citizens are crumbling through lack of maintenance and some are structurally unsound. In the nominated area only about 50% of the buildings that were there fifty years ago remain. Integrity is thus stretched and it is essential that there is no further erosion of the urban fabric. The detailed database

should also define the integrity of the area nominated and the threshold beyond which its integrity would no longer be intact if further buildings were lost.

As the majority of its historic structures are in private ownership with owners that are absent, the task of sustaining them for the future is immense. Although the nomination dossier exudes confidence that this can be achieved and provides commitments to support this process, the difficulty of putting in place public-private partnerships to achieve this goal cannot be overestimated, nor of controlling the overall process.

ICOMOS considers that currently the nominated property could be seen to be in danger in term of its vulnerability to erosion of historic fabric.

ICOMOS considers that a desired state of conservation for the property should be provided that sets out what condition could be achieved once the current decline of many buildings has been reversed.

An detailed overall road map of the way forward also needs to be provided, within the context of a revised and approved Management Plan, to show how such a state of conservation might be realised. The supplementary information provided in February 2014 suggests that such a road map is being envisaged and needs to be developed.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of Historic Jeddah, the Gate to Makkah, Kingdom of Saudi Arabia to the World Heritage List be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Provide detailed database of all attributes relating to the potential Outstanding Universal Value of the property and in particular details of all the tower houses, other urban houses, the *wikala*-s, *wakala*-s, *ribat*-s, mosques and *Zawiya*-s; and of the urban form and defined urban quarters, in order to show how these might be said to reflect all the facets of the once thriving multi-cultural port city, especially trade and the *hajj*;
- Strengthen the comparative analysis to encompass elements related to urban planning, trade and the accommodation of pilgrims;
- Put in place national protection, through approving and implementing the 2007 Antiquity Law currently under revision;
- Complete, approve and implement the revised Management Plan;

- Provide an overall assessment of the state of conservation of the 280 historic buildings in the nominated area and a desired state of conservation for the whole nominated area, including a definition of the integrity of the nominated area and the threshold beyond which its integrity would no longer be intact if further buildings were lost;
- Set out a detailed overall road map and timescale to show how the desired state of conservation of the nominated area will be achieved and how systems to ensure long term conservation will be established.

ICOMOS recommends that the name of the property be changed to 'Historic Jeddah, a Gate to Makkah'.

ICOMOS remains at the disposal of the State Party in the framework of upstream processes to advise them on the above recommendations.

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



Urban fabric of the historic city



Suq al-Alawi



Masjid al-Mi'mar



Tower house

Khor Dubai (United Arab Emirates) No 1458

Official name as proposed by the State Party

Khor Dubai (Dubai Creek)

Location

Dubai, Emirate of Dubai
United Arab Emirates

Brief description

Khor Dubai presents the first 4.5km of Dubai Creek, a natural seawater inlet of the Arabian Gulf. The property includes the waterway, its two banks and the three adjacent best-preserved neighbourhoods of Al-Ras, Bur Dubai and Shindagha. The creek was the traditional trade hub in the heart of the city. This commercial function continues to be documented through the inclusion of the spice and gold souk (market) and the passage and anchoring of traditional wooden boats trading goods and transporting people. The residential quarters are characterized by an architectural synthesis of different styles and cultural influences.

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*.

1 Basic data

Included in the Tentative List

30 January 2012

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Historic Towns and Villages and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 20 to 25 October 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party on 4 October 2013 requesting additional information with regard to the justification of Outstanding Universal Value, the global comparative analysis, the inventory of historic houses in the property, an overview of restoration and reconstruction work for each property and further imagery. The State Party provided additional information in response to the questions raised on 6 November 2013. ICOMOS received further additional information not responding to a request by ICOMOS on 28 February 2014, which provides updates on latest implementations in management and community involvement. The information provided is included under the relevant sections below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Khor Dubai, a 166-hectare area located in the centre of the city of Dubai and its historic nucleus, is a trade harbour in the seawater creek around which the Dubai settlement developed in the early 19th century. The creek continues to be a place of trade with active boat traffic and several commercial structures along its banks. The creek divides the city into two parts named Deira and Bur Dubai, which are nowadays linked by a series of four bridges and a tunnel.

The northern bank of Deira was traditionally used for cargo loading and debarkation. Close to the banks however, there now runs a road, constructed in 1975 following dredging to reclaim land for new infrastructure, which reduced the width of the creek waterway by 20 meters. New dhow docks were constructed in the 1990s along three piers, to load and unload goods and are included in the southern section of the property. Although recent architectural structures, these docks are seen to play a major role in the development and preservation of commercial life in the creek. The souk of Deira was the largest in historic Dubai and its activity was closely linked to the creek. Today the gold souk in Deira accommodates more than 300 retailers, the majority of whom trade in jewellery.

The southern bank, along which the neighbourhood of Shindagha is located, presents the recently constructed pier structure, mostly used by water taxis and tourist cruises. Shindagha was the settlement previously located on a narrow strip of land at the entrance of the creek, a privileged position as it allowed for control of the Dhow movement. All historic structures, with exception of the mosques, were demolished in the 1980s following documentation by the municipality. The reconstruction project of Shindagha was later launched based on this documentation.

Further inland on the southern bank is the souk of Bur Dubai, the former areas of the ruler's court and the neighbourhood of al-Faheidi. In the past, the souk was an elongated entity with 12 gates, of which the outer ones would have been locked at night. Al-Faheidi, also called Bastakiya, represents one of the three architectural, historical and urban sectors, in which a group of wind-tower houses has been restored. In this section, the creek mooring areas are occupied with wooden dhows, which were Dubai's trading lifelines in the past. However, today they are mostly used for touristic trips and floating restaurants. Whilst the former wharfs have disappeared, a refurbished historic dockside crane remains as a memorial to Dubai's creek side wharfs and their key role in Dubai's development.

The three neighbourhoods which are included in the property, Deira, Shindagha and al-Faheidi, illustrate the residential and commercial architecture created in response to influences of trade exchanges. Architectural structures include defensive, domestic & public buildings, courtyard houses with wind-towers that differ in size due to the varying social status of the owners, traditional shopping markets (souk) and small-scale neighbourhood mosques. The traditional houses of Dubai were inwardly oriented courtyard houses decorated to the outside only by means of their elaborated wind towers, doors and colourful glass windows.

History and development

The city of Dubai was founded as a small pearling settlement at the end of the 18th century. During this and the early 19th century the settlement had witnessed a number of struggles for maritime supremacy in the Gulf, in particular between the tribes of Bani Yas and Qawasim. Following British interference, the situation stabilized through the arrangement of a peace treaty amongst the leaders of Trucial Oman. In 1833 a group of around 800 members of the Al Bu Falasah tribe settled in the Dubai creek to form the independent Sheikhdom of Dubai following disputes with the rulers of Abu Dhabi. The sheikhdom was initially ruled by Maktoum bin Buti (1833-1852) and all subsequent rulers of Dubai descend from the Maktoum family.

During the 19th century Dubai remained a minor urban pearling centre and its economic sustenance depended on two export goods, pearls and dried fish. Most of the population resided in Bur Dubai, which was surrounded by a defensive wall. The majority of residential buildings were constructed of palm fronds. In the second half of the 19th century, Deira and al-Shindagha had become separate settlements following earlier epidemics in Bur Dubai and the creek became a regularly frequented trade centre as a result of a change in taxation policies on the northern side of the Gulf which caused merchants to move southwards and brought increased trading activities with India and in the Arabian Gulf to Dubai.

Around the turn of the 20th century, Dubai grew rapidly and became one of the key pearling centres in the lower Gulf. The striving local economy and its multicultural

merchant community characterize Dubai until today. It continued to prosper until the inter-war period in the 1920s when the world pearl market went into recession due to the introduction of Japanese cultured pearls. Much of the trading business was sharply curtailed and trade with India become interrupted during World War II. During the 1950s prosperity increased again, now based on gold trade, and wooden dhows crowded the creek again for the actively revived India trade. The creek was deepened by dredging for the first time in 1958-9 to allow larger boats to enter the docking facilities.

In the 1960s oil was discovered offshore and soon Dubai granted concession licenses to international oil companies. Oil revenues enabled the government to undertake major infrastructure works and redevelop the creek area in the 1970s. The discovery of oil also led to an influx of foreign workers who required housing, and hence to urban development and expansion. As a result of the rapid urban expansion several subsequent master plans were developed to guide the development of roads as well as commercial and residential units. Major transport developments including the creek tunnel and bridges were initiated and the international import and container harbour was developed on the other side of the creek.

Since the 1980s rapid urban expansion continued. A strategic master plan developed in 1993 for 2012 was by far exceeded as a result of tremendously-fast urban and economic development. A series of large-scale mega-projects have been launched and realized, some not too far from the nominated property. A new master plan Dubai 2020 has recently been approved and a more general strategic vision for the city, Dubai 2050, has also been put forth.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analyses aims to compare Khor Dubai with other sea trade settlements throughout the world following three main aspects considered to be of key importance to the Outstanding Universal Value. These are the specific commercial role in the exchange of trade which brought forth a unique urban landscape of Dubai, its key role in international trade relations in a larger regional context of the Indian Ocean trade and thirdly the specific architectural qualities of Dubai as opposed to architectural and urban structures in other trade centres.

In the first section focused on trade centres in the Gulf, Khor Dubai is weighed against other coastal pearl trade settlements, including Sharjah and Ras al-Khaimah, both in the United Arab Emirates; Muharraq, Bahrain, partly World Heritage property as Pearling Testimony of an Island Economy (2012, (iii)); Al-Zubarah, Qatar, listed as an archaeological site (2013, (iii), (iv), (v)); Bushehr, Bandar Abbas and Bandar Linge, all three in Iran. The analysis concludes that like Dubai most of these

settlements developed around creeks or natural harbours. Yet, it is concluded that in Dubai the morphological element of the creek remains more visible than in the other settlements in defining the historic and contemporary urban structure and development.

The following consideration of Indian Ocean trade centres compares Macao, inscribed as the Historic Centre of Macao, China (2005, (ii), (iii), (iv), (vi)); Melaka and George Town, Historic Cities of the Straits of Malacca, Malaysia (2008, (ii), (iii), (iv)); the Historic Town of Vigan, Philippines (1999, (ii), (iv)), and the Stone Town of Zanzibar, Tanzania (2000, (ii), (iii), (vi)). It is shown that in these cities the urban structures and wharfs differ, mostly because of other trade goods which characterise the setup of loading and unloading docks.

In the third section which is focused on architectural elements, the State Party analyses how the architecture of Dubai can be said to be a product of specific active trade exchanges as opposed to other settlements in the wider geo-cultural region. Comparisons are made with wind towers in specific locations including Yazd, Lingeh and Bastak in Iran, as well as Manama and Muharraq in Bahrain. The section concludes with the claim that Dubai represents the sole remain of a coherent urban district with wind towers on the Arabian side of the Gulf.

In the additional information provided at the request of ICOMOS, the State Party further highlighted that Khor Dubai should preferably be compared in the regional context of the Gulf as its urban form illustrates the particularities of the regional development patterns in a unique way. The construction of wind towers, an important element developed on the northern side of the Gulf, shows the direct influence of trade relations and is said to be seen solely in Dubai when considering the southern Gulf context. It is highlighted that the urban and architectural scheme was at no time a colonial imposition but has uniquely developed in its local cultural context.

ICOMOS considers that Dubai shows remains of an urban and architectural development which retains sporadic reminders of the urban development of a pearl settlement on the southern Gulf coast and which indeed reflects the exchange of architectural elements and technology from the Northern Gulf coast and the Indian Ocean trade. However, ICOMOS considers that it has not been illustrated how these remains could be seen as of Outstanding Universal Value in regard to the combination of a natural harbour and the introduction of urban and commercial functions on a global scale.

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:

- The creek was the nucleus of the urban development of Dubai as a trading and fishing port, which – despite the city’s massive growth – continues to represent the very heart of the historic commercial and residential quarters.
- Traditional wooden dhows continue to carry people and goods along the creek in the traditional way, unloading and selling valuable merchandise along its banks and in the nearby souks.
- The residential and commercial quarters form an exceptional urban landscape characterized by traditional wind tower houses, a traditional feature responding to the extreme climatic conditions in the region.
- Khor Dubai and its surrounding historic quarters is an outstanding ensemble characterized by the fusion of natural, architectural, social and cultural components into a unique historic urban landscape.

ICOMOS considers that this justification highlights how the contemporary creek of Dubai testifies to its historic appearance and how the residential neighbourhoods integrate structures which illustrate remains of significant regional styles and typologies. It does however not illustrate how Khor Dubai could be seen as of Outstanding Universal Value as a trade centre or urban development around a creek or natural harbour setting from a global perspective. In the additional information provided at ICOMOS’ request, the State Party argued that the geography of Khor Dubai is noteworthy and relatively uncommon and that it belonged to a transboundary and transcultural Gulf environment, which was not fully comparable to other maritime trade centres but directly dependant on its immediate hinterland.

ICOMOS considers that even the ambiguous status of a maritime and hinterland trade centre is only relevant in the 19th and early 20th century, when the lack of transport opportunities limited hinterland movement, and that this feature is no longer reflected in the urban structure. ICOMOS also considers that Khor Dubai’s capacity to symbolize or represent an outstanding example of an urban and residential development of a 19th and early 20th century trade centre is rather limited as a result of its significant reduction of historic architectural substance and urban patterns as well as the changes of the shape and mouth of the creek. The neighbourhoods included in the property were partly demolished and reconstructed and in other cases extensively restored and now provide an impressive imagination of what the city may have looked like half a century ago. ICOMOS however does not consider that reconstructions, even of the highest quality, can represent a unique representation of what they attempt to recreate.

Integrity and authenticity

Integrity

The waterway of the creek, including its natural topography, has undergone consistent transformation in the second half of the 20th century. The present layout is

the result of the works in the 1970s, when land was reclaimed to allow for new infrastructure and buildings. The original spatial relations of the three settlements, the natural features of the creek and the landscape surrounding it, have changed considerably, often to the extent that its features are difficult to recognize when historic and contemporary aerial photographs are compared. The former functional relations between the creek docks and the merchant houses have been interrupted by landscaping and mid-size residential housing. On the northern bank the creek was substantially altered with the construction of contemporary wharves north of al-Maktoum Bridge.

Likewise the three neighbourhoods in the property have undergone significant alterations. When comparing the contemporary architectural substance with historic imagery, it becomes clear that the majority of al-Faheidi district was demolished except for the Bastakia cluster of houses which still exists. This small portion of traditional urban fabric in al-Faheidi area has retained the spatial organisation of plots and narrow streets. Unfortunately however, the spatial and functional relations between these houses and the creek have been severely affected by recent urban development of modern buildings along the edge of the creek. The setting of the al-Faheidi district is strongly affected by 20th century medium- and high-rise buildings which have changed the urban skyline. In order to mitigate the view on those buildings from inside the small streets of Bastakia, the Architectural Heritage Department has built urban screen walls inspired by the local architectural tradition.

The quarter of Shindagha was systematically demolished since the 1960s and a large reconstruction programme started in 1995. The philosophy on which the reconstruction was explained to be based, is analogous to Post World War II reconstructions undertaken in Europe from the 1950s onwards. The reconstruction is deemed necessary as a result of the rapid loss of cultural memory and identity in view of the massive urban and economic growth. The physical reconstructions have been carried out in traditional materials such as coral stone, mangrove trunks or sandal beams and traditional mortar made of sand, lime and gypsum, according to very detailed and accurate designs.

Whilst the traditional spice souk of Bur Dubai was partly demolished, the remaining part seems to also present an appearance which could be close to its historic outlook. The gold souk on the other hand has unfortunately been completely refurbished and lost its traditional character. ICOMOS considers that while the commercial activities in Khor Dubai continue to function, the original physical features and setting of this urban context as a whole, as well as the spatial and functional interrelations of creek, commercial and residential quarters, have been largely modified and have lost a significant part of their intactness and completeness. ICOMOS consequently considers that the condition of integrity has not been met.

Authenticity

The water way of the creek has changed in form and location but also its setting can hardly be compared to how it might have been half a century ago. The majority of the three commercial and residential neighbourhoods included in the property were demolished from the 1960s onwards and only few houses have been preserved in their original design and substance. Most buildings in the neighbourhood are late 20th century structures and the Architectural Heritage Department encourages renovation of these contemporary buildings to restyle their facades according to traditional architectural vocabulary. Following this trend, underground stations have been designed as traditional buildings with wind towers aimed at creating a historical urban scenery.

ICOMOS notes that, with the exception of the waterway and some of the banks and markets, major parts of the property have lost connection to their historical use and function. The few remaining historic houses have been restored – some rather extensively – and do no longer function as residences, but are reused as cultural institutions, museums and foundations or small hotels. While these functions sustain the future maintenance of the structures they have also changed the atmosphere of what was once a vibrant residential merchant quarter.

The reconstruction of houses in the three different neighbourhoods has been based on prior archaeological excavation of the foundations, which in many cases identified the architectural layout, and on aerial photographs from the early 20th century, which assisted in creating a resemblance of the former elevations of the external facades. The internal organisation of the houses has been reconstructed in light of memories of former residents who have sometimes also drawn plan sketches as part of a wider oral history survey. Decorative elements have been created according to a style catalogue established by the Architectural Heritage Department based on an inventory of decorative elements in historical Dubai.

ICOMOS considers that even though the few remaining traditional buildings can be considered the last testimonies of the traditional Khor Dubai dwellings, and that the reconstructions sometimes provide a good imagination of what Dubai must have appeared like half a century ago, these quarters cannot constitute a significant architectural or urban ensemble which would allow for demonstration of Outstanding Universal Value. The property provides ideas of the historical context but the present condition of its physical attributes and their functional and morphological relation does not meet the condition of authenticity.

In conclusion, 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 (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 commercial activities which took place on and around the creek facilitated a significant interchange of human values and created a unique urban landscape, in which elements and forms of different architectural styles have melted. The State Party emphasized in this context the coexistence of different architectural features, in particular courtyard houses with wind towers, as an innovative response to the harsh climate in the Gulf region.

ICOMOS considers that it has not been demonstrated how the remains of this architectural and urban heritage demonstrate, in an exceptional way, such an important interchange of human values. The stylistic elements are representative examples of the architectural language in the Gulf region, which in several places is characterized by a combination of different styles and influences from especially Persia and India. ICOMOS considers that the capacity of the site to represent an important or unique example of this style was reduced by the demolitions of architectural structures and the changes in urban patterns that took place during the second half of the 20th century, and that the authentic remains are too fragmented to be considered a unique urban landscape.

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 Khor Dubai is an exceptional example of a traditional human settlement characterized by the interaction with a peculiar marine environment. Thriving on maritime trade, pearling and fishing the Khor Dubai developed as an important commercial centre in the late 19th and early 20th century and provided a safe harbour for wooden boats that crossed the Gulf.

ICOMOS considers that Khor Dubai has been one of the commercial trade centres in the southern Gulf from the late 19th century which developed around the natural harbour qualities of the creek. However, ICOMOS considers that the changes to the traditional human settlement have been very significant over time, in particular that the entrance and shape of the creek was modified, the urban patterns adjacent to the creek changed and the few remaining historic ensembles of architectural structures lost their relation to the banks of the creek as a result of recent midrise developments

placed along its banks. ICOMOS considers that Khor Dubai can no longer be seen as an outstanding example of a traditional human settlement.

ICOMOS notes the arguments of the State Party that intangible and movable elements contribute to the attributes representing this criterion, including the continuing trade activity of dhows on the creek and the economical dynamics that remain the *raison d'être* of the modern city. However, ICOMOS reminds that the World Heritage Convention is a site-based convention which, although it recognizes other associations, requires the key attributes to be tangible and immovable.

ICOMOS considers that this criterion has not been justified.

In conclusion, ICOMOS does not consider that the criteria have been justified. ICOMOS further considers that the conditions of authenticity and integrity have not been met.

4 Factors affecting the property

The past and present key factor which negatively affected and affects the property is rapid urban development. Despite reconsideration of some of the giant projects planned before the recent economic crisis, Dubai continues to expand, both in horizontal and vertical dimensions, with impacts on urban patterns and the cityscape. The nomination dossier provides a good overview of all ongoing and planned development projects and several of these will further alter the urban characteristics and setting of Khor Dubai.

Two major development projects are planned in the immediate vicinity of Khor Dubai, the Palm Deira project, which is situated just outside the mouth of the creek at the sea coast and the Jewel of the Creek project which is under realization just adjacent to the Al Maktoum Bridge which marks the south limit of the property. Palm Deira is a large scale urban development project launched in 2004. The original plan foresaw new settlements for 250,000 people on this land reclamation, but the plans have now been downgraded with a final design yet to be decided. While the original plan could also have affected the hydrodynamics of the creek, further hydrodynamic studies will need to be conducted for the revised design. The Jewel of the Creek project is a new large-scale construction at the southern boundary of the property, which is suggested without a buffer zone in this area. Currently under construction, the project will include five 17 storey buildings and twelve 19 storey buildings of curved ovoid shape. ICOMOS considers that this project will further adversely impact the setting of the property. Reconstruction projects for historic houses are continuing in both Shindagha and al-Faheidi.

The additional information received on 28 February 2014 indicated a number of new or revised projects related to the approval of Dubai's hosting the Expo 2020. Among these is a project proposal to extend the creek further west by an artificial canal-like waterway and provide a second coastal access to the creek area. The Pearls Walk is a upgrading project for both sides of the creek providing infrastructure for pedestrian walkways and further underground parking.

Dubai is a major tourism destination, yet the Khor Dubai does not yet receive a heavy share of visitors. Although an accurate analysis of visitor numbers to the property is not available, large visitor conglomeration only occurs in the markets, such as the gold and spice market. Here a certain amount of crowding is expected and is in fact part of the traditional atmosphere. Even if visitor numbers are to increase significantly in the future, the extensive restoration works undertaken on historic buildings as well as the change of function of previously residential buildings towards visitor centres with infrastructure facilities, will reduce potential negative impacts due to increased visitor numbers.

The Khor Dubai is affected by air pollution mostly caused by the car and ship traffic along the creek. Many of the past urban development but also tourism and recreation activities have negatively affected the marine environment of the creek and caused drastic changes in water quality, as a result of an influx of organic matter, heavy metals and petroleum hydrocarbon pollutants. According to the State Party more than 100 tonnes of dead fish were washed ashore on the banks of the creek in 2009 alone. Since then, a series of awareness raising activities has been launched and volunteer divers have collected rubbish from the creek bed. According to additional information provided on 28 February 2014, a volunteer campaign started in September 2013 collected 23 tons of rubbish in the creek during a period of six months.

Dubai Municipality operates a comprehensive risk management plan which addresses earthquakes, storms, floods and sea tides. However, since the Arabian Gulf is not an earthquake prone region and the Gulf itself as a sea too shallow to create major risks of Tsunami or flooding, these risks are largely theoretical. Likelier risk factors include fire, especially in multi-storey buildings, perhaps even with resulting building collapses. These have also been addressed in the risk management plan.

ICOMOS considers that the main threats to the property are continued large scale urban and infrastructure developments and heavy water pollution of the creek.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The nominated property measures 166.5 hectares in size and comprises the initial 4.5 km of Dubai creek, its banks along both sides as well as three neighbourhoods, the al-Faheidi district with the enclave of Al Fahidi Fort, Shindaga quarters on the southern bank and the Al-Ras district comprising the Spice and Gold Souks on the northern bank of the property. ICOMOS considers that the property has undergone many changes during the second half of the 20th century and now includes elements which can no longer be considered authentic. ICOMOS hence considers that the boundaries are not appropriate to reflect a historical architectural or urban complex.

The buffer zone of 240 hectares covers both banks of the creek and is set approximately parallel to the waterway. It is a heterogeneous urban sector which includes very large plots with modern constructions as well as skyscrapers. No buffer zone covers the property to the south where one of the key development projects currently underway is located, the Jewel of the Creek. Likewise a buffer zone extension to the other three directions would not be sufficient to protect the cityscape that provides the visual setting of the property. However, ICOMOS considers that the setting has already been adversely impacted by past development and that it will no longer be possible to protect an adequate setting for the nominated property. ICOMOS hence considers that even if the protective regulations currently under discussion were adopted, the proposed buffer zone would only be able to avoid further disintegration of the urban context.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are not adequate.

Ownership

The waterway of Dubai creek is owned by the Emirate of Dubai and is managed by the Dubai Municipality, which is in charge of navigation control and maintenance. All historic buildings within the property are state owned and belong to the Emirate, the Dubai Municipality or other government agencies. Mosques in the property are under the ownership and administration of the Islamic Waqf system. Only the shops in and along the souks and the modern constructions in the area are privately owned.

Protection

A legislative process for a federal law of antiquities was initiated in the 1990s and since then several drafts have been prepared. However, the law has not yet been formally adopted and the highest level of national protection lies hence with the individual emirates. The Emirate of Dubai has no cultural heritage law but regulates cultural heritage aspects in the municipal bylaws. This applies to the nominated property of Khor Dubai which is partially protected on the basis of the Dubai Municipality's bylaws, according to which the

Municipality's Architectural Heritage Department is responsible for all historic structures located in Dubai. Historic structures are defined as structures built in the 1960s or earlier. Part of the property is located in the Dubai Historical Zone, for which the Architectural Heritage Department has been given general responsibility on all structures. However, architectural structures of recent origin and the property areas that fall outside the historical zone are not presently protected as monuments or historic urban structures.

The Architectural Heritage Department was established in 1994 and the historical zone was protected in 1996. Since then, the protective mechanism operated under basically the same bylaw situation which exists today. ICOMOS notes that most adverse measures, in particular the demolition of the historic districts, were undertaken much earlier than this, but regrets that even since 1996 numerous developments were approved and implemented without adequate Heritage Impact Assessments or considerations for the setting of historic resources. ICOMOS considers that at present only parts of the property are formally protected and that based on past experiences the protection mechanism does not seem to be fully effective. ICOMOS notes that according to the latest information provided new urban regulations are being prepared which will formally address height restrictions within the property boundaries. The buffer zone at present is not protected by municipal bylaws but negotiations between the different departments of the Dubai Municipality have commenced in order to create an adequate regulatory framework. In the additional information provided on 28 February 2014 the State Party notified that the buffer zone boundaries had now been integrated into the municipal GIS database.

ICOMOS considers that the legal protection in place is not yet adequate.

Conservation

After a phase of fast pace development in the second half of the 20th century, a policy change has created a stronger focus on the populations roots and identity which went hand in hand with the desire to reconstruct the previously demolished quarters and preserve the few remains that had survived. Comprehensive reconstruction projects were launched in 1996 which were aimed at recreating previously demolished historical neighbourhoods based on historic aerial photographs and archaeological evidence. In the Shindagha district; the reconstruction of traditional building is ongoing. Houses in Dubai were originally built in coral stone and gypsum mortar; since the 1950s concrete building structures and cement-rendered surfaces have become familiar sights, together with standard elements of European architectural typology. The Architectural Heritage Department, as a matter of principle, conducts restoration activities in the materials and forms that a structure was originally built with.

The few remaining historic architectural structures are in a good state of conservation as a result of intense restoration and regular maintenance. However, the

current state of conservation of the creek waterway raises concern with regard to its level of water pollution and the condition of the marine ecosystem. ICOMOS considers that efforts towards the improvement of the waste management system need to be urgently initiated.

ICOMOS considers that the maintenance measures for the historic components of the site are effective but that previous conservation measures have at times been very extensive and the complete change of function of the historic structures is regrettable.

ICOMOS considers that the state of conservation of the few historic and the reconstructed architectural structures is acceptable but that the condition of the creek's marine environment requires urgent attention.

Management

Management structures and processes, including traditional management processes

The property is managed by the Municipality of Dubai with the lead taken by the Architectural Heritage Department of the Dubai Municipality, which has developed the guidelines for the management plan of the property, discussed below. For various aspects of management considerations, the Architectural Heritage Department cooperates with the Environment Department and its Marine Environment & Wildlife Section, the Road and Transport Authority through its Water Transportation section, the police, the Customs and Port authorities and many others. There is no standing committee to bring all management stakeholders together but rather a form of day to day cooperation in management implementation whenever need occurs.

The Architectural Heritage Department is composed of four technical sections dedicated to (1) architectural heritage studies, (2) architectural heritage project design (3) architectural heritage project execution and (4) heritage development. As indicated in the additional information provided on 28 February 2014, a new structure has just been approved and will be implemented in the forthcoming month. Following the restructuring, the planned World Heritage Site Centre will be composed of four units dedicated to (1) Implementation, (2) Projects, (3) Studies, and the (4) Khor Dubai Site. The latter integrates three subsections covering Heritage Tourism, Awareness and Control/Monitoring. The department operates based on a vision, "to preserve our architectural heritage with a vision that looks for a distinctive future" and a mission statement, which aims to guide heritage management strategies. A specific world heritage management system for the property is intended to be designed to ensure the best possible cooperation and information exchange between the authorities of the municipality, the emirate and the federal level.

Three support committees, entitled the Higher Committee, the Scientific Committee and the Committee for Khor Dubai, have been established as consultation platforms

for other international experts as well as national and local stakeholders. These Committees have already started to get together and are foreseen to meet between once (Scientific Committee) and four times per year (Community Committee).

The budget of the Architectural Heritage Department amounted to approximately 40 million USD over the past four years. This is expected to remain constant to ensure continuation of management and maintenance activities. The department has a staff resource of 325 individuals, with about a 6th of them qualified heritage professionals with university degrees or specific crafts-related training.

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

The State Party has submitted a document containing guidelines for a future management plan as part of the nomination dossier, which outlines the management processes and authorities involved including their responsibilities and staff structures. Several workshops were conducted by the Municipal Authorities to arrive at these guidelines which establish the basis for the future development of a management plan including strategies and action plans to be detailed.

A series of small museums and cultural centres has been created in the historic houses to provide facilities and information to visitors. The related exhibitions focus on the social and cultural traditions of life in historic Dubai but also in some instances highlight architectural stylistics. A visitor centre is to be created in the future which will introduce Khor Dubai to its visitors. The visitor centre shall be located in the Shindagha neighbourhood in a building currently under reconstruction. As this building provides only 800 square meters of exhibition space, a second extension of the visitor centre of an additional 1,600 square meters is planned for the medium term.

Involvement of the local communities

During its technical evaluation mission, ICOMOS was able to consult with local community representatives, including representatives of the souk merchants and the Dubai Commerce Chamber, who are strongly in favour of the World Heritage nomination and management approach and have great expectations for its future. According to the additional information received, additional awareness-raising activities and information workshops for the local community have been undertaken.

ICOMOS considers that the current management authority is well equipped with financial and staff resources and that the general approaches to the management and maintenance of the architectural components of the property are effective. ICOMOS recommends giving more attention to the management components which relate to the creek as a waterway.

ICOMOS considers that the management authority is well equipped for all management tasks but that further priority needs to be given to the management of the waterway. ICOMOS recommends that a management plan be developed based on the guidelines which have been provided.

6 Monitoring

The State Party has provided a comprehensive set of monitoring indicators addressing the environmental, architectural and urban planning as well as the infrastructure condition of the property. Tourism and merchant activities are also being monitored to assess the attractiveness of the site as a tourism and shopping destination. The monitoring is supervised by the Architectural Heritage Department and linked to other municipal departments where required. Timeframes for the monitoring exercises and responsible staff members were identified and monthly as well as annual reports with monitoring results will be compiled by the Architectural Heritage Department.

In conclusion, ICOMOS considers that the monitoring indicators and procedures presented are adequate.

7 Conclusions

Khor Dubai (Dubai Creek) testifies to its trade tradition, cultural encounters and architectural stylistics, and some of its reconstructed neighbourhoods illustrate how the residential and commercial neighbourhoods of Dubai must have appeared half a century ago. However, ICOMOS does not consider that it has been demonstrated that Khor Dubai could be seen as of Outstanding Universal Value as a trade centre or urban development in a creek or natural harbour setting in a global perspective.

ICOMOS considers that Khor Dubai's ability to credibly communicate the urban and residential development of a 19th and early 20th century trade centre is limited as a result of large scale demolition of historical architecture which has now been partly reconstructed. Khor Dubai today provides an impressive imagination of a historic neighbourhood but ICOMOS does not consider that reconstructions, even of the highest quality, can represent a unique representation of what they recreate.

Like the historic quarters, the waterway of the creek, including its natural topography, has also undergone consistent transformation in the second half of the 20th century. When comparing the contemporary urban structure with historic photographs, it becomes obvious that the changes which have occurred are considerable and affect the communication of the creek's former functional relations and its setting. Although the property provides ideas and imaginations of this historical context, ICOMOS considers the present condition of its physical

attributes and their functional relation does not meet the conditions of integrity and authenticity.

The property continues to be affected by the rapid urban development of a city which expands both in horizontal and vertical dimensions. Several ongoing and planned development projects which are already partially approved will further alter the urban characteristics and setting of the Khor Dubai.

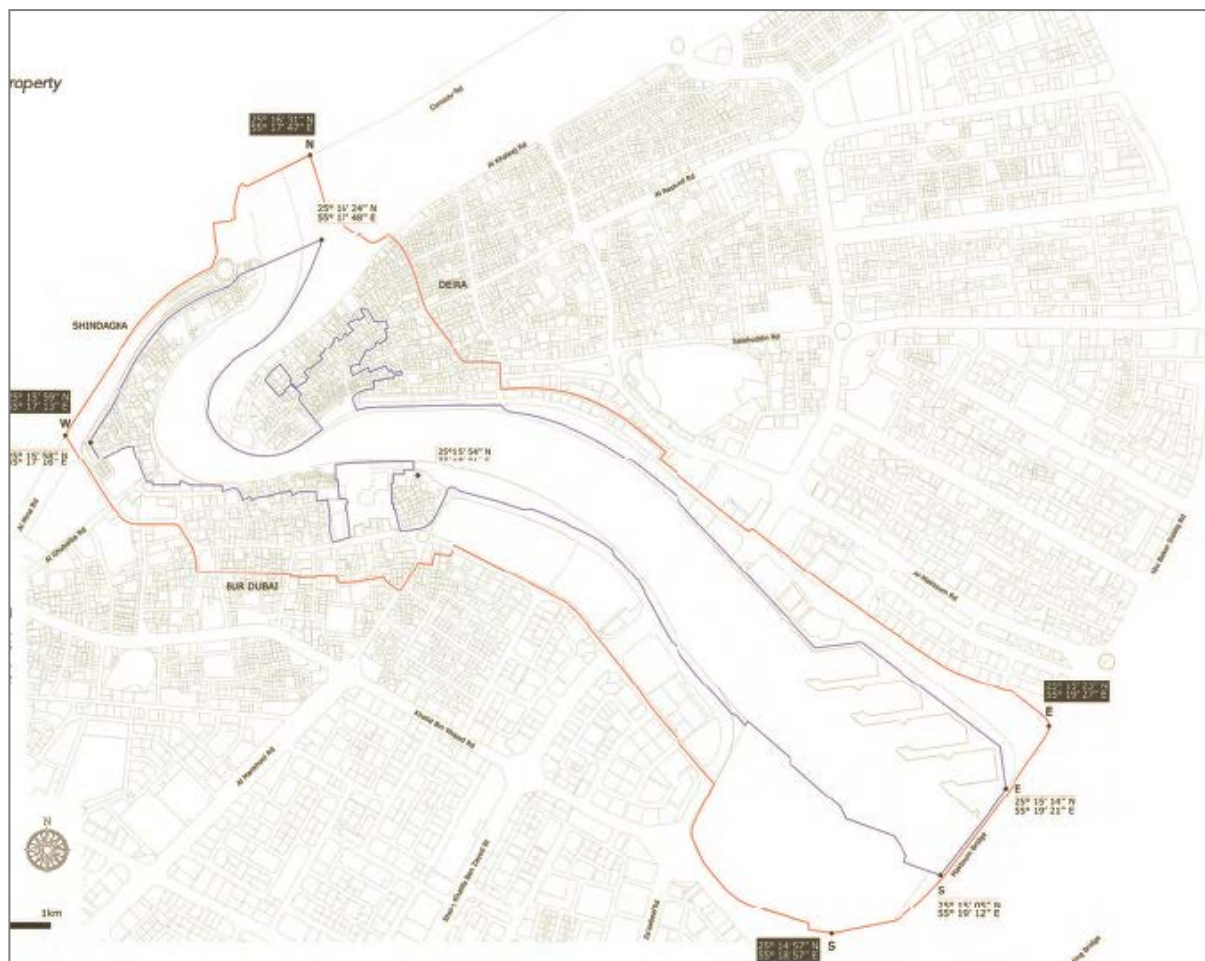
ICOMOS considers that at present only parts of the property are formally protected and that based on past experiences the protection mechanism cannot be considered fully effective. The buffer zone is not yet protected by municipal bylaws but it has recently been integrated in the municipal GIS system and negotiations between the different departments of the Dubai Municipality have commenced in order to create an adequate regulatory framework.

ICOMOS considers that the management schemes for the historic components of the property are effective but that previous conservation measures have at times been extensive including complete changes of function. The ongoing projects towards the reconstruction of the historic neighbourhoods recreate a historic situation but do not conserve historic architectural remains. ICOMOS considers that the management authority is well equipped with financial and staff resources, and that the management approaches for the historic and rebuilt architectural components as well as the monitoring programme are adequate. ICOMOS recommends giving stronger attention to the management challenges of the creek's marine environment.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that Khor Dubai (Dubai Creek), United Arab Emirates, should **not be inscribed** on the World Heritage List.



Map showing the boundaries of the nominated property



General view of the nominated property



Souk of Bur Dubai



Courtyard house in the neighbourhood of al-Faheidi



Mosque in the neighbourhood of al-Faheidi

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

The Grand Canal (China) No 1443

Official name as proposed by the State Party

The Grand Canal

Location

Provinces, municipalities with province status, and cities:

- Beijing Municipality
- Tianjin Municipality
- Hebei Province: Cangzhou City, Hengshui City
- Jiangsu Province: Wuxi, Changzhou, Suzhou, Huai'an, Yangzhou and Suqian Cities
- Zhejiang Province: Hangzhou, Ningbo, Jiaxing, Huzhou and Shaoxing Cities
- Anhui Province: Huaibei City, Suzhou City
- Shandong Province: Zaozhuang, Jining, Tai'an, Dezhou and Liaocheng Cities
- Henan Province: Zhengzhou, Luoyang, Shangqiu, Anyang and Hebi Cities

People's Republic of China

Brief description

The Grand Canal forms a vast inland waterway system in the north-eastern and central eastern plains of China, passing through eight of the country's present-day provinces. It runs from the capital Beijing in the north to Zhejiang Province in the south. Constructed in sections from the 5th century BC onwards, it was conceived as a unified means of communication for the Empire for the first time in the 7th century AD (Sui Dynasty). This led to a series of gigantic worksites, creating the world's largest and most extensive civil engineering project ensemble prior to the Industrial Revolution. Completed and maintained by successive dynasties, it formed the backbone of the Empire's inland communications system. Its management was made possible over a long period by means of the *Caoyun* system, the imperial monopoly for the transport of grain and strategic raw materials, and for the taxation and control of traffic. The system enabled the supply of rice to feed the population, the unified administration of the territory, and the transport of troops. The Grand Canal reached a new peak in the 13th century (Yuan Dynasty), providing a unified inland navigation network consisting of more than 2,000 km of artificial waterways, linking five of the most important river basins in China, including the Yellow River and the Yangtze. Still a major means of internal communication today, it has played an important role in ensuring the economic prosperity and stability of China over the ages.

Category of property

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

a nomination for the serial inscription of 31 *groups of buildings*.

1 Basic data

Included in the Tentative List

28 March 2008

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

25 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted TICCIH and several independent experts.

Technical Evaluation Mission

Two ICOMOS technical evaluation missions visited the property from 16 to 26 September 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 2 October 2013 to request further information about:

- the status of the land owned by local communities and their involvement in the management of the property;
- the information provided to property owners affected by the measures to protect the property and the buffer zone;
- the protection measures along the canal for ordinary sections (with no specific attributes but included in the property);
- the boundaries of the buffer zone of the ordinary sections of the canal and the associated protection measures;
- the monitoring system project.

The State Party replied on 29 October 2013, sending additional documentation which has been taken into account in this evaluation.

A second letter was sent to the State Party on 16 December 2013, asking it to:

- confirm that all the components of the proposed sites have been granted the highest degree of national protection;
- supply a timetable for the introduction of the property monitoring system, confirm its staff resources, and provide information about how it functions;
- consider extending and redefining the buffer zone to allow for different types of environment.

The State Party replied on 26 February 2014, sending additional documentation that has been taken into account in this evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The Grand Canal is located in the vast plains of north-eastern and central eastern China. It runs from the present-day capital Beijing, in the north, to the province of Zhejiang, in the south, as far as the port of Ningbo, on the East China Sea. It connects five of the largest river basins in China: the Hai coastal river in the north which flows into the Bohai Gulf at Tianjin; the Yellow River which today runs to the north of Shandong, but which had southerly courses earlier in its history, until 1855; the Huai River whose lower course merged with the southern arm of the Yellow River; the Yangtze further south; and finally the Qiantang coastal river. The rivers generally flow from the mountainous west to the Yellow Sea and the East China Sea to the east. The Grand Canal system tends to connect them along a north-south axis, and it flows successively through five major natural regions: the great plain of north-eastern China and the downstream basin of the Yellow River; the low hilly zone of Shandong; the Yangtze delta with its numerous lakes; the coastal plain of Ningbo – Shaoxing; and the Qiantang estuary region.

The Grand Canal connects the temperate regions of the north, with low or relatively low rainfall, and the subtropical regions further south, with a hot, wet climate that is particularly favourable for rice-growing. Furthermore, rainfall is seasonal, both in the north and south, with monsoons that represent major risks of flooding, giving rise to specific constraints for the construction of hydraulic facilities and the management of water resources.

Built and maintained by the constant efforts of successive dynasties, the Grand Canal was a vital axis in the Empire's lines of communication, particularly for the feeding of the population, the unified administration of the territory and cultural interchanges. In the 13th century, it provided a complete inland network of more than 2,000 km of navigable man-made waterways. The nominated property aims to present the most comprehensive sample possible of the range of vestiges of the historical facilities of the Grand Canal, over the whole of its course. The remains are either archaeological or constitute a hydraulic heritage which is in many cases still functioning.

The Grand Canal has 10 main sections of ancient artificial waterways. The historic names have been preserved, and the canals are presented in chronological order according to which were completed first. The nominated serial property is made up of 31 individual properties, corresponding to a little over 1,000 km of navigable waterways, most of which are still filled with water, but some of which are today archaeological sites. Together

they represent a total of 85 major heritage items, consisting of 27 canal sections and 58 cultural heritage sites on the Grand Canal. The chosen properties illustrate archaeological sites showing its course, river navigation landscapes, technical facilities used for water management, urban landscapes associated with the canals, and monuments.

The properties are as follows:

Tongji Canal (7 properties, Provinces of Henan and Anhui):

- Part 1 (TJ-01), *Hanjia* is the archaeological site of an imperial granary, where the canal reaches the former capital Luoyang; it illustrates the principle of large-scale commercial interchanges for the benefit of the capital, and their control by the Caoyun imperial administration.

- Part 2 (TJ-02), *Huiluo* is the archaeological site of one of the largest granaries on the Grand Canal; it is a suburban site north-east of the present-day town of Luoyang; its vast scale illustrates the extensive range and power of the imperial Caoyun system.

- Part 3 (TJ-03), *Zhengzhou* is one of the few typical sections of the Tongji canal (20 km) still in use, close to the Yellow River; there is also an archaeological part (a reach providing a connection to the river and a water supply).

- Part 4 (TJ-04), *Shangqiu Nanguan* is an archaeological section of the Tongji Canal (1 km) which illustrates the techniques of construction of the canal and the use of rammed-earth revetments during the Tang and Song Dynasties; it also bears witness to the great size of this canal, designed in the 7th century.

- Part 5 (TJ-05), *Shangqiu Xiayi* forms another archaeological section of the canal (0.5 km) in the town of Jiyang; it also bears witness to the exceptional dimensions of the Tongji Canal, the shape of the dykes, and navigation practices.

- Part 6 (TJ-06), *Liuzi* consists of (1) a canal section (2 km) and (2) a bridge site; both are archaeological; they illustrate the canal facilities, which demonstrate great architectural quality in the use of stone, and the remains of boats, which confirm the scale of river traffic between the 7th and 11th centuries.

- Part 7 (TJ-07), *Si* comprises an annex section of the canal (6 km), which connected the town of Sicheng to the Xinsui River; this is a section that is still filled with water, and still has its rammed-earth revetments. It is an archaeological site.

Wei Canal (or Yongji Canal) (2 properties, Henan):

- Part 8 (WH-01), *Hua and Xun* comprise a relatively long section of the Wei Canal (18 km); this is the best preserved section, and forms one of the most typical

landscapes illustrating ancient navigation in the inland regions.

- Part 9 (WH-02), *Liyang* is the archaeological site of a large granary dating from the Sui Dynasty; it is situated in the town of Xun, close to the Yellow River, and bears witness to the changes in form of silos and warehouses from the Sui to the Song Dynasty.

Huaiyang Canal (or Li Canal) (3 properties, Jiangsu):

- Part 10 (HY-01), the *Qingkou* site near Huai'an consists of (1) a long section of the ancient canal (46 km) illustrating a canal landscape, (2) the archaeological remains of the Qingkou hydraulic complex designed to cross the former bed of the Yellow River and the junction with the Huai River, (3) the boat lock of Shuangjin, (4) the boat lock of Qingjiang, (5) the stone dyke of Lake Hongze. Benefiting from a water supply either from the Huai River or from the earlier course of the Yellow River, depending on the period, and the lake as a spillway, the Qingkou site is a vital nodal point of the Grand Canal and its history. It was completed in the 16th century and operated for around 200 years in its most elaborate form. It is one of the most emblematic sites in terms of the techniques and scientific knowledge embodied in the Grand Canal.

- Part 11 (HY-02), the archaeological site of the *Caoyun Governor's Mansion* is close to the canal, in the former provincial capital Huai'an; it is the most important vestige of the Caoyun imperial administration.

- Part 12 (HY-03), the *Yangzhou* region comprises (1) a very long section of canal (134 km) and its branches in the town of Yangzhou; it illustrates a navigation landscape and an urban canal landscape; (2) the archaeological site of the drainage lock of Luibao; (3) the Yucheng post, (4) the remains of the ancient Shaobo dyke; (5) Shaobo docks; (6) Slender West lake, (7) Tianning palace and temple, (8) Ge garden, (9) Wang Lumen's residence; (10) the Salt Ancestral Temple; and (11) Lu Shaoxu's residence. This is one of the sections of the Grand Canal that has been in use for the longest period, demonstrating the hydrological changes that have occurred over the ages, and the gradual transition in navigation from lakes and natural rivers to an entirely artificial waterway; Yangzhou reflects the economic history of the canal, and was at the heart of the lucrative salt trade, and bears witness to the resulting urban and cultural wealth.

The Jiangnan Canal (5 properties, Jiangsu and Zhejiang):

- Part 13 (JN-01), the *Changzhou* City section comprises a 23 km section of the canal which passes through the built-up area; it illustrates a typical landscape of the canal in the setting of a large city.

- Part 14 (JN-02), *Wuxi City* comprises (1) an urban section of the historic canal of Jiangnan (14 km), with two branches that encircled the former urban centre, (2) the historic Qingming bridge quarter. Wuxi embodies urban

landscapes associated with the canal, its everyday activities and its economy.

- Part 15 (JN-03), *Suzhou* comprises (1) a section of the canal in the marshes and then in the city, along with numerous urban branches (73 km); (2) Pan Gate on one of the branches of the canal; (3) Baodai Bridge; (4) the Shantang canal conservation zone; (5) the Pingjiang quarter, (6) the former Wujiang towpath. Just next to the Yangtze, Suzhou was from time immemorial a major regional economic and cultural capital; it bears witness to the most intense and most continuous use of the southern canal system, from the 6th century BC to the present day.

- Part 16 (JN-04), the *Jiaxing-Hangzhou* region comprises: (1) a long section of the canal with numerous branches (187 km), between Taihu Lake in the north and Qiantang River in the south, with navigation landscapes; (2) the archaeological site of Chang'an, bearing testimony to an 11th century three-gate lock, to which was added in the 14th century a boat passage with a winch-towing system; (3) the site of the Fengshan hydraulic gate, (4) the Fuyi granary at Hangzhou; (5) Changhong Bridge; (6); Gongchen Bridge; (7) Guangji Bridge, (8) the Qiaoxi conservation area at Hangzhou. This part of the canal bears witness to a diversified network of waterways associated with rivers and lakes.

- Part 17 (JN-05), *Nanxun* is a district of the canal which comprises: (1) an urban branch of the Jiangnan (or Ditang) Canal (2 km); (2) the urban area of Nanxun. This is a particularly well preserved urban section, and is typical of the canal, representing the prosperity it brought to the waterside populations.

Zhedong Canal (4 properties, Zhejiang):

- Part 18 (ZD-01), *Hangzhou Xiaoshan-Shaoxing* is the start of the Zhedong Canal at the point where it links up to the Qiantang River, which it connects to the urban areas of Shushan, Shaoxing and Shangyu. It comprises: (1) the section of canal between these towns (90 km); (2) the docks of the distribution centre of Xixing; (3) Bazi Bridge; (4) the urban zone of the Bazi bridge; (5) a portion of the former towpath. This was an important traffic hub which was particularly active over a long historical period, in connection with the river and with maritime trade.

- Part 19 (ZD-02), *Shangyu-Yuyao* is a section of canal (25 km), which runs from the River Cao'e, in the town of Shangyu, for some twenty kilometres to the east and the River Yao; it bears witness to the economic role of the canal and the prosperity it generated.

- Part 20 (ZD-03), *Ningbo* is a section of canal (23 km) which runs to the town of Ningbo; this section is lateral to the Yao River, of which it forms a second artificial branch in order to avoid tidal currents.

- Part 21 (ZD-04), *Ningbo Sanjiangkou* is an urban river site at the confluence of the Yao and Fenghua Rivers, in the town of Ningbo which marks the end of the Grand

Canal in the south; its terminal port provides access to the East China Sea; this was the point of departure of the maritime silk route during the Song Dynasty.

Tonghui Canal (2 properties, Beijing):

- Part 22 (TH-01), *Old Beijing City* comprises: (1) an urban section of the canal (0.5 km), which is an archaeological site; (2) the upper lock of Chengqing; (3) the lower lock of Chengqing; (4) Shixha Lake. Beijing marks the northern end of the Grand Canal, and also shows how canal planning affected the layout and drainage of the old city.

- Part 23 (TH-02), *Tongzhou* is a section of the canal (5 km) where it joins the Wenyu River and where the Bei Canal exits in the direction of Tianjin. This was a key node for the control of traffic at the entrance to the capital for the Caoyun system, during the Ming and Qing Dynasties.

Bei Canal (1 property, Tianjin):

- Part 24 (BY-01), *Sanchakou* is a section of the canal comprising the eastern part of the Bei Canal, the arrival of the Nan Canal at Tianjin and their urban junction (71 km). The Bei Canal has a winding course. After connecting with several rivers, it forms an urban waterway which continues to the sea via the Haihe Estuary. An intermodal point between river and sea traffic, the site constitutes an urban landscape that is typical for the canal in the northern provinces of China.

Nan Canal (1 property, Hebei and Shandong):

- Part 25 (NY-01), *Cangzhou–Dezhou* is a section of the Nan Canal which includes: (1) the canal section in the town of Decheng Qu and the surrounding region, mainly to the north (94 km); (2) the Xiejia Dam at Lianzhen; (3) the well-preserved rammed-earth levée of Huajiakou, built under the Qing Dynasty. The site is also an example of the technique of using curving branches with gates, which function as locks.

Huitong Canal (4 properties, Shandong):

- Part 26 (HT-01), the town of *Linqing* marks the historic intersection between the waterways running to the west and the former capitals, to the north and Tianjin, and to Shandong and the south. The property includes: (1) the two branches of the Huitong Canal at its confluence with the Wei Canal, and their combined flow to the south (8 km); (2) the Linqing customs post. This was an important place for the control and organisation of river traffic.

- Part 27 (HT-02), the *Yanggu* complex includes: (1) a section of the canal (19 km) at the approach to its confluence with the Yellow River; (2) the lower lock of Echeng; (3) the upper lock of Echeng; (4) the lower lock of Jingmen; (5) the upper lock of Jingmen. This site is emblematic of the hydraulic techniques used in Chinese canals during the Qing Dynasty.

- Part 28 (HT-03), the *Nanwang Complex* includes: (1) a section of the Huitong Canal comprising archaeological remains at the confluence with (2) which is the whole of the supply reach for the Xiaowen canal, from the Daqing River (102 km), which is also a navigable branch; (3) the Daicun Dam which is the river water intake for Xiaowen; (4) the remains of the Shili lock; (5) the archaeological site of Xujiankou lock; (6) the archaeological site of Xingtong; (7) the archaeological remains of a brick dyke; (8) the Liulin lock; (9) the archaeological site of the Royal Dragon Temple at the confluence, together with the remains of an overflow weir; (10) the site of the Siquanpu lock. This component bears testimony to many kinds of technical know-how, in a context that was crucial for the operation of the canal as a whole.

- Part 29 (HT-04), *Weishan* is a section of canal (9 km) which includes: (1) the archaeological site of the ancient canal as it crossed Dushan Lake; (2) the remains of the Lijian lock. This site has unique landscape importance, and also bears witness to the efforts made by man to overcome the caprices of nature and changes in rivers and lakes over the course of history.

Zhong Canal (2 properties, Shandong and Jiangsu):

- Part 30 (ZH-01), *Taierzhuang* is a former section of canal (3 km) in an urban zone, today replaced by the Hanshuang canal a little further south.

- Part 31 (ZH-02), *Suqian* is a canal section (35 km) which includes (1) its course in the Sucheng district and on the edge of the Luoma Lake, (2) the location and the remains of the temporary palace and the Royal Dragon Temple. It is a canal landscape which bears witness to the ultimate efforts made to overcome and break free from the natural constraints affecting the river navigation of the Yellow River. This principle of independence reaches a higher degree here than at any point on the Grand Canal.

Several of the nominated reaches are filled with water and are still used for active commercial traffic, while other mainly urban sections of the canal are today used only for tourist traffic. Other sections are used as overflow weirs in the event of flooding, or are used for irrigation purposes.

History and development

River traffic operated on the Middle Yellow River and its tributaries the Wei and Fen, in the 6th century BC, before any idea of building canals had been conceived, in order to provision Shaanxi Province and the capital of the Jin kingdom.

At the end of the 5th century BC, the ambitions of regional states for conquest were such that canals were built for the more efficient transport of troops and supplies. The Wu kingdom dug the *Hangou Canal* to link the Yangtze to the Huai River; towards the south the Jiangnan Canal was opened as far as Suzhou. In the 4th century, the Wei kingdom connected the Yellow River to the Huai River via the *Honggou Canal*.

The founding Qin dynasty (221-206 BC) set up the imperial Caoyun system to control and tax the grain trade, with imperial granaries, which were both food reserves and tax collection centres. Emperor Qin Shi Huang used the Honggou Canal to provide supplies to his capital Xianyang in Shaanxi Province.

The Western Han period (206 BC – 25 AD) was marked by the extension of the *Hongghu* Canal and the improvement of river navigation to the new capital of Chang'an, in central Shaanxi. The Eastern Han (25-221 AD) established their capital Luoyang in Henan Province, on the Luo River, a southern tributary of the Middle Yellow River. A canal connected the Luo to the Yellow River; however, the silting up of the Honggou Canal due to flooding greatly reduced the scope of the river network. This was followed by a long period of intermittent constructions, restorations and abandonment as a result of specific circumstances. The northern wars gave rise to the creation of a system of navigable waterways in the Tianjin region.

The Sui Dynasty (589-618 AD), followed by the Tang Dynasty (618-907 AD), reunified the Empire. Luoyang remained the capital, but the economic centre of gravity shifted towards the Yangtze and the eastern plains, while the threat from the nomadic peoples in the north remained. To ensure the political, military and administrative coherence of zones that were distant from each other, and ensure the regular supply of food for the population, the Sui Dynasty launched a vast project of canals centrally managed by the Caoyun system. The waterway beginning at Luoyang was wholly re-excavated as far as the Huai River, and was named the *Tongji* Canal; the *Hangou* Canal connecting to the Yangtze was thoroughly renovated, as were the ancient *Jiangnan* and *Zhedong* Canals south of the river. To support his military actions in the north, Emperor Yang of Sui launched the digging of the *Yongji* Canal. For the first time in the history of China, a complete network of interconnected canals with centralised management was set up, and this process was completed by the Tang Dynasty.

The Grand Canal thus became a waterway carrying busy traffic between the major poles of the empire, to supply their needs. The Caoyun system was extended to include iron and salt, and enabled effective control of supplies with substantial revenues for the central power base. The empire reached a peak, achieving an exceptionally high level of development, much of which stemmed from the interchanges made possible by the Grand Canal system as a whole, which had become the vital artery of China.

On the whole, the Tang and then the Song Dynasties (960-1127 AD) maintained the Grand Canal satisfactorily. In the most favourable phases, they improved it, but during periods of weakness for the central power base maintenance was reduced or brought to a standstill, temporarily preventing the overall interconnection. The canal then returned to regional functions. The Yellow River overflowed on several occasions into the plains (10th

and early 11th centuries), and the terminal course of the river split into three branches.

In the early 12th century, the Song Dynasty lost control of Northern China to the Jin, Mongol invaders who established their capital at Zhongdu (Beijing). The Song retreated to the south and to the central eastern part of the country. Once again the Grand Canal system was broken up into a set of regional waterways, which remained active primarily to the south of the Huai River.

In the late 13th century, the Mongol Yuan Dynasty (1276-1368) reunified the empire. The dynasty quickly became sinicized and took many measures to re-establish links between the north, where it had established its capital (Beijing), and the central eastern part of the country, the rice-growing and economic dynamo of the empire. The axis of communications shifted to the east, and the new Grand Canal followed more of a direct north-south axis, via Shandong and crossing over various arms of the Yellow River delta. The construction of the connecting *Huitong* Canal was undertaken, requiring the resolution of a considerable number of new hydraulic problems. The canal was opened in 1289. The *Tonghui* Canal was completed shortly afterwards in the province of Dadu (Beijing). The new waterway to the south was 500 km shorter than the earlier one, and up to 3,000 barges were used to supply the new capital. However, following disastrous flooding, the Lower Yellow River merged to form a single water course: its widest course south of Shandong (1344). Navigation thus became more difficult and irregular on this central river section of the Grand Canal.

One of the first political moves of the Ming Dynasty (1368-1644) was the confirmation of the office of the *Caoyun* for the transport of grain, and its reorganisation with the establishment of a governor general at Huai'an. As the flooding of the Yellow River regularly disrupted the operation of the Grand Canal, a supplementary canal (*Zhong* Canal) was planned by the Qing Dynasty (1644-1912), for the direct connection of the *Huaiyang* and *Huitong*, Canals, which required the crossing of the river by the *Qingkou* hydraulic complex. The new system was completed at the end of the 17th century.

In 1855, exceptional flooding of the Yellow River changed its course once again, this time favouring a channel to the north in the direction of Bohai Gulf. The hydraulic system of the Grand Canal was severely disrupted, and the measures taken proved ineffective. The weakening of the Qing Dynasty led to a lack of maintenance, and then to an organisational breakdown of the Grand Canal. The original *Caoyun* system was abandoned in favour of monetary taxation. Its operation was confined to the most active economic zones, and many branches of the canal became silted up.

Following the creation of the People's Republic of China (1949), a vast project was launched to renovate and modernise the Grand Canal. This project was carried out over a period of some 50 years, particularly refurbishing

the section between Beijing and Tianjin, the canals to the north of the Yellow River, followed by the canals in Shandong. The great northern ancient waterways of Jiangsu, the Yangtze region and the Qiantang estuary region, in the south, were regularly improved, and they carried increasingly heavy levels of bulk traffic. Many sections were re-excavated and widened, historic cities were by-passed, and many hydraulic and port infrastructures were constructed. This period marked the arrival of the machine age in the history of the Grand Canal, replacing the manual labour that had been used for millennia. Since the early 2000s, traffic growth has been phenomenal, particularly in the provinces of Jiangsu and Zhejiang, reflecting the unprecedented economic boom taking place in China.

ICOMOS considers that the historic aspects referred to are important, and that they contribute a great deal to knowledge of the Grand Canal. But the historic information is insufficient or entirely lacking in several areas, and the information needs to be supplemented to improve the overall quality of the understanding of the property and its values: hydraulic and technical operation, archaeological overview of the ensemble, economic and social history along the banks of the canal, history of river transport, etc.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparison is first made with canals already inscribed on the World Heritage List: Canal du Midi, France, (1996, criteria (i), (ii), (iv) and (vi)), Rideau Canal, Canada, (2007, criteria (i) and (iv)), Canal du Centre, Belgium (1998, criteria (iii) and (iv)), and Pontcysyllte Aqueduct and Canal, United Kingdom (2009, criteria (i), (ii) and (iv)), to which are added hydraulic systems with more complex functions, such as Shushtar, Iran (2009, criteria (i), (ii) and (v)) or used for irrigation and water supply, such as Aflaj Irrigation Systems of Oman (2006, criterion (v)) or drainage and town planning, such as the Canal Ring Area of Amsterdam inside the Singelgracht, Netherlands (2010, criteria (i), (ii) and (iv)). Other conventional transport canals are also mentioned, in Europe, North America and South America. In the State Party's view, these comparisons clearly establish the uniqueness of the Grand Canal:

- The dimensions of the Grand Canal are beyond comparison to other artificial waterways.
- The Caoyun governmental grain transport monopoly system is unique, and, over the long history of its use, its role in the unity of China as a great agricultural empire is clearly demonstrated.
- The Grand Canal constitutes a benchmark, illustrating the apogee of hydraulic engineering prior to the Industrial Revolution. The Grand Canal may be seen as a training ground for canalisation techniques applied at various stages of human civilisation.

- The origins of the Grand Canal date back more than 2,000 years, which is not the case with European hydraulic works, which were all designed in the modern and contemporary era.

ICOMOS considers that the comparative analysis that has been put forward is relevant in many ways, and that it highlights the specific genius of the Grand Canal, but there are some shortcomings. During the history of the great agricultural empires of antiquity, many made use of large river transport networks, in most cases using major rivers and their tributaries: the canals between the Tigris and the Euphrates in the case of Mesopotamia, such as Shushtar (Iran, 2009) nearby, which gives some idea of their wealth. Another example is the system of transport on the Nile and the network of canals in the Nile delta, at the time of the pharaohs of Egypt. The Khmer empire also used a vast artificial hydraulic system for the transport, drainage and irrigation of a rice-growing empire, etc., as illustrated by Angkor, Cambodia (1992, criteria (i), (ii), (iii) and (iv)). Furthermore, the comparison with Western canals, to which should be added those of the Italian Renaissance and the canal network of the Netherlands, could be extended to include technical elements. With this in mind, the description of the hydraulic techniques of the Grand Canal should be made more thorough. The fact remains that because of its massive scale, its antiquity, its imperial management and the long duration of its operation up to the present-day, the Grand Canal is both unique and outstanding.

The comparative analysis justifies the selection of the elements to form the nominated series.

ICOMOS considers that the comparative analysis justifies consideration of this serial 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 the most extensive and oldest inland waterway system put in place by a government to feed its people, stabilise its power base, and unify its territory. The length of the Grand Canal and its branches reaches 3,000 km.
- The first steps towards the creation of the Grand Canal were taken in the 6th century BC, and the canal was completed for the first time in the 7th century AD. With some intermittent periods, the canal has been in regular operation up to the present-day, when it constitutes a major axis for bulk transport.
- It bears unique testimony to the history of China from ancient times up to the present day, and almost all the dynasties, along with the Republican and Communist regimes of the 20th century, have left their mark on it. Today it presents elements that are

sufficiently well preserved for an understanding of its different dimensions.

- For a vast agricultural empire, the Grand Canal has enabled the achievement of three major objectives over the course of history: 1) maintaining a link between the successive political capitals and the fertile plains of the central east and east, 2) providing military transport to protect the northern frontier, 3) promoting interchanges between the northern and southern provinces of China.
- The construction of the Grand Canal involved innovative technical skills and an organisation of civil engineering works that was unquestionably the largest such enterprise of any time.
- The *Caoyun* management system was formulated at the birth of the Chinese Empire, and was effective from the 7th century onwards for the Grand Canal. It consisted of a grain transport monopoly combined with tax collection, and the monopoly was extended to include other strategic raw materials during the course of its history.
- The property has a scope and richness of archaeological, technological, urban and landscape components which are unrivalled by any other canal in the world.

The serial approach is justified by a choice of places and built remains which illustrate firstly the canal's vast territorial extent in various provinces of China, and secondly the different periods of its conception, construction and operation. The series has been chosen in such a way as to present a balanced ensemble of archaeological remains, canal sections that are still in use, and the diversified landscapes of the canal, particularly in historic urban centres. Finally, the series illustrates the history of hydraulic techniques (dykes, lock gates, water supply, weirs, drainage and irrigation, etc.), and the associated facilities (quays, warehouses, granaries, canal administration, housing and town planning, canal-related economic activities, etc.).

ICOMOS considers that this justification is appropriate.

Integrity and authenticity

Integrity

The canal sections, the remains of hydraulic facilities, and the associated complementary and urban facilities satisfactorily and comprehensibly embody the route of the Grand Canal, its hydraulic functioning in conjunction with the natural rivers and lakes, the operation of its management system and the context of its historic uses. The geographic distribution of these attributes is sufficient to indicate the dimensions, geographic distribution of the routes, and the major historic role played by the Grand Canal in the domestic history of China.

Of the 85 individual elements forming the serial property, 71 are considered to be appropriately preserved and in a state of complete integrity, with 14 in a state of lesser integrity.

The justification of the choice of elements in the series was analysed in the previous section, and ICOMOS has concluded that it is overall satisfactory. However, there are two questions about integrity that need to be raised: 1) the inclusion of recently excavated archaeological elements means that it is not always possible to properly judge their contribution to the overall understanding of the Grand Canal, particularly in terms of technical operation; 2) a paradoxical situation arises for the property: on the one hand, the repetitive succession of long sections of canal does not seem to make a decisive contribution to the Outstanding Universal Value; on the other hand, the continuity of the course of the canal across China, and the continuity of its hydraulic systems, is not well highlighted by a discontinuous series.

ICOMOS considers that, although the integrity of such a vast and ancient property raises various fundamental questions which should be explored further (archaeology, the paradox of a discontinuous series for a property for which continuity is an essential value), the power, complementarity and scale of testimony provided mean that the conditions of integrity of the individual sites forming the series are considered to have been met.

Authenticity

In the State Party's view, all the elements of the Grand Canal presented in the serial property are of satisfactory authenticity in terms of their forms and conceptions, construction materials and location. They appropriately support and express the values of the property. The functions of use in particular are present and easily recognisable in most of the elements. As an overall organisational structure, the Grand Canal sites also express great authenticity in terms of appearance and the feelings they generate in the visitor.

ICOMOS considers that this approach to authenticity is too optimistic, mainly because of two important ambiguities in the presentation of the property. The first relates to the very history of certain sections of the Grand Canal and the successive dredging, deepening and widening operations they have undergone, along with the technological alterations made to associated facilities. Some of the sections presented have clearly been recently rebuilt, either in the same bed, or alongside the earlier course. This raises an element of doubt in the perception of the property, particularly as the presentation stresses the ancient origins of the canals and their historic role, while the heritage aspect of the Grand Canal in the 20th century has been neglected.

The second difficulty concerns the landscapes of certain urban or suburban sections of the canal, once again from the viewpoint of a historic canal whose elements are supposed to represent the long history of China. The canal thus passes quite often through zones which are poorly preserved in terms of urban heritage, and which have undergone large-scale recent development in terms of housing and industrial infrastructures. This difficulty with

regard to the perception of landscape in several sections of the canal is reinforced by a property definition often limited to the waterway itself, and to minimal buffer zones along its banks, which is not consistent with a policy truly aimed at preserving the landscapes of the Grand Canal, at least not for its whole 1,000 km length.

ICOMOS considers that, despite a certain number of reservations, particularly for perceived historical authenticity and the landscape authenticity of certain sections of a heritage which is moreover living and still in use, the conditions of authenticity of the series as a whole and of the individual sites have been met.

ICOMOS considers that, despite a certain number of reservations, the conditions of integrity and authenticity of the whole series have been overall met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (iii), (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 Grand Canal represents the greatest masterpiece of hydraulic engineering in the history of mankind, because of its very ancient origins and its vast scale, along with its continuous development and its adaptation to circumstances down the ages. It provides tangible proof of human wisdom, determination and courage. It is an outstanding example of human creativity, demonstrating technical capabilities and a mastery of hydrology in a vast agricultural empire that stems directly from Ancient China.

ICOMOS considers that the arguments advanced by the State Party are admissible.

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 Grand Canal bears witness to the unique cultural tradition of canal management via the Caoyun system, its genesis, its flourishing, and its adaptations to the various dynasties and their successive capitals, and then its disappearance in the 20th century. It consisted of an imperial monopoly of grain transport and storage, and a taxation system. It contributed to the fundamental link between the peasant economy, the imperial court and the supply of food to the population and troops. It was a factor of stability for the Chinese Empire down the ages.

ICOMOS considers that the arguments advanced by the State Party are fully worthy of consideration, and that it should be added that the Caoyun system was extended

to include other vital raw materials such as salt and iron. More broadly, the economic and urban development along the course of the Grand Canal bears witness to the functioning core of a great agricultural civilisation, and to the decisive role played in this respect by the development of waterway networks. To focus on this aspect, a history of transport and economic life along the Grand Canal would have been necessary.

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 Grand Canal is the longest and oldest canal in the world. It bears witness to a remarkable and early development of hydraulic engineering. It is an essential technological achievement dating from before the Industrial Revolution. It is a benchmark in terms of dealing with difficult natural conditions, as is reflected in the many constructions that are fully adapted to the diversity and complexity of circumstances. It fully demonstrates the technical capabilities of Eastern civilisations.

ICOMOS considers that several of the elements presented in the serial property constitute important, innovative and particularly early examples of hydraulic techniques. The property also bears witness to specific know-how in the construction of dykes, weirs and bridges, and to the original and sophisticated use of materials, such as stone and rammed-earth, and the use of mixed materials (such as clay and straw).

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 Grand Canal is a demonstration of the ancient Chinese philosophical concept of the Great Unity, and that it was an essential element for the unity, complementarity and consolidation of the great agricultural empire of China. It is also the birthplace and setting for the development of a way of life specific to the populations on its banks, and is seen by them as a maternal influence.

ICOMOS considers that the Grand Canal is indeed directly associated with important human values and remarkable living cultural traditions. The people who live along the canal have a specific way of life and culture, whose effects cover a large proportion of the territory of China and have long contributed to the country's economic and political equilibrium. However, these values have already been recognised by criterion (i) for

the exceptional nature and scale of the project, and by criterion (iii) for the cultural traditions that underpin its operation and long-standing use.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the serial approach is based on a substantial effort in terms of the thematic and geographic selection of elements, and that it is appropriate.

ICOMOS considers that the nominated property overall meets the conditions of integrity and authenticity, and criteria (i), (iii) and (iv).

Description of the attributes

- It is the largest and oldest inland waterway system, set up by a government to provide food for its population, stabilise its power base and unify its territory.
- The Grand Canal and its branches have attained a length of 3,000 km, and its course passes through eight of the present-day provinces of China.
- The first steps towards the Grand Canal were taken in the 6th century BC, and the canal was completed for the first time in the 7th century. Apart from certain intermittent periods, the canal has operated on a regular basis up to the present-day.
- It bears unique testimony to the history of China from ancient times up to the present day, and almost all the dynasties up to the regimes of the 20th century have left their mark on it. Today it still has sufficiently well-preserved elements to be fully understood.
- For a vast agricultural empire, the Grand Canal enabled the achievement over the course of history of the objectives of maintaining a link between the successive political capitals and the fertile plains of the central east and east, providing military transport to protect the northern frontier, and promoting interchanges between the northern and southern provinces.
- The construction of the Grand Canal involved innovative technical skills and what was unquestionably the greatest enterprise of all time in terms of the organisation of civil engineering worksites.
- The *Caoyun* management system was effective from the 7th century onwards for the Grand Canal. It consisted of a grain transport monopoly combined with tax collection, and the monopoly was extended to other strategic raw materials in the course of history.
- The property is unique in its scope and richness of its archaeological, technological, urban and landscape components.

4 Factors affecting the property

The Grand Canal passes through provinces which have always been amongst the richest in China, throughout its history. The strong economic development since the 1990s has necessarily had an impact on the canal environment in many places: bridges, motorways, modern facilities for the canal itself (locks, port zones, dockyards, etc.), industrial zones often linked to the canal, urban expansion zones, etc.

Pressure from tourism is felt in several specific zones of the Grand Canal: 1) hydraulic complexes developed as parks, such as Nanwang and Quingkou, 2) lake and canal zones which are sought after for leisure purposes and for urban development, 3) major historic urban centres which are already well-known tourist destinations. The State Party considers that such pressures are relatively moderate, and that current facilities are sufficient to cope with them.

Bearing in mind the scale of urban development and population growth along the Grand Canal, the current environmental conditions are not considered to be excessively poor by the State Party. They are in line with the nationally recommended standards. The main environmental factor affecting the property is constant pressure on water quality, as the canal and its associated hydrological elements constitute a water reserve, and are often used as an outfall for waste water after treatment, of varying intensity depending on the location). The canal is affected, like all highly urbanised regions, (but less directly because of the water), by the quality of the air, which is impacted by industrial activity, the boom in individual means of transport, and rapid urban development.

With regard to natural risks, the Grand Canal is directly threatened by flooding risks as a result of meteorological conditions (rainfall, storms and occasional hurricanes). Up to a certain limit, the canal plays an important role in the regulation of water levels and the prevention of flooding risks. Other natural disaster risks also exist, but at much lower levels of probability. The risk of fire in urban settings is the most significant risk, given that a great deal of wood is used in many buildings.

The impact of climate change may increase the existing imbalances in rainfall between the provinces, and thus directly affect water resources, both as regards the canal and the life of local residents. The dry periods in the northern provinces may become longer and more intense; the monsoon episodes may become more violent and longer in the subtropical provinces.

ICOMOS considers that the main threats to the property are economic and urban development, together with the risk of flooding. Here and there, the risk of fire in a historic urban setting should be taken into account. Pressure from the development of tourism could become a bigger phenomenon than predicted over the coming years, at least in certain zones of the Grand Canal.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The 31 properties forming the series and their buffer zones have the following areas and populations:

Prop. ref.	Name	Area (ha)	Population (property)	Buffer zone (ha)	Population (BZ)
1	Hanjia	0.11	0	58	12 000
2	Huiluo	24	0	44	350
3	Zhengzhou	561	0	307	21 800
4	Shangqiu Nanguan	92	410	140	720
5	Shangqiu Xiayi	12	360	13	680
6	Liuzi	41	1 975	89	3 120
7	Si	16	353	334	5 870
8	Hua and Xun	267	10 638	693	12 848
9	Liyang	7	2 100	16	0
10	Qingkou	3 967	8 000	6 275	10 000
11	Mansion of Caoyun governor	3	0	14	0
12	Yangzhou	4 045	11 500	4 359	52 500
13	Changzhou	140	50 000	137	60 000
14	Wuxi	95	39 759	121	66 265
15	Suzhou	642	5 000	675	40 000
16	Jiaxing-Hangzhou	1 442	6 666	6 464	383 816
17	Nanxun	92	12 761	99	18 445
18	Hangzhou Xiaoshan - Shaoxing	683	9 200	1 745	63 000
19	Shangyu-Yuyao	158	4 011	1 113	32 240
20	Ningbo	270	262	882	5 520
21	Ningbo Sanjiangkou	13	0	18	3 182
22	Old Beijing	35	0	13	47 000
23	Tongzhou	30	0	42	0
24	Sanchakou - Tianjin	975	188 279	2 483	55 930
25	Cangzhou - Dezhou	3 382	3 570	1 143	5 150
26	Linqing	42	0	56	8 000
27	Yanggu	99	360	368	7 000
28	Nanwang	2 930	4 330	22 677	24 900
29	Weishan	54	6 000	53	14 000
30	Taierzhuang	24	0	36	1 000

31	Suqian	678	50 000	2 270	60 000
Totals		20 819 ha	415 534 inhabitants	52 743 ha	1 020 304 inhabitants

ICOMOS considers that the boundaries of the serial property as nominated are generally acceptable, although a certain number of questions remain unresolved, but are sometimes difficult to answer (better integration of the archaeology of hydraulic elements in the understanding of the property as a whole, the paradox of the discontinuity of the series and the continuity of the property as a value of the property, the place of 20th century heritage).

ICOMOS, in its letter dated 16 December 2013, asked the State Party to reconsider the issue of the buffer zones, their definition and their regulation, because of the sometimes minimalist approach, particularly along those ordinary sections of the Grand Canal without any specific attributes. The buffer zones seem to have been established hastily, and some points have clearly been neglected. In the case of a serial property which is extremely extensive and complex, involving very different environmental situations in variable locations along the banks of the same serial property, various types of buffer zones should be considered, and each site should have a buffer zone well-adapted to it, which has been studied in conjunction with representatives of the local communities. Its protection system could then bring together in a credible way the general directives of cultural and natural environment preservation, the integrated regional projects linked to the canal (water quality, tourism development, transport, economic development, etc.) and specific protection appropriate to the local type of cultural and natural environment. It also seems essential to define the special cones of vision, and protect them against the possible aggressive impacts of development projects.

Finally, the possibility of a supplementary continuous buffer zone, whose regulation would impose only weak constraints, but which would encourage local inhabitants and riverside communities to adhere to the canal's values, could be considered. Its purpose would be to demonstrate the continuity of the Grand Canal along its whole length, and to encompass all of its modern-day variants.

In its reply in February 2014, the State Party showed that it has already revised the buffer zones of four of the nominated properties, by extending them considerably. The same process is under way for six other properties. A general typology setting out the various types of buffer zone, and the establishment of appropriate protection measures, is currently being drawn up by the State Administration for Cultural Heritage (SACH).

ICOMOS considers that overall the boundaries of the serial property as nominated are acceptable. However, ICOMOS considers that it would be appropriate to allow the State Party to thoroughly revise the system of buffer

zones, as regards their geographic definition, their regulation and their setting up on the basis of negotiations with the regional and local authorities; a level 2 buffer zone could possibly be considered, in order to highlight the continuity of the Grand Canal and to encompass all its modern-day components.

Ownership

In accordance with the Constitution and the Land Administration Law of the People's Republic of China, the nominated properties are either state-owned (88%) or collectively owned at local level (12%). The state-owned property consists of the canals, their banks and verges, and the territory of the towns. The rural and suburban property consists of rural communities in accordance with constitutional and legal texts. 162 local communities are concerned with the properties and 632 with the current buffer zones.

Protection

Specific priority protection and conservation measures apply to those properties already inscribed on the World Heritage List and those inscribed on the Tentative List of China, in accordance with the Law on the protection of cultural remains. This measure has been fully applicable since 2008. Meanwhile, the List of the six key examples of the cultural heritage of China has been promulgated, and includes 18 sections and 49 elements of the Grand Canal. This recognition by the Council of State gives these sites priority in protection terms. As indicated in the additional documentation of February 2014, all the properties nominated for inclusion on the World Heritage List were granted this maximum level of protection by the State Party in 2013.

The serial property is managed in accordance with national regulation laws which are applicable for a variety of reasons. The law is applied through administrative regulation texts which apply to all the properties concerned, and by provincial or local protection plans for specific properties. The property as a whole has been the subject of the promulgation of 54 texts of this type, of which the main ones are referred to below.

The hydraulic management of the canals depends on the Law on the administration of the regulation of rivers (including canals) (1988), amended by the Law on flood control, the Law on water and the Law on water pollution. The application documents are enacted by the competent provincial administrations, and all these documents are grouped together in the form of Regulation plans specific to each canal and catchment area, defining the management areas for the waterway and its technical facilities.

The national law on the regulation of the protection of historic towns, villages and conservation areas (2008) ensures the highest degree of national protection. Six urban areas of the property are concerned, with specific regional and local regulation texts.

The Law on the regulation of scenic sites (2006) can lead to the institution of a national conservation park. One property in the series is concerned.

The Law on the regulation of natural reserves. One property in the series is concerned: the natural reserve of Nansihu (2003) includes the Weishan site (property n° 29).

The other national laws concerning the property, with the administrative and local regulation texts applicable to the sites concerned are: the Law on the protection of the environment, the Law on territorial administration, the Law on urban and rural planning, and the Law on water and soil conservancy.

In 2008, the Ministry of Culture and the State Authority for the Cultural Heritage of China took charge, along with the eight provincial governments concerned, of the setting up of advanced heritage protection for the Grand Canal. A document setting out the basis for harmonisation between the towns along the canal – the Joint Agreement for the Protection of the Grand Canal – was signed and was implemented in 2012 for the main municipalities concerned. It guarantees the convergence of municipal regulations in town planning and building rules, and in the demarcation of protected areas, etc.

In practice, all elements next to the canal (passageways, bridges, house facades, trees) in the historic urban quarters are recognised and strictly protected as urban districts associated with the canal. In the ordinary sections of the linear course of the canal, with no specific attributes, the banks are considered to form part of the canal because of their technical role, and they are protected in the same way as the canal. However, immediately adjacent elements which play a role in the heritage integrity of the canal and its landscapes (trees, footpaths, facades, etc.) are not always protected by the current buffer zones.

The buffer zones are intended to prevent building and development pressure in the most sensitive zones of the canal. Generally speaking, they are covered by the same regulation as the nominated property itself. When this is not the case, building density and height are regulated by the provisions of the local Master Plan.

ICOMOS considers that the legal protection in place is generally adequate, but that various improvements and extensions are necessary. It is necessary to systematically widen the protection of the banks to include immediately adjacent elements, by extending the buffer zones along the canal.

Conservation

The large amount of canal maintenance work and dredging carried out since the 1950s has demonstrated the revival in interest in waterways in China. Several of the sections included in the nominated property have been affected by this work. The associated documentation is available from the River Regulation Administration of the

People's Republic of China, from provincial bodies and departments, and from municipalities and local authorities. The canals are currently carrying intense levels of traffic; in some cases the canals have been widened, and in many cases new sections have been dug and new port facilities built. While their state of hydraulic conservation is usually good, the state of heritage conservation may vary considerably, as in some cases technical characteristics have been substantially altered, and landscape authenticity has been affected by the many sections passing through suburban or industrial zones, often developed because of the presence of the canal.

The non-navigable sections of the canals have often been kept as drainage reaches, to carry away rainwater and protect against flooding, and they are also used for irrigation purposes. They have thus been kept for water management purposes, but without any major structural alterations. These are the most authentic sections, and those most representative of the historic canal. Recently, projects have been drawn up with a view to refilling some of these sections with water to enable navigation.

Conservation plans have been drawn up for each of the canals included in the nominated property; they provide for the construction of technical facilities whose materials and shapes are in keeping with traditional facilities, and the regulation of new building densities and heights mentioned above. Each plan acts as a guide of best practices for the restoration and maintenance of the canal itself, the associated hydrological zones (lakes, marshland, irrigation zones, etc.) and of its existing facilities. It also sets out a series of measures to improve environmental quality in general and water quality in particular, and is based on a plan for the distribution of water between the various zones along the Grand Canal.

Since 2006, systematic monitoring of the heritage conservation of the property as a whole has been added to the hydraulic management. A policy of encouraging archaeological excavations, with the conservation and protection of the remains unearthed, has also been developed. The archaeological sites fall into 2 main categories: those whose existence has been known since 1970-1980, and those that were recently discovered following research undertaken for the purpose of the World Heritage List nomination. These sites have been excavated recently, or are still being excavated. Protection measures have been taken to prevent deterioration and intrusion, in some cases by back-filling the sites after excavation.

In 2008, in response to the problems of economic and urban development in many zones around the canal, the provincial and municipal authorities agreed to coordinate a global conservation plan for the property, including control of urban development in the zones forming part of the nominated property and buffer zones (urban density, building height, industrial and logistical facilities). The associated documentation is available from the State Administration for Cultural Heritage (SACH) and from the local management units in charge of a section or site

included in the property. The conservation monitoring project will also have a centralising effect on the canal documentation, which will take the form of a geographic information system (GIS) and data base.

The conservation of historic urban areas forming part of the Grand Canal heritage has led to the creation of national bodies for the protection and management of historic city conservation and urban conservation zones. Six have been set up since 1982: one each at Wuxi, Hangzhou, Shaoxing, and Naxum-Hugzhou, and 2 at Suzhou. Special attention is paid to the historic urban zones of the Grand Canal, particularly with regard to the rapidly growing use of the canal for tourism. The conservation programmes are wide-reaching, and include the appearance of the canal banks, and the conservation of streets and quarters traditionally associated with the life and economy of the Grand Canal. The main difficulties are social, as the improvement of the housing stock raises many compatibility problems (access to modern conveniences versus maintaining the existing ancient appearance of houses and quarters). A great deal of work on networks (water, sewerage, electricity, etc.) is also necessary.

Some more specific programmes, usually in urban areas or in park zones close to urban centres, are aimed at carrying out overall landscape and environmental rehabilitation. Environmental measures are also being taken in some sectors, consisting of the controlled management of land and building, and water quality improvement.

The conservation of the section of the Huaiyang Canal and its environment in the Yangzhou region (n° 12 or HY-03) has national park status (2006).

ICOMOS wishes to emphasise the impressive nature of the work carried out by the State Party for the conservation of a property as vast and complex as the Grand Canal. This has already produced important and convincing results in terms of the preservation of the many cultural and environmental values. The Grand Canal clearly illustrates the challenges of heritage conservation today in a huge country in a phase of swift economic development. The successes achieved are unquestionable, as are the difficulties encountered in certain major issues, not only social and economic, but also related to the philosophy of development. In view of the scale of the efforts and their mobilisation, ICOMOS congratulates the State Party, but also wishes to make some observations:

- The sharp increase in the number of excavation sites may be detrimental to an understanding of their significance. Excavations must be carried out carefully, over a long period, and greater efforts must be made to critically analyse their results and set them into context. The current rate of excavations seems to be excessive, and the results need to be looked at using the perspective of international scientific critical analysis.

- The hydraulic rehabilitation of the Grand Canal over the last 60 years and the boom in the use of waterways in China must be seen in the context of the property as a whole, so that each section is understood in terms of what it really is today, thus avoiding confusion. It is important to distinguish those restorations that have been carried out that have changed the status of anything.
- Greater attention must be paid to environmental issues and to the landscapes of the Grand Canal.
- The question of the place of the 20th century in the heritage of the Grand Canal remains, and it must be identified in its own right, and not only in terms of past history to which it bears testimony.

ICOMOS considers that the state of conservation is generally good, and that a determined and diversified conservation policy has been carried out, to its benefit. However, greater attention should be given to: setting archaeological findings into a more critical perspective, clarifying which historical periods are actually represented by sections of the canal, and increasing the efforts made in environmental and landscape conservation.

Management

Management structures and processes, including traditional management processes

The management system is based on several levels of responsibility. At national level, under the auspices of the State Council, the coordination of the property's management is in the hands of the Inter-Provincial and Ministerial Consultation Group for the conservation of the Grand Canal. The group is made up of the governments of the six provinces and of the two cities with provincial status, the State Administration of Cultural Heritage (SACH), the Water Distribution Office, the Ministry of Water Resources and the other ministerial departments concerned. Its work is carried out at plenary sessions and in working subgroups. The Group is the supreme body for the management of the canal, because of its role of coordination, harmonisation and control of provincial and municipal planning. It has set up 8 provincial management committees under the responsibility of the provincial governments. The management committees have members from the provincial departments, the decentralised state departments and the catchment area organisations. Their role is to ensure cooperation and developing decisions made. 25 municipal councils have formed the Contractual Alliance of Towns for Protection of the Grand Canal. Its role is the inter-city coordination and harmonisation of protection and conservation practices. The provincial management committees and the Alliance have set up institutions in charge of the everyday protection and management of the various sites. There are 80 institutions of this type, most of them responsible for managing one or several element(s) of a property.

As part of the Master Plan, there is currently an updated flood risk monitoring and control plan along the whole

length of the Grand Canal, continuing the measures taken since the 1950s. Its material resources are regularly improved in the light of technical advances in water management and control (dykes, dredging, reservoirs, etc.) and in the improvement of regulation facilities (dams, weirs, sluices, etc.). The plan has three levels of application: the river basin, the province and the municipality.

Each historic urban zone affected by fire risk must have an intervention plan, fire-fighting facilities and fast emergency access roads.

The funding for the protection and conservation of the Grand Canal comes mainly from central government, through the cultural authorities and the river management authorities, and from funds allocated by the various local authorities to the plans and to the management institutions. At present, a fairly modest additional sum is provided by direct tourism revenue. Over the five years up to 2012, central government invested USD 96 million and the local authorities a total of USD 1,600 million. These amounts cover the maintenance of the waterways, the consolidation of banks and dykes, the conservation of cultural sites, archaeological research, environmental improvement, scientific research and the operation of the institutions.

Staff resources along the canal for protection, conservation and visitor interpretation varies considerably from one site to another. Generally speaking, there are four main departments in the management body of a site: cultural heritage, water conservancy, transport and urban administration. Specialist departments are added depending on the nature of the site: archaeology, history, promotion and education, etc. In 2012, 3,559 staff were employed in the management of the Grand Canal.

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

The current national plans are the General Master Plan for the property (2012-2030) and the Grand Canal Management Plan drawn up for the purpose of the World Heritage nomination, and which is based on the General Master Plan. These framework documents were based on an overview drawn up on the basis of the protection, conservation and management measures taken by the municipalities and then by the provinces. The municipal and provincial plans are based on the application of legal protection rules and the associated regulatory decisions. These rules also apply to buffer zones. A process of concertation between the provinces and municipalities takes place under the auspices of the Group, which harmonises and validates the plans, before grouping them together. The current Master Plan, which is federal, was drawn up using this principle from 2008 onwards.

The Master Plan is divided into 35 sector conservation plans, all of which have been promulgated and are being

applied, up to 2030; 5 historic town conservation plans, up to 2020; 8 provincial land use plans, up to 2020; 24 urbanisation plans for towns along the canal; and the plan for the scenic Shugang-Slender West Lake site.

The 2013-2015 Management Plan for the property was drawn up for the purpose of the World Heritage List nomination. It brings together, over a period of 3 years, the various items relating to governance, management and protection of the property, in line with the expectations of the Committee. This has led to the fine tuning of protection levels, the improvement and reinforcement of conservation, the enrichment and standardisation of management measures, the precise definition and harmonisation of buffer zone protection, and the development of short-term action plans to improve knowledge of the property.

Tourist visits take place mainly in a series of clearly identified places, which are clearly identified and generally satisfactorily organised (historic urban sites of the canal, and associated gardens, hydraulic facilities, lakes and parks) or which are currently being identified (archaeological sites). The most frequently visited sites on the canal are: Slender West Lake at Yangzhou (3.2 million visitors in 2012), Suzhou (2.3m), Jiaxing-Hangzhou (1.3m), Nanxun (4.0m), the old city of Beijing (3.0m) and Taierzhuang (1.8m). Visitor facilities have been standardised with regard to signage, trained guides and security systems. Four national museums have been opened to act as Grand Canal interpretation centres: Jining, Hua'an, Hangzhou and Huaibei. Of the 31 sites, 10 do not yet have a visitor reception centre. 23 canal sections offer the possibility of visits by boat.

Involvement of the local communities

This is achieved by strong institutional involvement of the towns along the canal in the management of conservation, and by means of risk intervention plans. It is also achieved by the local development of visitor facilities and the providing of commercial and cultural facilities for the sites most frequently visited.

ICOMOS considers that the management system as a whole for such a complex system has been rationally devised and organised over the last 7 to 8 years, and implemented over the last 4 to 5 years. The system seems to function satisfactorily and the State Party is encouraged to continue its efforts in this direction, while paying closer attention to water quality management, improving the quality of visitor reception plans in the new zones of the canal (interpretation centre, qualified guides) and training personnel about the values of the Grand Canal.

6 Monitoring

A large amount of material already exists relating to the monitoring of the property, in terms of its hydraulic operation, the various urban preservation policies, and the

active policy recently introduced for the conservation and valorisation of the property. The material consists of reports and studies on conservation, some of which were drawn up for the preparation of the nomination file. Archiving of technical information about the management of the canals is currently being carried out at both local and national level. In 2012, there were 21 recent monitoring reports on individual sites, 8 water quality monitoring reports, 16 major conservation-restoration project reports for components of the property, and 21 reports on local monitoring or district monitoring of hydraulic management.

In view of the diversity of issues and situations encountered, the following general categories are proposed:

- *Physical fabrics:* 1- Current condition of the individual components (shape, structure, materials, etc.); 2- Uses; 3- Relationships between the elements themselves and with the environment.
- *Factors affecting conservation efforts:* 1- Natural environment (weather, geology, environment, ecology, etc.); 2- Social environment (urban development, economic installations, pollution, etc.).
- *Conservation and management:* 1- Tourism (number of tourists, financial and economic impacts); 2- Intervention practices (archaeological excavations, routine maintenance, environmental improvement, conservation projects, etc.); 3- Heritage enhancement (exhibitions, interpretation centres, tourist facilities, etc.) 4- Management and staff resources (implementation of management plan, management bodies, management staff, funding, etc.).
- *Security:* 1- General security and fire security 2- Measures to deal with emergencies and unexpected incidents.

The State Party intends to ensure that the monitoring of the property is carried out using standardised practices under the Master Plan and the Property Management Plan. The practices will be coordinated between the various levels (national, provincial and local). To set up the necessary system for monitoring and sharing information between all the bodies involved, the State Party is currently setting up a *Grand Canal Heritage Monitoring and Archive Centre*, with its own staffing and with local centres at the property's sites. A guide for Grand Canal monitoring and archives has been published to harmonise practices. Although the setting up of the Centre seemed to be a project when the nomination file was drawn up (at the end of 2012), the additional documentation supplied by the State Party (October 2013 and February 2014) refers to the setting up of 41 local and regional agencies. However, the definitive setting up of the Centre is not scheduled until 2015.

ICOMOS considers that the monitoring of a complex property such as the Grand Canal must be set up in a permanent and coherent form that covers all the

components. This work has begun, but it is now necessary to complete its implementation.

7 Conclusions

ICOMOS recognises the Outstanding Universal Value of the Grand Canal of China. It is the largest civil engineering project in the history of mankind, whose first construction work dates back to pre-imperial Chinese antiquity, and which even today in its modernised form constitutes the largest internal waterway with the highest levels of traffic in the world. It bears witness to an exceptional technical, social, economic and political history. It represents in civil terms what the Great Wall of China represents in the military field, a fundamental testimony to Chinese civilisation.

ICOMOS congratulates the State Party for taking up the challenge of the heritage conservation of a property of this kind, at the heart of an internal waterway network almost 2,500 km long, which is currently the most active in traffic terms in the world, in one of the world's most densely populated regions.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the nomination of the Grand Canal, People's Republic of China, be **referred back** to the State Party in order to allow it to:

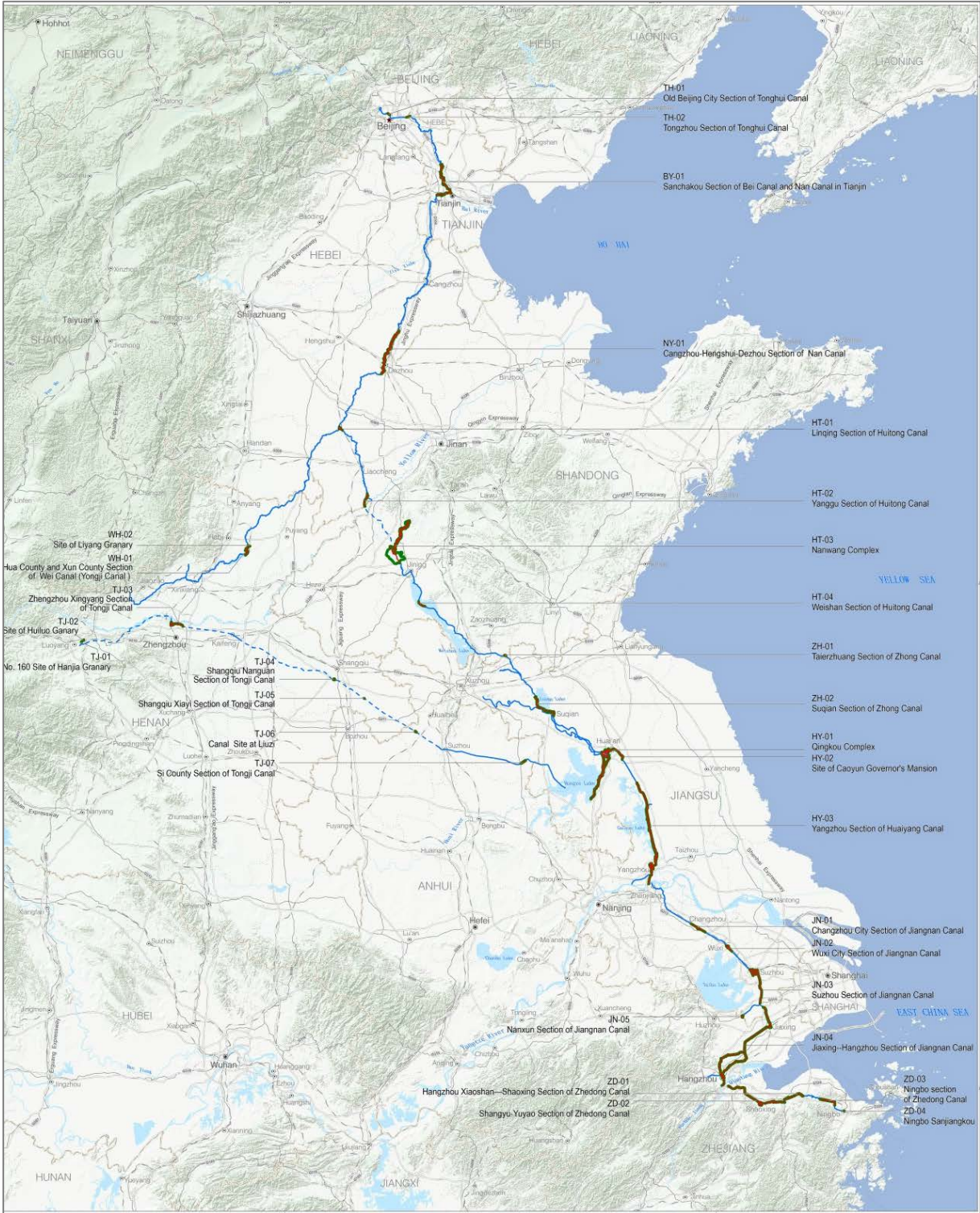
- Continue the work that has begun to revise the system of buffer zones in terms of their territorial definition, by major canal environment zone type, and enact protection measures that are fully adapted to local situations and negotiated with the municipal and regional authorities. In this connection, systematically widen the protection of the canal banks beyond the historic urban zones to include the elements forming the immediate canal landscape: footpaths, trees, facades of bordering houses, etc.
- Complete the setting up of the *Grand Canal Heritage Monitoring and Archive Centre*.

Additional recommendations

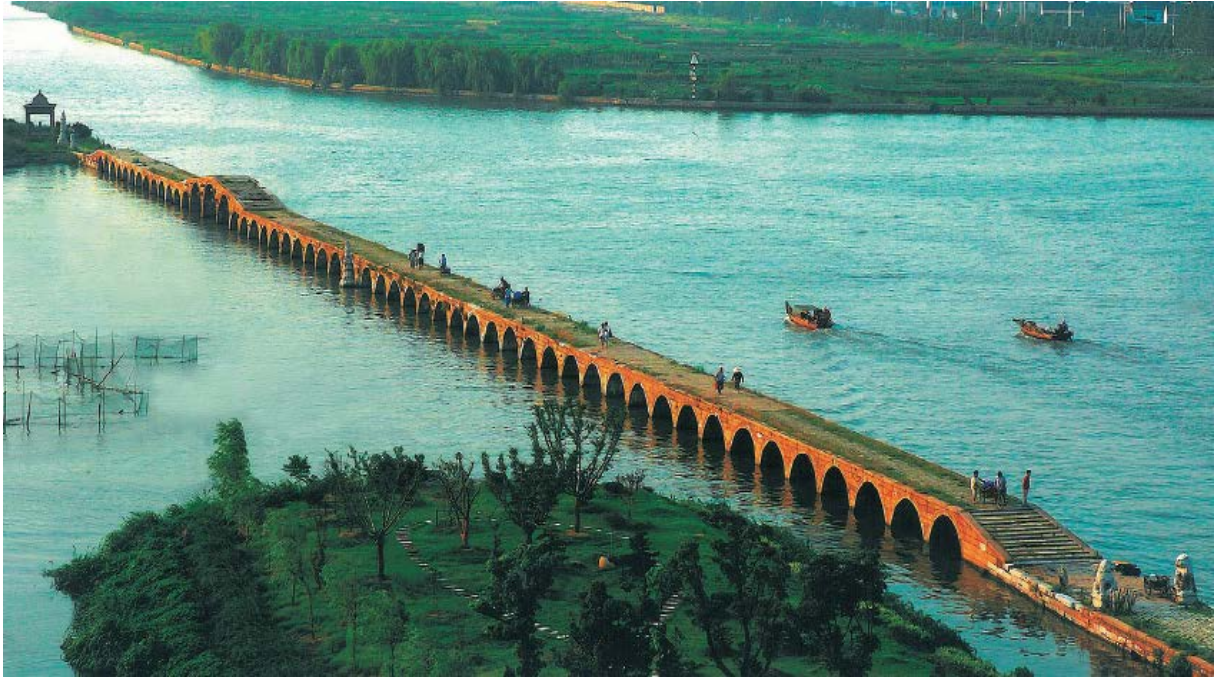
ICOMOS further recommends that the State Party give consideration to the following:

- Better explaining the technological elements that form part of the canal, particularly the hydraulic functioning of the archaeological parts of the Grand Canal. A more critical analysis of the archaeological findings should be carried out;
- Clarifying the historic periods that are actually represented by the preserved sections of the canal;

- Stepping up efforts in environmental and landscape conservation, for example by defining priority cones of vision for the properties, and then protecting them from the impact of new buildings;
- Strengthening the quality of the tourism development and visitor reception plans in those zones of the canal that have recently been opened up for tourism (interpretation centre, qualified guides);
- Examining the possibility of a supplementary continuous buffer zone with a low level of constraint, which could both indicate the value of the functional continuity of the Grand Canal and also involve all the local residents in adhering to its values;
- Clarifying recent and projected funding, drawing a clearer distinction between operations and investment, and drawing a distinction between funding relating to the hydraulic conservation of the waterway, its conservation as cultural and natural heritage, and tourism development programmes;
- Continuing and deepening efforts to improve water quality by incorporating them systematically in conservation and development programmes linked to the Grand Canal;
- Strengthening the continuing education of the permanent or temporary staff at the various sites with regard to the overall values of the Grand Canal;
- Encouraging international cooperation in order to promote the sharing of knowledge relating to canal management/conservation.



Map showing the boundaries of the nominated property



Baodai Bridge



Archaeological site of the Caoyun Governor's Mansion



Daicun Dam



Shantang canal conservation zone



Zhong Canal



Changzhou city, Jiangnan Canal

Rani-ki-Vav (India) No 922

Official name as proposed by the State Party

Rani-ki-Vav (The Queen's Stepwell) at Patan, Gujarat

Location

Patan, Patan District
State of Gujarat, India

Brief description

Rani-ki-Vav, located on the banks of the Saraswati River in Patan, represents a distinctive form of subterranean water architecture of the Indian subcontinent, the stepwell. Initially built as a memorial in the 11th century CE, the stepwell is a single component, water management system divided into seven levels of stairs with sculptural panels of high artistic and aesthetic quality. More than five hundred principle sculptures and over a thousand minor ones combine religious, mythological and secular imagery, often referencing literary works.

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*.

1 Basic data

Included in the Tentative List

3 July 1998

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 21 to 25 October 2013.

Additional information requested and received from the State Party

ICOMOS sent an initial letter to the State Party on 27 September 2013 requesting additional information with regard to the general approach of nominating a single

stepwell rather than a group and the comparative analysis in a national context. The State Party provided additional information in response to the questions raised on 12 November 2013. The information provided is included under the relevant sections below.

ICOMOS sent a second letter on 13 December 2013 requesting further clarification on the boundaries, a possible extension of the buffer zone and the indicators of the monitoring system established. The State Party responded by letter on 28 February 2014 addressing all aspects for which additional information was sought. The information provided has been integrated in the relevant sections below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The nominated property consists of the monument of Rani-ki-Vav, the Queen's Stepwell and its immediate vicinity, which cover an area of 4.68ha. The stepwell is oriented in an east-west direction and combines all of the principle components which characterize stepwells: (1) a stepped corridor beginning at ground level which leads to a first pavilion, (2) a series of four pavilions with an increasing amount of storeys towards the west, (3) the tank, which is directly accessed from the well and in which water was stored, and (4) the well in tunnel shaft form, which extends above the ground water level forming a parapet. Rani-ki-Vav has seven storeys of terraced walls with pavilions and buttresses which in architectural stylistics conform to the Maru-Gurjara style. The stepwell is mostly constructed of burned bricks with lime mortar and the local Dhrangadhra stone. A large number of masons' marks and signatures remain visible on architectural elements and sculptures. Only some of these can be securely dated however.

From east to west, the Rani-ki-Vav was entered through a ceremonial arched gateway framed by two entrance pillars, with figurines in niches on all four sides. The descending flight of wide steps leads to the ground level of the first pavilion. The stepped corridor was originally ornamented with 292 carved pillars, of which 226 remain. The steps are rather high but can be descended using the risers in the shape of truncated pyramids placed at regular intervals. The first pavilion originally had two storeys but only 12 plinths of former pillars remain on its lower storey. Moving towards the second pavilion, five principle high platforms with turret-shaped short flights of steps lead to the formerly four-storey second pavilion, of which only the lowest storey still exists.

The third stage of the corridor and following third pavilion is the largest, which also retains four out of six former high terraces. The even-higher steps can be navigated by multiple turret-shaped risers leading to the former six-storey pavilion, of which three storeys are preserved in

good condition. The roofs of each level are supported by three rows of six free-standing pillars and three additional pillars on each side adjoining the walls. The bottom of this third corridor reaches a depth of up to 22 meters below ground level. The fourth stage of the corridor is the deepest and leads into a rectangular tank, of 9.5 by 9.4 meters at a depth of 23 meters. The high walls of the tank integrate seven storeys of richly decorated architecture. The vertical surfaces on either side of the well cavity are reinforced by additional two-storey buttress structures aimed to prevent collapse of the vertical surfaces. The fourth pavilion had seven storeys of which five full storeys are preserved and the plinths of the sixth storey. The spaces between the pillars on the lower two storeys were braced with ornate walls to increase the structural stability of the lower stepwell sections. The well is located in the westernmost section of the property and consists of a shaft of 10m diameter which reaches an additional 7m below the ground level of the fourth section to 30m depth. The shaft is divided into seven levels which correspond to the seven storeys of the fourth pavilion.

Elements of ornament and decoration illustrate high artistic quality and systematic development. All pillars in Rani-ki-Vav are uniform in design with square shaped plinths and carved niches housing deities on opposite sides. The octagonal drums are divided into four vertical, decorative segments and the capitals are designed in the form of quadruple brackets, the undersides of which carry four human or animal heads. Rani-ki-Vav initially included more than 800 sculpted panels of which approximately 400 survive, distributed in the walls. All surfaces of Rani-ki-Vav are ornate with sculptures illustrating contemporary belief systems but also social patterns and the extraordinary skills of craftsmen. Around 400 niches housed divine images, amongst which Vishnu by far outnumbers the other gods and Parvati the goddesses. The nomination dossier provides elaborate documentation on the location and stylistics of sculptured elements. Additional sculptures flank either side of the niches on the long stretches of the terraced walls.

History and development

Stepwells are a specific architectural typology of the Indian Subcontinent and have been constructed since as early as the 3rd millennium BC. The typology evolved over time from what was basically an accessible pit in sandy soil, towards very elaborate multi-storey works of art and architecture. Rani-ki-Vav was built at the height of craftsmen ability in both stepwell construction and the Maru-Gurjara architectural style. The Rani-ki-Vav was constructed as a religious as well as functional structure, designed as an inverted temple highlighting the sanctity of water. Built as a memorial to a King, the stepwell celebrated water as the mother goddess and was associated with both medical and ritual benefits.

Following the construction on Rani-ki-Vav in the 11th century CE, major environmental events influenced its present state of conservation. The first of these events was the initial flooding and later silting of Rani-ki-Vav following major floods and later the disappearance of the

Saraswati River in the 13th century. According to traveller reports authored in the 19th century, the entire property, except for the well shaft, was still then indiscernible due to the layers of silt which covered the multi-storey structure.

During the following important phase from the 1930s to the 1960s, initial conservation works were undertaken which later allowed for excavation of the silted parts of the property. In 1937 initial repair and stabilization work was conducted on the extant parts of the property and in the following years the colonnades were exposed. Large amounts of debris were removed and the stepwell was cleared during several subsequent phases in conjunction with conservation initiatives. In the 1970s conservation activities were continued and structural stabilizations were undertaken, especially on the northern wall which was in a dilapidated condition and was therefore reassembled and its sculptures put back into place. During the 1980s most of the silt was removed and surface conservation and cleaning could be commenced. Dust, dirt and biological deposits continued to be removed in the 1990s, when some of the richly-decorated, missing ashlar were also replaced to stabilize the underground water structures. Conservation works were completed in 2008 but have since been continued as part of an annual maintenance and monitoring scheme.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis discusses stepwells and comparable accessible well structures, both on an international and regional level. In the international comparison, well structures are identified in different regional contexts such as the stepwells of the Cahuillan Indians in Coachella Valley, the holy wells of Ireland, Sardinia and France, several accessible well structures in North America, the Tula wells of the Borana community in Ethiopia and several others. Several of these wells considered in the comparison have rich ornamentation and religious associations. ICOMOS considers however that the stepwells on the Indian Subcontinent constitute a specific type of architectural structure that cannot easily be compared with stepwell structures in other cultural contexts.

At a regional level, the comparative analysis considered a number of other stepwells including Narayan Rao's stepwell at Idar, Gujarat, the Rataba stepwell in Rampura, Gujarat, the Dada Harir stepwell in Ahmedabar, Gujarat, the Rudabai stepwell in Adalaj, Gujarat, the Stepwell in Neemrana Fort and the Rani Stepwell in Nadol, Bundi, Rajasthan. The comparative analysis concluded that the Rani-ki-Vav has the most ideal proportions in relation to the division of space, and exhibited the highest level of technological achievement in engineering skills.

At the request of ICOMOS the State Party expanded on the comparative analysis and provided additional

information on 47 stepwells. Key examples were then compared both on the basis of architectural design, ornamental decoration, state of conservation and quality of craftsmanship for which ground plans and ample photographic documentation was provided.

ICOMOS considers that Rani-ki-Vav is a distinct and remarkable example of a stepwell representing the height of the technological and architectural development of this particular type of structure. It is also a unique masterpiece in terms of its ornamental and figurative decoration of exceptionally high quality and artistic skill.

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:

- Rani-ki-Vav is the most developed, elaborate and ornate example of a unique type of Indian subterranean architectural structure, and it marks the zenith in the evolution of stepwells.
- The queen's stepwell is an exceptional example of technological development in utilizing ground water resources in a single component, water management system and it illustrates the exceptional capacity to break large spaces into smaller volumes following ideal aesthetic proportions.
- Rani-ki-Vav is a particularly large and complex example of a stepwell, with seven storeys of ornamented panels of sculptures and relief representing the height of the Maru-Gurjara style.
- Following the flooding and disappearance of the Saraswati River due to geotectonic changes, the property was buried under layers of silt for almost seven centuries and has been preserved underneath in an exceptional state of conservation.

ICOMOS considers that Rani-ki-Vav is indeed an outstanding example of the mastery and elaborate technology of stepwell construction, and that the aesthetic proportions and artistic skill that it illustrates are impressive. ICOMOS considers that stepwells are an important architectural typology on the Indian subcontinent and that hundreds of examples, many of them well-preserved, still exist. ICOMOS agrees however with the arguments presented, that it is the mastery of artistic implementation, the excellent quality of workmanship and the beauty of detail and proportions, which makes Rani-ki-Vav the most outstanding example amongst these single component water management structures.

Integrity and authenticity

Integrity

Rani-ki-Vav is preserved in its key architectural components and, despite missing pavilion storeys, its original form and design can still be easily recognized. A majority of the sculptures and decorative panels remain in-situ and some of these in an exceptional state of conservation. The level of integrity may have been reduced slightly as several figurative elements were found in the silt and could not be attributed to a specific location on site. It was decided not to integrate these in the monument and they were transported to an off-site museum and are in consequence no longer part of the nominated property. ICOMOS considers however that it is legitimate to preserve selected structures in an ideal environment, in particular when their original location remains subject to speculation.

It could be argued that the integrity of Rani-ki-Vav has also been reduced following geotectonic changes due to seismic activity and natural processes in the 13th century, which resulted in a change of the Saraswati River bed and consequently reduced the ground water level on site, negatively impacting on the functionality of the stepwell. ICOMOS considers that this change is part of the history of Rani-ki-Vav as it caused the flooding and silting of the architectural structure which allowed for its exceptional preservation over seven centuries. Although it is regrettable that the previous function of Rani-ki-Vav can no longer be experienced today, the seismic activity allowed for its unique state of preservation, and cannot be said to significantly affect the integrity of the site.

ICOMOS considers that all components including the immediate surrounding soils which adjoin the vertical architecture of the stepwell are included in the property. It can therefore be assumed that the property is complete. In terms of intactness, the property does not seem to have experienced major losses since its flooding and silting in the 13th century. However, ICOMOS considers that Patan like many Indian urban centres is experiencing rapid urban growth and that the western expansion of the city towards Rani-ki-Vav has to be carefully controlled to protect the integrity of the property in the future.

Authenticity

Rani-ki-Vav has largely maintained its authentic material and substance, but in several sections component parts had to be reconstructed for structural stability. At the entrance flight of stairs, new steps had to be integrated in the same type of sandstone used in the construction of the monument, and previously-lost stone works on the southern side of the upper two levels were added, suggesting the architectural language of neighboring components but without ornamental details. In all instances the reconstructed elements seem to be only added where structurally required or to protect remaining sculptures. The smooth surfaces and lack of decoration of these elements can be easily distinguished from the historic elements.

Likewise, at the lowest two levels of the tank, new sand stone pillars were added to reinforce the cracked beams of the bracing structure. Around the outer terrace at ground level, slopes of smooth descent, a so-called sacrificial terrace, were created to prevent soil erosion following stronger rain falls. ICOMOS considers that apart from these clearly identifiable additions, Rani-ki-Vav has a high level of authenticity in material, substance, design, workmanship and, to a certain extent, atmosphere, location and setting. The authenticity of setting is somewhat reduced however by the fencing structure installed for security purposes. Unfortunately, the Rani-ki-Vav cannot retain authenticity in its use and function as a result of the altered ground water levels following the relocation of the Saraswati River. ICOMOS considers that the overall condition of authenticity is acceptable.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have been met but that urban development in the property's vicinity has to be carefully controlled to protect its integrity.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i) and (iii).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that Rani-ki-Vav is the most authentic example of a subterranean water structure, also seen as an underground water temple, which has been perfectly executed with complex engineering and masonry skills. It creates a unique combination of functional requirements and high-quality water architecture with religious imagery.

ICOMOS considers that Rani-ki-Vav illustrates the technological and artistic height of stepwell tradition, and that it has been decorated with religious, mythological and at times secular sculptures and reliefs, of true artistic mastery. The stepwell represents an expression of human creative genius in its variety of motifs and mastery of craftsmanship, and in its elegance of proportions which frame an intriguing space, both functional and aesthetic.

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 Rani-ki-Vav reflects an exceptional testimony to the tradition of building subterranean stepwells as an act of charity and piety. It constitutes the most evolved example of such single component, water management structures at the zenith of stepwell construction, which flourished during early and medieval times but then disappeared completely from the 19th

century when alternative methods of sourcing and storing water were developed.

ICOMOS considers that while the arguments made are in principle valid, the building of subterranean stepwells cannot be considered a cultural tradition or civilization as required by criterion (iii) and accordingly Rani-ki-Vav cannot be seen as an exceptional testimony to a cultural tradition. However, the arguments presented seem to indicate that the Queen's stepwell is the most outstanding example of a specific type of architecture and technological development which would be better recognized under 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 has not been proposed by the State Party. However, ICOMOS considers that the arguments presented under criterion (iii) that Rani-ki-Vav is the most exceptional example of stepwells in both technological and functional terms, are better recognized under this criterion.

ICOMOS considers that Rani-ki-Vav is an outstanding example of subterranean stepwell construction and it represents a prime example of an architectural type of water resource and storage system which is widely distributed across the Indian subcontinent. It illustrates the technological, architectural and artistic mastery achieved at a stage of human development when water was predominantly resourced from ground water streams and reservoirs through access of communal wells. The functional aspects of this architectural typology were often combined with worship of water as a venerated natural element and the depiction of highest quality Brahmanic deities. The presence of Sheshayin Vishnu in the well illustrates the "temple function" of this water management structure.

ICOMOS considers that this criterion has been justified.

In conclusion, ICOMOS considers that the nominated property meets the conditions of authenticity and integrity and meets criteria (i) and (iv).

Description of the attributes

The Outstanding Universal Value of Rani-ki-Vav is expressed in its architectural structure, technological achievements in water sourcing and structural stability and in particular its sculptural decoration and artistic mastery. Attributes encompass the consecutive stepped terraces and pavilions, the figurative motifs and sculptures, as well as the proportion of filled and empty spaces, which provide the stepwell's interior with its unique aesthetic character. The setting enhances these

attributes in the way in which the well descends almost suddenly from a plain plateau into the earth and it is the contrast of the empty plain out of which the descent starts, which strengthens the perception of this space.

4 Factors affecting the property

Patan is a zone of seismic activity, as the historic event which displaced the Saraswati River from the site previously demonstrated. In 2001, a massive earthquake occurred (between 7.6 and 8.1 magnitude according to the Richter scale) which had its epicentre close to Bhuj, only 260 kilometres west of Patan. Following close site inspections shortly after, it seems that only minor cracks occurred in the entrance wall of the upper level. Other monuments in the vicinity of the site however were seriously damaged and a risk of future earthquake damage exists also for Rani-ki-Vav. The fact that the top storeys of the pavilions have been lost – likely in an earlier massive earthquake - leaves the side walls more vulnerable during earthquakes. While a Risk Preparedness Plan exists and was described in the nomination dossier, it does not offer concrete technical solutions for any preventive mechanism to avoid future damage during earthquakes. ICOMOS considers that methods should be developed which provide preventive stabilization of the most elaborate sculptures in particular and thereby prevent damage which may be caused through earth movements or partial wall collapses during major earthquakes.

A number of natural factors including air pollution, heavy rain falls and wind are at the origin of the erosion and deterioration of sandstone sculptures and decorations. Likewise, mechanical damage occurs on the stone surfaces in particular because adequate measures are missing to prevent visitors from walking on the many narrow veneers on both sides, linking pavilions on each level. Sculptures which are easily accessible to visitors are frequently touched, and consequently suffer abrasion damage.

Urban expansion of Patan city towards the west could impact on the visual perspectives at the property in reducing the impression of an empty plain from which the visitor descends into the property. ICOMOS considers it essential that the perspectives towards the western end of the stepwell remain free of any development that would be visible from the entrance level of the stepwell and that any development towards the north, east and south of the stepwell should be controlled to ensure that the impression of the flat surrounding of the well entrance is not reduced. This applies in particular to potential developments for visitor infrastructure which may be considered in the future.

ICOMOS considers that the main threats to the property are earthquakes, urban or infrastructure developments, and direct physical damage to the sculptures due to visitor contact.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the property comprise an area of 4.68ha of almost triangular shape, of which the stepwell occupies an area of 1,400 (70 by 20) square meters. The property is surrounded by a buffer zone of 130.12ha. The boundaries comprise the stepwell architecture, surrounding soil and much of the undeveloped plain in which it is located. ICOMOS considers that the boundaries are adequate to encompass the key elements and provide adequate protection for Rani-ki-Vav.

The wider surrounding of the property contains further elements of cultural significance, which are included in the revised buffer zone submitted in February 2014 at the request of ICOMOS. It remains uncertain at this stage whether some of these may have had direct functional relation to the Rani-ki-Vav. Structures in the buffer zone include a second water tank built shortly after the Rani-ki-Vav, which may have had functional relations to the stepwell, as well as an ancient mound and the ancient city walls. ICOMOS considers that little information has been provided to understand the historic geographic conditions which provided the historic context to the property. The context of other water tanks and the ancient city walls, which were constructed earlier than the stepwell but created its protective surrounding until the floods in the 13th century, should be better researched and understood, especially in terms of functional and spatial relations between the Rani-ki-Vav and its environment.

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

Ownership

The nominated property is under State ownership administrated by the Archaeological Survey of India, Ministry of Culture, as the sole authority for all aspects of management and protection. The buffer zone is partly state-owned and administrated by the Archaeological Survey of India and the Municipal Cooperation of Patan, Gujarat. Other properties in the buffer zone belong to charitable organisations such as temple trusts or dargah trusts as well as private land owners. The cafeteria constructed for visitors belongs to the Tourism Cooperation of Gujarat.

Protection

The property is protected as a national monument by the provisions of the Ancient Monuments and Archaeological Sites Act of 1958 amended by its revision of 2010 and accordingly administrated by the Archaeological Survey of India. It is formally designated as an ancient monument of national importance and surrounded by a protective non-development zone of 100m to all sides of the architectural structure.

The buffer zone covers the protected area of Rani-ki-Vav and the protected areas of another monument, the Sahastralinga Talao located in the vicinity thus combining a larger protective zone. The wider surroundings of the buffer zone, in particular towards the east, are further protected in the municipal plan, which restricts urban and infrastructure development in this area.

ICOMOS considers that the protection of the property is established at the highest national level and that the protection of the buffer zone is adequate. ICOMOS further considers that it is important to upkeep the restrictions for urban and infrastructure development in the wider surroundings of the legally-formalized protection zone to preserve the integrity of the site's setting.

ICOMOS considers that the protective mechanisms for the property and the buffer zone are adequate.

Conservation

The state of conservation is good on a general level but the stone surfaces are constantly exposed to weathering conditions and, in some areas, visitor impacts. The deterioration of these stone surfaces, especially of the detailed ornamentation and sculptures, is one of the key challenges of the property, as the impact of water and wind erosion but also of physical abrasion and biological and chemical degradation can be observed. On lower, formerly silt-covered stone surfaces white crusts have developed over time as a result of mineral crystallizations and long-term humidity. Some of these crusts then begin to flake off and expose softer surfaces which then become subject to accelerated erosion.

According to the conservation activities foreseen in the management plan, the stone surfaces will be treated with a sacrificial layer to prevent further erosion and degradation. ICOMOS considers that the provision of a sacrificial layer is an appropriate solution for stone surfaces of such volume and vulnerability but recommends that prior tests be conducted to ensure that the impact on the surface appearance of the historic structures will be negligible.

In 2008, a systematic condition mapping was undertaken to document the structural features and decorative elements with regard to their structure and state of conservation. Additional detailed documentation was obtained in 2011 through a 3D scanning of the property. Several inventories of sculptures and figurative elements exist but are organized according to different methodologies. ICOMOS considers that it would be very beneficial to combine the data of different lists and inventories in one database and link these to images and location sketches.

Ongoing conservation and maintenance activities are effective, professionally-guided and match the highest international standards. Recently, conservators fixed glass markers across cracks for daily monitoring and carefully removed biological surface growth, likely induced by dampness in the well shaft and the tank. ICOMOS

considers that both the expertise dedicated and selection of activities is adequate.

ICOMOS considers that while stone surfaces in particular of sculptures are very vulnerable, the conservation activities and plans adequately address the challenges.

Management

Management structures and processes, including traditional management processes

The management of the property is under the sole responsibility of the Archaeological Survey of India. The management is steered by a Superintending Archaeologist and involves an in-house team of ASI archaeologists working and monitoring on site. Any proposed interventions require scientific clearance by the superintending archaeologist who may be advised by experts in a specific field. A management plan has been prepared by the ASI for the property and its implementation commenced in 2013.

The primary source of finance for the site is public funding through the contributions to the ASI which are complemented by resources from the National Culture Fund or other direct Government of India contributions. The team designated to be involved with different management aspects on site includes professionals trained in archaeology, engineering, conservation and architecture. Key training needs that have been identified for the team are risk preparedness and visitor management. ICOMOS confirms that the approaches taken to risk preparedness and disaster management planning are not yet adequate and should be further developed in such an earthquake prone area. ICOMOS recommends developing an adequate risk preparedness plan, including consideration for specific stabilization methods on site, which may prevent major damage in case of seismic activity.

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

The management plan for Rani-ki-Vav is drafted for implementation between 2013 and 2017 and contains five key strategies for management approaches: (1) a conservation plan, (2) visitor management, (3) information management, (4) security management and (5) disaster management. Various stakeholders were involved or consulted during the development of the vision and clear goals, which have subsequently been transferred into specific fields of action. The management of the buffer zone is also given special consideration and is steered through the site management committee and a consultative committee of all stakeholders concerned. ICOMOS considers that the management plan is adequate to guide the administrative interrelations of all management partners as well as goal-oriented management processes on site.

At present, interpretation facilities hardly exist on-site and the only source of visitor information are two stone panels erected by the ASI. These contain a very brief summary of the age and function of the site in Hindi and English. At the booking office, just outside the property, booklets and leaflets are also available. However, the content of these leaflets is no more detailed than what is indicated on the stone panels. Other booklets available are almost entirely focused on the religious interpretation of the sculptures. ICOMOS considers that the visitor management component of the management plan offers space for improvement and that a more holistic concept to visitor management including local community concerns and revenue models would be desirable.

During the technical evaluation mission, ICOMOS was informed that an information centre with food court and office building to be used as a monitoring centre is planned on a piece of empty land to the west of the property. No plans exist at the moment but the ASI indicated that it could under no circumstances be higher than a single storey structure. ICOMOS notes that the western side of the property is the most vulnerable with regard to developments which may change the view perspectives and settings of the property. ICOMOS recommends that a Heritage Impact Assessment in accordance with the ICOMOS guidance for heritage impact assessment on World Cultural Heritage properties be carried out before any concrete plans are approved and implemented.

Involvement of the local communities

Local communities have been involved in the process of the compilation of the nomination dossier and the drafting of the management plan through consultation of community leaders and information exchange via local media. Senior citizens especially have shown great consciousness and pride for this heritage site and are eager to participate in the preservation of Rani-ki-Vav. Local stakeholders consulted during the technical evaluation mission also expressed their strong support for the property's nomination and the municipal representatives indicated their full support including that they were willing to change the municipal development plan if needed.

ICOMOS considers that the current management is effective but that any future development in particular regarding visitor infrastructure needs to be very sensitive and should not create visual interference with the architectural features or setting of the Rani-ki-Vav.

ICOMOS considers that the management system for the property is adequate but that attention should be given to adequate heritage impact assessment procedures for any new infrastructure of interpretation development on site.

6 Monitoring

The monitoring system proposed contains indicators for the state of conservation of various architectural sections of the monument and its surroundings on the garden surface level. All monitoring indicators are identified with their specific method of observation, actions required during the monitoring procedures and periodicity of inspection. ICOMOS considers that the indicators submitted in the additional information at the request of ICOMOS are well described, cover all relevant areas and refer to the responsible authorities entrusted to undertake the monitoring exercises. ICOMOS recommends to improve these by establishing measurable benchmarks for the interpretation of the indicators.

ICOMOS considers that the monitoring system provided is adequate but would benefit from measurable indicators for interpretation of data.

7 Conclusions

Rani-ki-Vav is an outstanding example of a stepwell illustrating the technological and artistic height of this typology of underground water structures. It is decorated with religious and mythological sculptures and reliefs of true artistic mastery. The stepwell represents an expression of human creative genius in its variety of motifs, of the highest quality of craftsmanship, and its elegance of proportion creates a unique, functional and aesthetic space. ICOMOS considers that Rani-ki-Vav represents a prime example of an architectural type of water resource and storage system which is widely distributed across the Indian subcontinent. ICOMOS accordingly considers that the Rani-ki-Vav demonstrates Outstanding Universal Value and meets criteria (i) and (iv).

ICOMOS considers that the property meets the qualifying conditions of integrity and authenticity. However, to preserve integrity in the future, ICOMOS considers it essential that the perspectives towards the western end of the stepwell remain free of any development that would be visible from the entrance level of the stepwell. Likewise developments towards the north, east and south of the stepwell should be controlled and additions carefully evaluated for their potential heritage impact to ensure that the impression of the flat surrounding of the well entrance is not reduced. ICOMOS recommends in this context that any plans for the intended visitor centre should be evaluated by means of a comprehensive Heritage Impact Assessment before they are approved and implemented.

ICOMOS considers that the main threats to the property are earthquakes, urban or infrastructure development and direct physical damage to the sculptures due to visitor contact. Ongoing conservation and maintenance activities are in principle effective, professionally-guided and correspond to international standards. ICOMOS considers

that both the expertise dedicated to the conservation activities and the selection of activities is adequate.

ICOMOS considers that the management system in place and the administration's human and financial resources are adequate. However, ICOMOS considers that the approaches taken to risk preparedness and disaster management planning are not yet adequate and should be further developed in such an earthquake prone area.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Rani-ki-Vav (The Queen's Stepwell) at Patan, Gujarat, India, be inscribed on the World Heritage List on the basis of **criteria (i) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Rani-ki-Vav is an exceptional example of a distinctive form of subterranean water architecture of the Indian subcontinent, the stepwell, which is located on the banks of the Saraswati River in Patan. Initially built as a memorial in the 11th century CE, the stepwell was constructed as a religious as well as functional structure and designed as an inverted temple highlighting the sanctity of water. Rani-ki-Vav is a single-component, water management system divided into seven levels of stairs and sculptural panels of high artistic and aesthetic quality. It is oriented in an east-west direction and combines all of the principle components of a stepwell, including a stepped corridor beginning at ground level, a series of four pavilions with an increasing amount of storeys towards the west, the tank, and the well in tunnel shaft form. More than five hundred principle sculptures and over a thousand minor ones combine religious, mythological and secular imagery, often referencing literary works.

Rani-ki-Vav impresses not only with its architectural structure and technological achievements in water sourcing and structural stability, but also in particular with its sculptural decoration, of true artistic mastery. The figurative motifs and sculptures, and the proportion of filled and empty spaces, provide the stepwell's interior with its unique aesthetic character. The setting enhances these attributes in the way in which the well descends suddenly from a plain plateau, which strengthens the perception of this space.

Criterion (i): Rani-ki-Vav (The Queen's Stepwell) at Patan, Gujarat illustrates an example of the artistic and technological height of stepwell tradition. It has been decorated with religious, mythological and at times secular sculptures and reliefs, illustrating a true mastery of craftsmanship and figurative expression. The stepwell represents an architectural monument of human creative

genius in its variety of motifs and its elegance of proportions, which frame an intriguing space, both functional and aesthetic.

Criterion (iv): Rani-ki-Vav is an outstanding example of a subterranean stepwell construction and represents a prime example of an architectural type of water resource and storage system which is widely distributed across the Indian subcontinent. It illustrates the technological, architectural and artistic mastery achieved at a stage of human development when water was predominantly resourced from ground water streams and reservoirs through access of communal wells. In the case of Rani-ki-Vav, the functional aspects of this architectural typology were combined with a temple-like structure celebrating the sanctity of water as a venerated natural element and the depiction of highest-quality Brahmanic deities.

Integrity

Rani-ki-Vav is preserved with all its key architectural components and, despite missing pavilion storeys, its original form and design can still be easily recognized. A majority of sculptures and decorative panels remain in-situ and some of these in an exceptional state of conservation. Rani-ki-Vav is a very complete example of the stepwell tradition, even though after geotectonic changes in the 13th century it does no longer function as a water well as a result of the change to the Saraswati River bed. It was however the silting of the flood caused during this historic event, which allowed for the exceptional preservation of Rani-ki-Vav for over seven centuries.

All components including the immediate surrounding soils which adjoin the vertical architecture of the stepwell are included in the property. In terms of intactness, the property does not seem to have experienced major losses since its flooding and silting in the 13th century. However, Patan like many Indian urban centres is experiencing rapid urban growth and the western expansion of the city towards Rani-ki-Vav has to be carefully controlled to protect the integrity of the property in the future.

Authenticity

Rani-ki-Vav has a high level of authenticity in material, substance, design, workmanship and, to a certain extent, atmosphere, location and setting. While it maintained its authentic material and substance, it also required some punctual reconstructions for structural stability. In all instances reconstructed elements were only added where structurally required to protect remaining sculpture, and they are indicated by smooth surfaces and a lack of decoration which can be easily distinguished from the historic elements. Around the outer terrace at ground level, slopes of smooth descent, a so-called sacrificial terrace, were created to prevent soil erosion following stronger rain falls. Unfortunately the Rani-ki-Vav cannot retain authenticity in use and function as a result of the altered ground water levels following the relocation of Saraswati River.

Management and protection requirements

The property is protected as a national monument by the provisions of the Ancient Monuments and Archaeological Sites Act of 1958 amended by its revision of 2010 and accordingly administrated by the Archaeological Survey of India (ASI). It is formally designated as an ancient monument of national importance and surrounded by a protective non-development zone of 100m to all sides of the architectural structure. The buffer zone has been included in the adopted Second Revised Development Plan, which ensures its protection from any inappropriate development.

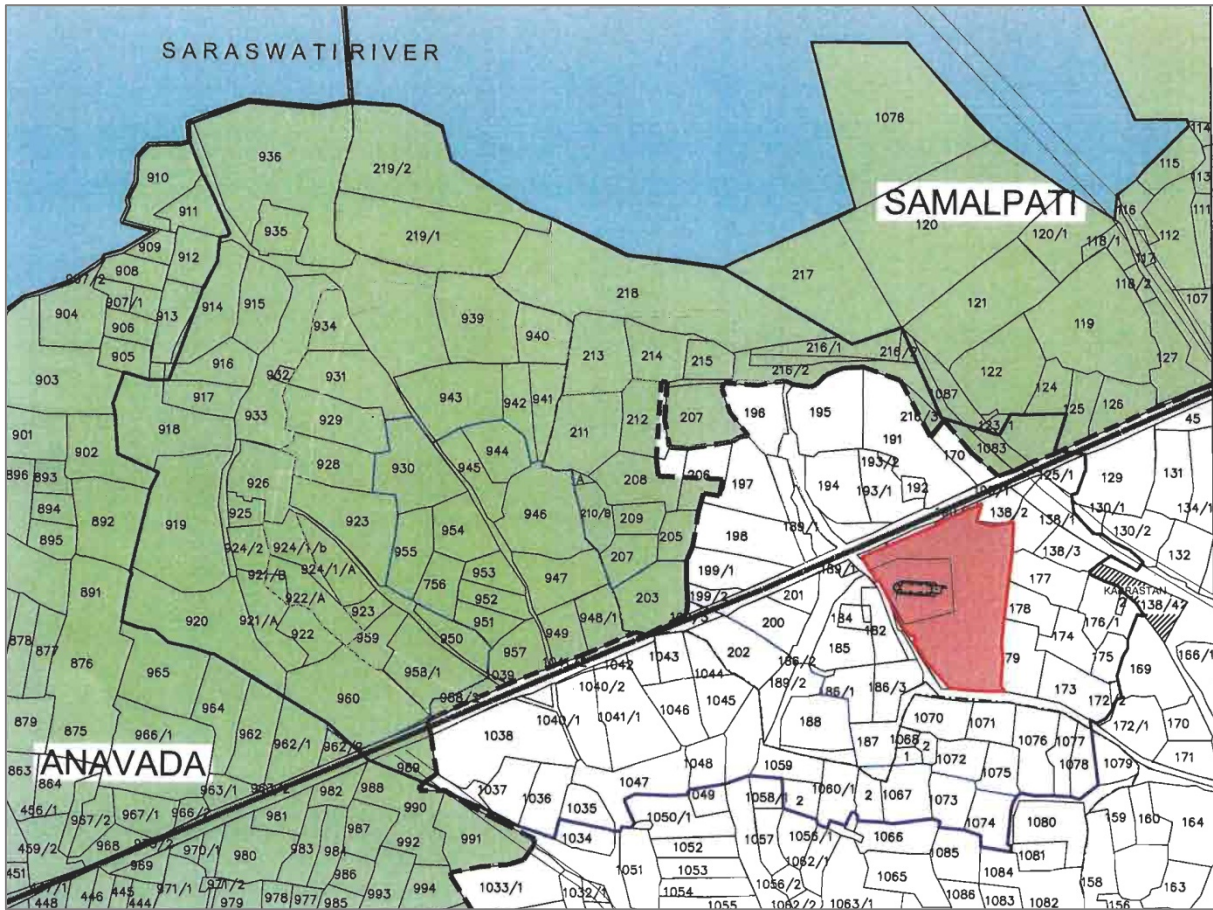
The management of the property is under the sole responsibility of the Archaeological Survey of India and steered by a Superintending Archaeologist with an in-house team of ASI archaeologists working and monitoring on site. Any proposed interventions require scientific review by the superintending archaeologist who may be advised by experts in a specific field. A management plan has been prepared by the ASI for the property and its implementation commenced in 2013.

The approaches taken to risk preparedness and disaster management planning should be further developed given that Rani-ki-Vav is situated in an earthquake prone area. Few interpretation facilities exist on site and the only information sources are two stone panels erected by the ASI. The Rani-ki-Vav would benefit from a more holistic concept to visitor management including local community concerns and revenue models. An information centre with food court and office building is planned on site but its location needs to be selected with care as some directions, in particular the western direction are more vulnerable with regard to developments which may change the view perspectives and settings of the property. For any future intervention in the property or buffer zone, Heritage Impact Assessments in accordance with the ICOMOS guidance for heritage impact assessment on World Cultural Heritage properties should be carried out before any plans are approved and implemented.

Additional recommendations

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

- Developing an adequate risk preparedness plan, including consideration for specific stabilization methods on site which may prevent major damage in case of seismic activity;
- Augmenting the monitoring indicators to provide measurable benchmarks for the interpretation of data collected;
- Combining the data sets of different surveys and studies now compiled in different lists and inventories into one single database, which links the inventory records to the photographic and cartographic documentation of sculptures;
- Conducting a Heritage Impact Assessment (HIA) in accordance with the ICOMOS Guidance on Heritage Impact Assessment for World Cultural Heritage properties once concrete plans for the visitor centre have been prepared;
- Strengthening approaches to visitor management including through community involvement and revenue generation models wherever possible.



Map showing the revised boundaries of the nominated property



Aerial view of Rani-ki-Vav



Bracing structure in the tank



The well shaft



Sculptured panel

Shahr-i Sokhta (Islamic Republic of Iran) No 1456

Official name as proposed by the State Party

Shahr-i Sokhta

Location

Sistan-o Baluchistan Province
South-east Iran
Islamic Republic of Iran

Brief description

Located at the junction of Bronze Age trade routes crossing the Iranian plateau, the remains of the mud brick city of Shahr-i Sokhta represent the emergence of the first complex societies in eastern Iran. Founded around 3200 BCE, the city was populated during four main periods up to 1800 BCE, during which time there developed several distinct areas within the city. These include a monumental area, residential areas, industrial zones and a graveyard. Changes in water courses and climate change led to the eventual abandonment of the city in the early second millennium. The structures, burial grounds and large number of significant artefacts unearthed there and their well-preserved state due to the dry desert climate make this site a rich source of information regarding the emergence of complex societies and contacts between them in the third millennium BCE.

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*.

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

1 February 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 6 to 10 November 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 25 September 2013 requesting additional information about the Craftsmen's quarters and the property's boundary location. A reply was received on 24 October 2013 and the information has been incorporated below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Shahr-i Sokhta meaning 'Burnt City' was named by the local people during the past 200 years for the traces of ash and fire which can be seen at the site. Located in a desert environment on a hill rising 19m above the surrounding lands, the actual city area within the property boundary is 151 ha. The city area is covered by fragments of pottery and stone artefacts held in the hardened surface matrix and exposed by wind erosion. This surface unites the various excavated zones into a single archaeological site. The property area is 275 ha surrounded by a buffer zone of 2,200 ha. The city is laid out with a north-west axis and is approximately 2,220 m long and 1,090 m wide; said to be the largest proto-historic human settlement in the Eastern Iranian Plateau. Within this the mud brick buildings are found in several excavated areas:

Eastern residential area – occupied 3200-2300 BCE

A number of courtyard houses arranged along alleyways have been excavated here. Each building unit had 6-8 rooms with covered and open areas for cooking, animal husbandry and in some cases, craft activities. Features include doors, thresholds, stairs, floors, ceilings fireplaces and animal troughs. Finds include thousands of human and animal figurines.

Central quarters – occupied from 3000-2500 BCE

This area is located in the centre of the site, north-west of the eastern residential area about 300m away and across a small valley. It comprises a large building complex with thick outer walls enclosing an area of 5,000 sq m. The building contains residential rooms around a central courtyard and was built in two consecutive construction periods, the second period overlaying the first and stretching further south. Both phases contained a great number of human and animal figurines, similar to the ones discovered in the eastern residential area.

Monumental area with memorial buildings – 2800-2500 BCE

Located in the north-western part of the site this area has so far been excavated to reveal a building of 1,600 sq m

with more than 93 rooms, of which the largest is 28 sq m. The main walls are built of very strong adobe up to 125 cm thick. Finds include ceramic and stone vessels; ritual objects such as human and animal figurines made of clay or terracotta similar to those found in the eastern residential and central quarters; flat stamp seals, cylindrical seals; disc-like objects made of baked clay; pieces of reed baskets; cloth; wooden combs and stone and metal objects and moulds. The figurines indicate cultural links with distant regions including Central Asia and Baluchistan. Some finds also relate to the later period (2500-2300 BCE).

North-western industrial area – 2800-2500 BCE

Separated from the other areas by small valleys this area is located at the north-western corner of the city and has an area of 6 ha. Excavations in 1972 uncovered workshops for the manufacture of beads made of lapis lazuli, agate and other semi-precious stones. Comparison with lapis lazuli items found in the Royal Cemetery at Ur indicates that the Shahr-i Sokhta workshops supplied the stone obtained from Badakhshan in a semi-finished state to Mesopotamia.

Southern industrial area

Another industrial area has been identified to the south. Surface surveys indicate that stone tools were made of flint in this area.

Southern area including Kakh-i Sokhta (Burnt Building) – 2300-1850 BCE

The large Burnt Building was excavated from 1969 and is currently the largest and latest building in the city being 560 sq m with 25 rooms. It was destroyed by fire as indicated by the name. There is also an adobe mastaba. It is thought that this building had two storeys because of the extremely thick walls of two to five rows of adobe and the presence of two staircases. It is thought to be a palace or public building.

Graveyard

The graveyard located at the south and south-western part of the site contains 20,000-37,000 graves, of which 680 have been excavated. It is thought that the cemetery may have extended further to the east and south-east but this area has been eroded by water in the past. The majority of the ten different types of grave are of the double or single pit type in which the body and grave objects were placed in the pit and covered with earth. These were used once or twice; some contained multiple bodies. Other grave types include the catacomb type which has a shaft leading to a blocked burial chamber in which the burial was preserved in an airless space, without contact with soil, and the pseudo catacomb type where the burial chamber was not blocked off. The catacomb graves represent 6% of those investigated and are thought to have belonged to the tribal chiefs on the basis of the grave objects found in them. Others are rectangular and square brick-lined graves, some with bricks lining only the two sides; circular brick-lined graves

and circular pits. Children were buried in a hole covered by a ceramic bowl. Important finds include a Jemdet Nasr type cylinder seal from the early third millennium BCE found in the only instance of a circular grave with a brick entrance; three dog skeletons in burial no. 1003; a skull found in burial no. 1003 which exhibits evidence of surgical treatment to relieve hydrocephalus and a semi-spherical object found in burial no. 6705 that has been identified as a prosthetic eye belonging to the tallest female found at the site (180 cm) and dating from 2900-2800 BCE. The 61 grave objects found in burial no. 731 include alabaster and pottery vessels including one decorated to create an animated effect as the vessel is turned; baskets, a wooden vessel and spoon, a metal seal and a wooden game board with its pieces. Mass burials in graves no. 609, 2301 and 1003 where the skulls are arranged in a circle around a central skeleton suggest some kind of human sacrifice. Food and beads made of semi-precious stones were also found in these burials. Pottery types exhibit a wide range of shape and decoration, but no kilns have been found so far.

In the wider excavation the remains of ceramic water or sewage pipes were found, laid to fall from the higher eastern part of the site in an east-west direction.

History and development

The settlement of Shahr-i Sokhta was founded c. 3200 BCE on the Biaban River, one of the branches of the now dry Hilmand River. At that time the proto-historic settlement was associated with a fertile plain irrigated by the Biaban. Subsequent changes in the water courses and climate change resulted in the abandonment of the city c. 1800 BCE. The city was located between two of the most important civilisations of the third millennium BCE: the Mesopotamians and the Elamites in the west and the Indus Valley civilisation in the east, at the junction of trade routes connecting them. According to the nomination dossier, the city was known in the 19th century but is yet to be identified in ancient texts.

Archaeological excavations at the site began in the 1960s under the auspices of the Italian Institute for Oriental Studies (IsMEO) working with the Iranian Centre for Archaeological Research. Various scientific experts including geologists, paleobotanists, anthropologists, paleozoologists and nuclear physicists worked at the site to study all aspects of the large number of significant artefacts discovered there. The Islamic Revolution resulted in a break in the study of the site until 1997 when a survey and investigation program was instigated in the wider Sistan area by Iran's Cultural Heritage Organisation and the University of Sistan-o Baluchistan. Investigations undertaken up to 2009 have revealed four main settlement periods covering 1,200 years:

I. 3200-2800 BCE. The main settlements were the eastern residential and central areas covering 16 ha. Artefacts discovered including cylinder seals similar to the Jemdet Nasr period and Elam, a proto-Elamite tablet together with pottery similar to that of southern Central

Asia and Pakistan indicate that at this time the city was an economic and cultural crossroads.

II. 2800-2500 BCE. The city expanded towards the north-west beyond the central quarters to include the monumental area, reaching its largest size of 80 ha.

III. 2500-2300 BCE. This is a relatively unknown period due to lack of investigation in relevant parts of the site. Remains of the period have been identified in the central area, in the graveyard, and at RudBiaban Hill. The overall settlement area was 20 ha.

IV. 2300-1850 BCE. This is the period ascribed to the south and south-west parts of the city, including the Kakh-i Sokhta (Burnt Building), after which the site was abandoned.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The nomination dossier includes a comparative analysis which compares Shahr-i Sokhta with other archaeologically well-known sites of the period in the region from Iraq/Mesopotamia in the west to Afghanistan, Pakistan and India in the east; Turkmenistan in the north, Tajikistan in the north-east and Oman in the south. Two main interaction spheres were identified in the Iranian plateau: the eastern Sistan area centred on Shahr-i Sokhta extended its influence north to Central Asia and east to the Quetta Valley, while the western 'Jemdat Nasr' sphere extended from Mesopotamia to Tepe Yahya in central Iran. Comparisons within these spheres based on the analysis of data from Tepe Yahya; Bampur in southern Iran; Moenjodaro, Pakistan (1980, (ii) and (iii)); Altyn Tepe, Turkmenistan; Sohr Damb/Nal in western Pakistan; Mundigak near Kandahar, Afghanistan, and Sarazm, Tajikistan (2010, (ii) and (iii)) indicate that Mundigak and Shahr-i Sokhta were the main proto-urban centres of the Hilmand culture on the Iran-Afghan border, with Shahr-i Sokhta being much larger and connected to trade routes across the plateau. It is proposed that Sarazm – a proto-urban metropolis with links into the Hindu Kush – was to the north-eastern extremity of the Iranian plateau what Shahr-i Sokhta was to the south-eastern extremity. It is concluded that Shahr-i Sokhta as the main centre of the Hilmand basin culture of Sistan in the third millennium BCE stands out in terms of its urban remains and artefacts and the interconnections they demonstrate with the wider region from Mesopotamia to the Indus Valley.

However ICOMOS notes that there is very little evidence in the nomination dossier to support this conclusion and the published reports by the archaeologists who excavated the site conclude that the trade was not large-scale and there was no centralisation of a trading network or centrally managed entrepreneurship. These reports consider that current evidence suggests that the carnelian and lapis lazuli production was for local consumption and conclude that the evidence overall suggests sporadic and

ephemeral trade contacts, rather than systematic, specialised forms of long-distance trade.

The archaeological remains are very well preserved due to the dry desert climate and the salt crusts up to 50 cm deep over the whole site. However ICOMOS notes a number of errors and speculative statements in the description and justification relating to Shahr-i Sokhta being the capital of the region, its ethnic diversity and later mythology.

ICOMOS considers that the nominated property could have been compared with Harappa in the Indus Valley. However the planned town of Harappa is slightly later than Shahr-i Sokhta; its remains are less well-preserved, and contain modern reconstructions.

ICOMOS notes that the catacomb tombs at Shahr-i Sokhta bear strong similarities to those of the Central Asian tombs found at Zaman Baba and other locations. It has been suggested that together with the Geoksjurian pottery types this indicates a possible Turkmenistan origin for this burial tradition. ICOMOS also notes that to date only a very small area of the site has been excavated and that while graves at Ur and Shahr-i Sokhta have been found to contain identical sets of stone tools and semi-finished precious stones, it is not yet fully understood how the town relates to Mesopotamian centres beyond the lapis lazuli trade. The connection to the Indus Valley is limited to a few potsherds, and possibly stamp seals and gaming pieces. According to the nomination dossier the pipes (water or sewerage) found at Shahr-i Sokhta predate those at Moenjodaro but no conclusive evidence is provided.

ICOMOS considers that it is clear that Shahr-i Sokhta was a very large and important city within south-eastern Iran. The excavations and multi-disciplinary research since the 1960s have brought to light well-preserved evidence in the form of its mud-brick structures, burial grounds, workshops and artefacts that testify to its size, organisation, the source of its wealth and its trade and social structures. The site is a rich source of information regarding the emergence of complex societies and some contact between them in the third millennium BCE. However ICOMOS does not consider that Shahr-i Sokhta stands out in relation to comparable sites in the wider region beyond south-eastern Iran. Greater evidence of this kind and particularly trade contacts is evident at the world heritage listed proto-historic site of Sarazm.

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

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 the only city on the Iranian plateau containing remains of a transition from rural to urban life.

- Shahr-i Sokhta is evidence of the first complex societies in eastern Iran.
- The city provides information about adaption to the difficult climate in the 3rd millennium BCE.
- It demonstrates the use of local and outside resources, connecting civilisations on the east and west and giving a unique picture of a proto-historic settlement.

ICOMOS considers that this justification is not appropriate because it focuses on the importance of Shahr-i Sokhta within the Iranian context. It is not supported by adequate evidence of the relationship with other civilisations and has not been shown to be an exemplar proto-historic settlement.

Integrity and authenticity

Integrity

All elements necessary to express the property's values are included within the nominated area, which is of adequate size to ensure the complete representation of features and processes which convey the property's significance. The property does not suffer from development or neglect. However the presence of the Zahedan-Zabol road and adjacent high-voltage power transmission line running past close to the site within the buffer zone has a negative impact. ICOMOS notes that there are proposals by the provincial government to move these further away from the site. ICOMOS considers that the sacrificial mud and straw plaster treatment (*Kahgel*) applied to preserve the excavated structures, while appropriate in itself detracts from the correct appreciation of the standing remains and the manner in which it is used could be improved. ICOMOS also considers that the protective roofs used over various parts of the excavations confuse understanding of the site and could be improved.

Authenticity

In general the surrounding desert landscape and extraordinary scatter of archaeological material present on the surface of the low hill of Shahr-i Sokhta give a strong sense of authenticity, as does the sight of the complex architecture of the various parts so far excavated. The labyrinthine succession of rooms, corridors and courtyards give a genuine impression of these ancient buildings. However ICOMOS notes that in some cases the indiscriminate use of the *Kahgel* plaster has resulted in blocked doorways, and the thick plaster makes all surfaces look the same and conceals the different architectural elements. The presentation of the cemetery is also confused by the way in which this plaster has been applied.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity are vulnerable.

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 Shahr-i Sokhta exhibits a transition from village habitation to an urbanised community with significant cultural, social and economic achievements and developments from the late Chalcolithic to the early Bronze Age. It served as a link between the civilisations of the Indus Valley and Mesopotamia.

ICOMOS considers that it is not fully understood how the nominated property relates to Mesopotamia and the Indus Valley. The cited evidence for the contacts is minimal.

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 civilisation which is living or which has disappeared;*

This criterion is justified by the State Party on the grounds that Shahr-i Sokhta bears exceptional testimony to a civilisation and cultural tradition that linked trade and cultural relations with ancient sites and cultures in the Indus Plain, southern shores of the Persian Gulf, Makran Sea and south-west Iran, Mesopotamia and Central Asia. Archaeological remains and finds indicate the key role of the city on a very large scale in terms of working with metals, stone vessels, gems and pottery.

ICOMOS considers that as for criterion (ii) above, the cultural and trade links are not fully understood. However the evidence uncovered testifies to the way of life and death of the inhabitants. The mud-brick structures, burial grounds, and workshops are testimony to its size, organisation and social structures. Knowledge of the source of the city's wealth and trade has been enhanced by analysis of the artefacts and materials discovered which demonstrate the crafts that were practised and the origin of the materials used. However in relation to the criterion ICOMOS considers that these attributes are not exceptional testimony when compared with that of sites already inscribed on the World Heritage List such as Sarazm, for which far more detail is evident of the residential areas, decorated shrines and workshops which included pottery kilns.

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 ancient site of Shahr-i Sokhta is an

outstanding example of a multi-cultural settlement during the 3rd millennium BCE. The excavations show that the city was separated into various parts according to different functions - residential, industrial and burial; it therefore represents an important stage in urban planning and as such serves as prototype in the region.

ICOMOS considers that the settlement has not been demonstrated to be multi-cultural, neither has it been shown to be an exemplar proto- historic settlement.

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

ICOMOS does not consider that the criteria have been justified at this stage, and conditions of authenticity and integrity are vulnerable.

4 Factors affecting the property

Shahr-i Sokhta is in a remote location accessed from the nearest town Zabol, which is 56 km away by the Zahedan-Zabol road constructed in 1971. The nearest village is Ramshar, 15 km from the site. The property is inhabited by 21 residents and is not subject to development pressure. Tourism numbers have grown from 53,503 in 2007 to 100,861 in 2012 and visitors are managed through the creation of a specific route through the site. Environmentally the site is subject to erosion by wind and sandstorms, seasonal rain and consequent biological factors. These have been addressed by the use of *Kahgel* (mud and straw) plaster on exposed walls, which changes their appearance to a considerable extent. Other protective measures include protective roofs and construction of support walls. No statistical seismic information is available for the area, but ICOMOS notes that there was a recent earthquake in the Sistan and Baluchistan region on 16 April 2013, said to be the strongest in Iran in the last 40 years.

ICOMOS considers that the main threats to the property are from decay due to natural forces.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The property boundary encloses the known area of the extent of the archaeological remains of the city and is morphologically well-defined by the lower limit of the slope of the low hill on which the site is located. It is marked by stakes at the co-ordination points indicated on the plan provided in the nomination dossier. The buffer zone is marked in the same way. It surrounds the property concentrically at a distance of 1.5 – 2 km. Its boundary connects high points that define the basin in which the property is located and is essentially a desert area.

Additional information provided by the State Party in response to ICOMOS' request includes a map showing that the buffer zone includes the single storey research base for the site, the emergency and fire station and water pumping station. The highway and adjacent power line pass through the buffer zone from north-east to south-west, not far outside the eastern boundary of the property. Surrounding the buffer zone concentrically at a distance of around 4 – 5 km is a landscape zone which includes a police station; research missions' accommodation; two brick kiln sites; the Hauzdar basin; Machi castle, Asbad windmills and the village of Qal'a-e Rostam. The Hamoun Lake and the castle Qal'a-e Rostam are located outside the landscape zone. ICOMOS considers that the eastern buffer zone boundary could be modified so as to distinguish between the protective zone and the area used for site services.

ICOMOS considers that the boundaries of the nominated property are adequate but the buffer zone boundary could be modified to exclude the site services area.

Ownership

The nominated property is in State ownership.

Protection

The property is protected by the Law for Protection of National Heritage (1930). The Law covers identification, criteria and legal protection for properties on the National Heritage List and legal provisions for archaeological excavations. Shahr-i Sokhta was registered in the list of national cultural properties of Iran as no. 542 in 1966. The bylaw Concerning Prevention of Unauthorised Excavation (1980) stipulates penalties for excavation and/or purchase of excavated historic objects and further regulation limits production, purchase, use or advertisement of metal detectors. The property is also subject to the Regulations of Cultural and Historical Properties covering all works, research and data organisation.

In the buffer zone use of heavy machinery and environmental pollutants that may harm the buffer zone is prohibited, as are installation of pollutant facilities and alteration of the topography of hills and mountains; plans for infrastructure and tourism are subject to approval by the Iranian Cultural Heritage, Handicrafts and Tourism organisation (ICHHTO). The landscape zone is also regulated to prevent any large scale industrial projects that may harm the environment or "deeply" affect historical, cultural and natural structures of the region. All ancient mounds within the landscape zone are subject to the same regulations as those for the nominated property. It is intended that an archaeological map of the landscape zone will be completed by the Shahr-i Sokhta Base of ICCHTO as soon as possible.

ICOMOS considers that the legal protection in place is adequate. ICOMOS considers that the protective measures for the property are adequate.

Conservation

The archaeological excavations and finds have been documented by the Italian Institute for Oriental Studies (IsMEO) and the Iranian Centre for Archaeological Research. Records, inventory and finds are stored and analysed at the ICCHTO multi-disciplinary Base at Shahr-i Sokhta. ICOMOS notes that there is no single electronic data base connected to a geographic information system (GIS). The Base comprises a library, archives, museum, laboratory, anthropological and pathological studies centre; botany, zoology and restoration workshops; audio-visual facilities and visitors' centre. Recent research includes Magnetometer surveys in 2012 to investigate areas around existing excavations for further remains.

The excavated remains are cleaned regularly during the year and *Kahgel* plaster is applied over jute matting to conserve exposed walls. This is periodically replaced every two or three years when decayed. As noted above the plastering has an unfortunate affect on the appearance of the excavated remains. ICOMOS considers that the manner in which the plaster is applied could be improved in such a way as to allow the different surfaces (tops of walls, vertical surfaces and floors) to be distinguished by different textures. ICOMOS also considers that the use of protective roofs needs to be modified to be clearly recognisable as modern additions and avoid confusing understanding of the site.

ICOMOS considers that conservation of the property could be improved by digitisation of the inventory/data base and by modification of the *Kahgel* plastering technique and protective roofs.

Management

Management structures and processes, including traditional management processes

The property is managed by the Iranian Cultural Heritage, Handicrafts and Tourism organisation (ICHHTO) on behalf of the government of the Islamic Republic of Iran from ICCHTO's Base at the property, located in the buffer zone. The Base is advised by a steering committee comprising regional officials and experts and a technical committee comprising regional officials and experts and is divided into six sections: Technical (4 staff), Research (3 staff), Presentation and Training (5 staff), Financial, Legal and Security. The Higher Education Centre of ICCHTO and national universities provide sources of expertise and training in conservation and management. The Research Organisation of Cultural Heritage and Tourism is responsible for multi-disciplinary research and training. Students from local and national universities undertake internships at Shahr-i Sokhta. Funding is provided from national and provincial annual budgets. No information is provided on risk preparedness.

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

ICOMOS notes that it is the intention of the Iranian authorities to open the country to more international tourism, incorporating cultural heritage sites such as Shahr-i Sokhta. As part of this overall policy, the provincial government has plans to relocate the road and power line out of the buffer zone, a proposal which ICOMOS supports but suggests that in the meantime the speed limit allowed on the road should be reduced where it passes the site. As well, the local ICHHTO Base plans to build a new museum underground behind the present one. An outline management plan is provided in the nomination dossier together with an outline action plan covering short, medium and long term activities relating to research, conservation, visitor management and presentation. These do not include the above-mentioned proposals regarding relocation of the road and power line and the new museum, and needs updating. The updated plan should be open to revision and cover future projects, evaluating their compatibility with the property and the protective role of the buffer zone.

Signage and a designated tourist path are provided at the site, together with visitor information (brochures and site map) at the ICCHTO Base. A guide book is also available but neither it nor the leaflet contains plans which interpret the building phases of the structures. ICOMOS considers that presentation could be improved by incorporating plans and other illustrative matter into the information panels and leaflet/guidebook in order to better explain the site to visitors.

Involvement of the local communities

Workers from local villages are employed to apply the *Kahgel* plaster to the remains.

ICOMOS considers that the management of the site is effective overall, but needs co-ordination with regional policies for the site.

ICOMOS considers that the management system is adequate. The Management Plan should be extended to include risk preparedness and should be updated and co-ordinated with regional policies.

6 Monitoring

The proposed monitoring system as provided in the nomination dossier could be improved by specifying which organisation/expert is responsible for monitoring each indicator – the table gives only the periodicity and methods/tools. Monitoring of the site surface scatter and erosion channels should be included and also seismic monitoring.

ICOMOS considers that the monitoring system should be improved to nominate the responsible organisation or expert for each indicator and include monitoring of the surface scatter and erosion, and seismic monitoring.

7 Conclusions

ICOMOS considers that while it is clear that Shahr-i Sokhta was a very large and important city within south-eastern Iran and the excavations and multi-disciplinary research since the 1960s have brought to light well-preserved evidence in the form of its mud-brick structures, burial grounds, workshops and artefacts that testify to its size, organisation, the source of its wealth and its trade and social structures, ICOMOS does not consider that Shahr-i Sokhta stands out in relation to comparable sites in the wider region beyond south-eastern Iran. Outstanding Universal Value has not been demonstrated at this stage. ICOMOS considers that the property does not meet criteria (ii), (iii) and (iv) at this stage and its integrity and authenticity are vulnerable due to the way in which conservation techniques are being implemented. The eastern boundary of the buffer zone could be modified to exclude the services area and conservation of the property could be improved by digitisation of the inventory/data base and by modification of the *Kahgel* plastering technique and protective roofs. The Management Plan should be extended to include risk preparedness and should be updated and co-ordinated with regional policies. The monitoring system should be improved to nominate the responsible organisation or expert for each indicator and include monitoring of the surface scatter and erosion, and seismic monitoring.

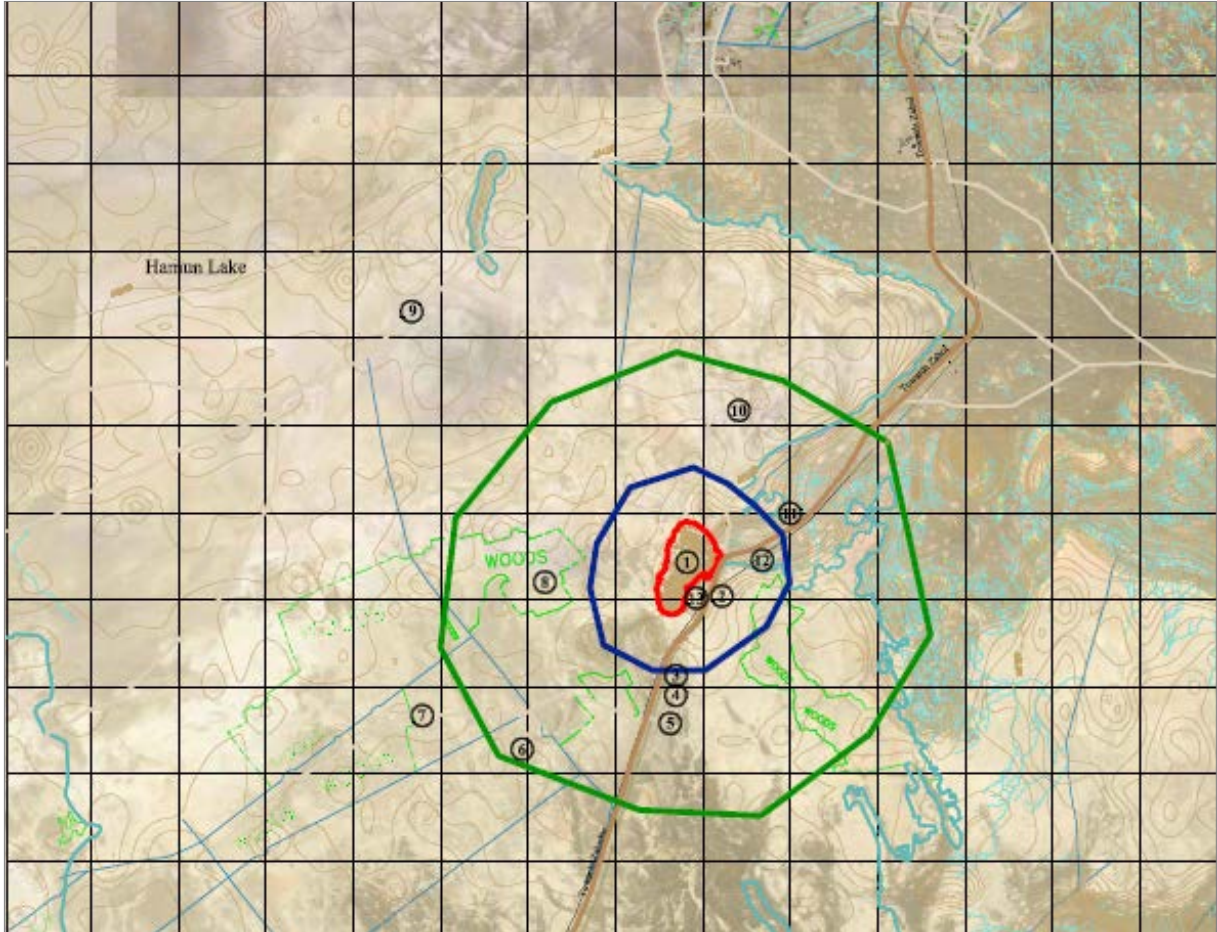
8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Shahr-i Sokhta, Islamic Republic of Iran, to the World Heritage List be **deferred** in order to allow the State Party to:

- Continue research and investigations;
- If substantial publication of results provides a greater understanding of the relationship of Shahr-i Sokhta to other civilizations, or to the way it might be considered as an exemplar of a proto-historic settlement, then consider re-nominating the property.

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



Map showing the boundaries of the nominated property



Aerial view of Shahr-i Sokhta



Monumental area



Graveyard



Grave

Tomioka Silk Mill (Japan) No 1449

Official name as proposed by the State Party

Tomioka Silk Mill and Related Sites

Location

Cities of Tomioka (site S1), Isesaki (S2), Fujioka (S3) and the Shimonita Municipality (S4)
Gunma Prefecture
Japan

Brief description

The Tomioka silk mill dates back to the early Meiji period. With its related sites consisting of silkworm farms, a school and a cold storage facility (for silkworm eggs), it illustrates Japan's desire, a traditional producer of silk in the Far East, to rapidly adopt the best mass production techniques. The government imported machinery and industrial expertise from France in order to create an integrated raw silk production system in Gunma Prefecture. It included the production of eggs and their storage, silk worm farming in sericulture schools and the construction of a large mill for reeling and mechanised spinning. In turn, the Tomioka model complex and its related sites were a decisive element in the renewal of sericulture and the Japanese silk industry in the last quarter of the 19th century, and a key element of the country's entry into the modern industrialised world.

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 four *sites*.

1 Identification

Included in the Tentative List

30 January 2007

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted the TICCIH and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 24 to 26 September 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party on 27 September 2013 requesting additional information with regard to:

- Expanding the comparative study of the property with French and Italian sites involved in the production of raw silk;
- The possibility of reinstating disappeared sections of the sites using virtual recreation techniques;
- The human resources for the sites' management;
- The operation of the property's Coordination Committee.

The State Party sent additional documentation on 28 October 2013 which is taken into account in the present evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The historic sericulture and silk mill complex nominated for inscription on the World Heritage List is located in the south of Gunma Prefecture, a region lying to the northwest of Tokyo with alternating inland plains and mountainous terrain. The property includes four distinct sites that attest to the different stages in the production of raw silk: production of cocoons in an experimental farm (S2), a cold storage facility (eggs of the silkworm *bombyx mori*) (S4), reeling of cocoons and spinning of the raw silk in a mill (S1), as well as a sericulture school for the dissemination of sericultural knowledge (S3).

Part 1 (S1): The Tomioka raw silk mill

The Tomioka site is a large-scale industrial complex established in 1872 by the Japanese government with the contractual assistance of French companies and technicians from the Lyon region, at the time the leading centre for the industrialised production of silk yarn and silk mills in the West. It is located on the banks of the Kabura River. The mill is arranged around three large original buildings forming a squared U-shape open to the north. It reflects an architectural stylistic synthesis between the Western French traditions in the construction of factories, and traditional Japanese materials and styles. It gives substance to numerous technical and architectural innovations in Japan, as well as being the first appearance in the country of the large functional and mechanised factory for the mass production of textiles.

To the south, the large building for cocoon reeling and raw yarn production forms the heart of the factory. Measuring 140 metres long and 12.3 metres wide, it is orientated in

order to present the maximum amount of glazed façade to the natural sunlight. The openings are wide and their forms have been retained, following a restoration of the windows. The building has a wooden frame and the infill walls are in red brick. The timber roof frame is of European type, with a rigid structure, which was an innovation in Japan. The roof covering includes a raised ridge to allow for the natural ventilation of the building, which was a steam-filled place. The tanks, and the cocoon reeling machines and those which spun the raw silk yarn are still in place. The original machines were imported from France. The technical annexes are functionally arranged around this building, notably the six steam generating boilers, five for boiling cocoons and one to provide the motive power. These buildings are constructed in timber or brick.

To the east, a long building (104 m) was designated for storing and drying the cocoons, before they were reeled in the central building. Its built structure is of the same type, with numerous openings on three levels. The roof structure has a row of central pillars. To the west, a symmetrical building with the same proportions and technical functions sits opposite. It has an external covered gallery.

The original layout also included, outside this central U, various buildings for the staff, in particular the residence for the French instructors, an inspector's house and the residence of the director, Paul Brunat, set somewhat apart in the southeast. Colonial in style, this vast residence has a wide wrap-around veranda. It was subsequently converted into a dormitory and a school.

In addition to the original buildings still present, various remains of structures illustrate this initial period of the mill: the base of the boiler plant chimney, the position of the six wells supplying water for the boilers, a large sheet metal tank on its foundations and a large masonry drain to collect the mill wastewater and channel it to the river.

At the very end of the 19th century, when the mill passed from the State into the hands of a private entrepreneur, several extensions were made: an additional workshop for raw silk reeling and hank storage, a second women's dormitory and four residences in the north.

However, various original buildings have not survived or have been demolished to make way for other facilities, in particular: the women's dormitories, a cocoon drying hangar, and the boiler buildings and reservoir in the east. Other old buildings (prior to 1908) have also disappeared, in particular the egg production laboratory and a large tank. The laboratory is now an archaeological site and its foundations have been unearthed.

In the course of the 20th century through to the end of the mill's operation in 1987, many small additional buildings were added as required, most of which have been preserved. They are small to average in size and their forms are compatible with the structures of the large original buildings which have not been altered.

Part 2 (S2): *The Tajima Yahei sericulture farm*

It is located near the Tone River, around 30 kilometres east of the mill (S1), in the locality called Shimamura. The soil was not very suitable for growing rice but tolerated mulberry plants well, whose leaves were harvested to feed the silk worm larvae. It bears the name of the agronomist who developed a new sericulture breeding method here known as *seiryō-iku*. It was a prototype farm, a place of experimentation and a school. The farm was also actively engaged in the production and sale of silkworm eggs.

The main building dates from 1863. Its architecture is characterised by two levels and a pitched roof with a raised ridge and large windows to create good natural ventilation. It is 28 metres long by 12 metres wide. It is a new functional type of architecture in Japanese sericulture. An annexe or "microscope room" served as a laboratory to monitor the health of the eggs and larvae. This building has undergone several alterations, mainly the disappearance of the entrance pediment.

The farm site also has a large barn for storing the mulberry leaves, an egg storage building, another for larvae hatching, a roofed well, a tool shelter, a *torii* (Shinto shrine gateway), and a monument commemorating a visit by the Empress Teimei. Various remains of foundations are located within the perimeter of the farm: another sericulture building extending from the existing building, another barn, and a hangar.

Part 3 (S3): *The Takayama-sha sericulture school*

It is located around 12 kilometres southeast of the mill (S1), near the city of Fujioka, on a river terrace at the foot of a wooded hill. Sericulture in this small valley dates from the Edo period (17th to the 19th centuries). A new farm was developed here at the start of the Meiji era (1875), encouraged by the setting up of the large Tomioka mill. The school was started by the agronomist Chogoro Takayama in 1884, to teach the *seion-iku* sericulture method.

The farm's original building was extended with a two-level construction to the east (1891), measuring 17 metres long. Its ground floor was used as a dwelling and the upper storey for silk worm breeding. Raised roof ridges provided ventilation. Originally, these buildings were entirely constructed in wood. Today, the roofs are tiled. The silkworm raising boxes and their shelves are still in place.

Near the main building, there is a covered gate, a small bathhouse and a kitchen. The foundations of other buildings, today disappeared, are discernible: a school, mulberry leaf barn, and a sericulture building. The location of the mulberry tree field has also been preserved.

Part 4 (S4): *Arafune cold storage site*

This is an archaeological site of egg storage cellars, at an altitude of 840 metres, west of the city of Shimonita. North-facing, the built structures in front of the cellars are

made of blocks of rock and artificially-piled rocks allowing subterranean air circulation. This provided coolness from the wet vegetation on the surface of the rock pile. This system controlled the temperature inside the three successive storage cellars, of which today only the thick stone foundations remain. The annual management of the placement of the eggs meant they could be kept at a constant temperature in order to manage when the larvae hatched. The successive cellars were built in the early 20th century; they were between 10 and 16 metres long and 4 to 6 metres wide. The surface buildings disappeared in the 1950s.

History and development

The technical mastery of silk yarn and its weaving dates from Chinese antiquity. China produced extremely luxurious fabrics that were traded on a grand scale in ancient times (along the Silk Road between the Far East and the Western Mediterranean).

The secret of Chinese silkmaking spread partially and slowly throughout the world, firstly without doubt to Japan, sometime in antiquity, and towards South East Asia; and then around the 10th century to the Byzantine Empire and the Islamic world; and finally to the western Mediterranean. In general, Chinese silks long remained the finest and the most sought-after. Silk production was encouraged in Japan from the Nara Period (8th century), as a luxury fabric for the court aristocracy and new social elites.

The start of the Edo Period (1603-1867) was marked by massive Chinese imports and later by their control. Silk production then started to develop in Japan and incentives were introduced by the Shogunates (17th century). Numerous improvement and innovation efforts were made throughout this period and treatises were written by agronomists. The central region of Honshu became an important sericulture region, and the discovery of Western techniques in the 19th century occurred at a dynamic time for the Japanese silk industry.

In the 17th-18th centuries, the centre of gravity of the European silk industry moved from Italy to France, in particular the Lyon region and its rural hinterland, which was suitable for raising silkworms. The mechanisation of reeling and spinning, with its early beginnings in Bologna in the 17th century, became an integrated industry in France, simultaneously producing mass quantity and quality by the end of the 18th century. Lyon then became the capital of the world's silk industry and its trade, and it dominated the market for specialist machinery (Vaucanson machines, Jacquard looms, etc.).

When the port of Yokohama opened in 1859, raw silk alone accounted for 65% of Japanese exports. The Meiji period (1868-1912) turned towards the outside world and showed Japan's desire to acquire the best Western industrial technologies (iron and steel, mechanical engineering, armaments, cotton, etc.), through actions directly supported by the government. In the area of silk, contact with the Lyon region occurred very early on. The

French industry, like the entire sericulture sector in Europe, was at that time affected by the *pebrine* silkworm disease which had not affected Japan. The search for raw silk ready for spinning and uncontaminated eggs was very vital. It was against this backdrop that a partnership was formed between Japan and France to develop reeling and raw silk spinning mills (1870). Tomioka was the pilot project, on a grand scale. It was to serve as the centre of training, thanks to French supervision under the direction of the engineer Paul Brunat (1840-1908).

The choice of Tomioka was dictated by the sericultural tradition of Gunma Prefecture, guaranteeing a sufficient number of cocoons and extensive local expertise, as well as the nearby presence of a coal mine. It was the architect Edmond Bastien (1839-1888), already employed to build Yokosuka Arsenal, another Franco-Japanese cooperation project, who drew up the plans and supervised the construction (1872).

The Tomioka mill and its imported machinery were rapidly taken as the model for many projects in the Gunma and Nagano regions. The machines were subsequently improved, becoming the reference for sericulture equipment for the region, and then rapidly became the most widespread in all Japan.

At the same time, the artisanal system remained dominant in silkworm breeding and several agronomists attempted to improve it, whilst avoiding any diseases. For example, Yahei Tajima developed a model farm in 1863 based on his *seiryō-iku* model (site S2), the first modern method in Japan. A little later, Chogoro Takayama created a farm and a school to teach a variant, *seion-iku* that was ultimately to dominate in this region (S3). The methods for controlling the temperature and ventilating the cocoon boxes were all-important. Chogoro worked with the Tomioka mill, improving the silkworm incubation processes and training thousands of sericulturists. The use of cooling in managing eggs appeared in the early 20th century, making the Arafune cold storage site (S4) one of the main silkworm egg distribution centres in Japan and increasing the length of the production period.

Tomioka and its productive environment became the site of innovation in managing and coordinating production, as well as the selection of silkworms by the introduction of the F1 hybrid (1911), and egg production. Japan thus became a leader in sericulture production and the world's leading exporter of raw silk, notably to France and Italy.

The Tomioka mill ceased workings in 1987. It was still owned by *Katabura Industries Co* which maintained it as it was until 2005, when ownership passed to the city of Tomioka.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The international comparative analysis made by the State Party shows that the silk industry, in terms of heritage, and especially in the production of cocoons, and the reeling and spinning of raw silk, is not the subject of any inscription, nor specific to any projects on the national Tentative Lists. However, there are two types of recognition of silk and silk mills. The first is as one specific attribute of more all-embracing properties, generally via their urban, village or architectural values: the prototype silk milling site amongst the Derwent Valley Mills, United Kingdom (2001, criteria (ii) and (iv)) which was moreover a failure; the Historic Villages of Shirakawa-go and Gokayama, Japan (1995, criteria (iv) and (v)) which were traditionally devoted to silkworm breeding; the annex to the Royal Palace of Caserta, Italy, forming an industrial complex devoted to silk, silk mills and its trade (1997, criteria (i), (ii), (iii) and (iv)); the Historic Site of Lyons, France (1998, criteria (ii) and (iv)), a major centre for the international silk trade for several centuries; and finally, the small family silkworm farms in the Causses and the Cévennes, Mediterranean agro-pastoral Cultural Landscape, France (2011, criteria (iii) and (v)). The other sources mentioned show a relative marginalisation of silk heritage in Europe compared with other textiles, such as cotton or wool, and even the essentially architectural approaches of French companies.

The comparative study also references China's sericultural heritage, at the same period. It was also influenced by Western techniques and corresponds to similar contexts, for example, the imperial workshops for the production of raw silk and the Ruifeng industrial site in Suzhou, the Yongtai site in Wuxi, Husizhan in Shanghai, etc.

The local and national comparative analysis, using well-documented databases, reveals that the sites selected, from a clearly identified regional ensemble, justify the serial approach:

- The Tomioka mill forms the central component, justified by its historical precedence, its heritage importance and its historic role as the centre for the adaptation and dissemination of Western techniques, and then of Japanese innovations;
- The two sericulture schools are the best preserved and they illustrate technical and architectural innovations;
- The egg cold storage site, of which only vestiges remain, is the largest in Japan and illustrates an innovative aspect.

In its response of 28 October 2013, the State Party provided additional information about the technical systems used in other countries, mainly in France and Italy. But this is above all a comparison in historical terms, the heritage being reduced to a long list of sites.

ICOMOS considers that the comparative analysis is satisfactory at the national level and that the justification of the choice of sites has been made with extreme care.

ICOMOS considers that the comparative analysis justifies consideration of this serial 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 a unique and complete historical technical ensemble dedicated to the production of raw silk, egg production, silkworm breeding (silk farm), cocoon reeling and spinning on a grand scale.
- The Tomioka mill is the first example of a mechanised mill using automated machinery and steam power in Japan.
- The Tomioka mill provides rare and well preserved evidence of international technological exchanges during the industrial revolution, in the second half of the 19th century.
- Tomioka, the sericulture schools and the egg cold storage site illustrate a style of architecture blending foreign influences and local traditions to achieve greater technical efficiency. It gave rise to a style of industrial architecture specific to 19th century Japan.
- It is a model of international technological transfer that then spread rapidly throughout Japan, based on the foundations of ancient regional artisanal practices, out of the desire to spread industrial equipment and the associated expertise, through the notions of the industrial model and sericulture school.
- The rapid dissemination of the Tomioka model in Japan contributed decisively to the renewal of global sericulture production, making up for Western shortages caused by the *pebrine* silkworm disease. At this time, Japan contributed decisively to the growth of the world's silk market, in which it became a leading player.
- Tomioka and its complex contributed to the worldwide development of technology with its silkworm hybrid, silk farm ventilation, progress in automatic reeling and spinning machines and even the cooperative management between rural family producers and mass industry. In its turn, Tomioka became an international exemplar.
- Tomioka illustrates the shift from a state-directed economic model to private management and the birth of major independent economic groups.

The four sites nominated for inscription are complementary and each illustrates a technical and historic aspect of the Tomioka sericulture complex.

ICOMOS considers that this justification is appropriate because Tomioka is a fully accomplished example of the spreading of Western technology in the early years of

the Meiji period. It is both a technical and economic achievement, built on a foundation of traditional silk producers, in the heart of ancient Japan. All the various levels of the technical complex that was created, from egg production and storage to raising silkworms in sericulture schools, then automatic reeling of the cocoons and spinning in a large model factory built with French cooperation, are well represented. It was a model that spread rapidly in Japan and it became a centre of innovation and a model for the integrated production of raw silk.

Integrity and authenticity

Integrity

The series has been put together to illustrate the major components of the technical operation, ranging from the production of eggs and silkworm farming, to reeling of the cocoons and spinning the hanks of raw silk. It is also intended to highlight the international technological exchanges occurring at this time: on the one hand, the acquisition of Western technologies at the start of the Meiji period, and, on the other, the innovations and improvements made by the Tomioka mill and the Gunma region in the ensuing years.

The structural integrity of the Tomioka mill (S1) is comprehensible, as the major large industrial buildings are still present; the mill's land divisions have been retained and clearly define the property boundaries. The main technical annexes (boilers, well, drain, etc.) have left significant and sometimes well-preserved traces (metal tank, drain tunnel, etc.). Several staff facilities are still present, without having undergone any major architectural changes even if their use has changed over time. However, important places, such as the laboratory and egg reproduction area have not been preserved, and today exist only as archaeological traces that give little idea as to their past purpose.

The Tajima Yahei (S2) and Takayama-sha (S3) sericulture schools are mainly represented by their original buildings, with several annexes: the microscope room, the well and a barn (S2), and the old entrance gate (S3). The other buildings and structural components of these two properties now only exist as remains of foundations, which in themselves are not very evocative of their past functions. The land boundaries have been preserved. The Arafune cold storage site (S4) is essentially an archaeological site.

To understand the technical ensemble, good interpretation must be present at each of the sites, because whilst they are notable technical testimonies, it is above all the technical process and its context that is important, based on heritage components that are at times not very explicit in themselves or are reduced to the state of archaeological remains. Certain dimensions of the process are missing, such as the decidedly agricultural nature of silkworm farming, totally dependent on mulberry orchards which are no longer present at all.

ICOMOS considers that the integrity of the serial property is good, but that the structural and functional integrity of each of the components is uneven and at times difficult to understand. While it is relatively good for the Tomioka mill, where a large part of the machinery is still present (S1), and is still reasonable for the Tajima Yahei silk farm (S2), it is more debatable for the two other sites (S3 and S4): the first limited to the old central building and the second is an archaeological site that is relatively inexplicit by itself. The integrity of the landscape, in relation to the buffer zones, also requires particular attention.

ICOMOS considers that the integrity of the whole series and the integrity of its component sites are satisfactory.

Authenticity

For the Tomioka mill (S1), the land divisions have been preserved, providing an adequate indication of the scale and limits of the original property, and its extent. The main buildings have retained a good level of authenticity, even if they have undergone several transformations. The architectural language has been respected, notably with regard to the built structures, construction materials and functions. Buildings have been added, but in a manner that is respectful of the original large buildings and the initial structural arrangement of the space. These buildings are compatible with the existing built elements and complete its functions. Since the mill closed in 1987, it has been well conserved, both in terms of its architecture and its machinery. There is full conservation of the functional authenticity which is clearly visible to the visitor.

The two sericulture school sites (S2 and S3) have built components of obvious authenticity and their conservation has generally respected their initial state in terms of the forms, structures and materials. Their transformation into modern dwellings has had some limited effects, such as the closing off of the roof openings, but without altering the built forms. The internal technological components that have been preserved satisfactorily evoke silkworm farming and cocoon reeling. Whilst the positions of the demolished buildings are identifiable by their traces on the ground, their ability to evoke their former use is on the other hand very poor.

ICOMOS considers that the authenticity of the components presented is generally satisfactory in terms of its various dimensions of structure, form and materials, but it nonetheless suffers from a lack of integrity, already mentioned, regarding the two silk farms (S2 and S3). The Arafune site (S4) currently undergoing restoration must remain within a strictly controlled framework in terms of its authenticity, which must remain archaeological in nature.

ICOMOS considers that the authenticity of the whole series and the authenticity of the individual sites that comprise the series have been demonstrated.

ICOMOS considers that the conditions of integrity are relatively uneven between the sites that make up the series, but that they have generally been met, and that the conditions of authenticity have been met.

Criteria under which the 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 Tomioka complex shows an important exchange of scientific knowledge between Japan and different countries, with regard to silk production. Western technology for industrial integrated production was introduced at Tomioka as a pioneering project in Japan, under government initiative. The silk industry in Japan developed out of the Tomioka complex. This was subsequently prolonged by the global dissemination of modern sericulture techniques and machinery improvements from Japan. It is an exemplar of mutual exchanges that made it possible to achieve global mass production and high quality raw silk at the dawn of the 20th century, resulting in a technical culture with a global character.

ICOMOS considers that the Tomioka mill illustrates the early and entirely successful transfer of Western industrial sericulture techniques to Japan, by way of cooperation with France. Its success is based on a long regional tradition of silkworm farming and its rapid appropriation within a model integrated complex. This approach to sericulture was rapidly learned and copied in Japan where it underwent many technical improvements allowing the country to achieve a preeminent position in the global raw silk market at the dawn of the 20th century. Tomioka in its turn became a centre for the dissemination of sericultural techniques and one of the major icons of a global technological culture of sericulture.

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 Tomioka mill and its related sites form an exceptional, complete example of an integrated ensemble for the mass production of raw silk, built at the end of the 19th and beginning of the 20th centuries. The series comprises a very large-scale, mechanised cocoon reeling and raw silk spinning mill, and three cocoon breeding and egg storage sites which are on a smaller scale but remain significant within an entire region

dedicated to silkworm farming. They clearly demonstrate the technological progression from the first imported Western machines through to the automatic reeling machine, as well as the progress made in silkworm selection, egg storage and cocoon raising techniques. These innovations played a central role in the development of the modern raw silk industry within a market that was globalised early on.

ICOMOS considers that the Tomioka mill and its related sites form an outstanding example of an integrated ensemble for the production of raw silk on a grand scale. The extent of the mill, from its initial design, and the deliberate adoption of the best Western techniques illustrate a decisive period for the spread of industrial methods to Japan and the Far East. Its large late 19th century buildings provide an eminent example of the emergence of a style of industrial architecture specific to Japan, combining foreign and local elements. Tomioka is testimony to Japan's early industrial success on the world stage in the area of raw silk.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the serial approach is justified by the complementarity of the sites presented, which illustrate the notion of an integrated technical system of production.

ICOMOS considers that the nominated property meets the conditions of integrity and authenticity and criteria (ii) and (iv).

Description of the attributes

- The Tomioka mill and its related sites form a complete example of the integrated production of raw silk, the production of eggs, their cold storage, silkworm farming in model sericulture schools, through to mechanised cocoon reeling and spinning of hanks of raw silk.
- Tomioka is an important testimony to the international exchange of the technologies of the industrial revolution in the second half of the 19th century. It is the first example of a mechanised factory using automatic machines and steam power in Japan.
- The Tomioka complex is testimony to a style of architecture combining foreign influences and local traditions, resulting in a style of industrial architecture specific to 19th century Japan that first appeared at this site.
- It is an example of the successful international transfer of technology that then spread rapidly in Japan, through the copying of the industrial tools and the transmission of the associated expertise. It contributed to the renewal of raw silk production and the development of a global silk market in the 20th century.

- Tomioka in its turn became an international exemplar and the symbol of the mechanised production of quality raw silk.
- Tomioka illustrates the shift from a state-run economic model towards private and cooperative management between small producers and large industrial groups.

4 Factors affecting the property

The urban growth of Tomioka, where the mill is located, could have a visual effect on the property. The 2002 renovation project was however extensively amended in 2006 to limit and better control this factor.

The number of tourists visiting the property is for the time being relatively small, only several hundred (S3 and S4) or a few thousand (S2) a year, with the exception of the Tomioka mill (S1) which attracts some 250,000 visitors all year round. The need for guides to interpret an agri-industrial property which is by nature not very easy to understand does however limit these numbers, as do the relatively small reception areas at the other mill sites. The main pressure would come from the need for parking.

The proximity to rivers could lead to erosion phenomena (S2 and S3) or flooding from violent storms and the potential increase in their strength due to ongoing climate change.

There is currently no atmospheric pollution, but an increase in acid rain could occur linked to climate change.

There is a risk of earthquake. However, the nominated sites have so far been spared any major damage, including during the recent 2011 earthquake. The damage that has occurred has always been limited and has been repaired appropriately. The risk to the property from a major earthquake is considered low.

There is also a risk of volcanic eruption. The sites would have been affected by ash fallout from the major 1793 eruption, but they were created after this event.

ICOMOS considers that the main threats to the property are urban growth in Tomioka and more generally natural risks (typhoons, earthquakes and volcanic eruptions).

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundary of the Tomioka mill (S1) corresponds to the land boundaries of the historic mill, including the part used for the larvae production laboratory that no longer exists. The same applies to the Tajima Yahei (S2) and Takayama-sha (S3) sericulture schools and the Arafune cold storage site(S4).

For the first two sites, the environment is urban or peri-urban; for the third, it is a sparsely populated rural zone, and forest for the fourth. The buffer zones for the first three correspond to the limits of visibility from the sites and, vice-versa, visibility of the site from its surrounding environment. For the fourth, which is not very visible, the buffer zone takes into account the need to protect the natural conditions required to produce the cooling and its underground circulation through to the storage area.

Name and reference	Site surface area (ha)	Buffer zone surface area (ha)	Site inhabitants	Buffer zone inhabitants
S1: Tomioka	5.5	151.1	2	4,453
S2: Tajima Yahei	0.4	60.8	3	619
S3: Takayama-sha	0.8	54.1	0	53
S4: Arafune	0.5	148.6	0	11
Total	7.2 ha	414.6 ha	5	5,138

ICOMOS considers that the boundaries of the nominated property's sites and their buffer zones are adequate.

Ownership

Three of the sites are municipal property:

- S1, the Tomioka mill: city of Tomioka,
- S3, the Takayama-sha silkworm farm: city of Fujioka,
- S4, the Arafune cold storage: Shimonita municipality.

The Tajima Yahei (S2) silkworm farm is an inhabited private property.

Protection

Each of the sites is recognised as a historic site, under the protection of the Japanese *Law for the Protection of Cultural Properties*. The listings were made between 2005 (S1) and 2012 (S2). The main buildings are well protected as cultural properties of national importance.

The municipalities are legally responsible for applying protection for the sites. They act under the control of and support from the Council for Cultural Affairs, with national status and Prefectural representation.

The protection of the buffer zones is also under municipal responsibility, via the application of the *Planning Act* and the *Landscape Act*, or ordinances enforced by each of the municipalities. They are inscribed in municipal planning acts. Any construction is subject to prior authorisation and must comply with height and size regulations, and also comply with building directives concerning exterior appearance. The Tajima Yahei (S2) buffer zone also comes under the *Act on Establishment of Agricultural Promotion Areas* and the Arafune (S4) buffer zone comes under the *Forest Act*.

ICOMOS considers that the legal protection in place is adequate and effectively implemented.

Conservation

Extensive documentation is preserved at the Tomioka mill. There are other archival and documentation centres concerning the various sites in the municipalities and Gunma Prefecture: Gunma Prefectural Archives, Gunma Prefectural Museum of History, Sericulture Promotion Foundation, and Gunma Archaeological Research Foundation.

The current state of conservation of the serial property's various components is good for three of them (S1, S2 and S3); while the fourth, Arafune (S4) is the subject of a restoration campaign and a roof to protect the archaeological site is being considered. Also, work is scheduled for the Takayama-sha annex buildings. Each of the sites has its own conservation and management plan setting out the conservation measures. These plans are applied directly by the municipalities at three of the sites and under a partnership agreement with the private owner of Tajima Yahey for the fourth. They receive technical support from the Council for Cultural Affairs.

The municipalities are responsible for the conservation of the three sites they own, and for the privately-owned Tajima Yahey silkworm farm (S2) under an agreement between the owner and the city of Isesaki.

ICOMOS considers that the property's state of conservation is adequate overall and that the planned measures are efficient. However, ICOMOS recommends that further thought be given to the advantages and disadvantages of a protective roof at Arafune.

Management

Management structures and processes, including traditional management processes

The management framework grouping together the four organisations already in place for the conservation and management of each of the four sites is the *Coordinating Committee for the Tomioka Mill and Related Sites*. It is organised under the supervision of Gunma Prefecture and includes representatives of the municipalities of the various sites. It sets up cooperation between the personnel in charge of management, experts on the property, the local inhabitants and volunteer associations. The latter play an active role in welcoming visitors and bringing to life the properties, by organising demonstrations and experimental workshops open to the public. The property is also part of a wider network of knowledge about sericultural heritage and history in Gunma Prefecture, of which it is the jewel in its crown. Details about the Committee's composition and operation since spring 2012 were given in the documentation provided on 28 October 2013.

There is a natural risk prevention and disaster response plan in Gunma Prefecture. Within this context, the four municipalities have services organised to deal with these issues and response teams to handle fire, natural disasters and major risks for civil protection.

The cost of work carried out to research, conserve and promote the serial sites is between three and four million US dollars a year (2010-2012). Around 50% of this amount corresponds to research and conservation activities, around 30% for visitor facilities, and the remainder for day-to-day management and maintenance.

Around 20 conservation and management professionals work permanently at the various sites, of which half are at Tomioka. There are around 30 other staff members, guides in particular, at Tomioka; and 2 to 4 at the other sites. There are also various specialist services involved as required: the Agency for Cultural Affairs, various national cultural heritage organisations, etc. They are in charge of providing human resources to deal with the relevant technical issues that need addressing and provide regular training sessions for local stakeholders.

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

In Japan, when a property is inscribed as a national cultural property, a conservation and management plan is demanded. It includes sections dealing with protection and conservation of the property, including a restoration and maintenance work programme, and a promotion and development plan including visitor facilities. This same planning situation therefore exists for the four nominated sites. Their combination provides the basis for a shared management plan insofar as works and maintenance projects are concerned. The drawing up of this plan implies harmonisation between the four sites that form the serial property.

Furthermore, individual conservation and promotion plans are compatible with a series of other prefectural or municipal plans, the main ones being:

- Gunma Prefecture Comprehensive Plan (2011-2015),
- Gunma Prefecture Basic Environment Plan (2011-2015),
- Gunma Prefecture Infrastructure Master Plan (2008-2017),
- Gunma Prefecture Infrastructure Master Plan, Kanra and Tomioka Regional (2008-2017),
- Policy for Improvement, Development and Conservation in the City Planning Area, Isesaki City Planning (2009-2015),
- Tomioka City Comprehensive Plan (2008-2015), and its City Planning Master Plan (2009-2028),
- Isesaki City Comprehensive Plan (2007-2014), and its City Planning Master Plan (2008-2027),
- Fujioka City Comprehensive Plan (2008-2017),
- Shimonita Town Comprehensive Plan (2007-2016).

Visitor management is generally constrained by the need for guided tours to help visitors understand this complex industrial property, of which each of the nominated sites forms a stage in the overall process of raw silk production.

Apart from the vast Tomioka mill, the other sites are relatively small and the number of visitors is as a consequence limited. Only the Tomioka mill is for the moment visited in any significant way. Tourist management plans are planned, in particular for adjacent car parking.

Involvement of local communities

The municipalities manage or contribute to the management of the four nominated sites; they are therefore directly concerned as the local political and administrative authorities. There are also several volunteer associations that directly involve the region's inhabitants in receiving visitors and promoting the sites and their cultural values.

ICOMOS considers that the property's management is effective, and that its Coordination Committee is in place. However, more thorough cooperation between the local structures and the Central Coordination Committee is recommended in order to harmonise the various provisions in the management plans for each of the sites and to arrive at a unified Management Plan.

6 Monitoring

A series of indicators has been defined to monitor the various aspects of the property's conservation:

- environment (acid rain, effects of climate change, influence of fauna and flora on the sites, state of conservation of the urban environment,
- natural disasters (rain and wind, erosion, earthquakes and volcanic activity, landscape impacts, effects of fire),
- impact of tourism and visitors on the sites and their environment,
- impact of public and private development projects,
- transmission of the property's values (conferences and seminars, participation of the sites in civic activities, and assessment of communications).

Monitoring using these indicators is performed by Gunma Prefecture or the municipalities, generally on an annual basis.

ICOMOS considers that the proposed monitoring is adequate.

7 Conclusions

ICOMOS recognises the Outstanding Universal Value of the Tomioka raw silk mill and its related sites. They bear witness to a crucial moment in the international spread of industrial techniques in the final third of the 19th century, from the Western world to Japan. They have their roots in ancient expertise that they renewed, whilst also becoming part of the global market of the period. It is the first large

industrial plant in Japan entirely dedicated to the mass production of an intermediate textile product: raw silk. In the early 20th century, the Tomioka integrated complex became in its turn a source of innovation and an international reference model for silkworm production, reeling and spinning of raw silk.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Tomioka Silk Mill and Related Sites, Japan, be inscribed on the World Heritage List on the basis of **criteria (ii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The Tomioka Silk Mill dates from the early Meiji period. With its related sites including two sericulture schools and an egg storage site, it illustrates the desire of Japan, a traditional silk producer, to rapidly access the best mass production techniques. The Japanese government imported French machinery and industrial expertise to create an integrated system in Gunma Prefecture. It included egg production, silkworm farming and the construction of a large mechanised raw silk reeling and spinning plant. In turn, the Tomioka model complex and its related sites became a decisive component in the renewal of sericulture and the Japanese silk industry, in the last quarter of the 19th century, and a key element in Japan's entry into the modern industrialised world.

Criterion (ii): The Tomioka mill illustrates the early and entirely successful transfer of French industrial sericultural techniques to Japan. This technological transfer took place in the context of a long regional tradition of silkworm farming, which it profoundly renewed. In turn, Tomioka became a centre for technical improvements and a model that enshrined Japan's role in the global raw silk market at the beginning of the 20th century, and which bears witness to the early advent of a shared international culture of sericulture.

Criterion (iv): Tomioka and its related sites form an outstanding example of an integrated ensemble for the mass production of raw silk. The extent of the plant, from its initial design, and the deliberate adoption of the best Western techniques illustrate a decisive period for the spread of industrial methods to Japan and the Far East. Its large, late 19th century buildings provide an eminent example of the emergence of a style of industrial architecture specific to Japan, combining foreign and local elements.

Integrity

The integrity of the serial property's composition is good, illustrating the idea of a productive complex for an intermediate textile product: raw silk. The structural and functional integrity of each of the components is more

uneven and at times difficult for the visitor to understand, notably the Takayama-sha sericulture school and Arafune cold storage. The landscape integrity, as it relates to the buffer zones, requires particular attention.

Authenticity

The authenticity of the components presented is generally satisfactory in terms of its various dimensions of structure, form and materials. The perceived authenticity is remarkable at the Tomioka mill, which has retained its complete textile machinery. The restoration activities at the Arafune site must remain within a strictly controlled framework in terms of its authenticity, which must remain archaeological in nature.

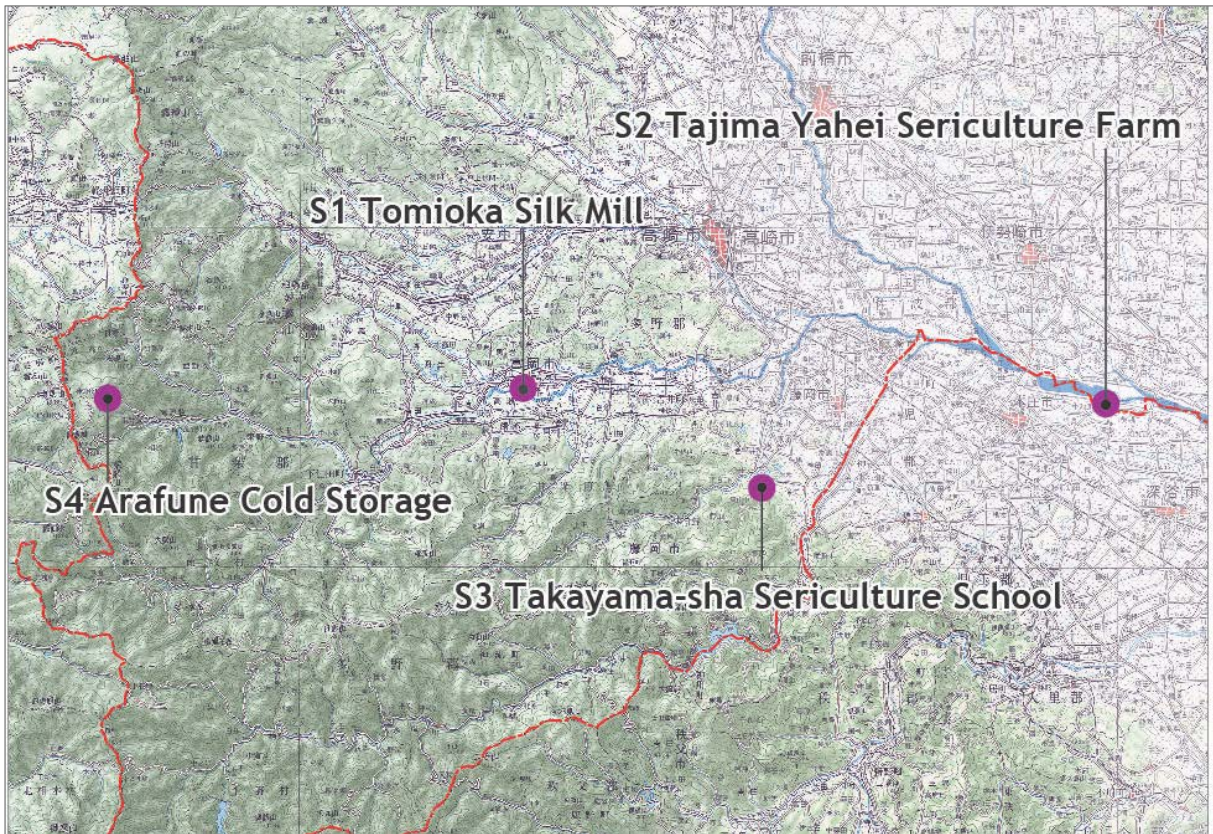
Management and protection requirements

Each of the four sites comprising the serial property is protected by Japan's *Law for the Protection of Cultural Properties*. The main buildings are also protected as cultural properties of national importance. Under the application of this law, each of the sites is covered by a conservation and management plan already in place under the aegis of the cities and municipalities, including in the case of the privately owned Tajima Yahei (S2). Continuing this protection policy, the buffer zones correspond with a desire to control the urban and natural environments using measures that are, in theory, stringent. The management system relies on the competent services of the municipalities, the Commission for Cultural Affairs of the Gunma Prefecture and a series of scientific institutions involved in the regional silk heritage, and volunteer associations. The Coordination Committee, established in spring 2012, is an overarching body responsible for coordinating the actual operation.

Additional recommendations

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

- Continuing to pay close attention to economic and urban development in the vicinity of the sites by strictly applying the planned protection measures for the buffer zones, and even consider strengthening them;
- Giving deeper consideration to the archaeological nature of the Arafune site and the advantages and disadvantages of a protective roof;
- Strengthening the cooperation between the local structures and the Central Coordination Committee in order to harmonise the various provisions in the management plans for each of the sites and to arrive at a unified Management Plan;
- Undertaking research on the transmission of expertise by women, from France and within Japan itself, thanks to their roles as instructors and workers; and improve knowledge about the latter's working and social conditions.



Map showing the location of the nominated properties



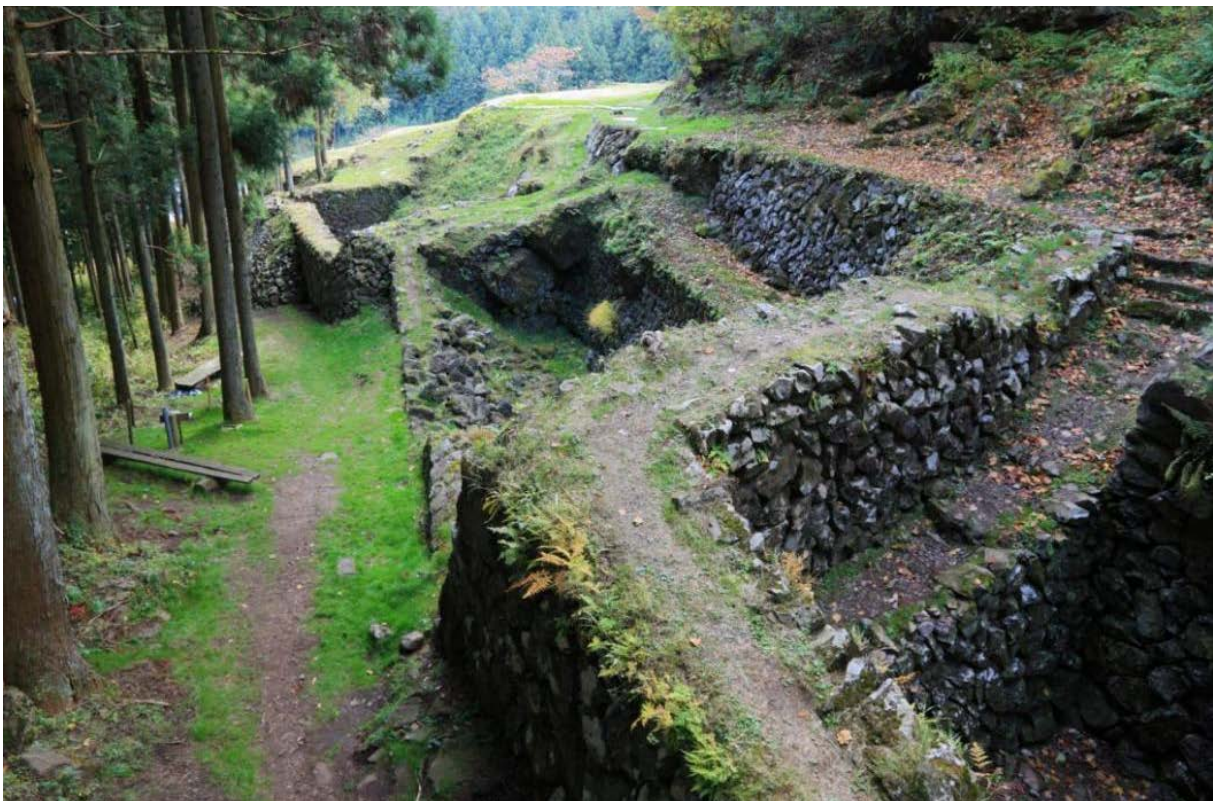
Tomioka raw silk mill



Tajima Yahei sericulture farm



Takayama-sha sericulture school



Arafune cold storage site

Silk Roads: the Routes Network of Tian-shan Corridor (China, Kazakhstan, Kyrgyz Republic) No 1442

Official name as proposed by the State Party

Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor

Location

People's Republic of China: (22 sites)
Shaanxi Province
Henan Province
Gansu Province
Xinjiang Uyghur Autonomous Region

Republic of Kazakhstan: (8 sites)
Almaty Province
Zhambyl Province

Kyrgyz Republic: (3 sites)
Chuy Province

Brief description

The Tian-shan corridor of the Silk Roads stretches for 5,000km from Chang'an/Luoyang, the central capital of China in the Han and Tang Dynasties, to the Zhetysu Region of Central Asia, linking two of the great power centres that drove the Silk Roads trade.

Between the Mongolian and Qinghai-Tibet Plateaux the route passed westward from the middle reaches of the Yellow River in Central China, through the Hosi Corridor and across the North and South Tian-shan Mountains until it reached the fertile Ili, Chuy and Talas valley of the Zhetysu region.

This major trade corridor, part of the overall Silk Roads that linked China with Europe, took shape between the 2nd century BC and 1st century AD. It flourished between the 6th and 14th century AD and remained in use as a major trade route until the 16th century.

Within the corridor is a complex network of trade routes covering some 8,700km, linking cities and towns. The nominated sites reflect the wealth generated by the Silk Roads trade as well as the infrastructure that facilitated the passage of people and goods, the interchange of numerous nationalities fostered by trade, the ideas that flowed along the routes, and the strong fusion that resulted between the two main cultures of the Eurasian continent: the settled agricultural nations and the nomadic communities of the steppes.

The 33 sites include capital cities/ palace complexes of various empires and Khan Kingdoms, trading

settlements, Buddhist cave temples, ancient paths, posthouses, passes, beacon towers, sections of the Great Wall, fortifications, tombs and religious buildings.

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 33 sites.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013) annex 3, it is also a *heritage route*.

1 Basic data

Included in the Tentative List

28 March 2008 (China)
5 March 2012 (Kazakhstan)
19 February 2010 (Kyrgyz Republic)

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

28 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Cultural Routes and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the sites in Kyrgyzstan and Kazakhstan from 20 September to 2 October 2013 and a further two ICOMOS technical evaluation missions visited the sites in China from 10 to 22 October 2013.

Additional information requested and received from the State Party

On 18 December 2013, the States Parties were requested to provide supplementary information on the specific characteristics of the overall corridor and the attributes of the proposed Outstanding Universal Value, the over-arching management system, improvements to national protection, management and conservation plans, clarification of threats within buffer zones, and the possibility of augmenting the series.

The States Parties responded on 24 February 2014 and the supplementary information provided has been included in this report.

In addition, the three States Parties participated in a virtual meeting with ICOMOS on 15 January 2014 to discuss ways to address ICOMOS's requests.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Note: due to limitations on the length of evaluation reports, not all sites in this large series have been described in this report. In the nomination dossier, each of the sites is clearly described and documented, as is the way each contributes to the overall series.

Description

The Silk Roads

The Silk Roads were an interconnected web of routes linking the ancient societies of Asia, the Subcontinent, Central Asia, Western Asia and the Near East, and contributed to the development of many of the world's great civilizations. They represent one of the world's preeminent long-distance communication networks stretching as the crow flies to around 7,500km but extending to in excess of 35,000km along specific routes. While some of these routes had been in use for millennia, by the 2nd century BCE the volume of exchange had increased substantially, as had the long distance trade between east and west in high value goods, and the political, social and cultural impacts of these movements had far-reaching consequences upon all the societies that encountered them.

The routes served principally to transfer raw materials, foodstuffs, and luxury goods. Some areas had a monopoly on certain materials or goods: notably China, who supplied Central Asia, the Subcontinent, West Asia and the Mediterranean world with silk. Many of the high value trade goods were transported over vast distances - by pack animals and river craft – and probably by a string of different merchants.

There were a number of major transformative impacts from this extensive network of interactions:

- The development of cities along these routes, which gained power and wealth from the trade, providing the infrastructure of production and redistribution, and policing its routes. Many became major cultural and artistic centres, where peoples of different ethnic and cultural backgrounds intermingled.
- The development of religious centres, which benefitted from the patronage of political systems and wealthy individuals.
- The movement of technologies, artistic styles, languages, social practices and religious beliefs, transmitted by people moving along the Silk Roads.

The overall Silks Roads from China to the Mediterranean have been the subject of extensive study over the past eight years by a group of 15 countries, mainly from Central and East Asia. The broad synthesis of the results has been published in an ICOMOS Thematic Study of the Silk Roads. This identified 54 'corridors'

along the routes that are distinctive from other sections of the Silk Roads, in terms of the quantity and quality of surviving ensembles of sites that reflect long distance trade and the complex socio-cultural-political systems that supported the trade. Each of these corridors might have the potential to be put forward as a serial nomination.

In time, if such serial corridors are inscribed on the World Heritage list, eventually the overall series of corridors may together be seen to reflect and represent the scope, rise and decline of the settlements and monuments along the 150,000 kilometres of the overall Silk Roads network.

The Silk Roads: the Tian-shan Corridor

The Tian-shan corridor is one section or corridor of this extensive overall Silk roads network. Extending across a distance of around 5,000km, it encompasses a complex of trade routes that developed to link Chang'an in central China with the heartland of Central Asia from the 2nd century BC when long distance trade in high value goods, particularly silk, started to flourish between the Chinese and Roman Empires.

The extremes of geography along the routes graphically illustrate the challenges of this long distance trade. Falling to 154 metres below sea level and rising to 7400 metres above sea level, the routes touch great rivers, alpine lakes, crusty salt flats, vast deserts, snow-capped mountains and 'fecund' prairies. The climate varies from extreme drought to semi-humid; while vegetation covers temperate forests, temperate deserts, temperate steppes, alpine steppes and oases.

This spectacular landscape, with landform shaped by 'divine craftsmanship' and documented over more than a thousand years, is the backdrop to the nominated sites. Given its scale, it is the wider setting in the widest sense of the word.

Starting in Chang'an on the Loess plateau, the routes of the Tian-shan corridor passed westwards through the Hosi Corridor across the Qin and Qilian Mountains to the Yumen Pass of Dunhuang. From Loulan/Hami, they continued along the northern and southern flanks of the Tian-shan Mountain and then through passes to reach the Ili, Chuy and Talas valleys.

This complex of routes within the corridor can be very broadly divided into four sections from east to west to reflect the diverse geographical zones and differing cultural and political regimes that they traversed.

1 Central China

Starting in Chang'an in the middle reaches of the Yellow River, this most easterly section has routes across Luoyang and Guanzhong basins and the fertile lands of the Loess Plateaux of Shaanxi and Gansu Provinces.

2 Hosi Corridor

Running on the edge of the Qilian Mountains, with the Badain Jaran and Tengger deserts to the north, the routes cross the Shiyang, Black and Shule rivers formed by melted snow, until they reach Dunhuang.

These two sections encompassed numerous different nationalities within the Han, Xianbei and Mongolian empires and nation states, including Han, Cao Wei, Western Jin, Western Qin, Northern Wei, Sui, Tang, Song, Yuan, Xianbei and Mongolian peoples.

3 North and South of Tian-shan Mountains

The routes diverge to the north and south Tian-shan Mountains. The southern route developed as a major route after 138 BC, and links oases along the southern rim of the Tian-shan Mountains, north of the Taklimakan desert.

The northern route that came into existence around a century later in the 1st century BC traversed the steppe zones along the northern foot of the Tian-shan Mountains, south of the Gurbantunggut desert, and runs through the Khorgos or Alatau passes into what is now Kazakhstan.

4 The Zhetysu Region

This most westerly section covers the fertile Ili, Chuy, and Talas Valleys, north of the Tian-shan Mountains, south of Lake Balkhash, and east of the Syr Darya River.

In these last two sections, within the Kingdoms of Qocho and Kucha, the Uyghur Khaganate, the Western Turkic Khaganate, the Kara-Khanid Khanate, the Kara-Khoja Kingdom (Western Liao), and the Qarluq Karluk, nationalities included Xiongnu, Han, Jushi, Rouran, Sogdians, Turks, Uighur, Kara-Khitans, Persian, Turgesh and Arab.

Trade was driven to a large extent by the Han people of China and the Sogdians, living in the area between Amu Darya and Syr Darya in Central Asia.

The trading process brought together the two main cultures of the Eurasian continent: the settled agriculturalists focused on markets in towns and cities and the nomadic peoples of the steppes that supplied goods to these markets – a symbiotic relationship that underpinned the trade along these routes. This benefited both societies, the highly organised Han and Sogdian societies, as well as the northern nomads including the Xiongnu, Xianbei and Mongolian peoples, and the Uighurs who expanded into the north and south of Tian-shan. In time this relationship also led to the settling of some nomadic peoples in the Zhetysu Region such as the Turgesh, and the peoples of the Kara-Khanid Khanate and the Qarluq Karluk.

The routes facilitated local and regional trade, but it was the high value, long distance trade across the Eurasian Continent that was the crucial engine that kept the routes alive.

China's silk, became almost a currency, and was the most expensive among all the trading goods transported to the west. But as well as silk, trade to the west also included porcelain, lacquer work, iron goods and tea from China. Horses, spices, jewels, coloured glazes and clothes were transported from Central Asia to China, while trade to the east also included grapes, pomegranates, nuts and other foods that were introduced into China from Western Asia. And musical instruments, paintings and many other types of goods moved both ways.

The flourishing trade along the routes for over 1,800 years was a two way conduit not only for people and goods but also for ideas related to city planning, architecture, literature, art, technology and particularly the major religions of Buddhism, Zoroastrianism, Nestorian, Manichaeism, and Islam originating in India, Iran, Syria and Arabian peninsula.

Over time, all of these ideas had a profound impact on the organisation of settlements and societies, and on the lives of millions of people along the routes who, even in the remotest areas, were part of a trade network that spanned a quarter of the globe through which they gained access to knowledge and innovation.

The series as a whole has been selected to reflect how certain areas exerted significant influence on the organisation of the trade, how individual sites became imbued with many layers of significant cultural meaning reflecting the dynamic exchange and dialogue facilitated by the Silk Roads over a period of 1,800 years, and the extent of interchange between sites along the routes.

The nominated property consists of 25 archaeological sites, 3 historic buildings, 1 tomb and 4 cave temples which reflect towns, trading settlements, transportation and defence facilities, religious sites and sections of the routes.

The nomination dossier sets out very clearly the rationale for including each of the sites and how each contribute to the overall proposed Outstanding Universal Value of the series. Shortage of space has not allowed this report to include full details of each of the sites, nor how each relates to the whole.

Groups of sites are considered within the four main geo-cultural areas:

Central China

Twelve sites are mainly sited in the fertile basin of the middle reaches of the Yellow river, where the benefits of fertile soil, ample water and an equable climate were harnessed to develop a prosperous agricultural society that contributed to the earliest unified empires of China during the Qin and Han dynasties and subsequently supported Chinese prosperity over the following twelve centuries.

The sites reflect the urban culture of this imperial power from the 2nd century BC to the 10th century AD, Buddhist heritage, the culture of nomadic ethnic groups, Zhang Qian's notable diplomatic visit to the Western Regions, and the defence necessary to maintain the safety of the routes. It is thus reflecting the overall merging of political, mercantile, and religious strands that characterised the Silk Roads.

- Weiyang Palace, Chang'an City, of the Western Han Dynasty (2nd century BC – 1st century AD)
- Daming Palace in Chang'an City of Tang Dynasty (7th -10th century AD)
- Great Wild Goose Pagoda
- Small Wild Goose Pagoda
- Xingjiaosi Pagodas
- Bin county cave temple
- Zhang Qian tomb
- Luoyang City, from the Eastern Han to Northern Wei Dynasty (1st – 6th century AD)
- Dingding Gate, Luoyang City of Sui and Tang Dynasties
- Longmen grottoes (already inscribed on the World Heritage list)
- Han'gu pass
- Shihao section of Xiaohan route
- Maijishan cave temple complex

Hosi Corridor

The Hosi corridor is the flat land some 900 kilometres in length, and between few kilometres to several hundred kilometres in width, that caravans had to cross to move from central China to the Tian-shan Mountains.

These five sites are mainly in the Gobi Desert and in oases north of the Qilian Mountains where the Han Dynasty in the 2nd century BC begun to establish military agricultural colonies to support trade within the territory of nomadic groups of people such as Rouzhi, Usun, Xiongnu, Tibetan and Uighur. Gradually many of these people became settled.

The sites consists of extensive richly decorated cave temples that reflect the wealth created by the trade in these remote areas (the most elaborate along the whole of the Silk roads), the essential infrastructure (forts and beacons) to support travellers crossing these thinly populated areas, settlements that developed purely to cater for the caravans, and the complex irrigation-based agricultural systems that were needed in desert areas to feed travellers and communities.

- Bingling cave temple complex
- Xuanquan posthouse
- Suoyang city
- Mogao caves (already inscribed on the World Heritage List)
- Yumen pass

North and South Tian-shan Mountains

These mountains are the barrier between the Hosi corridor and the ancient Western Regions in present-day Xinjiang. They reflect the interface between settled peoples and nomads. To the north, parts of the Great Wall defend the boundary between the nomads and settled areas; to the south were oasis settlements, and between the North and South Mountain chains agricultural settlements and semi-nomadic peoples.

The five sites in this section are from the area between the mountain chains, on both north and south edges of the Gashun Gobi (desert) and along the northern edge of the Taklimakan Desert.

Bashbaliq City to the north reflects the junction of north-south routes from the steppes with the east-west Silk Roads. The other towns and cities reflect the states formed by nomads from the north and south of the mountains between the 2nd century BC and the 16th century AD in order to benefit from the Silk roads trade and the influence of Buddhism that spread along the southern edge of the Taklimakan desert on other religions.

- Qocho City
- Yar City Site of Bashbaliq City
- Kizil cave temple
- Subash Buddhist temple
- Kizilgaha Beacon tower
- Bachbaliq city

Zhetysu region

This fertile area of grassland, steppe, forest and high mountains around (lake) Issyk Kul, with a plentiful water supply stemming from the mountains, provided the clearest land routes from the edges of the Tian-shan Mountains westwards. A combination of agriculture and trade led to the development of prosperous towns and cities that persisted over many centuries and brought together different peoples such as the Saka, Ousun, Turks, Iranian, Khitan, Mongolian and Han Chinese.

The sites were all fortified. Some were large towns or cities: Suyab (Ak-Beshim), city of Balasagun (Burana), city of Nevaket (Krashya Rechka), and Kayalyk. Others were smaller trading settlements: Talgar, Aktobe, Kulan, Ornek, Akyrtas, Kostobe. Karamergen was a fortified border post on an ancient delta of the Ili River, with still standing walls and towers, and was the transit point for what is now Central Kazakhstan and Eastern Europe, through what has now been identified as the Balkhash corridor.

Many of the cities are of considerable size, such as Ak-Beshim (Suyab), Krashya Rechka (Nevaket) with a 100ha citadel and 20km long walls, and Akyrtas with the remains of several large red sandstone palaces and caravanserai. All exemplify the way nomadic people turned to settled agriculture and trade. Several had

complex water gathering and irrigation systems with ceramic pipes and reservoirs.

The sites reflect the seven main powers that held sway over this area between the 2nd century BC and the 16th century AD (Hephthalites, Rouran Khaganate, Western Turkic Khaganate, Turgesh, Karluks, Karakhanids and Kara-Khitan Khanate) and the influence of ideas from both east and west, including Zoroastrianism, Manichaeism, Nestorian Christianity, Buddhism and Islam. There are the remains of a Manichean church at Kayalyk, while the city of Balasagun (Site of Burana), the capital of the Eastern Kaganate of the Islamic Turkic state, is a planned Islamic medieval city of the 10th -14th century with a 24metre high minaret.

- Kayalyk
- Talgar
- Karamergen
- Suyab (Site of Ak-Beshim)
- City of Balasagun (Site of Burana)
- City of Nevaket (Site of Krasnaya Rechka)
- Aktobe
- Kulan
- Ornek
- Kostobe
- Akyrtas

History and development

Trade routes in various parts of China and Central Asia had existed for centuries before the 2nd century BC when the Chinese Emperor, Shi Huangdi (reigned 221–210 BCE) developed policies that began a new era of more frequent and longer journeys, linking the east and west.

From the 2nd century BCE, China was unified under the Qin and then particularly the western Han rulers. This era coincided with, and was probably in part a response to, the unification of many of the northern nomads in the Xiongnu (Hsiung-nu) confederation.

In 138 BCE, Emperor Wudi dispatched Zhang Qian (?-114 BC), who had been involved in the conquest of Xiongnu on a mission to what were known as the Western Regions in Central Asia, in order to open up further contacts. Zhang Qian undertook two lengthy journeys (to India as well as to the Western Regions) and established for the first time an official relationship between the Chinese Empire and the countries of the Western Regions. He is now renowned for his courage and perseverance and “an outstanding man, the one who unveiled the world history”.

The Silk Roads gained momentum in the 1st BCE to 3rd century CE when four contiguous empires - the Roman, Parthian, Kushan, and Han – along with the nomadic confederation of the Xiongnu, developed long-term connections. The relationships between major civilizations, and between these and complex nomadic societies was not static and the trade reflected the varying changes in fortunes and zones of control.

Trade activity peaked in the 8th-9th centuries CE, reflecting the prosperity of the Islamic empires of the Middle East and Central Asia, the Tang Dynasty in China, and the Byzantine Empire in the Mediterranean. From about this time, seaborne trade from ports in Fujian and Guangdong began to flourish and take away some of the land trade. Nevertheless, the Silk Roads experienced another surge in activity under the *Pax Mongolica* in the 13th and 14th centuries CE, but the importance of the land routes declined again after the break-up of the Timurid Empire in the early 16th century CE, with the sea routes becoming dominant.

The history of the Tian-shan corridor reflects this larger history of the overall Silk roads of which it was a crucial part.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The extensive Thematic Study of the Silk Roads undertaken by ICOMOS in collaboration with States Parties participating in the overall Silk Roads project has provided at the macro level a comparative analysis across the whole length of the Silk Roads from China to the Mediterranean.

This allowed the identification of 54 ‘corridors’ that could be readily defined in geo-cultural-political terms and which have adequate tangible remains to reflect the way trade and the wealth that it generated supported settlements, defensive arrangements and the overall management of the landscape, particularly in terms of water management.

The corridors were meant to link ‘nodal’ points along the routes such as cities and towns and to also encompass the complexity of the social and economic arrangements of the routes as well as the defence arrangements and way stations that provided caravans with shelter a day’s journey apart.

The current nomination is for parts of five corridors in the East of the Silk Roads.

The comparative study in the nomination dossier starts by comparing the Tian-shan corridor with other cultural routes inscribed on the World Heritage. Although a tabulated analysis is presented no direct conclusion are drawn. However ICOMOS considers that none of the already inscribed routes can be said to reflect the scope and extent of the Silk Roads trade network, its time depth or the diversity and amount of structures that testify to its importance.

The second part of the analysis compares the nominated corridor to others along the wider Silk Roads. This analysis is not that revealing as the particular characteristics of the Tian-shan corridor are not clearly set out as a basis with which to compare it to others.

ICOMOS considers that the Thematic Study has however in effect already undertaken this analysis and clearly defined corridors that each reflect different geo-cultural-political aspects of the Silk Roads trade.

The third part of the analysis considers the choice of sites in the nominated property in comparison with other sites which were not selected. This analysis is first undertaken on a national basis and under various categories such as towns, trading settlements, transportation and defence facilities, religious sites, and associated sites (such as tombs). For China, the results are tabulated in terms of value, authenticity, integrity and state of conservation; for Kazakhstan, they are tabulated in terms of significance, state of conservation and information, and for Kyrgyzstan there is an analysis in terms of the dates of the evidence. These results are then combined into a single table that justified the final selection.

ICOMOS considers that the comparative analysis has highlighted the difficulties of choosing sites within vast corridors that stretch over thousands of kilometres in an area where there is not uniform data, research or state of conservation. Nevertheless, it considers that the analysis provides a good understanding of why the final selection was made with the categories highlighted.

However it would like to draw attention to the three key components of the Silk Roads, identified in the Thematic Study:

- 1 The sophisticated arrangements for water management that underpinned many of the settlements and their agriculture along the Silk Roads and particularly those within this corridor as highlighted by the failure of some towns when the water supply dried up. This aspect does not feature prominently in the analysis although it is mentioned in the text in connection with the Hosi corridor. It appears that evidence exists at several sites but that the boundaries have not necessarily been drawn to reflect this aspect.
- 2 The productive interchange between settled and nomadic societies. Although this is mentioned in the justification, it is not highlighted in the analysis of choice of sites. For China for instance it is suggested that the category trading settlements is not relevant.
- 3 The provision of way stations and watch towers (particularly in the Chinese section) along the routes that were the essential pre-requisite of safe, regular trade. These are not mentioned in detail and yet existed as is shown on a detailed Tang Dynasty map of stations between Chang'an and Luoyang. Furthermore, although one watch tower has been nominated, no others were featured in the comparisons, although a considerable number have survived. In the case of way stations and watch towers it is the ensemble that is important to demonstrate the enormous extent of the formal support that was provided for the trade.

In order to gain a full understanding of the richness of the interactions along the Silk Roads, the corridors were meant to reflect not only the power and wealth of the palaces and towns, but also their technical infrastructure, the way the trade routes impacted on smaller communities, the interaction between settled and nomadic communities, and the facilities provided for caravans that plied the routes.

The supplementary information provided by the States Parties in February 2014 at the request of ICOMOS greatly adds to an understanding of these further dimensions, particularly the elaborate water management systems, the interface between settled and nomadic communities, and the spread of Buddhism. For way stations and watch towers, the States Parties have signalled their intention to undertake further studies of these and suggest how they might be added to the series in the future.

In conclusion, ICOMOS considers that the comparative analysis justifies consideration of this corridor on the World Heritage list but it does not consider that the sites nominated have been shown to encompass all those that could have been suggested to reflect the full range of attributes of the corridor, particularly in relation to the way stations and watch towers.

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

Justification of Outstanding Universal Value

The Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor is considered by the States Parties to be of Outstanding Universal Value as a cultural property for the following reasons:

The Tian-Shan Corridor:

- Is a significant component of the Silk Roads, hold the crucial starting position for the transportation and communication system of the entire cultural route.
- Is a long distance cross regional transportation system that linked up multiple civilizations, and facilitated a lasting and far reaching exchange of activities in trade, religion, science and technology and culture.
- Played an essential role in the cultural interchanges between nomadic and settled peoples, and between East and Central Asian civilizations.
- Witnessed significant stages in the development of human civilization on the Eurasian continent over a period of eighteen centuries between the 2nd century BC and 16th century AD, and the outstanding characteristic of multicultural coexistence during this long span of time.
- Promoted in a significant way dialogues between different civilizations and cultures across continents, that contributed to their common development.

- Is an outstanding example in world history of how mankind established long-distance east-west transportation system and realized the widest interchange among civilizations and cultures across the Asian Continent.

ICOMOS considers that this justification is appropriate in general terms in setting out the extent and scope of this section of the route and its influence and impact. The justification did however need to be augmented to set out more clearly how these influences and impact are related to the attributes of the property and to the way these reflect different geo-cultural areas and changing economic and political fortunes over time. In the nomination dossier, notwithstanding the fact that it was commendably detailed, what did not come out clearly was what distinguishes this corridor from others in terms of defining a set of characteristics that are not present in other corridors.

The supplementary information provided in February 2014 responded to this need and has allowed a much clearer understanding to emerge of the very specific profile of this corridor as well as of the way it reflects certain key attributes of the overall Silk Roads.

It is now clear that the defining attributes of this corridor are:

- Formal system of posthouses and beacon towers provided by the Chinese Empire to facilitate trade, and the system of forts, caravanserai and way stations operated by states in the Zhetysu region;
- Succession of palaces that reflect the power centre of the Chinese Empire over 1,200 years; and the cities of the Chuy valley that witness the power centre of the Zhetysu region from the 9th to the 14th centuries and their organisation of the long distance trade;
- Series of Buddhist pagodas and large, elaborate cave temples extending from Kucha (now Kuqa County) in the west to Luoyong in the east, that record the eastward transmission of Buddhism from India via Karakorum, that demonstrate an evolution in the design of stupas as local ideas were absorbed, that reflect the sponsorship of local authorities and the central Chinese imperial government as well as donations of wealthy merchants, and that demonstrate the influence of monks that travelled the routes, many of whose journeys were documented from 2 BC onwards;
- The manifestation and co-existence of many religions (as well as many ethnic groups) along the corridor including Zoroastrianism, the main religion of the Sogdians of Zhetysu region, Manichaeism in the Chuy and Talas valleys and in Qocho city and Luoyong, Nestorian Christianity also in Qocho city, around Xinjiang and in Chang'an, and Islam in Burana;
- Prosperous and thriving towns and cities benefiting from massive trading activities that reflect the interface between settled and nomadic communities:

- The mutual inter-dependence of nomads and farmers and different peoples such as between Turks and Sogdians in the Zhetysu region;
- The transformation of nomadic communities to settled communities in the Tian-shan mountains, resulting in highly distinctive construction and planning such as semi-underground buildings;
- In the Hosi corridor the planned agricultural expansion of the 1,000 mile corridor after the 1st century BC as an agricultural garrison and its transformation to settled agricultural communities.
- The diverse and large scale water management systems that were essential to facilitate towns, the growth of trading settlements, forts, and caravanserai and the agriculture necessary to support them; and particularly:
 - The extensive Karez underground water channels of the extremely arid Turpan basin, many of which are still in use, that supplied water to Qocho city, and were supplemented by deep wells inside Yar city;
 - The grand scale of the network of open canals and ditches along the Hosi corridor that drew river water to the settlements, 90km of which survive around Suoyang city;
 - In the Zhetsyu region river water distribution through canals and pipes and collection in reservoirs.

Integrity and authenticity

Integrity

The nomination sets out clearly why the nominated series as a whole should be seen to have integrity and, through a detailed analysis, how each of the individual sites can also be seen to have integrity.

The overall series adequately reflects the significant facets of the Tian-Shan corridor and the attributes of Outstanding Universal Value in terms of adequate representation of towns and cities, smaller trading settlements, transport and defence facilities, religious sites and tombs.

In terms of individual sites, although it is recognised that some are vulnerable in the face of pressure including urban, rural development, infrastructural development, tourism or changes in agricultural practices, in the majority these pressures are adequately contained.

ICOMOS would like to highlight the need to ensure that modern interventions such as screen walls at some sites built in traditional style do not confuse the archaeological record.

Most of the boundaries adequately cover all the planning features of the settlements and allow room for some further research or exploration with the exception of

Kayalyk and Kulan where villages have encroached into nominated sites since the 1970s.

However in order to fully understand the relationship between these urban areas and their surrounding desert landscapes, and in particular the trade routes, there is a need for further ground surveys or remote sensing of surrounding areas.

In some sites, the extensive, intact water management systems, necessary for their survival, are currently outside the boundaries and in some cases outside the buffer zones. In one site, Karamergen, the canal has not been surveyed. Consideration needs to be given to assessing the way these water management systems contribute to the integrity of the sites and in places minor adjustments to the boundaries need to be considered.

Authenticity

The nomination also sets out clearly why the nominated series as a whole should be seen to have authenticity and, through a detailed analysis, how each of the individual sites can also be seen to have authenticity.

The overall series includes adequate sites to fully convey the particular strengths and characteristics of this Tian-shan corridor.

The authenticity of individual sites is mostly satisfactory.

However, if the full value of these sites is to be clearly conveyed, then more surveys, research and explanation are needed to show how the sites relate to the routes to which they are linked and, in the case of settlements, to show how they survived in desert areas through the use of sophisticated water management techniques.

In the Zhetysu region, all the eleven archaeological sites are backfilled and covered for protection and to control deterioration, which in the current absence of adequate means to stabilise exposed bricks is essential. This can mean that fully understanding the significance of the remains is difficult. ICOMOS considers that the possibility of international aid to explore innovative ways of highlighting the scope and range of urban functions would be desirable. (This relates to interpretation – see below).

Generally, there is also a need for more archaeological and academic research to clarify the functions particularly of urban sites beyond the often fragmented archaeological studies of the nominated sites and to link them more clearly through interpretation to the ancient routes to which they were associated.

ICOMOS considers that the conditions of integrity and authenticity have been adequately met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), (v) 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 States Parties on the grounds that the vastness of the continental routes networks, the ultra-long duration of use, the diversity of heritage remains and their dynamic interlinks, the richness of the cultural exchange they facilitated, the varied geographical environments they connected and crossed, clearly demonstrates the extensive interaction that took place within various cultural regions, especially the nomadic steppe and settled agrarian/oasis/pastoral civilizations, on the Eurasian continent between the 2nd century BC and the 16th century AD.

These interaction and influences were profound in terms of developments in architecture and city planning, religions and beliefs, urban culture and habitation, merchandise trade and interethnic relations in all regions along the routes.

The Tian-shan corridor is an extraordinary example in world history of how a dynamic channel linking civilizations and cultures across the Eurasian continent, realized the broadest and most long-lasting interchange among civilizations and cultures.

ICOMOS considers that this criterion is fully justified for this particular corridor in terms of the combination of attributes of this Silk Roads corridor that convey the range and scope of interchange of ideas related to many different and specific cultural manifestations in technology, architecture and religion, and which thus differentiate it from other corridors.

The justification also mentions the 'Revival of the Historical Function' in terms of new roads and railways that follow the route of the Silk Roads (details below). This cannot be seen as part of the justification for this criterion which is related to the period during which the Silks Roads actively flourished – between the 2nd century BC and the 16th century AD.

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 civilisation which is living or which has disappeared;*

This criterion is justified by the States Parties on the grounds that the Tian-shan corridor bears a unique witness to the traditions of communication and exchange in economy and culture, and to social development across the Eurasian continent between the 2nd century BC to the 16th century AD.

This is especially evident in the remains of capital cities, central towns and settlements distributed along the routes that bear exceptional testimony to the numerous

ancient nations and civilizations which once existed or evolved over the 18 centuries, and to the Chinese civilization which has continued down to the present day.

ICOMOS considers that the nominated sites in the Tian-shan corridor do as a series bear an exceptional witness to a system of international trade that flourished for 1,800 years from the 2nd century BC to the 16th century AD, particularly in term of the way long distance trade had a profound influence on the settlement structure of the landscape, through the development of towns and cities that brought together nomadic and settled communities, through water management systems that underpinned those settlements through the extensive network of forts, beacon towers, way stations and caravanserai that accommodated travellers and ensured their safety, through the sequence of Buddhist shrines and cave temples and through manifestations of other religions such as Zoroastrianism, Manichaeism, Nestorian Christianity and Islam that resulted from the cosmopolitan, multi-ethnic communities that organised and benefitted from the high value trade.

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 States Parties on the grounds that the Tian-shan corridor is an outstanding example of human interaction with the natural environment which reflects the way impetus for long distance trade led to measures to adapt, utilize and remodel the natural environment to allow the successful development of desert lands for agriculture and settlement.

ICOMOS considers that this criterion has been justified in terms of the way the value of long-distance trade prompted the growth of sizeable towns and cities supported by elaborate, sophisticated water management systems that harvested water from rivers, wells and underground springs and channelled it for drinking and for the irrigation of crops that supported residents and travellers.

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 Tian-shan Corridor, with its many sites and monuments, numerous excavated cultural properties, documents on bamboo strips, and historical records and travelogues, is directly associated with

Zhang Qian's diplomatic mission to the Western Regions, a milestone event in the history of human civilization and cultural interchange in the Eurasian Continent, with the spread of Buddhism into ancient China which had significant impact on cultures of East Asia, with intercontinental silk trade (i.e. barter of silk fabrics and horses), with the Sogdians' unique tradition of trade along the Silk Roads, and with the important written works of historical, geographical and cultural value.

ICOMOS considers that Zhang Qian's mission to the Western Regions was an important event that created political alliances under which trade begun to flourish. This significant event is directly and tangibly reflected in the property in a single site, Zhang Qian's tomb, but for the rest of the sites only in the most general way through the whole subsequent history of trade and its impact.

The Silk Roads in general and the Tian-shan corridor in particular were undoubtedly conduits through which many profound ideas, beliefs and technological innovations flowed over an extraordinary long period of time and many of these were of outstanding universal significance. The key issue is which of these significant intangible cultural traits can be directly and tangibly associated with the 33 sites that have been included in the series.

ICOMOS considers that what is outstanding is the tangible impact of religious ideas, and of technologies related to harnessing water power, architecture and town planning, that flowed along the routes and which can be seen in an exceptional way in many of the sites.

The nomination dossier suggests that knowledge of technological advance in areas such as silk production, papermaking, printing, porcelain making, iron casting, well digging, cotton cultivation and working, tapestry weaving, calendrical sciences, wine making, cultivation of grapes, medicago, pomegranate, til and pepino, glazing and metal working techniques, medical and pharmaceutical knowledge all flowed along the routes. In particular, the spread of techniques of silk reeling and silk textile is considered to be one of the most significant accomplishments. ICOMOS considers that although all of these ideas or practices were significant, not all can be understood in terms of the fabric of the nominated sites.

ICOMOS considers that this criterion can be justified within a more limited range of ideas and practices that had a direct bearing on the development of the nominated sites – such as the various religious ideas that flowed along the Silk Roads not just Buddhism but also Nestorian Christianity (which reached China in 500 AD), Manichaeism, Zoroastrianism and early Islam water management, architectural ideas and ideas on town planning.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets the conditions of authenticity and integrity. ICOMOS also considers that criteria (ii), (iii), (v) and (vi) have been justified as has the serial approach.

4 Factors affecting the property

In relation to threats or potential threats from infrastructural development, one of the main concerns is the proximity of the new Western Europe - Western China trans-continental highway to sites in Kazakhstan. The two most affected sites are Aktobe and Kostobe. These are respectively 3km and 5km from the new road. Although there is no visual disturbance, there is some noise at Aktobe.

As the new highway could increase traffic on feeder roads, ICOMOS considers that it is essential that adequate forward plans are developed to ensure that road widening and upgrading is not applied to routes through and next to the sites and that alternative locations are considered where necessary after full archaeological surveys.

The following transport development projects are also mentioned but without further details being provided: China's major East-West transport line Lianhuo Expressway¹, China National Highway No. 3102 and 3143, the construction of China-Kyrgyzstan-Uzbekistan railway.

In terms of specific sites, at Luoyang (China) railways and roads currently pass through the large site. In the short term, to reduce the impact, tree planting has been undertaken, while for the longer term, the relocation of the railways and roads are being discussed amongst related authorities.

At Han'gu (China), the Longhai Railway and 310 National Highway, pass respectively close to the site and through the site. Re-routing of the highway has already been planned. As the railway is located higher than the site, its negative impact is reduced.

Most sites are in remote locations and not currently under threat from development either urban or rural.

The urban exceptions include sites in and near Chang'an and Luoyang (China). ICOMOS considers that in order to allow the two pagodas to retain their dominance of their surroundings, height restriction need to be put in place and respected for the buffer zones.

For the Dingding gate (China), modern facilities such as electric lines, towers and power poles are within the boundary and impact on the overall landscape. However they are planned to be relocated or to be buried. In addition, car factories and golf courses are also planned to be relocated to recover the landscape.

Generally for the sites in China, construction of building in towns is controlled according to established land-use regulations in the buffer zones.

In terms of rural areas, Kulan and Kayalyk (Kazakhstan) are sites where local villages have impinged on the edges of the archaeological remains. If the village houses were to be developed this could provide a threat to the buried archaeology and to the setting of the property.

In China the possible impact of coal particles on the exposed limestone of the ancient surfaces of the Silk Roads at the Shihao Section of Xiaohan road need to be considered as a matter of urgency.

In the sites in Kazakhstan, there is evidence for considerable pressure for grassland resources from breeding farms, grazing, and the extraction of mineral resources. ICOMOS considers that there is a need to develop overall landscape protection plans for the sites and their wider settings that encourage active involvement of local communities in order to put in place appropriate sustainable development of the grasslands. Such plans would need to be linked to ecological as well as archaeological monitoring systems.

Grass fires are potentially a major hazard. There is a need for the installation of fire-prevention measures, including regular patrols, and firefighting equipment for properties in Kazakhstan.

If this corridor is inscribed on the World Heritage List this will provide a high level of recognition of the Silk Roads and the associated sites and could inevitably produce high expectations from tourists in the near future. Thus, tourism pressure could be one of the major threats. Although visitor numbers are comparatively low at the moment, in some sites inscription could raise numbers, especially after the completion of the new transcontinental highway in China and Kazakhstan.

ICOMOS considers that there is thus an urgent need for plans for all sites that set out how an appropriate response can be provided in terms of the provision of active controls, facilities and access to interpretation (see below). Within the sites in China, these are mostly in place but need creating for sites in Kazakhstan and Kyrgyzstan.

At the Kizilgaha Beacon Tower (China), a thermal power plant is located about 6 km southwest of the property. The building, steel towers, and electrical wires are visible from the site. It is essential that the sense of remoteness of the tower is not compromised by further development that is visible from it.

The State Party of China has confirmed that mining activity is prohibited in the buffer zone of the Hangu Pass Gate and the buffer zone of the Shihao Section of Xiaohan road.

ICOMOS considers that the main threats to the property are the possibility of major increases in tourist numbers, the impact of cross-continental roads and associated feeder roads and railways (both in physical terms and for their impact on local traffic) and the possibility of rapid development of villages into towns in a few sites.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

China

The boundaries of the sites and their buffer zones are acceptable. Nonetheless there are a few sites where minor modification could be made.

At Qocho city, the site is limited to the city. To the north of the city are the Astana Tombs, within which many artefacts have been excavated that add to knowledge of how the trade of the city functioned. ICOMOS considers that it would be desirable to include these two tombs in the nominated property in the future.

As mentioned before, there is also a need to assess how boundaries can better reflect water management systems.

Kazakhstan

Although the boundaries of the sites are acceptable, none are clearly marked. At Karamergen the boundary is drawn tightly around the walls and does not encompass the water collection system as these have not yet been studied and this may need to be extended after an archaeological survey has been carried out.

Kyrgyzstan

The boundaries of the individual sites are adequate and encompass areas of future archaeological potential.

ICOMOS considers that the boundaries of the nominated sites and of their buffer zones are generally adequate.

Ownership

China

All the nominated sites are owned by the state; 27,308.30 hectares are defined as state-owned and 2,517.11 hectares as collective-owned.

Kazakhstan

All the nominated sites are owned by the State.

Kyrgyzstan

The excavated ruins within the sites are owned by the State while the agricultural land that surrounds them is privately owned.

Protection

China

All the 22 sites have been designated as National Cultural Heritage. This requires agencies and authorities at national, regional and local level to put in place measures for protection and management of the sites. The necessary cooperative framework among the State Administration of Cultural Heritage, the local Bureaux of Cultural Relics and local governments is established and functional.

Kazakhstan

The sites of Aktobe, Kulan, Talgar and Akyrtas are listed as national monuments of history and culture. The sites of Kayalyk, Karamergen, Ornek and Kostobe were at the time of nomination subject only to local protection.

However, separately, the sites of Aktobe, Kulan, Akyrtas and Kostobe are protected as part of the State Historical and Cultural Reserve-Museum of "The monuments of ancient Taraz". This means that the reserve museum is responsible for the proper protection and management under special regulations. In effect this gives Kostobe national protection which left three sites with only local protection. In February 2014, the additional information confirmed that national protection for these three sites has been confirmed.

Even where there is legal protection at the national level, implementation of protection measures is carried out through local authorities and with local budgets which are limited.

For Kazakhstan, buffer zone is classified into three sub-categories. First, zone of strict use and control that is up to 50m from the property boundary in which is only allowed research related activity and conservation and maintenance of ancient structures and monuments. Second, a zone of regulation of development, of 100m in which there are strict controls on construction activities. Third, a zone of protected landscape a further 100m outward with measure designed to protect landscape. These restrictions for land use are supported by legal jurisdictions of the various local authorities.

Kyrgyzstan

All three sites are protected through inclusion on the State List of Monuments of National Importance. Although there is legal protection at the national level, implementation of protection measures is carried out through local authorities and with local budgets and these are limited.

ICOMOS considers that the legal protection in place is satisfactory for all sites.

Conservation

An overall database for all sites in the nominated corridor is being developed at IICC-X, Xi'an (China) (see below). While original copies of documents are stored in archive centres, each site needs access to relevant data

at least in digitised form and this does not at all sites yet appear to be the case.

China

All the sites except the Shihao Section of Xiaohan road have specific, detailed and long-term conservation plans. A plan needs preparing for the sensitive, extensive and currently exposed remains of the Shihao Section of Xiaohan road that date back to the Han dynasty. In February 2014, the additional information confirmed that a conservation plan has been approved and will be implemented in the near future.

In terms of individual sites, most are stable. The two pagodas in Chang'an appear to have rising damp problems associated with the hard landscaping that goes right up to their walls, thus forcing damp upwards.

Kazakhstan

The Kazrestoration Republic State Enterprise under the Ministry of Culture and Information, is the specialized organization in charge of conservation and maintenance for the eight nominated sites.

Conservation of the nominated sites is a major challenge as they are located far (up to 700km) from major towns in deserts and semi-desert areas. Current conservation measures involved backfilling after excavations (except for Talgar), some protective shelters, and, where necessary to prevent collapse, filling of cracks with clay or clay bricks. At Karamergen, due to its remote location in the middle of desert, some six hours over rough roads from the nearest village, no regular maintenance and conservation measure are currently carried out.

Excavated areas still need protection from people and grazing animals and fences are not in place at any of the sites, except Talgar and Akyrtas. And in some sites even where there are fences in place, such as at Talgar, cultivation and grazing is practiced within the boundaries. ICOMOS considers that more active land control measures are needed.

A new gate is under construction in the southern part (north-west corner) of the Talgar site as a traffic control measure. The building would be better constructed outside of the property boundary.

Akyrtas, Kayalyk, Aktobe and Burana have been maintained in fairly good condition thanks to programmed care by the local authority. However, other sites, such as Ornek, Talgar and Kostobe have problems due to lack of financial resources and regular maintenance, while Karamergen, because of its inaccessibility has no active conservation.

In Kazakhstan there are well trained archaeologists for archaeological survey and inventories nationally. At the local level Akyrtas and Aktobe have staff for conservation work which is led by local archaeologist. Other sites are managed by local authorities both in provincial level and local level. There is however no

evidence of training or capacity building to ensure staff are aware of up to date thinking and practices.

Generally, ICOMOS considers that there appears to be insufficient resources devoted to active conservation measure. Such resources as are available are used for excavation instead of conservation.

Furthermore there is no regular patrol program for the nominated sites.

Kyrgyzstan

Three sites, Krasnaya Rechka, Ak-Beshim and Burana, in the Chuy Valley are still part of a thriving agricultural landscape with traditional arable and pastoral systems. All three sites are back filled and generally their conservation is satisfactory. At Ak-Beshim (Suyab) cultivation is allowed but the depth of ploughing is controlled.

Minor repairs on the minaret at Burana were carried out in the 1970s using cement. The local authorities are now working to research appropriate repair materials similar to the originals in order to reverse this work.

Burana has staff members who are well trained and informed. Overall there appears to be a shortage of resources for day to day conservation of the sites.

Kyrgyz sites are equipped with fences and entrance gates to control access as well as horseman who patrol on a daily base.

ICOMOS considers that the state of conservation of sites in all three countries is satisfactory, but in Kazakhstan and Kyrgyzstan there is a lack of adequate physical protection for excavations at some of the sites and overall a lack of day-to-day conservation.

Management

Management structures and processes, including traditional management processes

The great strength of this trans-national serial nomination is the existence of an Intergovernmental Coordinating Committee of the Serial World Heritage Nomination of the Silk Roads formed in 2007. This is a steering committee composed of representatives of all States Parties involved in the nominations of all Silk Roads corridors. The ICOMOS International Conservation Centre – Xi'an (IICC-X) is the Secretariat for the Committee.

The Committee has overseen the development of the first trans-national serial nominations of corridors identified in the ICOMOS Silk Roads Thematic Study. It has stressed the need for nominations that come forward to underpin the international nature of the Silk Roads trade through nominating corridors that include sites in more than one country. In terms of management, this Committee aims to implement a coordinated

management system based on mutual agreement and to provide guidelines on conservation principles, methods, and management.

For the Tian-shan corridor, the formal agreement between all the participating States Parties in the Committee has been augmented with a specific agreement between the three States Parties supporting this nomination.

For the coordinated management of the Tian-shan corridor, an agreement between the three States Parties was signed in May 2012. Subsequently in order to improve coordination and dialogue between the three States Parties and between sites, a further detailed agreement was signed in February 2014. This refined the management mechanisms, and identified principles and rules of conservation management. It also sets out suggestions for exchange and collaboration on conservation, interpretation, presentation and publicity as a means of working towards coordinated approaches throughout the sites along the corridor.

The organisational framework for the coordinated management consists of a Steering Committee of Vice Ministers, a Working Group of two experts and one government official from each State Party, and a Secretariat - the ICOMOS International Conservation Centre in Xi'an (IICC-X).

Since 2011 regular meetings have been held between the three States Parties. Collaboration is supported by the development of an on-line platform at the IICC-X. This is in three languages, English, Russian and Chinese. It collects and promotes information on the conservation initiatives along the Silk Roads.

This international collaboration needs to be supported by national collaboration if the many fragile archaeological sites can share information on the most advanced techniques and conservation measures that are appropriate and beneficial for the sites.

Within China, this management structure is well developed and appears effective. However, ICOMOS considers that within Kazakhstan and Kyrgyzstan this collaboration needs to be reinforced.

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

China

Management Plans are in place for all the individual sites.

Kazakhstan

Management plans including tourism plans have been proposed in the nomination dossier. However the emphasis in the current plans is on archaeological excavation, rather than on-going management, site

surveillance, conservation, environment protection and tourism management.

In February 2014, the additional information confirmed that a timetable for developing detailed management plans that would provide strategies for conservation and visitor management, including interpretation, for all sites had been approved and would be undertaken between 2014 and 2016.

Kyrgyzstan

All three sites in Kyrgyzstan have proposed management plans for 2011 – 2015 that includes proposals for improving the conservation of the sites, visitor facilities, and monitoring. Agreements between local land owners and local authorities were confirmed to ICOMOS.

Although the nomination dossier mentions the need for tourism plans in each of the three countries, and these have been put in place in China and are being implemented, it seems that no actual plans of tourist oriented policies have been put in place for sites in the other two countries.

In Kazakhstan and Kyrgyzstan, most of the sites seem ill-prepared for an increase in visitors. As the sites are archaeological sites, there is a basic need for practical measures to prevent visitor walking on excavated areas and to control their numbers through fences and signs. And if visitors are to appreciate properly the significance of these sites and their relationship to the Silk Roads, ICOMOS considers that there is an urgent need to provide adequate information in the form of panels, or through mobile apps and web based data, and ideally to supplement these with knowledgeable guides.

With the exception of Akyrtas and Burana, such approaches were not identified by ICOMOS in Kazakhstan and Kyrgyzstan. However in February 2014, the additional information confirmed that a Conservation Action Plan and a Tourism Development Plan for the Chuy Valley 2013-2015 had been approved.

As the majority of the 33 nominated sites are archaeological sites, there is a need for good information that allows understanding of their layout, function and history, why they are of significance and particularly their relationship to the Silk Roads routes, to water and its management which was so crucial for survival, to trade and to each other. Many are associated with remarkable finds but these are often in museums some distance from the sites. And these museums do not always provide specific information about the Silk Roads and how they relate to the sites.

Given the scale and scope of the Tian-shan corridor and the remoteness of some sites, ICOMOS considers that innovative measures are needed to provide the necessary information. Boards at sites can provide some details but these are difficult to maintain in remote areas. Web-based data and information through mobile phones

would seem to be valuable tools and these are in places being developed.

China

Most of the sites in China have good interpretation that explains their importance and relates them to the Silk Roads. Sites where the interpretation could be improved include Bashbaliq.

Kazakhstan

The 'Archaeological Expertise', a commercial company is working on a mobile app and is developing a Web page related to the nominated sites.

Currently apart from Akyrtas and Burana, which have site museums, most of the nominated sites are not equipped with information boards for interpretation and presentation to the public, even Talgar which is frequently visited by tourists and villagers. Sites such as Karamergen, Ornek and Kostobe are in remote areas but could become known if inscribed as part of the corridor and need to be understood if their value is to be sustained. Making information on boundaries and on the attributes of the sites readily available would help raise awareness of what needs protecting.

Kyrgyzstan

Burana site is well equipped with information boards, tourist shop and site museum. Suyab and Nevaket do not have information boards or any public presentation at the sites.

Involvement of the local communities

This is one area that did not feature strongly in the nomination dossier. Even though it is clear that for some of the smaller sites, local communities have been and still are active custodians.

In Kyrgyzstan, ICOMOS noted the positive involvement of local schools for public interpretation and reporting artefacts found in agricultural fields, and also an education programmes for local students to enhance local and national identity in relation to one of the nominated sites.

Coordinated management needs strengthening at the national level in Kazakhstan and Kyrgyzstan with management plans being prepared for all sites that cover conservation, development controls and visitor management.

6 Monitoring

Given the magnitude of this Silk Roads corridor, the number of sites, the comparative fragility of many of them and the enormous distances between them, monitoring becomes an almost formidable task. Nevertheless if these sites are to be visited in greater numbers in the near future, there is a need to ensure that visitors are not the agents of their destruction.

ICOMOS considers that monitoring (combined with adequate physical protection) thus becomes a crucial tool.

In China all sites have up to date monitoring equipment. How this data is analysed and used will be crucial and more capacity building for these tasks would seem to be required.

In the more remote sites in Kazakhstan, regular monitoring by trained staff is unlikely to be totally adequate (or in places technically feasible) and needs to be augmented by other means.

One mechanism is the involvement of local communities, which needs to be encouraged. It is also recommended that the latest approaches to remote sensing and video links are explored that might be used to support staff on the ground in both Kazakhstan and Kyrgyzstan.

ICOMOS considers that ways to achieve effective monitoring of remote sites need to be urgently developed.

7 Conclusions

The submission of this trans-boundary nomination from three States Parties is a major milestone in the process of recognising the Silk Roads on the World Heritage List. It is the outcome of more than seven years collaborative work and of many more years of survey and research.

ICOMOS commends the States Parties for the impressive nomination dossier which puts forward 33 sites, a number of which are in highly remote and inaccessible areas, and all of which are extremely fragile, in a corridor that spans around 5,000 kilometres.

The challenge of how to capture the extraordinary impact of the Silk Roads trade over 1,800 years has been debated by all the States Parties contributing to the wider Silk Roads project during many seminars and meetings. The way forward that emerged, to define corridors which enclosed a series of linked sites reflecting particular facets of the Silk Roads, allowed a series of serial sites to be nominated that could incrementally over time together convey the full impact and influence of the Silk Roads.

This corridor is one of the first two to be nominated. It is anticipated that many others will follow. It is axiomatic that these first sites will provide the foundations of future Silk Roads nominations.

ICOMOS considers that it is essential that the various corridors that are nominated clearly reflect certain specific geo-cultural-political facets of the Silk Roads, as well as conveying the fundamental characteristics of the overall routes. In this respect it is essential that the defining characteristics of corridors are clearly set out in

order that the attributes of Outstanding Universal Value are easily understood and readily communicated and the key differences between the corridors are highlighted.

The substantial supplementary information provided by the States Parties in February 2014 complements the detailed information in the nomination dossier. Crucially it has also addresses this key issue clearly and simply. It sets out precisely how the characteristics of this corridor can be defined, what distinguishes it from other corridors and why it can be seen as an exceptional testimony to the Silk Roads trade.

It also highlights the dynamic inter-relationship between the various characteristics: trade needed security and infrastructure to flourish, and the wealth generated by the trade prompted the development of towns and cities that involved various types of symbiotic relationship between settled and nomadic communities. In order to survive in often hostile environment the landscape was re-shaped with elaborate and extensive water management systems, allowing the agricultural development to support residents and travellers. Along the corridor Silk Roads flowed ideas and ideals related to many religions – Zoroastrianism, Manichaeism, Nestorian Christianity, Islam and particularly Buddhism, whose progress eastwards is dramatically marked by pagodas reflecting local architecture, and by wealthy cave temples and monasteries.

The nominated sites fully support the key characteristics of the corridor in all but one area and that is the ensemble of way stations, beacons, watch towers and caravanserais that facilitated regular trade and reflects the everyday use of the route. One watch tower has been nominated and one post house. Although these are significant, they do not fully demonstrate the extent of the formal support that was provided for trade and travellers. In the supplementary information provided, the States Parties have acknowledged that numerous sites of beacon towers and forts survive between the Hoxi corridor and the Tian-shan range and these provided protection for the routes along with earthen sections of the Great Wall. The Chinese State Party is committed to undertaking further research of the remains of these mainly Tang dynasty structures in order to identify those that might be added to the series. Likewise formal structures can be found in Zhetysay region and these too need further identification and research.

Conveying the rich inter-linkage between the various sites of the Tian-shan corridor as a reflection of the cosmopolitan and thriving societies that facilitated trade is one of the challenges of this massive serial property. The support of a formal secretariat that promotes an on-line platform for information and exchange of ideas on conservation and interpretation in three languages – English, Russian and Chinese – is a model that deserves commendation.

On the ground, although many sites have good information, there appears to be a need to strengthen

knowledge on the relationships between the sites and the trade routes that provided their lifeblood.

In terms of protection, there are a few sites where this needs strengthening. This is also true for conservation and management of sites that have not had the benefit of adequate resources and/or are in areas which present particularly challenging conditions. Management plans need to be prepared that address conservation and tourism management strategies to allow sites to be adequately protected and prepared for increased visitors and ICOMOS notes that there is agreement to this way forward.

All sites need adequate monitoring arrangements and for sites in remote areas, there is a need to explore technical solutions where access is difficult and resources are scarce.

Although this nomination is one of the first two to be put forward, ICOMOS considers that signifying this in the name of the property might in the long term cause confusion. It suggests that the name should be shortened to: "Silk Roads: the Routes Network of the Tian-shan Corridor".

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Silk Roads: Initial Section of the Silk Roads, the Routes Network of Tian-shan Corridor, be inscribed on the World Heritage List on the basis of **criteria (ii), (iii), (v) and (vi)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The Silk Roads were an interconnected web of routes linking the ancient societies of Asia, the Subcontinent, Central Asia, Western Asia and the Near East, and contributed to the development of many of the world's great civilizations. They represent one of the world's preeminent long-distance communication networks stretching as the crow flies to around 7,500km but extending to in excess of 35,000km along specific routes. While some of these routes had been in use for millennia, by the 2nd century BC the volume of exchange had increased substantially, as had the long distance trade between east and west in high value goods, and the political, social and cultural impacts of these movements had far-reaching consequences upon all the societies that encountered them.

The routes served principally to transfer raw materials, foodstuffs, and luxury goods. Some areas had a monopoly on certain materials or goods: notably China, who supplied Central Asia, the Subcontinent, West Asia and the Mediterranean world with silk. Many of the high value trade goods were transported over vast distances

– by pack animals and river craft – and probably by a string of different merchants.

The Tian-shan corridor is one section or corridor of this extensive overall Silk Roads network. Extending across a distance of around 5,000km, it encompassed a complex network of trade routes extending to some 8,700km that developed to link Chang'an in central China with the heartland of Central Asia between the 2nd century BC and 1st century AD, when long distance trade in high value goods, particularly silk, started to expand between the Chinese and Roman Empires. It flourished between the 6th and 14th century AD and remained in use as a major trade route until the 16th century.

The extremes of geography along the routes graphically illustrate the challenges of this long distance trade. Falling to 154 metres below sea level and rising to 7,400 metres above sea level, the routes touch great rivers, alpine lakes, crusty salt flats, vast deserts, snow-capped mountains and 'fecund' prairies. The climate varies from extreme drought to semi-humid; while vegetation covers temperate forests, temperate deserts, temperate steppes, alpine steppes and oases.

Starting on the Loess plateau at Chang'an, the central capital of China in the Han and Tang Dynasties, the routes of the Tian-shan corridor passed westwards through the Hosi Corridor across the Qin and Qilian Mountains to the Yumen Pass of Dunhuang. From Loulan/Hami, they continued along the northern and southern flanks of the Tian-shan Mountain and then through passes to reach the Ili, Chuy and Talas valleys in the Zhetysu Region of Central Asia, linking two of the great power centres that drove the Silk Roads trade.

Thirty-three sites along the corridor include capital cities/palace complexes of various empires and Khan Kingdoms, trading settlements, Buddhist cave temples, ancient paths, posthouses, passes, beacon towers, sections of the Great Wall, fortifications, tombs and religious buildings. The formal system of posthouses and beacon towers provided by the Chinese Empire facilitated trade, as did the system of forts, caravanserai and way stations operated by states in the Zhetysu region. In and around Chang'an, a succession of palaces reflect the power centre of the Chinese Empire over 1,200 years; while the cities of the Chuy valley are witness to the power centre of the Zhetysu region from the 9th to the 14th centuries and their organisation of the long distance trade.

The series of Buddhist pagodas and large, elaborate cave temples extending from Kucha (now Kuqa County) in the west to Luoyong in the east, record the eastward transmission of Buddhism from India via Karakorum, and demonstrate an evolution in the design of stupas as local ideas were absorbed. Their elaboration reflects the sponsorship of local authorities and the central Chinese imperial government as well as donations of wealthy merchants, and the influence of monks that travelled the routes, many of whose journeys were documented from

2nd century BC onwards. Other religious buildings reflect the co-existence of many religions (as well as many ethnic groups) along the corridor including Zoroastrianism, the main religion of the Sogdians of Zhetysu region, Manichaeism in the Chuy and Talas valleys and in Qocho city and Luoyong, Nestorian Christianity also in Qocho city, around Xinjiang and in Chang'an, and Islam in Burana.

The massive scale of the trading activities fostered large, prosperous and thriving towns and cities that also reflect the interface between settled and nomadic communities in a variety of ways: the mutual inter-dependence of nomads and farmers and different peoples such as between Turks and Sogdians in the Zhetysu region; the transformation of nomadic communities to settled communities in the Tian-shan mountains, resulting in highly distinctive construction and planning such as semi-underground buildings; and in the Hosi corridor the planned agricultural expansion of the 1,000 mile corridor after the 1st century BC as an agricultural garrison and its transformation to settled agricultural communities. Diverse and large scale water management systems were essential to facilitate the growth of towns, trading settlements, forts, and caravanserai and the agriculture necessary to support them, such as the extensive Karez underground water channels of the extremely arid Turpan basin, many still in use, that supplied water to Qocho city, and were supplemented by deep wells inside Yar city; the grand scale of the network of open canals and ditches along the Hosi corridor that drew river water to the settlements, 90km of which survive around Suoyang city; and in the Zhetsyu region, river water distribution through canals and pipes and collection in reservoirs.

As well as conduits for goods and people, the routes allowed the exceptional flow of ideas, beliefs and technological innovations such as those related to architecture and town planning that shaped the urban spaces and peoples' lives in many fundamental ways.

Criterion (ii): The vastness of the continental routes networks, the ultra-long duration of use, the diversity of heritage remains and their dynamic interlinks, the richness of the cultural exchange they facilitated, the varied geographical environments they connected and crossed, clearly demonstrates the extensive interaction that took place within various cultural regions, especially the nomadic steppe and settled agrarian/oasis/pastoral civilizations, on the Eurasian continent between the 2nd century BC and the 16th century AD.

These interaction and influences were profound in terms of developments in architecture and city planning, religions and beliefs, urban culture and habitation, merchandise trade and interethnic relations in all regions along the routes.

The Tian-shan corridor is an extraordinary example in world history of how a dynamic channel linking civilizations and cultures across the Eurasian continent,

realized the broadest and most long-lasting interchange among civilizations and cultures.

Criterion (iii): The Tian-shan corridor bears an exceptional witness to traditions of communication and exchange in economy and culture, and to social development across the Eurasian continent between the 2nd century BC to the 16th century AD.

Trade had a profound influence on the settlement structure of the landscape, through the development of towns and cities that brought together nomadic and settled communities, through water management systems that underpinned those settlements, through the extensive network of forts, beacon towers, way stations and caravanserais that accommodated travellers and ensured their safety, through the sequence of Buddhist shrines and cave temples, and through manifestations of other religions such as Zoroastrianism, Manichaeism, Nestorian Christianity and Islam that resulted from the cosmopolitan, multi-ethnic communities that organised and benefitted from the high value trade.

Criterion (v): The Tian-shan corridor is an outstanding example of the way high value, long-distance trade prompted the growth of sizeable towns and cities, supported by elaborate, sophisticated water management systems that harvested water from rivers, wells and underground springs for residents, travellers and the irrigation of crops.

Criterion (vi): The Tian-shan Corridor is directly associated with Zhang Qian's diplomatic mission to the Western Regions, a milestone event in the history of human civilization and cultural interchange in the Eurasian Continent. It also reflects in a profound way the tangible impact of Buddhism into ancient China which had significant impact on cultures of East Asia, and the spread of Nestorian Christianity (which reached China in 500 AD), Manichaeism, Zoroastrianism and early Islam. Many of the towns and cities along the corridor also reflect in an exceptional way the impact of ideas that flowed along the routes related to harnessing water power, architecture and town planning.

Integrity

The nomination sets out clearly why the nominated series as a whole should be seen to have integrity and, through a detailed analysis, how each of the individual sites can also be seen to have integrity.

The overall series adequately reflects the significant characteristics of the Tian-Shan corridor and the attributes of Outstanding Universal Value in terms the representation of towns and cities, smaller trading settlements, transport and defence facilities, religious sites and tombs and water management. The one area that could be strengthened is the ensemble of way stations, beacons, watch towers and caravanserais that facilitated regular trade and reflects the everyday use of the route. One watch tower has been nominated and

one post house. Although these are significant, they do not fully demonstrate the extent of the formal support that was provided for trade and travellers. The numerous sites of beacon towers and forts that survive between the Hoxi corridor and the Tian-shan range need further survey and research in order to identify those that might be added to the series. Likewise formal structures in Zhetysu region also need further identification and research.

In terms of individual sites, although it is recognised that some are vulnerable in the face of pressure including urban, rural development, infrastructural development, tourism or changes in agricultural practices, for the majority of these the pressures are adequately contained. There is a need to ensure that new interventions such as screen walls at some sites built in traditional style do not confuse the archaeological record.

For some sites, in order to fully understand the relationship between urban areas and their surrounding desert landscapes, and in particular the trade routes, there is a need for further ground surveys or remote sensing of surrounding areas.

The extensive, intact water management systems, necessary for their survival, are currently outside the boundaries of some sites and in some cases outside the buffer zones. Consideration needs to be given to assessing the way these water management systems contribute to the integrity of the sites and in places minor adjustments to the boundaries need to be considered.

Authenticity

The overall series includes adequate sites to fully convey the particular strengths and characteristics of this Tian-shan corridor. The authenticity of individual sites is mostly satisfactory.

If the full value of these sites is to be clearly conveyed, then more surveys, research and explanation are needed to show how the sites relate to the routes to which they are linked and, in the case of settlements, to show how they survived in desert areas through the use of sophisticated water management techniques.

In the Zhetysu region, all the eleven archaeological sites are backfilled and covered for protection and to control deterioration, which in the current absence of adequate means to stabilise exposed bricks is essential. Fully understanding the significance of the remains is difficult. There is a need to explore innovative ways of highlighting the scope and range of urban functions.

There is also a need for more archaeological and academic research to clarify the functions particularly of urban sites and to link them more clearly through interpretation to the ancient routes to which they were associated.

Management and protection requirements

An Intergovernmental Coordinating Committee for the overall Silk Roads was formed in 2007. This is a steering committee composed of representatives of all States Parties involved in the nominations of all Silk Roads corridors. The ICOMOS International Conservation Centre – Xi'an (IICC-X) is the Secretariat for Committee. The Committee oversees the development of trans-national serial nominations of corridors identified in the ICOMOS Silk Roads Thematic Study. In terms of management, this Committee aims to implement a coordinated management system based on mutual agreement and to provide guidelines on conservation principles, methods, and management.

For the Tian-shan corridor, the formal agreement between all the participating States Parties in the Committee has been augmented with a specific agreement between the three States Parties, particular for the coordinated management of the sites in the corridor. A first agreement between the three States Parties was signed in May 2012 and a further detailed agreement was signed in February 2014. These agreements set out the management mechanisms, and identify principles and rules of conservation management. They also set out suggestions for exchange and collaboration on conservation, interpretation, presentation and publicity. The Steering Committee for the corridor consists of Vice Ministers. There is also a Working Group consisting of two experts and one government official from each State Party, and a Secretariat - the ICOMOS International Conservation Centre in Xi'an (IICC-X). Regular meetings are held between the three States Parties. Collaboration is supported by the development of an on-line platform at the IICC-X. This is in three languages, English, Russian and Chinese. It collects and promotes information on the conservation initiatives along the Silk Roads.

This international collaboration needs to be supported by national collaboration, particularly in Kazakhstan and Kyrgyzstan, if the many fragile archaeological sites are to share information on the most advanced techniques and conservation measures that are appropriate and beneficial for the sites. Within China, this management structure is well developed and appears effective. Within Kazakhstan and Kyrgyzstan this collaboration needs to be reinforced.

Management Plans are in place for all the individual sites in China. For Kazakhstan a timetable for developing detailed management plans that would provide strategies for conservation and visitor management, including interpretation, for all sites had been approved and the work will be undertaken between 2014 and 2016. It is essential that these plans go beyond archaeological excavation to encompass on-going management, site surveillance, conservation, environment protection and tourism management. In Kyrgyzstan, all three sites have management plans for 2011 – 2015 that include proposals for improving the

conservation of the sites, visitor facilities, and monitoring.

Although the need for tourism plans is acknowledged in each of the three countries, and these have been put in place in China and are being implemented, and a plan has been approved for the Chuy Valley, there is an urgent need to tourism plans to be put in place for the remaining sites and implemented to ensure they are well prepared for an increase in visitors, who do not become the agents of their destruction.

As the majority of the thirty-three nominated sites are archaeological sites, there is also need for good information that allows understanding of their layout, function and history, why they are of significance and particularly their relationship to the Silk Roads routes, to water and its management which was so crucial for survival, to trade and to each other. Many are associated with remarkable finds but these are often in museums some distance from the sites. And these museums do not always provide specific information about the Silk Roads and how they relate to the sites. Given the scale and scope of the Tian-shan corridor and the remoteness of some sites, there is a need for innovative techniques to provide the necessary information and interpretation.

The magnitude of this Silk Roads corridor, the number of sites, the comparative fragility of many of them and the enormous distances between them, makes monitoring a formidable task. Nevertheless monitoring (combined with adequate physical protection) is a crucial tool. In China all sites have up to date monitoring equipment. How this data is analysed and used will be crucial and more capacity building for these tasks would seem to be required. In the more remote sites in Kazakhstan, regular monitoring by trained staff is unlikely to be totally adequate (or in places technically feasible) and needs to be augmented by other means. In this context, the involvement of local communities needs to be encouraged.

As with It is also recommended that the latest approaches to remote sensing and video links are explored that might be used to support staff on the ground in both Kazakhstan and Kyrgyzstan.

Additional recommendations

ICOMOS further recommends that the States Parties give consideration to the following:

- Undertaking further studies of sites that reflect the many planned way stations and watch towers and consider how they might be added to the series in the future;
- Considering extending boundaries of sites to include the sophisticated arrangements for water management that underpinned many of the settlements and their agriculture along the Silk Roads;

- Implementing the timetables for developing detailed management plans that would provide strategies for conservation and visitor management, including interpretation;
- Suggesting how international resources might contribute to the technical monitoring of remote sites.

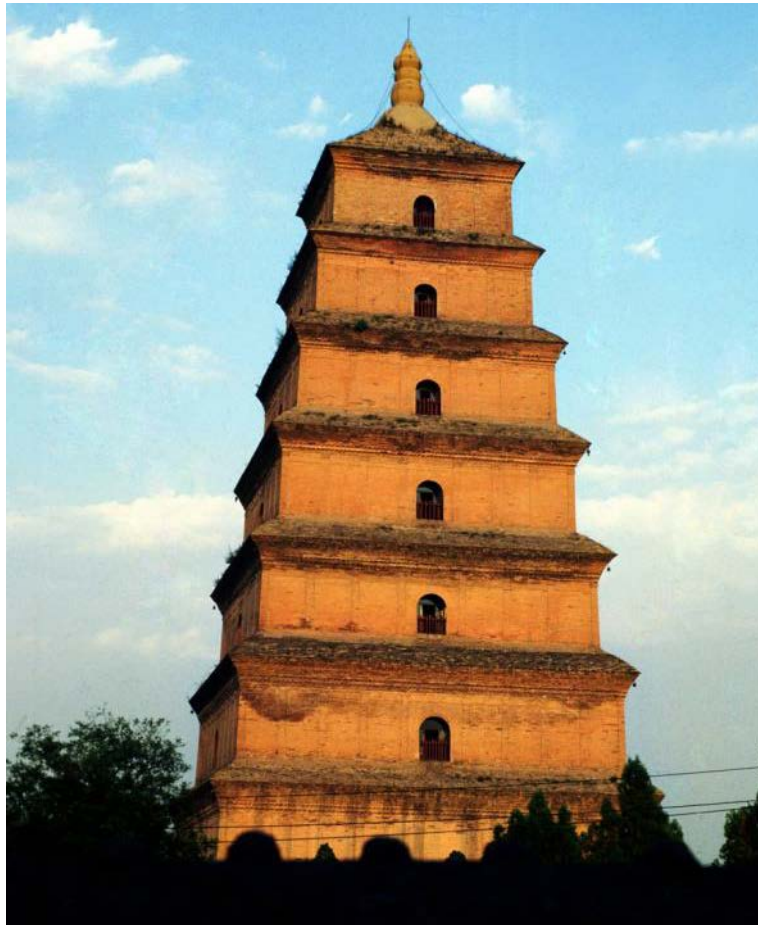
ICOMOS also suggests that the States Parties be requested to submit, by 1 February 2016, a report to the World Heritage Centre outlining progress made in the implementation of the above mentioned recommendations, to be examined by the World Heritage Committee at its 40th session in 2016.

ICOMOS further suggests that the name of the property should be shortened to: "Silk Roads: the Routes Network of the Tian-shan Corridor".

ICOMOS is at the disposal of the States Parties to provide further detailed advice on these recommendations or in relation to conservation and management of specific sites.



Luoyang City, from the Eastern Han to Northern Wei Dynasty (1st – 6th century AD), Central China



Great Wild Goose Pagoda, Central China



Bin county cave temple, Central China



Maijishan cave temple complex, Central China



Yumen Pass, Hosi Corridor



City of Nevaket (Site of Krasnaya Rechka), Zhetysu region



Talgar, Zhetysu region

Pyu Ancient Cities (Myanmar) No 1444

Official name as proposed by the State Party

Pyu Ancient Cities

Location

Sagaing Region, Magwe Region, and Bago Region
The Republic of the Union of Myanmar

Brief description

In the dry zone of the Ayeyarwady (Irrawaddy) River basin, the remains of three brick walled and moated cities of Halin, Beikthano, and Sri Ksetra located in vast irrigated landscapes, reflect the Pyu Kingdoms that flourished for over a 1,000 years between 200 BCE and 900 CE.

Fostered by patronage and pilgrimage, the development of Buddhist monasteries, and the introduction of skilful water management practices, the cities were centres of long-distance trade in manufactured goods such as terracotta, iron, gold, silver and semi-precious stones.

The three cities are partly excavated archaeological sites in which the footprint of each city is visible. Remains include excavated palace-citadels, burial grounds, and early industrial production sites, as well as still standing monumental brick Buddhist stupas, partly standing walls, and water management features – some still in use - that underpinned their organised, intensive agriculture.

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*.

1 Basic data

Included in the Tentative List

4 October 1996

International Assistance from the World Heritage Fund for preparing the Nomination

2012

Date received by the World Heritage Centre

28 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited two of the three sites, Beikthano, and Sri Ksetra, from 23 to 29 October 2013. A further mission to Halin was carried out from 23 to 26 January 2014.

Additional information requested and received from the State Party

On 16 October 2013, ICOMOS requested the State Party to provide clearer documentation of the overall sites, in terms of plans of the three sites that show the extent of the identified urban remains and the relationship between the various features.

On 17 December 2013, ICOMOS requested further documentation on the selection of sites, comparative study, management and looting. Details of the State Party's responses to both these requests are included in this report.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

From pre-historic times the dry but fertile alluvial plains alongside the River Ayeyarwady that runs north to South from China to the Andaman Sea supported clusters of villages that based their subsistence on irrigated fields.

Urban areas gradually emerged around 200BCE as these villages of Pyu people coalesced, first in the north and later further south.

An urban elite, specialised craftsmen and the complex organisation of people and resources led to the building of immense fortified urban enclaves, each with a palace citadel at its heart, and supported by extensive water engineering works involving tanks and canals, that allowed the surrounding plains to become intensively cultivated.

Precipitation was scarce (between 750 and 1,250 millimetres per annum); apart from the rainy season during May to September, there was often no rain at all, so water storage facilities were essential.

The Pyu adopted Buddhism as it spread into Southeast Asia. New monastic communities, organized and supported by the local population, disseminated the Buddhist texts in the local vernacular. Interchange with South Asia, and particularly India and Sri Lanka, might have led to the introduction of new skills and technologies or these could have been developed locally.

The on-going prosperity of the cities was based on patronage and pilgrimage underpinned by exploitation of mineral resources that supported long distance trade of manufactured goods by river north to China, and south to the Andaman Sea, and also to the east along land routes.

The three nominated Pyu cities are stretched out alongside the River Ayeyarwady. Halin in the north, Beikthano 270km to the south, and Sri Ksetra 130km further south. The area enclosed by their walls grew successively larger from north to south, while their location also moved closer and closer to the massive River Ayeyarwady.

Halin, the northernmost of the cities, was apparently the earliest of the three to be inhabited and demonstrates the transition from earlier Iron Age cultures to the rise of of Pyu urbanism. It has no standing remains and little survives above ground level.

Beikthano, located further south along the Ayeyarwady, demonstrates the development of a sophisticated hydraulic system of lakes supplemented by manmade reservoirs, tanks, and canals. It also has the excavated remains of the earliest dated monasteries and memorial halls, combining brick and wooden architecture along with the most elaborately decorated terracotta burial urns, evidence for the mass adoption of Buddhism by the population.

Sri Ksetra, the largest and richest city demonstrates the apex of Pyu culture with lofty stupas, monumental sculpture and inscriptions, extra-mural urban zones, and specialized production areas.

While these huge cities fell into disuse and gradually came to be the buried archaeological mounds discovered by early 20th century CE archaeologists, some parts continued to be used by monastic communities and pilgrims.

Although the nomination dossier is long, ICOMOS notes that the text is quite general, lacks specific details of many of the characteristics of the properties and their locations. There are no detailed plans of each of the cities with their agricultural hinterlands showing the totality of the evidence for the various urban forms, structures and processes and what standing structures have survived.

Within the boundaries of Sri Ksetra are sixteen villages, while there are none in Halin and only one in Beikthano.

The main characteristics of the cities are as follows:

- Urban layout
- Buddhist monastic communities and shrines
- Water engineering systems
- Manufacturing sites

Urban layout

The cities were characterised by massive moated city walls with long curved brick gates, a central palace-citadel, and cluster of monastic, ritual and residential structures and an extensive internal of canals, integrated into the natural landscape. This layout is said to be 'extended' by which it is meant that the enclosed urban areas are not all densely built up but included fields, gardens, irrigation canals and water tanks as well as monuments, palaces, markets and dwellings. In other words it was a low density solution.

The three cities have slightly different forms, at Halin rectangular, at Beikthano square, and at Sri Ksetra almost round forms, probably related to topography. They vary enormously in size: walls of 9.2 kilometres at Halin, 12 kilometres at Beikthano, and 27 kilometres at Sri Ksetra.

It is suggested that the layout of the three cities was based on ideas of Royal cities coming from India related to Sudarsana, the heavenly city of Indra located on the peak of Mount Meru at the centre of the universe. In such a city the palace is at the centre surrounded by palaces of the lesser gods and all enclosed within fortified wall.

In the Pyu cities this ideal plan is said to be innovatively adapted by the introduction of massed urn burials and sometimes great stupas.

It is further suggested that the adoption and adaptation of this model – and its later transmission to other part of south East Asia – positioned the Pyu cities within the wider world. ICOMOS notes that the precise nature of this plan is not set out in detail in the nomination dossier, nor is its influence substantiated (see further discussion below).

The reuse of bricks for roads and railways has reduced the height of the outer city walls. At Beikthano, little stands above the ground; at Halin the walls have been eroded to almost ground level, while the walls at Sri Ksetra survive to considerable height in place reaching 4.5 meters in height.

In all three cities there are sizeable central palace-citadels, also with brick walls. At Sri Ksetra with a clearly marked enclosing inner moat signifying the sacred role of the palace-citadel at the centre of the cosmological universe.

This body of evidence from Halin, Beikthano, and Sri Ksetra confirms the sacred as well as practical significance of the Pyu gateways, both in the outer walls and the inner walls around the palace areas. They are seen as an important feature of the urban landscape developed by the Pyu.

Buddhist monastic communities and shrines

The Pyu adopted Buddhism as it spread into Southeast Asia while continuing to practice Hinduism. This is demonstrated by excavations at Sri Ksetra, where artefacts associated with Vishnu were uncovered and at Beikthano whose name means the “City of Vishnu”, the second god in the Hindu Triad.

Each of the cities had extensive monastic quarters. The earliest dated monastic structure is at Beikthano: a large multi-room building built of well-fired bricks with wooden doors and window frames. This building was destroyed by fire but remains of its brick walls still rise to around 2.5 metres in height.

At Halin within the buffer zone are ancient temples including the well-endowed Ngayanpade stupa with Pyu finger-marked bricks. There is also mention of the Shwegugyi (in the property) and Nyaungkobin monasteries in the buffer zone.

Sri Ksetra has its own variant of the Pyu funerary or community memorial hall found at Halin and Beikthano: the extensive stepped burial terraces – *Pyutaiks* – found outside the city walls on the southeast. Three stupas that characterize the mature phase of Buddhist architecture are found outside the city wall: the Bawbawgyi to the south, the Payagyi to the northwest, and the Payama to the north. The Bawbawgyi, is the tallest at 153 feet high and consists of a massive cylindrical column on a base of five concentric terraces.

ICOMOS notes that no specific details are provided of all the monasteries within the sites and their buffer zones.

Water engineering systems

In order to feed large urban populations within an arid area, the Pyu developed a complex system of irrigation and water storage using elevated weirs canals, dykes, sluice gates, moats and water tanks, in part adapted from earlier systems, to mediate in the seasonally expanding and contracting *in-gyi* and *inaing* (lakes and ponds), as well as changes in the volumes and forces of rivers, streams and seasonal watercourses to ensure a year-long water supply for agricultural and domestic purposes.

Halin had the simplest extant water management system of a single moat and adjacent seasonal lake (*in-gyi*), the Nagayon tank, and virtually no inner canals. At Beikthano, there are two large *in-gyi* within the walled area, and extensive water channels outside the walls, while at Sri Ksetra a large *in-gyi* is fed by streams descending from the upland Myinbahu and there are a number of pools and canals for water circulation. The system at Sri Ksetra reached its greatest extent from the 7th-9th century AD.

At Halin the large *in-gyi* is now drained, as the dam has been breached.

At Sri Ksetra, some of the water features are still intact, for instance the Shanlebyin (old Nanda Lake) and Yindaikkwin inside the walled area are still visibly surrounded by large earthen banks, and a number of canals still continue to support contemporary agricultural activities. However the original hydraulic system at Sri Ksetra has been modified by modern urban development between Payagyi stupa and the city wall on the northwest, the changing course of the Nawin Stream on north, and cultivation in relation to the large *in-gyi* or seasonal lake on east.

The best preserved remains are at Beikthano. Here in the west and south of the ancient city wall within the property are large seasonal ponds or *in-gyi* dated from Pyu times, while the buffer zone has the best preserved the ancient hydraulic system from which the Pyu cities arose.

The hydraulic system of the Pyu was never really abandoned and elements of it still continue today, to be used by local farmers who rely on water tanks constructed by the Pyu two thousand years ago, to assure year-around supply of water.

ICOMOS notes that no complete systematic survey of the water management system has been undertaken and no attempts made to date the various segments of the systems and there appears to be very little archaeological data. If the sites were indeed utilized for a millennium or more, a very complex pattern of development is likely to have formed, but of this possibility no mention is made.

Further details are needed to show the specific technical or spatial arrangements of water management within each of the cities and their buffer zones.

Manufacturing sites

Sectors of the Pyu population are said to have excelled in the manufacture of terracotta goods, iron, gold, silver and semi-precious stones, and also salt production.

There is mention of excavations that have revealed abundant manufacture of iron, and evidence of its use in architectural fittings associated with the city walls, gates and other structures, and also silver mines are mentioned in connection with Halin, and the coins for which the silver was used, as are sites for the manufacture of the bricks and iron fittings. ICOMOS notes that details are not provided as to where these are, nor how many sites have been identified and whether the evidence can still be understood as part of the layout of the cities.

It is said that upland areas where the Pyu sourced the mineral raw materials for their gold, silver, stone and iron industries are included in the buffer zones – but not which one.

At Halin salt production is still practised.

History and development

The Pyu Ancient Cities were not created all at one time they appear to have developed their extended urban format characterized by an extensive walled area in association with brick and timber constructions from around the 2nd century BCE to the 3rd century CE.

From the dates so far achieved from the excavated materials, this urbanised format had emerged at Halin by the 2nd to 3rd century CE, at Beikthano by between the 2nd century BCE to the 4th century, and at Sri Ksetra by the 1st to 3rd century CE.

It is unknown precisely when and how Sri Ksetra, a very prosperous city, declined. It is thought that the Pyu were gradually absorbed by the Burmans as Pagan grew in importance and that by the late 11th century Pagan had become the undisputed capital of a unified Burma including the formerly Pyu territories.

After the move of political power to Pagan in ca. 9th century CE, the Pyu Ancient Cities were not abandoned but continued to receive royal, elite, and popular patronage throughout successive historical phases up to the present.

They were 'discovered' in 1902 CE.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The three Pyu cities are compared with Historic Cities in South and Southeast Asia inscribed on the World Heritage List; with other Contemporary Early Historic cities in South and Southeast Asia, with select walled cities of Europe and North Africa, 2nd century CE and with select Early Historic, 1st Millennium CE.

These comparisons show that cities inscribed on the World Heritage List belong to the mature phase of city development in south-east Asia rather than the earlier period to which the three Pyu cities belong. This is also true for Pagan that is currently on the Myanmar Tentative list.

In terms of comparison with other contemporary sites such as Sisupalgarh in Orissa (6th/5th century BCE to 3rd century CE); Jaugada, also in Orissa (ca. 3rd century BCE to ca. 4th century CE); Dhanyakataka, royal city of the powerful Satavahanas on the Krishna River and containing the remains of the great Amaravati Stupa (2nd/1st century BCE to 2nd/3rd century CE); Nagarjunakonda, royal city of the Ikshvakus on the middle Krishna River (2nd/3rd to 4th/5th centuries CE); Nalanda, the great centre of Buddhist learning (originated ca. 5th/6th century CE and lasting into the 12th century); Pataliputra (early 5th century BCE to 12th century CE); and Anuradhapura, the first royal city of Sri Lanka (5th century BCE to 10th century CE), it is suggested that the

Pyu Ancient Cities possessed uniquely early chronological origins among the cities of Southeast Asia.

Further comparisons are made between the size and density of the Pyu cities with other contemporary cities in Europe and North Africa. Although this shows that Pyu cities were much less densely populated than most of the other considered, these comparisons do not help as they are considering cities from very different geo-cultural contexts.

In terms of extensive cities, of much more relevance is the comparison between the Pyu cities and cities in India and Sri Lanka from where religious ideas of ideal cities are acknowledged to have come.

These comparisons are less complete. The extended urban format is not seen to have been a feature of the early historic cities of South Asia, although allowances have to be made for destruction or blurring of the outlines of ancient urban areas in India. There are however seen to be two important exceptions: Pataliputra [Patna] and Anuradhapura. It is suggested that it was highly probable that influences radiated from Pataliputra in many directions (including to the Pyu) when it was the famous capital of the Emperor Asoka, but this cannot be sustained by archaeological evidence owing to the disturbed condition of the site. The case of Anuradhapura is different: this was a city of extended format although without city walls. Many other comparisons could have been made with palace forts in India which from an early date were extensive, enclosing vast areas within their walls.

Comparisons are also considered between the Pyu cities and later cities in south-east Asia. This underscores that the extended urban format did attain its distinctive and highly developed form in the three Pyu Ancient Cities from the 2nd century CE and then also developed in the 4th or 5th century further south towards Rakhine State, east towards Thailand, Laos, and Cambodia, and in the Khmer civilization by ca. the 8th and 9th century CE. Although the extended urban format was adopted by the Khmers, there is no evidence of a reciprocal influence from the distinguishing Khmer urban concepts (strict linearity, sharply defined square and rectangular moats, water tanks and walled spaces) passing back from them to western Southeast Asia beyond Thailand.

It is thus suggested that the three Pyu Ancient Cities played a pioneering role in Southeast Asia in urban design and morphology.

The initial comparative analysis was incomplete in not considering other Pyu cities and how the selection of three was made. The supplementary information provided by the State Party augments the analysis with local comparisons. 8th century Chinese records identify 18 Pyu states throughout the Irrawaddy valley, while written epigraphic materials, written records and local chronicles mention the existence of up to ten walled Pyu cities. However, archaeological investigation has only

uncovered six principal walled cities so far in upper Myanmar. Of these, the cities of Tagaung, Wadi and Pinle (Maingmaw), all occupy a seminal place in national chronicles and are linked to Beikthano and Sri Ksetra. However they lack documented evidence of the key physical attributes of the Pyu culture and in some cases the evidence has been compromised. The three nominated sites are said to be the most thoroughly excavated, best dated and contain the greatest number of intact extant remains.

As for why all three sites are necessary to reflect Pyu culture, the rationale put forward rests partly on the argument that they developed sequentially and represent different stages in the development of Pyu urbanism. This argument is only partly justified by the historical and archaeological sources. There was considerable overlap between the three sites, and they continued to be occupied during the ensuing Pagan period.

The argument for proposing Sri Ksetra is conclusive. The justification for Beikthano is reasonably strong, whereas the inclusion of Halin is less so. Halin is an important site, but little research has been done there compared to the other two properties, and little of that research has been published. The main justification for including all three sites in the same nomination is that they represent three different phases of Pyu cultural, religious, artistic, and architectural evolution. This has become the dominant thesis, but the lack of specific archaeological research and publication makes it difficult to verify this narrative.

The serial approach is also justified by the claim that the three sites jointly played a role in introducing Buddhism and associated socio-economic changes to the region. Whether they were centres for the expansion of Pali Buddhism to the rest of mainland Southeast Asia however requires further historical validation.

Although more sites linked to Pyu culture are known, and more will no doubt be discovered in the future, it is probable that the three cities included in this nomination are the largest and most elaborate sites of the now-extinct Pyu civilization.

As a series, the justification for including all three remains weak. Halin appears to add very little that is not displayed by the other two sites.

ICOMOS considers that the comparative analysis justifies consideration of the representation of Pyu cities on the World Heritage List but has not provided a strong rationale for the inclusion of all three cities in terms of how they each contribute to the overall series.

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 Pyu Cities:

- Provide exceptional testimony to the introduction of Buddhism into southeast Asia two thousand years ago;
- Were the first, largest and longest-lived urban settlements in the region up to the 9th century;
- As Buddhist city states, played a seminal role in the process of transmitting the architectural and literary traditions of Pali-based Buddhism to other societies in the sub-region;
- Provide exceptional evidence of the early, mature and late stages of the Pyu civilisation, characterised by literacy, monastic communities, water management, agricultural productivity;
- Invented a form of urbanisation known as the city of extended format which influenced urbanisation within most of mainland south-east Asia.

ICOMOS considers that the three cities certainly provide a testimony to the overall Pyu state.

In terms of the influence that these cities had, this is said to relate to their extended urban form and to the transmission of the urban and literary traditions associated with Pali-based Buddhism.

First this urban form is not precisely described other than the idea of city walls enclosing a large area within which were settlements, a monumental palace compound, as well as fields and water storage.

Secondly not all scholars would agree that this 'extended city' is a phenomenon which was consciously invented at one place and time, and then transmitted as a single unified entity or concept to other parts of the region.

ICOMOS considers that it cannot be more than surmised that an extended city settlement pattern found in mainland Southeast Asia first appeared in the three nominated sites before it developed elsewhere, most notably at Angkor. This type of city arose in different places and different times as the result of differing sets of socioeconomic, institutional, and population factors, environmental conditions, technological inventions, plant and animal domestication and crucially the ability to manage water. These necessary and sufficient conditions for this extended form of city perhaps first appeared in the Pyu sites in this part of the world. It is however impossible to prove that the later development of similar cities such as Angkor were due to influence from the Pyu sites. Angkor could have arisen independently when similar conditions arose.

The early development of these cities does not logically mean that they were influential elsewhere. But the fact that these preconditions for a particular form of urban life emerged first in the Pyu lands are indicators of the early emergence of complex societies in the Pyu realm. These Pyu sites can be said to represent the transition from late Iron Age to early historic period culture.

The prosperity of these city states, based on technologies of water management and the extraction of resources spurred their development and prosperity – and this went hand in hand with the developing influence of Buddhist monasteries and their literary traditions.

The text suggests that the Pyu established trading networks with commercial centres in Southeast Asia, China, and India. This is no doubt true of Southeast Asia and India, but links with China at this period are not well attested outside of the diplomatic sphere. This does not negate the overall importance of the Pyu relations with the neighbouring parts of Asia, but the evidence for this proposition is least strong for Halin, and only somewhat stronger for Beikthano.

Integrity and authenticity

Integrity

Beikthano

The entire walled city Beikthano is within property boundaries. The boundary also incorporates not only the walled city but an extended area outside the city walls including the village of Innywagyi (an active village of around 100 families) and the Shweyaungdaw stupa and associated active monastery, and the remains of the irrigated landscape. Mention is also made of ancient urn burials within the boundary.

The Taungdwin-Magwe railway line crosses the property on the north.

Sri Ksetra

The entire walled city of Sri Ksetra is included within the property boundaries and much of its rural setting. The area has been subject to decades of archaeological research and documentation and in recent years a comprehensive inventory of archaeological sites and features has been established. However as with all archaeological sites it is not possible to say that some as yet undiscovered related elements will not occur outside the property boundary and indeed some remains are in the buffer zones.

Halin

The entire walled city of Halin is included within the property boundaries and the boundary encompasses an extended area outside the city walls but avoiding the existing village at Halin. Further archaeological sites are in the buffer zone.

In general at all three sites, the archaeological remains have suffered adverse effects and neglect through time. During the British occupation, roads and railway impacted on the remains. In the past the Public Works Department carried out some repairs using modern materials (although in many cases they have clearly marked and dated these at the time so the intervention is clear). In a number of places, concrete and new brick work was introduced to cap the archaeological remains. These are often obvious and in some cases (although

not all), such as Parama Stupa, these interventions are dated to provide transparency. Now, as a result of training from Italian conservators, less intrusive material stabilisation options have been developed.

In general terms, ICOMOS considers that the one area where integrity is weak is in terms of the hydraulic system. This is acknowledged to be of key importance as the Pyu system was never entirely abandoned and is still in parts used today by farmers. The best preserved system (that has not been impacted by various types of development) is said to be that in the buffer zone at city Beikthano. There would seem to be a strong case for including this in the nominated area. Much clearer documentation is needed of these important facets of the landscape.

The visual integrity of the property is strong. The stakeholders ensure that this also applies to the way tall crops such as sugar cane, rather than traditional crops could impact on views across the 3 sites.

Authenticity

On the ground, the form and design of Beikthano and Sri Ksetra is clearly evident. The city walls remains as an archaeological feature around the entire cities and archaeological features such as the palace citadel complexes and the city gates and other building provide evidence that allow the form and design of the city to be read. ICOMOS notes that this evidence is however not clearly documented in terms of detailed plans of the individual cities.

Beikthano and Sri Ksetra have been subjected to major reconstruction work during the past 20 years. The statement of authenticity contained in the nomination dossier does not acknowledge the reservations that have been expressed about the extent and nature of these reconstructions.

Under criterion (iv) is the assertion that “The three Pyu Ancient Cities are largely archaeologically intact, as seen in the standing monuments, the *in-situ* structural remains, the little-disturbed unexcavated remains and the still-functioning agrarian terrain”; this should be qualified. There is evidence of over-restoration of some structures, and of previous disturbance from illicit digging.

The only remaining intact structures are the Buddhist structures. The stupas are the focus of the monasteries and of the pilgrims that visit the site and thus the spirit and meaning of these places are sustained. Nevertheless the ongoing repair and maintenance of these structures needs to be subject to oversight.

The continued use of tradition agricultural practices has helped to preserve the evidence of the hydraulic irrigation systems.

However as set out above the key relationship between the Pyu cities and their irrigated landscapes can be best understood at Beikthano – although the best preserved parts are in the buffer zone.

ICOMOS considers that the conditions of integrity and authenticity have not yet been fully met. Attention needs to be given to reversing some of the strong conservation interventions; and to including the best preserved water management systems within the boundaries.

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 development of Pyu Buddhist urban culture had widespread and enduring impact throughout Southeast Asia, providing stimulus for a suite of inter-related developments in architecture, technology, monumental arts, town planning, and landscape engineering. The transformations of the Pyu cities established a prototype for later state formation following the onward transmission of Buddhist teaching and monastic practice into other parts of mainland Southeast Asia.

ICOMOS considers that this justification cannot on the basis of current evidence be fully justified in terms of cause and effect as there is no direct evidence of influence spreading from the Southeast India and Sri Lanka or of the direct influence the Pyu cities had elsewhere in terms of urban form and related Buddhist practice.

Although it is not clear who the Pyu people were – whether they reflect the fusion of immigrant from China with the local population –, nonetheless, the Pyu cities do reflect the way groups of small settlements at a certain time developed into large fortified towns that had sufficient size and organisational structure to allow for complex water management to sustain comparatively large populations.

Whether Buddhism caused socio-political transformations in Myanmar at this time, as the nomination dossier asserts, is open to debate; the socio-economic sphere may have changed first, due to autochthonous factors, thereby making it possible and advantageous to adopt Buddhist values and ideology. Buddhist societies developed in other parts of south-east Asia in the first millennium CE.

Nevertheless the association of Buddhism with early historical development of these urban sites is clear.

ICOMOS considers that these arguments are more relevant for criterion (iii) than for (ii) which would need a clearer justification for the way the cities reflect specific influence and in turn influence other places.

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 suggested in the nomination dossier. Nevertheless, ICOMOS considers that it could be justified on the basis that the three nominated Pyu Cities are the oldest extensive collections of brick architecture in Southeast Asia. One of the main hallmarks of this architecture is the introduction of the true arch, something which was rare in other parts of Asia during the 1st millennium CE, but not strongly argued in the documentation.

Pyu civilization had been absorbed into or merged with the Pagan culture by the 13th century, where upon it ceased to be a distinct living culture, but it is believed that many of its traits were adopted and further developed by the Myanmar people who built Pagan.

Literate Buddhist monastic communities arose in the first half of the 1st millennium CE in several parts of Southeast Asia, but the Pyu were the most highly developed of such communities. Technological and economic evolution was also reflected in the archaeological remains of this civilization. Although more sites linked to Pyu culture are known, and more will no doubt be discovered in the future, it is probable that the three cities included in this nomination are the largest and most elaborate sites of the now-extinct Pyu civilization.

In order to justify including all three, a clearer understanding is needed of how each contributes to the series.

ICOMOS considers that this criterion has the capacity to be justified on the basis of a clearer understanding as to how each site contributes to the series.

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 technological innovations in resource management, agriculture and manufacturing of brick and iron at the Pyu Ancient Cities created the preconditions leading to significant advances in urban planning and building construction. Furthermore, the completeness and reliability of dated archaeological sequences from the site, with radiocarbon dates derived from intact architectural features dating back to 190 BCE, provide

scientific proof of the entire one-thousand year period of occupation of the cities. As a serial property, the three cities together provide sufficient material evidence of the complete development trajectory of the Pyu culture.

ICOMOS considers that the three Pyu cities can be seen as an outstanding urban ensemble that reflects a fusion of religious ideas and technological developments that facilitated innovative response to urban planning. These cities do however need to be considered in relation to the irrigated landscape that was crucial to their support.

In terms of how these might be seen to reflect a specific period in history, ICOMOS considers that the urbanisation of the Ayeyarwady River basin, manifests the power and influence of the Pyu Kingdoms that flourished for over a 1,000 years between 200 BCE and 900 CE.

ICOMOS considers that in order to fully justify this criterion more specific details would be needed on the detailed attributes related to planning and landscape engineering which are only currently described in general terms.

ICOMOS considers that this criterion has the capacity to be justified with more details of specific attributes and how each site contributes to the series.

ICOMOS considers that the serial approach has been justified but that the choice of the site components has not been fully demonstrated.

ICOMOS considers that the condition of authenticity and integrity, and the criteria have not been fully demonstrated at this stage.

4 Factors affecting the property

There is an urgent need to stabilise and conserve the burial urns in the Burial Halls. These fragile relics are deteriorating and they provided crucial evidence for the development of what are seen as unique mortuary practices.

Currently there is a lack of regular monitoring of the archaeological remains and thus the rate of decay is not known. Such monitoring needs to be introduced.

Buddhist Monasteries and stupas undergo constant protection and continuous maintenance by monks and community members. There is public & Sangha demand to more fully renovate the stupas – and this has already had some impact. As the State does not have direct control over the Monks' activities and they have a level of autonomy through their own body the *sangha*, there is a need to include trustees of the *sangha* in regional stakeholder groups in order to try and put in place a collaborative and agreed approach.

Local people make use of bricks apparently lying around at Sri Ksetra and Beikthano. This issue needs to be addressed through awareness raising campaigns.

Some parts of the property have already been impacted by a severe loss of irrigation features and damage to archaeological sites as a result of deeper ploughing techniques. There is a need to codify less invasive techniques within the sites and for sensitive areas of the buffer zones. Statutory controls for this are being drafted.

In relation to urban development, there is already a moratorium in place to halt further expansion of Khittaya New Town. However there is still moderate to high pressure from the city of Pyay. ICOMOS considers that planning controls are needed to prevent expansion inside the property.

The relationship between the remains of the cities and their irrigated hinterland is important. It is therefore appropriate that the extensive property and buffer zones boundaries encompass remains of water management arrangements. These large areas, and some of the nominated areas contain living settlements whose inhabitants farm the irrigated land. Currently the villages do not appear to present major threats apart from where they impinge on important archaeological areas.

Both the property and the buffer zones are subject to development controls. Nevertheless ICOMOS considers that it would be appropriate for broader guidelines to be introduced that might consider how villages might be developed systematically and sustainably in the future to provide enhanced facilities, and improved infrastructure.

The property does not appear to be prepared for large increases in tourist numbers. Currently tourists mainly visit Sri Ksetra; Halin currently experiences little or no tourism.

Within the Management plan the only relevant objective to tourism relates to the quality of interpretation. There is thus no active consideration of the potential impacts of tourists, no monitoring of visitor numbers and no understanding of the carrying capacity of the sites. A tourism plan/strategy needs to be developed that encompasses research into current visitor number, the carrying capacity of the site, appropriate means to manage visitors (including transport over dusty roads) and in particular ways to limit numbers of visitors in certain sensitive parts of the property, perhaps through considering guided tours.

Such a strategy also needs to consider ways of monitoring current and future impacts of visitors as well as how local people might benefit from tourists.

Although the coordinating body has agreed that only the monasteries now in the property will remain, and thus no new ones will be allowed, redevelopment of monasteries could become a potential threat.

The monasteries are within the property boundaries. Some are small comprising just one building. The buildings are not historic but mostly built using traditional materials. If in the future, the sites become opened up to more visitors, and especially to more pilgrims, there could be pressure for visitor reception facilities and more substantial buildings. The nomination dossier states that 'Local donations continued the unbroken historical tradition with the repair of old buildings and the construction of new buildings at the active Buddhist monasteries at all three ancient city sites.'

Before the potential threats become real threats, there needs to be an understanding of any limits on future development of these highly important elements of the sites, particularly in the light of the comparative independence of the *sangha*.

Although highly localised and small scale, ICOMOS considers that quarrying and mining need to be prohibited in the sites and their buffer zones. It is understood one quarry has been already closed.

The nomination dossier mentions a road, a railway line, an (unused) airfield, and more recently a gas pipeline, and high-wire electricity pylons, across the site of Sri Ksetra ancient city. There is a need to codify how infrastructural improvements will respect buried archaeology and the integrity of the archaeological remains.

As regards risk preparedness, this is not yet in place in relation to potential threats from flooding, which is a high risk, and fire and earthquakes for which the risk could be said to be moderate.

ICOMOS considers that a disaster risk management plan needs to be prepared.

ICOMOS considers that the main threats to the property are likely to be development pressures in the villages and the negative impacts of tourism if it increases rapidly and is unregulated.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of each site encompass the entire brick walled city as well as peri-urban features such as mounds, monuments and landscape alterations. The boundaries are based on existing legal preservation demarcations.

Each buffer zone follows natural features such as mountains and streams, as well as local administrative boundaries.

The demarcation of the buffer zone at each site is the updated demarcation of the Protected and Preserved Zone under the same law.

The boundaries at each site are marked with physical markers that denote the site boundary and the buffer zone boundary.

The rationale for the boundaries in relation to the water systems needs to be clarified as currently some of the best surviving systems appear to be in the buffer zone.

ICOMOS considers that although the boundaries of the nominated property and of its buffer zones are adequate in relation to the walled cities, they need to be modified in Beikthano to include the best preserved remains of the hydraulic systems within the boundaries.

Ownership

Within the nominated property 32% of the land is publicly-owned; while 68% of the land is privately-owned. The publically owned land includes excavated and unexcavated areas of archaeological exploration, the standing monuments and other historic structures, and the service buildings constructed for the protection, management, maintenance, and interpretation of the property, such as the site office, site museums, and artefact stores.

Protection

The property is protected under the Law on the Protection and Preservation of Cultural Heritage Region, 1998 (as amended) as an Ancient Site Zone.

The buffer zones at each city are also protected as a Protected and Preserved Zone under the same law.

There are also nationally promulgated regulations Rules and Regulation of the Cultural Heritage Region Law (2011) applicable to the protection of the three Pyu Ancient Cities sites. These regulations prohibit certain activities.

In the buffer zones, there are planning controls in place with all development requiring approval of the Director General of the Department of Archaeology Museums and Library (DAML).

ICOMOS considers that what remains unclear is the degree of control over the development of villages both within the property and within the buffer zone, as the property and the buffer zone are protected under the same law.

One village Pyay pressed to be outside of the property presumably for reasons connected to degrees of control.

Currently the villages both in the property and in the buffer zones are attractive place with traditional houses. In due course, particularly if they benefit from tourism, this situation could change and change rapidly.

ICOMOS considers that more details are needed as to how the process of transformation will be planned and handled. Some other planning mechanisms would appear to be needed that are based on anticipating the need for improved facilities and infrastructure and can address how incremental change will be managed.

ICOMOS considers that the legal protection in place is adequate but more details are needed as to its implementation.

Conservation

The both Sri Ksetra and Beikthano have been inventoried. A record of excavations is maintained by the Department of Archaeology Museums and Library.

The inventories are now being integrated with a GIS system that has just been developed. GIS mapping for has been undertaken in 2013 and now exists to such a fine grained level that every rice paddy and property boundary is mapped.

However ICOMOS notes that the maps provided with the nomination dossier and as supplementary information are not detailed enough to understand fully the contents of the nominated sites and their buffer zones. They do not allow a full understanding of the disposition of the many monuments (105 monumental structures inside the walls of Sri Ksetra and 172 outside the walls), the location of villages or the water management arrangements and how these all relate to each other.

There have been long-term conservation efforts at Sri Ksetra and Beikthano over many decades. This has however been patchy. As in many archaeological sites, there was a separation between those undertaking the excavations and those responsible for conservation.

In the 1950s, 1960s and 1970s conservation work was carried out in a less than ideal way at various places across the property. The method of consolidation involved a capping brick layer on cement mortar.

As part of the preparation for World Heritage nomination, DAML have sought and received advice from conservators in Italy and the Italian government has pledged further support. They have also had some advice from The Getty.

ICOMOS considers that some additional external funding assistance will be needed to achieve further capacity building and specialised training. The supplementary information provided by the State Party refers to a training programme being developed by the local UNESCO office to address this need.

With the recent training that Myanmar conservators have received, they are undertaking some work on previously un-conserved areas. They may turn their attention in the future to previously restored areas but this is not seen as a priority unless the old intervention is causing problems.

Some of the brick work on the city wall around Sri Ksetra is collapsing and needs stabilisation. Other parts of the wall are well conserved.

Of greatest concern is the excavated burial hall in which pots with cremated bones are exposed to view. The pots are very fragile and many are broken with the contents of the pots winnowing away. The site is roofed and barriers are up to prevent people from stepping onto the surface but this arrangement does not appear to be entirely satisfactory in preventing access.

No details are provided on the conservation of the hydraulic features.

ICOMOS considers that the conservation of certain aspects of the property is of concern and need urgent attention. The conservation of the hydraulic features is unknown.

Management

Management structures and processes,
Including traditional management processes

A structure has been established which sets up at a National level Myanmar National Cultural Central Committee and a Myanmar National Committee for World Heritage. These are headed by the Union Minister for the Ministry of Culture and provide oversight across individual site management.

Specific to the Pyu Ancient Cities is the PYUCOMM i.e. the Pyu Ancient Cities Co-ordinating Committee. This comprises 3 site specific working groups one for each site and these meet regionally to ensure maximum participation. These report to the Director General of DAML and he in turn reports to the Myanmar National Cultural Central Committee and the Ministry of Culture. The PYUCOMM is central to the property management framework and is a key element of the Property Management Plan helping to ensure that local traditional systems are acknowledged and incorporated in to the day to day management. It is the PYUCOMM that provides the mandate for the site managers to manage the property. All development within the Property boundary has to be discussed by the PYUCOMM and must ultimately be approved of by the Director General. The traditional authority of the village headmen and the *sangha* (the body of monks) is maintained through their voice on the regional group of the PYUCOMM. The PYUCOMM brings together the multiple stakeholders: regional authorities, local government, village representatives, and the *sangha*.

In practice, given the distance between the three sites, the PYUCOMM operates regional stakeholder groups in each of the sites so that meetings are held locally.

Staffing levels appear adequate. Currently funds are limited to maintaining a DAML presence on site. There will be a need for extra funding to access international

conservators to assist with training, and to prepare visitor management and risk preparedness plans and to implement any necessary actions.

In the supplementary information provided, the State Party reports that financial support from the national budget has increased substantially since the nomination was submitted, as has the amount of international assistance received (and pledged). In addition, supplementary sources of financing have become available, most notably through the establishment of an autonomous foundation, the Pyu Ancient Cities Heritage Trust.

As well as the security guards at each site (10 at Halin, 10 at Beikthano, and 14 at Sri Ksetra) at Beikthano a small cultural zone security force has been established to patrol parts of the site remote from the museum and office. This provides an employment opportunity for the local Innywagyi Village.

Traditional management has two strands: the village communities who farmed the land in and around the sites and their buffer zones and the monastic communities.

The village communities do have representatives on the Coordinating Committee and appear to be supportive of the nomination dossier.

The State does not have direct control over the Monks rather they have a level of autonomy through their own body the *sangha*. In the past there have been tensions between DAML managing the sites as 'archaeological property' and the way in which the monks and Buddhist community would like to manage them as places of active veneration and pilgrimage, with constant renewal of some fabric. An example is the replacement every five to ten years of the top 'umbrella' of the stupas as the gilt fades and rusts off. It is the Board of Trustees for the stupa that makes many of the management decisions. Currently the site managers DAML appear to have very good relationships with the various Boards of Trustees, with the individual Monks and with the *sangha*.

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

A Property Management Plan (PMP) has been endorsed by the PYUCOMM which includes all of the relevant local and regional authorities such as the Department for Land use Planning etc. The PMP has been approved and adopted by the Director General DAML.

The PMP has also been approved and endorsed by the Ministry of Culture on the 18 January 2013.

The PMP respects the autonomy of the various local stakeholders while at the same time putting in place a supportive and protective framework. ICOMOS considers that the PMP does however need to be strengthened in some areas such as risk preparedness,

visitor management and capacity building for conservation. It also needs to be strengthened through the production of key priorities and actions plans. Perhaps most fundamentally it needs to be underpinned by a much clearer documentation of the attributes of the Outstanding Universal Value that is proposed.

There is currently no interpretation plan that has been prepared for the property. The National Museum staff has been involved in the redesign of the site museums. There are also a considerable number of new interpretation boards at the entrance gates to all three sites.

In Property Management Plan, there is an Action Plan to improve the Overall interpretation and presentation strategy of the Pyu Ancient Cities.

A small number of foreign tourists visit mainly Sri Ksetra. Myanmar itself is experiencing a sudden upswing in visitors now that it is relatively easier to travel there. ICOMOS notes that currently the property does not appear to be prepared for a sudden increase in visitors.

There is no visitor management plan – and as set out above, nor a specific management objective or action related to this issue. There are thus no tools to monitor visitors or consider the best ways to control and manage them on site. Nor are the sites set out in a way that allows visitors to stay within certain areas, in order to protect the property.

There would appear to be an urgent need for a visitor management plan/strategy based on expert advice on areas such as carrying capacity, visitor access routes, monitoring and management of visitor numbers.

Until a more effective visitor management arrangement is in place, guided tours would appear to be the safest option.

Involvement of the local communities

Local communities have been involved in the nomination and are involved in the Coordinating committee. Much work has been done to harness such consensus in the nomination process.

Consultation with communities has apparently led to certain concessions. These include putting Halin village and parts of Pyay in the buffer zone rather than in the property, and respecting the authority of the Board of Trustees for the stupas.

The management system still remains to be tested but the structures in place do not appear to be robust enough to deal with potential rapid changes in for instance visitor numbers, or the increasing demands for improved houses and other local infrastructure, or in terms of changing agricultural techniques, all of which are acknowledged in the nomination dossier.

ICOMOS considers that the management system for the property needs strengthening through the development of detailed visitor management, development and planning strategies.

6 Monitoring

Monitoring indicators have been defined related to evidence for various threats to the property. These need to be augmented to include more conservation indicators to monitor the lack of change and the impact of visitors.

ICOMOS considers that the monitoring indicators could be strengthened.

7 Conclusions

The remains of the three Pyu cities appear to be remarkable survivals of an early urbanisation process and one that can still be seen in relation to their irrigated landscapes that underpinned their prosperity. Much more detail is needed though in order to allow a full formulation of their significance and value.

Considerable archaeological research has been undertaken at the sites and this has allowed an understanding of certain aspects of the form of the cities and the period during which they flourished as well as details of mercantile practise and burial and religious practices. With its monumental remains, Sri Ksetra demonstrates the final flourishing of the Pyu cities; Beikthano contributes an understanding of early Buddhist structures and still surviving water management; it is less clear how Halin adds a new dimension to the series. Although the archaeology has been studied and inventoried, there is a lack of detail on the precise manifestations of the urban planning that is considered to have been influential and on the overall relationship between the various elements revealed. There is also insufficient documentation on the manufacturing sites that underpinned trade and the prosperity of the communities.

These large archaeological sites sit within a thriving agricultural landscape, scattered with villages that rely to an extent on the Pyu hydraulic systems and are brought to life by the monastic communities clustered around the still standing Buddhist stupas. Little detailed documentation has been provided on these aspects.

For the hydraulic system, although sketch maps have been prepared, it remains unclear quite how it functioned and what and where the best preserved remains are. The scope and extent of the monasteries and the location of villages is not made clear.

There is thus a need for much clearer documentation on each of the sites in the property in order to allow a clearer understanding of the overall attributes of each of

the three sites and how they interrelate with each other, and on how each of the three cities contributes to the series.

Overall this is an extremely fragile landscape in terms of the large areas of exposed and buried archaeological remains, and the extensive water bodies and water courses (some relict and some still used) that make up the irrigation system.

Both the archaeological remains, and in particular the burial sites, and the water courses need conservation, some urgently, and management. Although there has been some capacity building in the conservation of brickwork, there is a need for further training and for further conservation advice. For the hydraulic system, the situation is unclear.

Overlaying these highly important structures within the landscape are the thriving agricultural villages and small monasteries. The nomination dossier provides few details of these and their location and size is unclear, but it appears that both contain interesting examples of local vernacular architecture.

Although the local communities are supportive of the nomination and look forward to benefiting from tourism, there appears to be very little readiness to cope with the potential impacts of increased visitor numbers. There is an urgent need to put in place strategies to address these issues and to ensure that benefits from tourism reach local communities.

ICOMOS considers that if the three sites are to justify Outstanding Universal Value then clarity on the scope and extent of the attributes of potential Outstanding Universal Value is needed. There is also a need to put in place much more proactive strategies to prepare for an increase in visitors, to prepare for ways to improve the living standards of local villages, and to manage increased numbers of pilgrims.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Pyu Ancient Cities, The Republic of the Union of Myanmar, to the World Heritage List be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Provide documentation to clarify the scope and extent of the attributes of potential Outstanding Universal Value of the three cities in relation to:
 - The urban planning and the overall relationship of the various elements revealed;
 - Details of the Pyu hydraulic system, what survives, what is still in use, and what needs

conserving and how the best preserved parts might be included within the property boundaries;

- Sites of industrial production;
- Locations and details of monasteries;
- Locations of villages in the sites and buffer zones and details of those within the boundaries;
- Provide a deeper justification for the inclusion of all three cities in terms of how they each contribute to the overall series;
- Provide maps of the nominated sites (to a larger scale than those already provided) that set out the attributes of the potential Outstanding Universal Value of the property and their relationship to each other;
- Augment the Management plan through the development of a risk preparedness strategy, a tourism management strategy/plan to prepare for an increase in visitors, and the addition of key priorities and an action plan that addresses ways to improve the living standards of local villages, and to manage an increased numbers of pilgrims;
- Develop as soon as possible a conservation plan for the burial sites, allied to capacity building in the conservation of these particularly fragile and vulnerable sites.

ICOMOS remains at the disposal of the State Party in the framework of upstream processes to advise them on the above recommendations.

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



Maps showing the location and the boundaries of the nominated properties



Sri Ksetra - Bawbawgyi stupa



Halin - city wall



Beikthano - rice paddy



Beikthano - stupa structure excavation

Namhansanseong (Republic of Korea) No 1439

Official name as proposed by the State Party

Namhansanseong

Location

Gyeonggi-do Province
Towns of Gwangju-si, Seongnam-si and Hanam-si
Republic of Korea

Brief description

Namhansanseong was designed as an emergency capital for the Joseon dynasty (1392-1910), in a mountainous site 25 km south-east of Seoul. Its earliest remains date from the 7th century, but it was rebuilt several times, notably in the early 17th century in anticipation of an attack from the Sino-Manchu Qing dynasty. Built and defended by Buddhist soldier-monks, it embodies a synthesis of the defensive military engineering concepts of the period, based on Chinese and Japanese influences, and changes in the art of fortification following the introduction from the West of weapons using gunpowder. A city that has always been inhabited, and which was the provincial capital over a long period, it contains in its fortifications evidence of a variety of military, civil and religious buildings. It has become a symbol of Korean sovereignty.

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 two *sites*.

1 Basic data

Included in the Tentative List

11 January 2010

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

25 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Fortifications and Military Heritage and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 1 to 6 September 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party dated 26 September 2013 to ask for more details about:

- the property management system and the respective roles of each of the partners;
- who coordinates activities and expertise;
- who is responsible for monitoring the property.

ICOMOS sent a second letter on 12 December 2013, asking the State Party to:

- strengthen the buffer zone protection measures;
- confirm the setting up of the property management organisation's intervention unit, and the means at its disposal.

The State Party responded by sending additional documentation on 16 November 2013 and on 27 February 2014, which has been taken into account in this evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Namhansanseong is located on a hilly plateau, at an altitude of between 400 and 500 metres. The natural site is sloping, steeply in parts, and is located in an environment of mountain summits. It offered clear defensive advantages, and also substantial natural water resources. The fortress city was designed in its present form by the Joseon dynasty, in the early 17th century, as an emergency capital for Seoul, located 25 km to the north-west in the lowlands. It could accommodate a population of some 4,000 people, and fulfilled important administrative and military functions. It was the regional capital of the Gwangju district from 1624 to 1917.

Its town planning reflects Chinese Confucian influences; it reproduces the city plan of Seoul in order to accommodate the administration and the population in similar conditions if they were forced to move in the event of war. The two grand axes of communication form a cross, and they meet at the principal gates at the four cardinal points. They cross in front of the refuge palace, which has recently been reconstructed. The fortified town has quarters specifically dedicated to military, administrative, religious, residential and commercial functions.

The property as nominated consists of two parts of greatly differing size. The main part is delineated by the system of

fortifications, and it has an annular shape around the small present-day urban centre, which forms an internal buffer zone. The second part of the property is smaller, and consists of an advanced defensive outpost, about 1.5 km south of the main property.

Part 1

The defensive system consists mainly of a continuous fortification wall with a perimeter of just over 7.5 km, together with supplementary orthogonal walls. Namhansanseong was a prototype for fortified sites in Korea and Eastern Asia. Its construction began in 1624 and it was enclosed by outer walls leading to the three closest mountain summits, where defensive outposts were established: Bongam (1686) Hanbong (1693) and Sinnam (1719). The total length of the fortification walls is some 12.3 km and their height varies between 3 and 7 metres. The main rampart follows the edges of the plateau wherever possible. It is built of dressed stones of roughly rectangular shape whose dimensions decrease in proportion to the height of the wall. The rampart is topped with a wide wall-walk. On its flanks, the fortification wall has some thirty openings for the drainage of water from the plateau.

This defensive system was renewed and reinforced on a number of occasions up until the 19th century. The crenellations and parapets, and some defensive features were reconstructed in the second half of the 20th century. They are made of grey bricks, held together with mortar. With crenellations and shooting embrasures for closet or long-range, the walls were capable of accommodating fortress artillery. The rampart has 5 defensive posts, 20 casemates and 7 bastions.

The four main gates, at the four cardinal points, have arched stone vaults. Openings in the main wall, they are topped by a parapet and a roof supported by columns; they are flanked by defensive elements to enable close-range shooting. They are supplemented by 16 auxiliary openings, many of which are hidden, at various points in the main rampart. The eastern gate was partly destroyed in 1925.

Ten Buddhist military temples were constructed by the soldier-monks who were the builders and then the defenders of Namhansanseong. The temples, most of which are sited close to the ramparts, were used as officers' quarters and weapon stores. There are five temples in the north and five in the south. The soldiers' living quarters (*Gunpoji*), were usually situated on high parts of the land inside the fortress, but they have disappeared, except for some archaeological remains. Several temples have been restored; some bear witness to syncretism between Buddhist traditions and shamanic deities.

Five military command posts (Jungdae) were located on the periphery of the citadel. The western command post, *Sueojangdae*, is the one whose stone foundations have been best preserved. *Yeonmugwan* was the central

military command pavilion, and a training ground for the soldier-monks. It was thoroughly repaired three times, and was converted into the centre for the civil government in the 19th century. Archaeological excavations have uncovered remains dating back to the Goryeo dynasty.

The property also includes elements related to the property's role as the emergency capital of the Joseon dynasty, primarily the *Emergency Palace* or *Namhansanseong Palace*. It was built in 1626 and is a replica of the palace in Seoul. In addition to the spaces reserved for the royal family and its staff (upper palace), the palace ensemble included a space for the administration of the kingdom (lower palace), an ancestral shrine adjoining a shrine of peace, a ceremonial gateway (*Hannamnu*), a large entrance gate with outbuildings, and an independent hall (*Jaedeokdang*). Completely destroyed in the early 20th century, the site of the royal palace and its shrines was excavated (1999), and then reconstructed (2004).

The property includes other built elements whose origins date from the Joseon dynasty, such as the *Inhwagwan Royal Guesthouse*. *Sungryeoljeon Shrine* was an ancestor shrine that later became the mausoleum of King Onjo. A major ritual ceremony was regularly held there. Restored in the late 1990s, it includes annexes including a gate and a reception hall.

The site of the Shrine for the Deities of Earth and Grain, the religious sites for the village deities, and the platform for the ritual for Rain embody traditions inspired by Shamanism that are specific to Korean society. The *Hyeonjeolsa* commemorative shrine is also located in the fortified town; it has been restored. Several of the shrines of Namhansanseong are today used for a variety of rituals and events.

The elements bearing witness to the local government of the citadel include the governor's office (1817), the administrative site (1748), whose *Ijjanggak* edifice has been restored, and the *Jonggak* belfry and its bell, which has also been restored. The *Naea* housing quarter remains only as traces on the ground.

18 reception and leisure pavilions existed in the fortified city, of which 6 still remain, along with technical buildings such as the *Yeonggo* warehouse, connected to the royal palace, for which only the site remains. The *Jisudang* pavilion, today restored, is at the centre of the *Yeonji* pond, the main aquifer resource in times of war.

Lastly, the property includes a series of epigraphic steles, mainly commemorating the construction of the rampart, or related to human and social virtues, or linked to initiatives for the reconstruction or preservation of the property.

Monuments and sites forming characteristic tangible attributes of the value of the property are located in a forest park containing a large number of ancient pine trees, which have become one of the symbols of Namhansanseong.

Part 2

The summit of Geomdansan is separated from the main property by a small valley; today it includes the remains of the two Sinnam advanced defensive posts, which attest to the 1791 reconstruction. They consist of a circular defensive wall to the east (134 metres) and a second wall to the west (121 metres long).

History and development

The mountain plateau of Namhansanseong, near to fertile lowlands, rapidly caught the attention of successive Korean dynasties. The first archaeological traces of its occupation date from the 4th century BC, attesting to the existence of dwellings and a defensive wooden wall. Other elements show that the area was occupied during the Baekje kingdom period (c. 18 BC to around 660 AD).

In the 7th century, a large fortress was built on the site during the Silla era; it was used as a military command post during the war against the Chinese Tang dynasty. Tiles and remains of walls show evidence of this period. Since this time, the site has always been occupied.

In the 10th century, the site was known as Gwangju and it is considered to be an administrative unit. In the 13th century, the fort constructed by the Goryeo dynasty successfully fended off Mongol attacks (1232). Various furnishings and archaeological remains bear witness to this period of the fortress.

In the late 1580s, the weakening of the Chinese Ming dynasty led to the start of a long period of regional instability, in which the territory of the Joseon dynasty was the epicentre. From 1592 to 1598, Korea was at war with Japan, which was trying to gain access to China and the continent. The Japanese were equipped with European weapons and the Korean army was equipped with cannon using gunpowder. The strategic importance of the ancient Namhansanseong fortress for the protection of Seoul clearly emerged at this point, and it became obvious that it needed to be reinforced.

The reconstruction of the town-citadel began in the early 17th century in response to fears of invasion by the new regional Manchu power, from which sprang the future Chinese Qing dynasty. For the rebuilding and defence of Namhansanseong, the Joseon kings of Korea, although Confucian, entrusted it to a Buddhist soldier-monk sect which introduced the spiritual system of Seungyeong Sachal, which respected the beliefs of the local population. The reconstruction began in 1624 and was completed by 1626. The site was able to accommodate more than 10,000 soldiers. The citadel became the headquarters of the soldier-monks for some 300 years. Just one year later, a first Manchu invasion attempt was launched, and Seoul was occupied, but the king fled to the Island of Ganghwa.

The reconstruction of the citadel of Namhansanseong reflects an interchange of many major cultural and religious influences. Namhansanseong also bears witness

to Korea's spirit of independence. Cults of the first Korean dynasties were revived, along with local popular shamanic beliefs, and at the same time the influence of Confucianism, Buddhism and even Western thought was reflected in the way the emergency citadel was organised, both in its construction and its everyday life.

In 1636, the second Sino-Manchu invasion led to the capture of Seoul, and King Injo this time fled to Namhansanseong, which was attacked by a powerful army, equipped with cannon. The king resisted for 47 days, but the Joseon dynasty then had to recognise the suzerainty of the Qing. Namhansanseong however remained a royal fortress and a major administrative centre; restoration work began in 1638. At the end of the 17th century, outer walls were built to strengthen the defensive structure, and again in the following century. A specific system for the military-administrative governance of the fortress town was then introduced, known as Yusbu. In the mid-18th century, the population was around 4,000. A final defensive restoration was carried out in 1779.

The fate of the fortress town changed with the decline of the Joseon dynasty, in the late 19th century, and the Sino-Japanese War (1894). Japan then exercised suzerainty over Korea and later exercised a form of colonial power (1907); however, Namhansanseong was occupied by the rebel Uibyeong, and for a time became a centre of resistance. The city and its community then went into decline, and the town lost its administrative prerogatives (1919); it remained however a symbol of resistance to occupation. Various movements came into being at Namhansanseong. Some monuments were damaged or even destroyed, such as the Royal Palace.

In 1935, the importance of Namhansanseong as a cultural site was first recognised, and it began to play a tourist role, in light of its location close to Seoul. The protection of the pine trees in the citadel began in 1927, on the initiative of local residents, via the Geumlin association, which also carried out the first restorations.

In 1951, during the Korean War, Namhansanseong was seriously damaged by bombardment. In 1954, Namhansanseong was designated as Korea's first national park, and restoration work began in 1957. A fully-fledged conservation policy was introduced in the early 1970s, with the establishment of the provincial park (1971). A Catholic Martyrs' Church was completed in 1999.

Today, the Namhansanseong site is a venue for cultural and folkloric activities linked to the spiritual traditions of the Joseon dynasty, and for the revival of ancient popular shamanic beliefs, such as shrine cults and totemic practices.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis begins with an overview of the heritage of Korean historic fortresses. A distinction is traditionally drawn between lowland fortifications and mountain fortifications, the latter being the predominant category as Korea is a mountainous country. This is a distinctive feature compared with China, where most of the fortified urban systems are located on lowland plains. Three types of mountain fortresses exist in Korea, including those on plateaus surrounded by mountain slopes (known as Pogoksik), such as at Namhansanseong.

In ancient times, mountain fortresses were small, and it was not until the Unified Silla period (7th – 10th centuries) that the first mountain fortified urban centres were constructed, at a time of almost continuous warfare. The Goryeo dynasty that followed made its capital at Kaesong, in a valley site surrounded by mountains (early 10th century), Democratic People's Republic of Korea (2013, criteria (ii) and (iii)). From the 14th century on, the Joseon dynasty made quite frequent use of the mountain fortress, but they remained relatively modest in size, and their military effectiveness was often limited. The Japanese invasion marked a turning point, with the use of firearms and the appearance of a real threat to Korean independence. Namhansanseong bears witness to this change both in terms of its size (as it became a proper town and an emergency capital) and its quality, with the definition of a new fortification model which represents a synthesis of various foreign influences. From this point on, the Joseon dynasty built a considerable number of relatively large fortified towns in the mountains.

Amongst the fortified sites that have been recognised in Korea (about 250 sites), Namhansanseong stands out because of its dimensions, its large number of functions, and the fact that it is an emergency capital. It is also the best and most diversified example of the Pogiksik type. Hwaseong Fortress, Republic of Korea (1997, criteria (ii) and (iii)) is also a fortress of a very characteristic type in terms of military concepts, and it embodies a similar synthesis to that of Namhansanseong, at the end of the 18th century. The set of fortresses in the Boeun region (Tentative List, Republic of Korea) consist of fortified ensembles that are significantly older, but their dimensions are small, and their importance is exclusively military. Naganeupseong (Tentative List, Republic of Korea) is considered to be the most representative fortified town of the Joseon dynasty. It includes in particular a set of administrative buildings, dwellings and urban testimony that Namhansanseong no longer has, but it was not an emergency capital with a palace.

There are quite a large number of fortified towns or villages on the World Heritage List. However, many of these are fortified systems in the lowlands or on the coast, or a combination of both. In China, the closest property in functional terms is Ping Yao (1997, criteria (ii), (iii) and

(iv)); but this is a lowland fortress with a square plan, rebuilt by the Ming dynasty in the 14th century. It is a typical example of the architecture of fortified Chinese administrative towns; it uses earth and brick in its fortifications. In Japan, the feudal castle of Himeji-jo (1993, criteria (i) and (iv)) represents a national archetype whose general stone and wood structure is however quite different from Namhansanseong, and is far more compact; it embodies a military system and a feudal administration, but there is no town inside its fortifications.

Comparisons with other parts of the world are briefly mentioned, but the comparison centres on fortresses, and largely leaves aside fortified towns, notably in Europe, which essentially embody Medieval or Renaissance town planning that is well represented on the World Heritage List: Dubrovnik (Croatia, 1979), Carcassonne (France, 1997), Provins (France, 2001), Elvas (Portugal, 2012), Alhambra, Granada (Spain, 1984), Corfu (Greece, 2007), Levoča (Slovakia, 1993-2009), etc. These are indeed walled towns with ramparts, often on elevated land or utilising naturally defensible positions; they accommodate large urban ensembles that are generally well preserved, along with administrative and religious buildings. Without weakening the specific characteristics of the fortified ensemble of Namhansanseong, they set it into perspective and give it all its meaning in the context of Eastern Asia, where it expresses both a conceptual advance in fortification and a vision of the emergency capital that are specific to the property.

The series is represented by two elements, of which the smaller one is a functional complement fully associated with the main property. The comparative analysis makes no special emphasis of this point.

ICOMOS considers that the comparative analysis justifies consideration of this serial 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 mountain plateau site of Namhansanseong was favourable for the establishment of a vast fortified system, whose earliest remains date from the 7th century.
- In the early 17th century, the Joseon dynasty established there in the space of a few years a fortress city, designed to be an emergency refuge for the capital Seoul, 25 km away.
- The fortress city of Namhansanseong was built by Buddhist soldier-monks in order to resist a Sino-Manchu invasion which took place in 1636, and in which the siege of Namhansanseong was a decisive episode.
- Its plan and its architecture were designed on the basis of Chinese and Japanese influences, and reflect

the impact of the use of firearms introduced from the West.

- Permanently inhabited, the city was the provincial capital over a long period, and it includes within its fortifications evidence of a wide variety of military, civil and religious buildings.
- A place of expression of many philosophies and religions over the course of its history (popular animism, Confucianism, Buddhism and then Christianity), Namhansanseong has also become a symbol of Korean sovereignty.

The serial approach is justified by the fact that the defensive outpost of Sinnam, 1.5 km south of the property, is an integral part of the defensive system of Namhansanseong.

ICOMOS considers that the value of the property is essentially expressed by the fortified ensemble of Namhansanseong, which bears witness to an important moment in the art of military fortifications in a mountain context in Eastern Asia. The construction of the fortified system took place at a time of major geopolitical crisis for the region, with the weakening of the Ming dynasty and the rise of Japanese and then Manchu ambitions. The fortified city of Namhansanseong is an original expression of the "emergency capital" concept. It bears witness to a synthesis of both military and urban concepts stemming from Korean, Chinese, Japanese and European influences, with the use for the first time of Western firearms. Through its historic role in resisting invasions, Namhansanseong became a symbol of national independence. It is also a meeting place for several philosophical-religious influences, whose testimonies express the various facets of the spiritual history of Korea. However, it must be noted that many shrines and buildings, and the royal palace in particular, are *ex nihilo* reconstructions.

Integrity and authenticity

Integrity

The fortified elements constitute a coherent and relatively complete set of material elements to express the various values of the property in terms of architecture and military engineering. The other built elements are also quite numerous and diverse; they illustrate the values of the military organisation of the emergency citadel in the 17th century, its religious and spiritual aspects up to a more recent period, and the royal and regional civil administrations. The 17th century fortified citadel is itself preceded by quite a long history, and it continued in the 18th and 19th centuries with a great deal of restoration and reinforcement work on both civil and military facilities. The main intangible attributes (military concepts, political and administrative power, philosophical and religious aspects) are supported by a relatively numerous set of material elements, that are specific to their functions and comprehensible; the intangible attribute of the symbol of independence relates to the place as a whole. The environmental and landscape integrity is ensured by the

presence of the forest park, whose pine tree colony contributes to the symbolic nature of the place.

ICOMOS considers that the importance, diversity and extent of the property justify its integrity of composition. There are also a sufficient number of attributes with clearly identified historic roles to enable an understanding of the property's structure and past functioning. Knowledge of the property and its history are good, particularly with regard to the various influences that guided the defensive military engineering concepts of the citadel of Namhansanseong, and the infiltration of ancient spiritual elements. However, the present-day activities (folklore-related and neo-animistic, or sovereignist and in some cases nationalistic) are recent renditions and interpretations of popular traditions which do not contribute to the property's integrity or outstanding value.

In conclusion, the material integrity of the property is sufficient to ensure a full understanding. The presence of the additional element that is separate from the main property, the defensive outpost of Sinnam, is fully justified by the role it plays in the fortified ensemble as a whole, and it contributes to the integrity of the property.

ICOMOS considers that the integrity of the whole series has been justified; and that the integrity of the individual sites comprising the series has been demonstrated.

Authenticity

For the State Party, the various facets of authenticity are clearly fulfilled, as regards the morphology, forms, concepts and materials used in the restorations/reconstructions. Authenticity is guaranteed by the archival, iconographic and archaeological documentation that preceded the works. The natural environment of the property, its geographical and natural aspects, have been remarkably preserved by the park that surrounds the fortifications and by most of the shrines and sites forming the property's material attributes. The State Party claims that the adaptations, and the changes, particularly to the fortifications, as well as the repairs, have been milestones in the life of the fortified city.

ICOMOS considers that the restorations/reconstructions of the property's material elements, particularly the fortified ensembles, have been carried out in accordance with specific scientific guidelines about form, structures and materials. This scientific work has been taking place for many years, and the State Party has never shrunk from bringing its principles up to date when necessary. It is based on a large body of documentation relating to the works carried out throughout the property's history. The preservation of the authenticity of the property, particularly the temples and buildings largely made of wood, follows a tradition of authenticity that is specific to this region of the world and that is today clearly identified and scientifically defined. However, the systematic aspect of this restoration policy seems to be overdone. This leads to *ex nihilo* reconstructions of buildings which disappeared a long time ago, notably the royal palace that was razed to the ground

during the colonial period (late 19th century), and then replaced by two generations of buildings bearing no relation whatsoever to the initial edifice. The modern folklore-related activities and the reintroduction of recent cultural practices are also inauthentic; they are an interpretation of the symbolic role of the places, and not a contribution to the authenticity of the property.

ICOMOS considers that the authenticity of the whole series has been justified; and that the authenticity of the individual sites that comprise the series has been justified.

ICOMOS considers that the conditions of integrity and authenticity of the whole series have been justified, despite the sometimes ill-advised nature of the restorations/reconstructions and of the recent folklore-related and cultural activities.

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 Namhansanseong is an excellent example of the technological advances made in fortress construction during the international wars that took place in the Far East in the 17th century, that came about due to the use of firearms. It is a unique example of a fortified mountain city built to play the role of emergency capital for the Joseon dynasty.

ICOMOS considers that the Namhansanseong fortifications embody a synthesis of the art of defence, at the beginning of the 17th century in the Far East. It results from a rethinking of Chinese and Korean standards of urban fortification, and from the fears generated by the new firearms coming from the West. Namhansanseong marks a turning point in Korean mountain fortresses, and went on to influence the construction of other citadels in the region.

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 walls and the defensive ramparts of Namhansanseong, built around the perimeter of a mountain plateau, constitute a particularly comprehensive and consummate example, demonstrating the development of military architecture and the expertise attained in Korea from the 7th century to the 19th century.

Designed in the 17th century, the organisation of the urban centre of Namhansanseong constitutes an outstanding and well-preserved example of a royal emergency city, close to the capital of the Joseon dynasty. It is an exceptional example of a vast fortified ensemble, built and then managed by Buddhist soldier-monks. It is also an outstanding urban example of the political and administrative organisation of a Confucian state in Eastern Asia in the early 17th century.

ICOMOS considers that Namhansanseong is an outstanding example of a fortified city. Designed in the 17th century as the emergency capital of the Joseon dynasty, it was built and then defended by Buddhist soldier-monks who respected pre-existing traditions.

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 Namhansanseong bears direct witness to the theory of the mountain fortified city, combining the advantages of a mountain citadel and an administrative city. Namhansanseong also demonstrates the Buddhist idea of protecting the territory by setting up the Seungyeong Sachal system, which honours spirits and popular beliefs that are linked to the fortress. The fortress is itself an illustration of the efforts to survive and endure the sufferings of Korean history, resulting from Korea's situation as a focal point for geopolitical power struggles in Eastern Asia.

ICOMOS considers that the military engineering arguments presented, particularly concerning the evolution of the art of fortification at Namhansanseong in the 17th century, are already recognised by criteria (ii) and (iv), and the same applies to the military and religious organisation which formed the basis for its construction and management. The organisation of administrative life is of interest to a modest few, and whose significance is at best national. The relations between the state power dominated by Confucianism, the Buddhist military-religious sects that served the state, and Korean society that was still infused with popular animist beliefs are clearly illustrated by the property, but they are already present in Korean history in many other places.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the serial approach is justified and that the selection of elements in the series is appropriate.

ICOMOS considers that the nominated property meets the conditions of integrity and authenticity and criteria (ii) and (iv).

Description of the attributes

- The mountain plateau of Namhansanseong, favourable as the site of a vast defensive system, was fortified from the 7th century.
- In the early 17th century, the Joseon dynasty established there in the space of a few years a fortress city, designed as an emergency alternative for the capital, Seoul, 25 km away.
- The fortress city of Namhansanseong was built and then run by Buddhist soldier-monks, who respected popular traditions and Confucian values.
- Its defensive architecture expresses a synthesis of Asian, Chinese and Japanese influences, as well as the pressures resulting from the use of Western firearms.
- A city that has always been inhabited, and that was the provincial capital over a long period, it includes inside its fortifications evidence of a wide range of military, civil and religious buildings.
- The history of Namhansanseong has made it one of the symbols of Korean sovereignty.

4 Factors affecting the property

The main development factor affecting the property is the growing number of restaurants and shops inside the ramparts. This is the result of the rapid development of tourism at the site, facilitated by the proximity of Seoul. In the space of a few years, the number of visitors has increased from less than one million per year to more than 3 million (2010). The property also includes 13 parking areas for more than 1,100 vehicles.

On the edge of the buffer zone, urban development pressure in the Gwangju City zone could affect the property's visual integrity.

The natural and forest environment of the park around the ramparts is affected by hydrocarbon pollution linked to the growth in road traffic. This is combined with the effects of climate change and particularly affects the pine trees. Other tree species (such as oak and hornbeam) seem to be less seriously affected.

Torrential rain and typhoons may periodically affect the property and cause soil erosion. The topographic situation of the property means there is very little risk of flooding. A small earthquake risk must also be taken into account.

Fire could affect the pine forest and the historic wooden buildings, and could spread rapidly. This is the most serious environmental threat.

ICOMOS considers that the main threats to the property are tourism pressures and fire risk, together with urban development pressures at the edge of the buffer zone.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The nominated property has an area of 409.06 ha and has no permanent inhabitants.

The buffer zone has an area of 853.71 ha; it consists of two parts: the park around the fortifications, and the non-authentic urban centre; 521 people live in the buffer zone.

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

Ownership

The forest areas and land of the park are the public property of the Province of Gyeonggi-do or the local authorities. The listed historic properties are the property of the government or the municipalities, except for four Buddhist shrines, which belong to religious institutions. The property does not include any private properties.

Protection

The whole of the territory containing the fortifications and the monuments of Namhansanseong is a designated *National Historic Site* in accordance with the Cultural Heritage Protection Act (CHP Act, 1962-2007). It also involves an automatic protection zone extending 500 metres from the limits of the registered property.

The whole of the Namhansanseong site (property and buffer zone) has the status of a Provincial Natural Park, under the *Natural Park Act*.

In the framework of these national laws, four ordinances of the province of Gyeonggi-do directly govern the management of the property: the ordinances on the protection of the regional cultural heritage, on the Namhansanseong Management Committee, on the management of the regional parks, and on the nomination of Namhansanseong for the UNESCO World Heritage List. There is also an ordinance of Gwangju-si City relating to the local cultural heritage.

In the Namhansanseong ensemble, 218 tangible or intangible elements are today listed, and benefit from a specific protection status (national, provincial or local).

The other national Acts that cover the property are the *Act on Land Planning and Use*, the *Landscape Act* and the *Tourism Development Act*. These Acts are applied within the framework of regional and local plans for development and planning. The plans consist mainly of the *Gwangju City Urban Plan*, the provincial *Landscape Plan* and the provincial *Tourism Development Plan*. All the protection measures for the cultural property and natural property are embodied in the property's status as a provincial natural park. All alterations and building projects are subject to authorisation; they are controlled and their volume, shape and appearance are all regulated.

In its reply in February 2014, the State Party provided a more thorough description of the protection measures applicable to the property and the interior buffer zone (town of Namhansanseong).

ICOMOS considers that the current buffer zone protection measures do not sufficiently take into account the foreseeable development of tourism at the property in the coming years, and that it remains necessary to ensure that sustained attention is paid to this issue in relation to the central urban part of the buffer zone, - in all its private and public forms - so as to protect the visual expression of the outstanding universal value of the property as a whole. It is also necessary to pay attention to the urban development of the Gwangju City zone close to the outer buffer zone.

ICOMOS considers that the legal protection in place is appropriate and effective for the property but that it is necessary to pay sustained attention to the growth of tourism at the property and in the inner buffer zone, and to urban development on the edge of the outer buffer zone.

Conservation

The conservation of the property concerns three main sets of elements; military elements, elements relating to the historic government of Namhansanseong, and religious and intangible elements. The conservation of natural landscape elements is complementary to those mentioned above, as it constitutes their environment and context.

Very substantial restoration and reconstruction works have been carried out, particularly since the 1970s, under the auspices of the *Namhansanseong Regional Park*. For example, by 2012, more than 98% of the fortification walls had been subjected to works of this type since 1963. Such works are strictly controlled by the *Cultural Heritage Administration* (CHA), a national body, on the basis of four stages: excavation, research, experimentation and application to works. Each stage is scientifically validated, through the involvement of the *National Institute for Cultural Heritage Research*. Local implementation of the works is the responsibility of the property's management body, *Namhansanseong Cultural and Tourism Initiatives* (NCTI). All the results of the various stages, and a compilation of works carried out, are kept in the archives of NCTI.

Sector plans for the conservation of the fortifications are regularly drawn up, following on from earlier works that can be corrected as advances are made in knowledge about the property. For example, recent researches into parapet materials (2011-2012) have revealed the precise composition of the original mortars, which called into question the restorations carried out in 1980-1990. A plan is being prepared to carry out new restorations that are in line with the recent scientific results. Restorations/reconstructions of traditional built elements (both military and civil) are carried out in accordance with similar principles.

The property's conservation plan is supplemented by a series of measures relating to the burying of telecommunications lines (2009), restaurant signage and the rehabilitation of the cobbled streets (2010). The preservation of the natural and landscape environment has led to projects for the improvement of pine tree plantations (2009) and an experiment with electric cars (2010).

The supervision and monitoring of the property's conservation are the responsibility of the Cultural Heritage Administration (CHA), a central administration of the State Party. NCTI has set up an *Emergency Cultural Heritage Repair Unit* to deal with minor damage to the property, but it can also intervene in the event of an accident or natural disaster.

ICOMOS considers that, in the context of the framework defined by the State Party for systematic restoration/reconstruction of the elements forming the property, its general state of conservation is good, and that the conservation policy is effective; however, this policy, carried out systematically and taken to extremes, poses problems, as in the case of the total reconstruction of the emergency royal palace.

Management

Management structures and processes, including traditional management processes

The property is supervised by the *Cultural Foundation of Gyeonggi*, a provincial body under the responsibility of the Cultural Heritage Department and the provincial bodies in charge of nature and landscape preservation.

The technical and tourism management of the whole property is the responsibility of *Namhansanseong Cultural and Tourism Initiatives* (NCTI). This is an overarching institution, an offshoot of the Foundation that coordinates the efforts of the local operatives of the national, regional and local administrative bodies, together with the associations of volunteers involved in the conservation, management and enhancement of the property's cultural values. In all, no fewer than 14 institutions and organisations are involved in the management of the property. NCTI has an executive secretariat that handles coordination and information, and includes a body for the approval of projects. In particular, it is legally entitled to examine and authorise conservation projects. It is the guarantor of the charter drawn up between the partners. NCTI has three departments: research and conservation (9 staff), general management and promotion of the property (17 staff) and relations with residents (8 staff). Six are employed by NCTI itself, with the other staff being employed by other administrations (CHA, Province, Foundation, Municipality).

In addition, *Namhansanseong Provincial Park Office* (NPPO) is in charge of general property management with regard to plantations, green spaces and infrastructure

(trails, parking areas, etc.) for the property and the buffer zone.

The municipal staff of *Gwangju City* carry out everyday maintenance and servicing of the site (highways, cleanliness, security, etc.) and are responsible for permit procedures for building works (Municipal architecture office). An *NCTI* Emergency Cultural Heritage Repair Unit is also currently being set up.

Various complementary institutional bodies are mentioned: the *Namhansanseong World Heritage List Committee*, the *Namhansanseong Administration Committee*, and the *Namhansanseong Provincial Park Office*.

Associations of volunteers are actively involved in the conservation of the property, and they have for a long time played an important role in enhancing the property. It would seem however that the inhabitants of the property have not been sufficiently involved in the preparation of the nomination file and the determination of the property's values. It is essential to involve them in the management of the property and to enable them to participate in the *NCTI* structure that coordinates the property.

The Risk Preparedness Plan makes allowance for the various threats to the property. The *Emergency Cultural Heritage Repair Unit* already mentioned in connection with the conservation of the property can also intervene in the event of an accident or natural disaster. There is a fire station at *Namhansanseong*, which can respond rapidly to any alarm raised inside the property limits. It is staffed by 17 full-time fire brigade personnel and 20 local resident volunteers. It can be supported by reinforcements from fire stations in nearby towns and provinces. Special forest fire training drills are held. Twelve of the cultural properties have been assigned a priority fire intervention plan. Fire hydrants are installed in the park, and the wooden buildings are equipped with extinguishers. Vegetation clean-up initiatives are planned as part of an improvement plan, and fire-break corridors are to be set up in the forest (2012).

ICOMOS considers that special attention should be paid to fire protection (plan of fire hydrants and equipment in the buildings, specific fire access routes, presence of *Canadair* fire-fighting aircraft, etc.); the possibility of reinforcing the fire fighting capability should be considered.

Of the funding necessary for the conservation of the property, 70% comes from the government and 30% from the local authorities. An average of roughly 4 billion won is invested annually for conservation (2000 – 2012). The annual operating budget of *NCTI* is approximately 2 billion won, and comes from the provincial authorities. A supplementary budget is dedicated to education and cultural programmes.

The total number of professionals engaged in the conservation and maintenance of the property is 80

managers and 335 operatives (2011), of which 15 and 39 respectively are *NCTI* staff.

The required training levels and training improvement courses are led by the heads of the various local, national and international bodies involved in the study and conservation of the property.

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

The property's *Conservation and Management Plan* (CMP) brings together all elements relating to the protection, conservation and management of the property. It is a reference document which also constitutes a contract of objectives and means between all the parties in charge of the property, under the coordination of *NCTI*. Each operational chapter of the CMP contains a thematic plan, and divides the various initiatives according to geographic sectors.

The *Sustainable Tourism Plan* includes a substantial programme for monitoring tourism and visit conditions, in order to manage flows efficiently. Measures to limit numbers are in place if visitor levels become excessive, such as measures to diversify visit routes. In terms of facilities, the Plan includes the following projects:

- Improvement of visitor reception facilities (2009) (toilet facilities, signage, etc.);
- Installing of parking areas that are compatible with the landscape environment (2012). Tests are under way for the transport of visitors to the site by electric vehicles, in order to reduce pollution;
- The Cultural Programme includes everyday elements relating to visits (guides, audiovisual documentation, etc.), a vast programme of cultural and folkloric events throughout the year, and educational programmes. The emergency palace plays a central role in the promotion of cultural activities.

The *Regional Landscape Plan* and the *Local Plan* of *Gwangju City* take into account the management of the landscape impact of the development of the areas surrounding the property.

Involvement of the local communities

Local communities are involved via the Municipal Council of *Gwangju* and via the many citizens' associations already mentioned under conservation and management, some of which have played a historic role in the conservation of the property.

ICOMOS considers that the management of the property is effective, despite the large number of levels involved, and the tendency towards a proliferation of organisations of all types in its management and conservation. The management is particularly responsive in the event of material alterations, and it is also active in the enhancement of the property and its promotion to the public. The staffing seems to be adequate, and the

necessary funding is guaranteed by the involvement of the communities (State, province, municipality). However, the continuing existence of the *Emergency Cultural Heritage Repair Unit* of NCTI must be confirmed.

ICOMOS considers that the management system for the property is appropriate in the framework of the overarching NCTI organisation. However, in view of the complexity of the management required, and the number of parties involved, NCTI's coordination role should be strengthened. It is also essential that the inhabitants of the city of Namhansanseong should be involved, in order to ensure that the values are genuinely shared by everyone. Furthermore, special attention should be paid to fire safety, very susceptible during the dry season, and to the increase in tourism levels.

6 Monitoring

Systematic monitoring was established a long time ago, and efforts have always been made to cover tangible, natural and intangible cultural aspects. In practice, monitoring is organised by the overarching management structure NCTI and by the Namhansanseong Provincial Park Office, using their staff and technical facilities (including video surveillance). NCTI has 18 staff assigned full-time to the monitoring of the property and any emergency interventions that this necessitates. At a secondary level, interventions can be made by bodies of volunteers, residents of the village and the surrounding area (particularly the Namhansanseong Cultural Heritage Guardians and the Hansarang Keepers). These carry out additional monitoring and surveillance tasks; they fill in patrol reports and individual data sheets for the monitoring of the material cultural elements. The economic and social monitoring covers the monitoring of tourism and of the management system itself. Monitoring encompasses the buffer zone, particularly with regard to the economic and social impact of mass tourism and tourism infrastructures.

The main monitoring indicators, which comprise a large number of indicators and sub-indicators, are as follows:

- The fortified elements,
- Other tangible cultural elements,
- Landscape areas to be restored,
- Rites and traditions, intangible heritage,
- Tourism (focusing on black spots)
- Tourism (number of visitors),
- Various architectural, economic and social aspects of the town (buffer zone),
- The management system.

ICOMOS considers that the monitoring system is satisfactory.

7 Conclusions

ICOMOS recognises the outstanding universal value of the property, which bears witness to a rare system of a mountain emergency capital city dating back to the early 17th century. Namhansanseong is an outstanding synthesis of defensive military engineering embodying influences from several areas of the Far East, at a time when Western firearms were beginning to influence the military engineering of fortifications in this part of the world. At various points in its history, Namhansanseong has been emblematic of the values of the independence of Korea and the peaceful coexistence of various religious and philosophical beliefs.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that Namhansanseong, Republic of Korea, be inscribed on the World Heritage List on the basis of **criteria (ii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Namhansanseong was designed as an emergency capital for the Joseon dynasty (1392-1910), in a mountainous site 25 km south-east of Seoul. Its earliest remains date from the 7th century, but it was rebuilt several times, notably in anticipation of an attack by the Sino-Manchu Qing dynasty, in the early 17th century. Built and defended by Buddhist soldier-monks, it embodies a synthesis of the defensive military engineering concepts of the period, drawing on Chinese and Japanese influences, and changes in the art of fortification following the introduction of firearms from the West. A permanently inhabited city that was the provincial capital over a long period, it includes inside its fortified walls evidence of various types of military, civil and religious buildings. It has become a symbol of Korean sovereignty.

Criterion (ii): The system of fortifications of Namhansanseong embodies a synthesis of the art of defence in the Far East in the early 17th century. It stems from a re-examination of Chinese and Korean standards of urban fortification, and from fears aroused by new firearms from the West. Namhansanseong marks a turning point in mountain fortress design in Korea, and it went on to influence in its turn the construction of citadels in the region.

Criterion (iv): Namhansanseong is an outstanding example of a fortified city. Designed in the 17th century as an emergency capital for the Joseon dynasty, it was built and then defended by Buddhist soldier-monks who respected pre-existing traditions already in place.

Integrity

The importance, diversity and extent of the property justify the integrity of its composition. It possesses a sufficient number of attributes, with clearly identified historic roles, for an understanding of its structure and of how it functioned in the past. Knowledge of the property and its history is satisfactory, particularly with regard to the various influences that guided the concepts of defensive military engineering of the citadel of Namhansanseong. However, the present-day activities, of a folkloric and neo-animistic character, or those of a sovereignist nature, do not contribute either to the integrity of the property or to its outstanding universal value.

Authenticity

The restorations/reconstructions of the material elements of the property, notably the fortifications, have followed detailed scientific guidelines on forms, structures and materials. This activity has taken place over a long period of time and is being renewed. It is based on extensive documentation of the works throughout the history of the property. The conservation of the authenticity of the property, notably the temples and buildings made mainly of wood, follows a clearly identified and scientifically defined tradition of authenticity. However, the systematic aspect of this restoration policy seems to be excessive, and can lead to *ex nihilo* reconstructions of long-disappeared buildings, notably the royal palace, which was razed to the ground during the colonial period (late 19th century).

Management and protection requirements

The whole of the territory containing the fortifications and monuments of Namhansanseong is designated as a national historic site, under the terms of the Cultural Heritage Protection Act. 218 tangible and intangible cultural elements are today individually listed, and have been granted specific protection status (national, provincial or local). The technical and tourism management of the cultural ensemble is the responsibility of *Namhansanseong Culture and Tourism Initiatives* (NCTI) The property itself and the buffer zone have provincial park status (NPPO), and the NPPO is in charge of the management of plantations, green spaces and infrastructures (trails, parking areas, etc.). The national Cultural Heritage Administration, the regional bodies and the municipalities concerned with the property and its buffer zone are closely involved in protection, conservation and tourism management. A large number of associations of volunteer citizens participate in the management and enhancement of the property. The Management Plan includes many sector plans, notably for the conservation of the property.

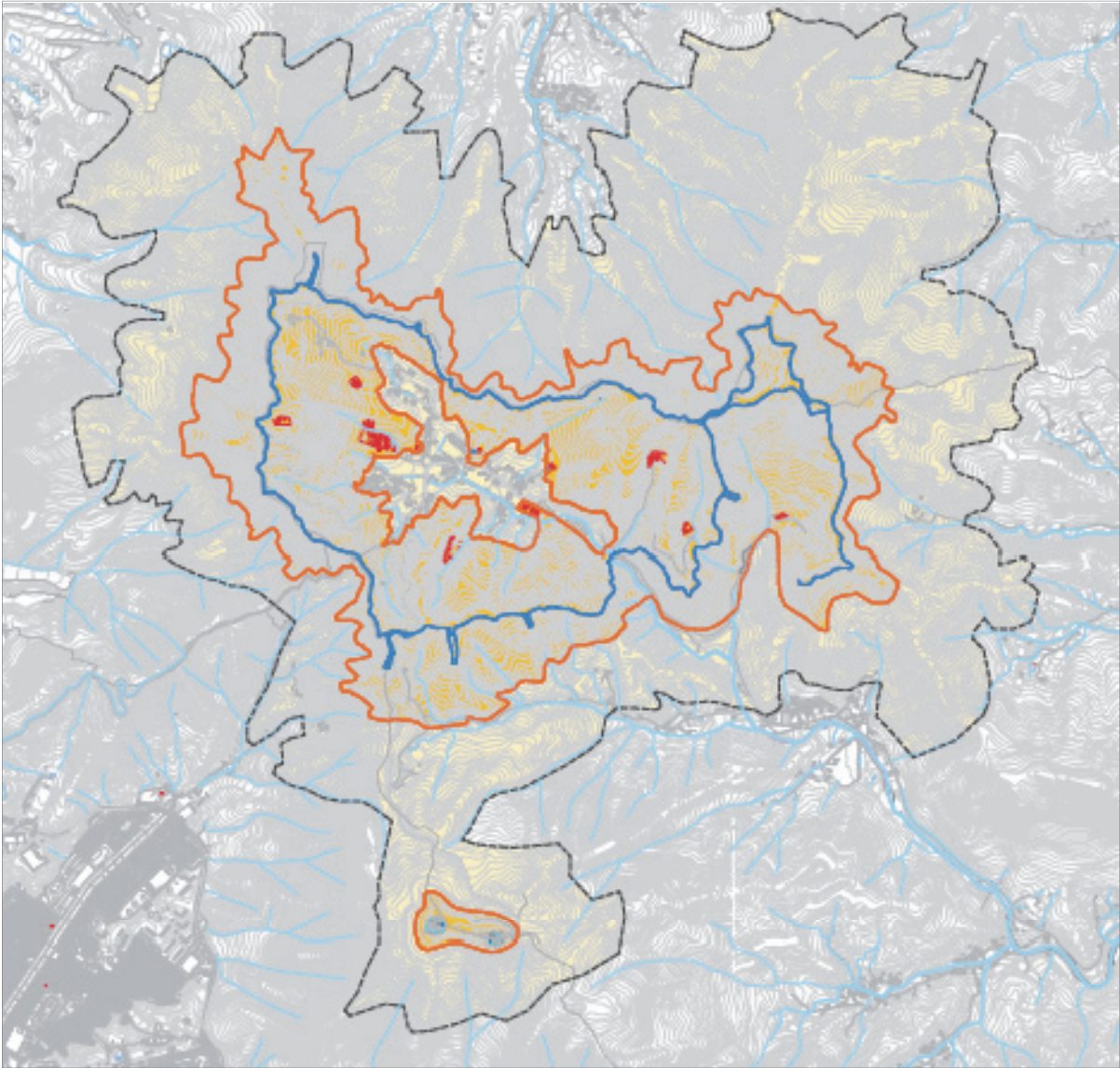
Additional recommendations

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

- Paying sustained attention to the control of the development of tourism – in all its private and public

forms - inside the property, and in the central urban part of the buffer zone, in order to protect the visual expression of the Outstanding Universal Value of the property as a whole;

- Paying attention to the urban development of the Gwangju City zone in the proximity of the outer buffer zone;
- Focusing efforts on sharing the values of the property more effectively with the inhabitants of Namhansanseong, involving them in the management of the property, and encouraging them to participate in NCTI which coordinates the property's management;
- Taking great care with fire safety, very susceptible during the dry season, and if necessary reinforcing fire safety protection;
- Strengthening the role of the common overarching organisation NCTI in coordinating the various partners involved in the management and monitoring of the property.



Map showing the boundaries of the nominated property



Aerial view of the nominated property



The defensive system



The eastern gate



Buddhist military temple

Silk Roads: Penjikent-Samarkand-Poykent Corridor (Tajikistan/Uzbekistan) No 1460

Official name as proposed by the State Party

Silk Roads: Penjikent-Samarkand-Poykent Corridor

Location

Sogd Province
Republic of Tajikistan
Bukhara Province and Navoi Province
Republic of Uzbekistan

Brief description

The Silk Roads extended over a 6,500 km span of the globe, connecting East, South, and Western Asia with the Mediterranean and European world between the 2nd century BC and the end of the 16th century.

The Penjikent-Samarkand-Poykent Corridor was an important link in the Central Asian part of the Silk Roads between China and the west, being the heartlands of the Sogdians whose merchants provided much of the early impetus for the Silk Roads trade between Central Asia and China. Twelve sites within the corridor are being nominated.

The Corridor ran roughly east-west through the wide, fertile basin of the Zarafshan River and was linked to the Tien-Shan corridor in the North, the Ferghana Valley corridor in the East, the Amudarya corridor in the South and, via the Southern Aral Sea, the Caspian corridor in the West.

The prosperous urban culture that was fostered by the Silk Roads trade, can be seen in the major urban centres of Penjikent at the eastern end of the corridor, Poykent at its western end and in the already inscribed cities of Samarkand, capital of the Sogdians, and Bukhara.

The elaborate infrastructure that facilitated the trade is represented by the Raboti Malik Caravanserai and its associated large Sardoba (reservoir).

These routes were not just important for trade but also for Muslim pilgrims after the 8th century, and particularly for Sufi dervishes for whom hostels or *khonakos* were developed along the routes. The focus of Bukhara as a sacred site intensified in the 16th century and this led to the creation of several *khonakos* in its surrounding, including in the mausolea of Chashma Ayub and Mir-Sayid Bakhrom. These buildings and the Vobkent Minaret testify to the religious and architectural ideas that flowed along the trade routes.

The corridor had three main periods of prosperity: first during the Turkish khanate between the 6th to 8th centuries, when the role of Central Asian merchants increased significantly, especially the Sogdians, who became the main intermediaries in the international silk trade, secondly during the 10th century, the period of the Samanids, when cities and urban culture in Maverannahr actively developed, and lastly, in the 14th and 15th centuries, at the time of the Temurids, when science, culture, urban planning and economics significantly developed.

The corridor extends over some 365 kilometres.

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 twelve *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013), annex 3, it is also a *cultural route*.

1 Basic data

Included in the Tentative List

15 January 2013 (Tajikistan)
19 February 2010 (Uzbekistan)

International Assistance from the World Heritage Fund for preparing the Nomination

2007 (Tajikistan)

Date received by the World Heritage Centre

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Cultural routes and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the sites in Uzbekistan from 9 to 23 August 2013 and the site in Tajikistan from 27 September to 15 October 2013.

Additional information requested and received from the State Party

None

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The overall Silk Roads

The Silk Roads were an interconnected web of routes linking the ancient societies of Asia, the Subcontinent, Central Asia, Western Asia and the Near East, and contributed to the development of many of the world's great civilizations. They represent one of the world's preeminent long-distance communication networks stretching as the crow flies to around 7,500km but extending to in excess of 35,000km of specific routes. While some parts of these routes had been in use for centuries, by the 2nd century BCE the volume of high value exchange had increased substantially, as had the links between the Chinese and Roman Empires.

The routes served principally to transfer raw materials, foodstuffs, and especially high value goods that made long distance trade worthwhile. Some areas had a monopoly on certain materials or goods: China, for example, supplied Central Asia, the Subcontinent, West Asia and the Mediterranean world with silk. These goods were transported over vast distances - by pack animals and river craft – and probably by a string of different merchants.

The political, social and cultural impacts of these movements had far-reaching consequences upon all the societies that encountered them. The major impacts included:

- The development of cities along these routes, which gained power and wealth from the trade, providing the infrastructure of production and redistribution, and policing its routes. Many became major cultural and artistic centres, where peoples of different ethnic and cultural backgrounds intermingled;
- The development of religious centres, which benefitted from the patronage of political systems and wealthy individuals;
- The movement of technologies, artistic styles, languages, social practices and religious beliefs, transmitted by people moving along the Silk Roads.

The route of the Penjikent-Samarkand-Poykent corridor

The corridor extends to around 365km mainly along the Zarafshan river valley between Penjikent in the east and Poykent in the west.

Within the corridor are the major centres of Samarkand and Bukhara (already inscribed on the World Heritage List). These two cities were cultural foci in prehistoric periods and flourished as major centres for Central Asian trade from the 6th century onwards, first under the Sogdians, and then during subsequent periods under the Samanids and Timurids, with various fluctuations in the power balance between them.

For caravans travelling westwards, the main route along the corridor started in the east at Penjikent. Caravans

then passed through the ancient city of Sarazm and the medieval city of Dobusia, one of the five major cities of Sogdiana, as well as flourishing villages and castles alongside the river, before arriving two days later in Samarkand.

The road between Samarkand and Bukhara, a hub for the entire Silk Roads in Central Asia, was called Shohroh, the royal road. Caravans covered its length of 37 - 39 farsahs in between 6 and 7 days. Around the road the landscape was intensively cultivated with a vast network of hundreds of kilometre of canals, and numerous oases for travellers.

Bukhara was strategically sited between the agricultural areas of central Sogdiana and the steppe. From ancient times it provided a local market where nomadic peoples of the steppe traded livestock products and raw materials, an example of the way the Silk Roads trade benefitted not only traders but agro-pastoral societies. Bukhara also was the interface with empires to the west such as Bactria.

From Bukhara, caravans headed for Poykent, a further two days journey. Beyond Poykent lay a crossing over the River Amu Darya and the ancient city of Farab, with the route eventually joining the Caspian corridor. In medieval times, this area was the border between Sogdiana and Sassanian Iran, and the states of Khorezm and Northern Khorasan and the steppe.

Strung out within this Penjikent-Samarkand-Poykent corridor as well as towns and cities are remains of large caravanserais, religious complexes, as well watchtowers and minarets.

The ten sites chosen (one in Tajikistan - Penjikent, and the others in Uzbekistan) together with Samarkand and Bukhara, are said to be the most representative and best preserved and to reflect the prosperity and richness of the societies that flourished as a result of the Silk Roads trade along this particular corridor.

The sites include two large towns, Penjikent and Poykent at either end of the corridor, a caravanserai and its nearby reservoir, a minaret, and six pilgrim sites built around the mausolea of saints, including three *khonakos* or sufi shrines:

- Ancient Town of Penjikent
- Qosim Shaikh Complex
- Mir-Sayid Bakhrom Mausoleum
- Raboti Malik Caravanserai
- Raboti Malik Sardoba (reservoir)
- Chashma-Ayub Mausoleum
- Vobkent Minaret
- Bahouddin Naqshband Architectural complex
- Chor-Bakr
- Poykent

These are considered in turn.

ICOMOS notes that for many of the sites, the information provided in the nomination dossier is limited or incomplete and cannot be said to be adequate to allow a satisfactory understanding of the sites as they now exist, or of their evolution over time or of their full significance.

Nor is it made clear in the text how each of the sites relates to the Silk Roads and contributes to the series that makes up this specific *Penjikent-Samarkand-Poykent* corridor as a whole.

- Ancient Town of Penjikent

The extensive ruins of the Ancient Sogdian Town of Penjikent, located in Tajikistan, lie on an elevated terrace above the floodplain of the river Zarafshan. It overlooks the new town of Penjikent which is some 50 metres lower.

Penjikent was a city in the Sassanian Empire and was abandoned a century after the Muslim conquest in the mid-7th century AD. Parts have been excavated to reveal the structure of a large and prosperous trading city, composed of three parts:

Kohandezhl arg - the fortified "citadel" on a high point included the palaces and the governmental quarters. On the walls of the lower palace, an engraved and coloured panel depicting red tulips was excavated in 2010. Immediately below the citadel on its north-western side is the spring that provided water for the town.

Shahrestan - the main walled city inhabited by influential people contained the trade and the financial centres, including the bazaars, caravanserais and workshops of metalworkers, potters, weavers etc. The city was heavily built up with blocks of two to three-storey houses. Two temples faced the town square. Their walls, as in some residential houses, were richly decorated with monumental paintings.

Rabats or suburbs- These were at the base of the city and in the case of Penjikent became important enough to have their own defensive walls. They include a Zoroastrian necropolis or dead city, Naousa.

Penjikent was excavated in 1946 by Russian archaeologists. Currently annual excavations are undertaken by the Hermitage Museum, St Petersburg.

Not all of the components of Penjikent are currently within the nominated area. The Lower Palace, spring and part of the suburbs lie in the buffer zone (see below).

- Qosim Shaikh Complex

The Qosim Shaikh Complex is in the city of Karmana between Samarkand and Bukhara. Built in the 16th century by the Bukharan emir Abdulla Khan, it consisted of a memorial shrine for Qosim Shaikh, the

spiritual adviser of the Sheibanids, and adjacent a large *khonako*, or *sufi* hostel for itinerant holy men. In the centre of the *khonako* is a dome faced with lapis lazuli tiles above a high drum.

The complex was altered in the 18th and 19th centuries and 'beautification' carried out in 2003 year. But no details have been provided as to the scope of this recent project (see Conservation below). The complex currently attracts considerable numbers of pilgrims.

- Mir-Sayid Bakhrom Mausoleum

The Mir-Sayid Bakhrom Mausoleum, also in Karmana, was built for an Arab pilgrim Mir-Sayid Bakhrom, who died here during his pilgrimage along the Silk Roads at the end of the 10th or the beginning of the 11th century.

The brick-built mausoleum is similar to the slightly earlier mausoleum of the Samanids in Bukhara. In contrast to the latter, it features a prominent *pishtak* or covered portal decorated with a Kufic inscription in raised bricks. This combination of dome and monumental portal proved to be a highly influential architectural form.

Adjacent to the east of the mausoleum there used to be a mosque with *aivans* from the 17th century. Only the bases of several of its columns have survived and these are lined up in front of the mausoleum. In 2001, a reproduction of this mosque was built a short distance from the mausoleum.

- Raboti Malik Caravanserai

The Raboti Malik (or royal caravanserai), dating originally from the 11th century CE, was one of the largest structures of civil pre-Mongol architecture in Central Asia. It is located in the steppe some 18-20km from the city of Karman between Samarkand and Bukhara. The lofty main entrance portal has survived, while much of the rest of the two large courts with galleried porticoes exists only in outline. The rabat fell into disuse in the 19th century and, as it was largely built of mud bricks, quickly deteriorated – although considerable portion of the outer walls and a minaret still existed as late as the 1960s.

The building would have been used to provide secure accommodation for merchants and their pack animals and trade goods. Its name *rabat*, and many architectural and planning features within it, reflect much earlier 8th century fortresses for military defence of the routes that were built by Ashras ibn Abdullah, Umayyad's governor in Khorasan between 727-729 CE.

- Raboti Malik Sardoba (reservoir)

The 14th century CE large domed Raboti Malik Sardoba (reservoir) supplied water to the nearby Raboti Malik caravanserai and thus is an essential part of it. The brick built hemi-spherical dome sits on a cylindrical base, two thirds of which are underground. Four arched windows

illuminate the interior. Part of the dome has been restored and the entrance *chartak* rebuilt.

The *sardoba* received water from the River Zarafshan along a canal nearly 30 km long. Traces of this are still visible near Raboti Malik. The caravanserai was supplied with water through a system of ceramic pipes.

Sardobas such as this were built at intervals of around 30 kilometres in desert areas of the Silk Roads to prevent evaporation of water. This is one of the very few that have survived.

These two sites (the caravanserai and the sardoba) need to be considered as one.

- Chashma-Ayub Mausoleum

The Mausoleum Chashma-Ayub lies on the north-eastern outskirts of modern Bukhara in the centre of an ancient cemetery. Dating originally from the 13th century, what survives from this date are an elaborate portal and fragments of a west wing. The huge portal is decorated with turquoise tiles in combination with polished ochre bricks. An Arabic inscription dates the building to the 605th year of the Muslim Calendar (1208-1209 CE).

Within the large complex are later domed buildings added since the 14th century.

- Vobkent Minaret

The Vobkent Minaret is in the centre of Vobkent 45 kilometres northeast of Bukhara. Built in 1196-97, the 40 metre high elaborately decorated brick built minaret is similar in style to the Kaylan Minaret in Bukhara built 70 years earlier. Three narrow ornamental belts with embossed lettering include its construction date and the name of the contractor.

In former times, parallel to its function as a minaret from where the muezzin calls believers to prayer, it was apparently also illuminated at night and thus led the way to the city of Vobkent for travellers on the Silk Roads. The nearby mosque was demolished in the 1930s.

- Bahouddin Naqshband Architectural complex

On the outskirts of Bukhara, this architectural ensemble within an enclosing wall, was built around the grave of Shaikh Bahouddin Naqshband who died in 1389. He was the founder of one of the largest of the Sufi Muslim sects, the *Naqshbandi*, that bears his name.

In the 16th century the Dakhma Shohon or Royal *dakhma* was added in which were buried Shaybanid and Ashtarhanid khans and their families. These tombs are slightly later than those in Chor-Bakr (see below) and show how the earlier structures have been replaced by *dakhmas*, elevated burial structures that cannot be entered.

The largest additions were made in the 19th century when two mosques and a minaret were constructed. Substantial restorations were carried out in the early 21st century but no details for this work have been provided (see Conservation below).

- Chor-Bakr

Near Bukhara, Chor-Bakr was built originally as a memorial complex for Abu Bakr Said, a spiritual figure and Djuybar sheikh who lived in the 10th century. Later it developed into a family burial place of the Djuybarids. The khaziras, a group of five tombs, are decorated with domes and elaborate portals.

In the second half of the 16th century, a new central square was constructed that consisted of a sufi *khonako*, mosques, and madrasah. Over time new groups of tombs were added to the complex, their decorated gates lining the streets. At the turn of the 17th century the main architectural ensemble of Chor-Bakr was completed with the building of a further mosque.

All the 16th century monuments of Chor-Bakr share a number of common features: they are of fired brick, and clay mortar with foundations of wooden beam construction. Arches, domes and vaults are decorated with *ganch* (traditional alabaster carving). The outer walls are faced with polished brick, and polychromatic tiles or mosaics.

- Poykent

Poykent was major centre of trade from its foundation around the 3rd century BC until it was abandoned at the beginning of the 11th century CE, probably for lack of water in spite of an unsuccessful attempt to construct a channel from the Zarafshan river to Poykent.

Its most intense growth took place in the early medieval period when its trading and craft quarters grew in response to increasing activity along the Silk Roads. Archaeological excavations have uncovered workshops for glass, pottery and bronze.

It now lies partly buried under sand, and partly under a green oasis.

The earliest part of the city is a 90 metre square fortified citadel within which one of the earliest buildings excavated was a Zoroastrian fire temple.

Below and adjoining the citadel were two *shakhristsans*, or urban settlements, also surrounded by walls and projecting towers, that are well preserved examples of Sogdian military architecture of the 5th and 6th centuries.

Within the city, the interior of wealthy homes were decorated with wall paintings. Parts of a composition of murals depicting the worship of the Zoroastrian deity have been excavated.

After the 8th century destruction by the Arabs, the city rose again and expanded outside its walls with the development of artisan suburbs protected by military *rabats*.

Written records recall 'thousands' of caravanserais in Poykent and numerous ruins still remain; an extensive one from the 9th or early 10th century has been excavated.

In the 1960s a channel serving the city of Bukhara was constructed that traverses the nominated area; it destroyed the remains of some *rabats*.

At Poykent, annual excavations are undertaken by the Hermitage Museum, St Petersburg, and the industrial quarters including potters' kilns on the western shores of the canal cutting through the site are currently being excavated by an Uzbek-French (Louvre Museum) team.

History and development

The specific importance of this section of the Silk Roads relates to the early role of the Sogdians as the enterprising organisers of much of the international trade particularly in the period between 6th and 7th centuries when stable relations were established between Central Asia and the Byzantine Empire. As well as leading to the development of many towns, including Samarkand, Merv, Taraz, Andijan and Tashkent, Sogdian trading settlements were also established all along the route between the Caucasus mountains and Xi'an in China.

The situation changed dramatically in the 8th century with the emergence of the Arab Caliphate, which after defeating Sassanid Iran and capturing Merv, made it their base for further incursions into Central Asia. In the 9th century the Samanid Empire with its capital Bukhara was established which was later replaced by the Turkic Karakhanids and Khorezm in the 11th to the mid-12th centuries. This heralded a great expansion of international trade from Eastern Europe to Tang China. Some 200 cities were established within the area of Maverannahr as well as a network of *rabats* – fortified caravanserais to defend the routes and provide accommodation for travellers. The plentiful raw materials of the area included woven gold cloth, guns, gems, and peaches from Samarkand.

The early 13th century's trade was consolidated for a short while by the creation of the vast Mongol Empire that united countries from China to the Middle East and parts of Europe. In the 14th century, Timur developed Samarkand as the centre of the Timurid Empire and established embassies in Europe and the Middle East, greatly developing trade, as did his heir, Ulugbeg.

This particular section of the Silk Roads declined in the subsequent centuries while other land routes continued until the end of the 16th century, after which the sea trade between China and Europe came to predominate. Nevertheless, the Sheybanid rulers continue to build caravanserais in the hope of sustaining the trade.

Alongside trade, the route grew in importance for Muslim pilgrims from the 8th century onwards, particularly for Sufi dervishes. Numerous Sufi *khonakos*, or hostels for itinerant holy men, appeared along the route and are documented from the 10th century. They increased in the 11th and 12th centuries being supported by the Seljuks in particular. Few small ones have survived. The largest remaining is the Khonako of Bahouddin dating from the 16th century, but they also exist in the ensembles of Qosim Shaikh and Chor-Bakr.

Particularly in the 16th century, Bukhara became a specific focus of Muslim pilgrimage and at that time several holy places were developed nearby including the Bahouddin Naqshband, Chor-Bakr and Qosim Shaikh complexes.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The extensive Thematic survey of the Silk Roads undertaken by ICOMOS in collaboration with States Parties participating in the overall Silk Roads project has provided at the macro level a comparative analysis across the whole length of the Silk Roads from China to the Mediterranean.

This allowed the identification of 54 'corridors' that could be readily defined in geo-cultural-political terms and which have adequate tangible remains reflected the way trade and the wealth that it generated, supported settlements, defensive arrangements and the overall management of the landscape, particularly in terms of water management.

The corridors were meant to link 'nodal' points along the routes such as cities and towns and to also encompass the complexity of the social and economic arrangements of the routes as well as the defence arrangements and way stations that provided caravans with shelter a day's journey apart.

The current nomination is for the Penjikent-Samarkand-Poykent Corridor, one of the identified main central Asian corridors.

In the nomination dossier, the series that make up the corridor is compared to seven other cultural routes on the World Heritage List in terms of location, cultural values, main content of interchange and typologies. A detailed analysis of all these sites, draws the conclusion that none are precisely comparable to the current corridors in terms of their history, geographical area scope, or overall content.

The comparative analysis also considers internal comparisons with similar sites to those nominated as part of the series. This is a much more limited comparison as it only considers 17 sites including 10 of the 12 nominated. The seven extra sites are all ancient

settlements. It is difficult to fully understand from the summary table provided why these particular sites were not considered to be relevant to the routes or, if they were, what other factors mitigated against their inclusion, and why other ancient settlements sites such as Taraz were not considered.

Nor is it clear why other religious complexes or the remains of other *sardobas* were not considered as part of these comparisons in order to justify the chosen examples. Perhaps more fundamentally, there should have been consideration of other types of sites that the Silk Roads Thematic Study has shown to be key components of the Silk Roads.

These are:

i) *The sophisticated arrangements for water management that underpinned many of the settlements and their agriculture along the Silk Roads.* This is particularly applicable within this corridor as highlighted by the failure of some towns when the water supply dried up. This aspect does not feature prominently in the comparative analysis although it is mentioned in the text in connection with the Hosi corridor. It appears that evidence exists at several sites but that the boundaries have not necessarily been drawn to reflect this aspect.

ii) *The productive interchange between settled and nomadic societies.* Although this is mentioned in the justification, it is not highlighted in the comparative analysis in terms of the choice of sites.

iii) *The provision of way stations and watch towers along the routes that were the essential pre-requisite of safe, regular trade.* Although the caravanserai and reservoir are prime examples of this, the comparative analysis does not set out what other examples of facilities and support for travellers still exist.

ICOMOS considers that the property has the potential to convey more of these aspects of the Silk Roads. In particular the links between settlement, trade and the management of water is clearly evident in the way settlements along the whole corridor relied on the waters of the River Zarafshan and its tributaries through elaborate water management arrangements, including the provision of lengthy and numerous canals.

ICOMOS considers that this corridor has the capacity to make a much more detailed statement on this aspect of the Silk Roads through the existing sites and through the addition of others.

In summary, ICOMOS considers that the internal comparative analysis needs to be strengthened with a wider analysis of the extent of surviving sites related to Silk Roads trade and to the full range of associations that they reveal in order to define the specific characteristics of the corridor more clearly and how it might be fully represented.

ICOMOS considers that the comparative analysis needs to be augmented to justify consideration of this serial property for the World Heritage List and for the choice of sites in the series.

Justification of 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:

Penjikent-Samarkand-Poykent Corridor:

- Is clearly defined by its location alongside the Zarafshan River and its hydrological basin;
- Is strategically linked to the Tian-Shan corridor to the north, the Ferghana valley corridor to the east and the Amudarya corridor in the south;
- Had three important periods of prosperity during the Turkic Khanate of the 6th to the 8th century AD, when the role of the Sogdians increased to become the main intermediaries of the Silk Roads international trade, as exemplified by Penjikent and Poykent; during the 10th century under the Samanids, when the urban culture flourished in Maverannah; and lastly in the 14th and 15th centuries during the period of the Timurids of Samarkand when science, culture, urban planning and economics significantly developed; as exemplified by Samarkand;
- Fostered the religious cult of Sufism and the provision of *khonakas*, which can still be seen in the Bahouddin Naqshband, Chor-Bakr and Qosim Shaikh mausolea;
- Demonstrates new stages in architecture in the Chashma Ayub and Mir-Sayid Bakhrom mausolea;
- Includes the unique water storage reservoir of the Raboti Malik Sardoba;
- Reflects the distribution and interaction of different religions such as Zoroastrianism, Manichaeism, Buddhism, Christianity and Islam.

ICOMOS considers that this justification begins to sum up the importance of this corridor but the details supplied in the nomination dossier do not allow a full understanding of the scope and extent of the corridor or the way individual elements contribute to the whole.

The way Silk Roads trade interacted with and shaped the landscape of the corridor has not been set out clearly in order to allow an understanding of the way the series as a whole reflects the specificities of the corridor.

Although Penjikent reflects Sogdian society, an essential link in the Silk Road chain, from the 6th to the 8th centuries; the caravanserai and its reservoir demonstrate elements of the once great infrastructure that serviced the caravans, while the mausolea and shrines are testimony to the Sufi and other pilgrims that travelled along the routes and contribute to the importance of Bukhara as a spiritual centre in the 16th century, as has been mentioned above, the rationale for the choice of these sites has not been fully

demonstrated nor why other sites have not been considered. Nor is the relationship between individual sites and the profile of the whole series explained.

ICOMOS considers that this corridor has the potential to reflect a rich assembly of facets of the Silk Roads trade but in order to achieve that, fuller and clearer information is needed on the overall profile of the corridor and on the choice of individual sites to reflect the specificities of the corridor.

What is missing are key elements of this corridor, in particular the relationship with the Zarafshan River and how its waters shaped cultivation and settlement.

In particular there needs to be more information provided on the influence of the Zarafshan River on the ability of the corridor to develop considerable urban areas. Without the precious waters of the River and its tributaries, life in the Penjikent-Poykent corridor would not exist, hence its name: Gold Sowing River. In its turn, the Penjikent-Poykent routes came to exist primarily for linking settlements more or less along its shores that flourished as a result of extensive irrigation.

The Shohroh, or royal road, is mentioned in the nomination dossier but few details are provided as to what remains of the route, its settlements, or its bridges and other structures, or the network of canals and numerous oases for travellers. Furthermore, the importance of Samarkand and Bukhara for this corridor cannot be overestimated. Although they are already inscribed on the World Heritage List, they nevertheless form important attributes for this corridor and need to be mentioned in the nomination in terms of what they contribute to the corridor, particularly in the case of Bukhara as one of the interfaces between settled and nomadic communities, an important feature of this and other corridors.

Integrity and authenticity

Integrity

The integrity of the overall series as a reflection of the potential Outstanding Universal Value of the corridor is slightly limited in terms of the ability of the chosen sites to fully reflect the specific characteristics or attributes of the corridor.

In terms of individual sites:

As the boundary is currently drawn, Penjikent does not enclose the complete representation of features and processes which convey the property's significance.

The setting of the Vobkent Minaret is compromised by the construction of a large and tall hospital building only a few metres away from its shaft. This was built in the 1990s on the site of a mosque demolished in the 1930s.

The Raboti Malik Caravanserai is a fragment of what survived until around 50 years ago.

Authenticity

The overall series lacks authenticity in terms of its ability to convey the full value of the corridor and the way it developed in relation to its landscape.

In terms of individual sites:

Penjikent

Penjikent is a unique window on the culture of Sogdiana during the 6th to the 8th centuries. Since that period no major modification has taken place in Penjikent in its forms and designs, materials or substances, uses and functions, location or setting. However, ICOMOS notes that the erosion of excavated areas is having a marked impact on the ability of the site to convey its value.

Vobkent Minaret

The replacement of the demolished mosque, near to the minaret with a large hospital building has reduced the authenticity of the minaret in terms of its ability to project an idea of the complex of buildings of which it used to be part.

Raboti Malik Caravanserai

The remains of the caravanserai can at the moment convey its function but it is clear that any further erosion of its fabric could severely compromise that ability.

Bahouddin Naqshband Architectural complex

This complex has been the subject of intensive restoration work which has included some re-building. In the absence of any details of the research on which this work was based, or of any further plans for the complex, ICOMOS considers that it is difficult to comment on the impact of the work on its authenticity.

Poykent

In a similar way to Penjikent, the erosion of excavated areas is having a negative impact on the authenticity of the site.

ICOMOS considers that the conditions of integrity and authenticity have not been met at this stage.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), (iv), (v) 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 States Parties on the grounds that individual sites reflect various interchanges or influence of ideas such as the way the cities of Penjikent and Poykent display Sogdian planning, how

the Raboti caravanserai displays the development of earlier architectural features, how the architecture of the Chashma Ayub mausoleum reflects the dynamism of central Asian architecture between the 11th and 15th centuries, and how the Vobkent minaret can show the genesis and development of minarets in Central Asia.

ICOMOS considers that although many of these ideas are touched on in the nomination dossier, insufficient information has been provided to substantiate them. Perhaps more importantly however, is the need for the justification of this and other criteria to apply to the whole series and thus the whole Silk Roads corridor in terms of how the ensemble of sites adds up to something greater than the sum of their individual parts.

Currently the value of the series is not well articulated, nor the way individual sites contribute to that overall value. Also as has been touched on above, there is a need to ensure that adequate attributes of the potential Outstanding Universal Value are nominated.

ICOMOS considers that this corridor has the potential to demonstrate this criterion, with an adequate series of sites and a much fuller justification of the whole series and the contribution of individual sites.

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;

This criterion is justified by the States Parties on the grounds that the monuments and sites, including the cities of Samarkand, Bukhara, Vobkent and others, along the corridor are unique examples of urban, architectural and monumental art. Poykent and Penjikent, in particular, exemplify the enormous wealth created by trade along the corridor; and Penjikent testifies to the importance of Sogdian Empire. The religious sites bear testimony to unique burial practices and the unique khonaka building for sufi adherents.

ICOMOS considers that this corridor could have the potential to justify this criterion in terms of how an overall series of sites, might be seen to be an exceptional testimony to the cultural traditions of the specific aspects of the Silk Roads trade that were practiced in this corridor.

As with the previous criterion, there is a need to set out clearly the particular aspects of the Silk Roads trade that define this corridor and then show how the series of sites as whole is an exceptional testimony to this tradition.

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 States Parties on the grounds that the monuments and sites along the corridor are outstanding examples of urban planning, architectural art and technological process.

Specifically it is suggested that Penjikent and Poykent illustrate significant stages in human history; while the mausolea demonstrate examples of architectural art in human history and the caravanserai and reservoir are outstanding examples of human creativity.

ICOMOS considers that in order to demonstrate that the series of sites as a whole satisfies this criterion, it is necessary to show how the ensemble of sites is outstanding as a reflection of specific period or periods of history. First, it would be necessary to demonstrate how the series of sites in the corridor as a whole shaped and was shaped by a certain period or periods in history and then to demonstrate how the chosen sites as a series can be seen as exceptional testimonies to this period or these periods of history.

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

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 States Parties on the grounds that the corridor is a unique example of a human interaction with the environment and the particular examples that are cited are the caravanserai and sardoba, and the interaction between settled and nomadic societies – without a specific example being mentioned.

ICOMOS considers that in order for this corridor to be seen as an outstanding example of traditional human settlement and its interaction with the environment, there is a need to underpin the justification for the criterion with details of how the Zarafshan river and its tributaries provided the water that underpinned the whole settlement pattern and agricultural production. A careful assessment of the necessary attributes to provide this justification would need to be made.

Mention could also be made of the interface between settled and nomadic societies but specific examples of this in the sites nominated and in other sites would need to be provided, in Poykent, Bukhara and elsewhere to explain how this interface might be understood at the sites.

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 States Parties on the grounds that the corridor has played a relevant role in the spread of various faiths and religious beliefs, particularly Zoroastrianism, Manichaeism, Buddhism, Christianity and Islam, and in the spread of artistic motifs and folk legends, music and folklore as well as brocade and paper that was traded along the routes.

ICOMOS considers that in order to show the overall series can be directly or tangibly associated with these various ideas and goods, much more specific details need to be set out to show how the various elements of the series each contribute to the justification as well as the series as a whole. ICOMOS considers that a strong case should be possible for the impact of various religions. The nomination dossier provides details of the sufi traditions and of other Islamic shrines but less details of the transmission of other religions. But what would also be needed is a demonstration of the way that this particular corridor reflects these associations better than other corridors.

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

ICOMOS does not consider that the criteria have been justified at this stage.

4 Factors affecting the property

After the collapse of the Soviet Union in 1991, Tajikistan entered in a period of civil war (1992 to 1997). During this period Penjikent suffered from neglect. While the Citadel and the Old Town only suffered from natural erosion and abandonment, sections of suburbs were appropriated for agricultural and other uses and their archaeology lost.

The ruins of Penjikent have also suffered as a result of the lack of back filling or consolidation after excavations undertaken since 1946. Large areas of earthen architecture have been exposed and left with at best partial back filling. The combined action of rain and wind is continuing to erode what is left of the architectural remains. The problem is also evident with the newly excavated areas uncovered as part of the annual excavations by the Hermitage Museum. Areas uncovered as late as 2003-2009 are now barely recognisable as no attempt was made to stabilise or protect the remains.

A similar situation exists in Poykent where the remains of most of the earthen structures exposed by early archaeological excavations have not been back filled or in any way consolidated. However here limited consolidation work has been undertaken. The unbaked bricks of shops and workshops in the Bazaar area have been covered with a layer of mud to protect them as has the remains of a minaret base consolidated by the Hermitage Museum team, who also excavate here on an annual basis.

Temporary conservation measures have been undertaken by the Uzbek-French archaeological team at the industrial quarter where the Louvre Museum team plans to restore at least one of the kilns perhaps up to its original form for educational and tourism purposes.

In complete contrast, some of the six mausolea have been restored, and in parts re-built, a reflection of the support of the many pilgrims that visit them. At the Bahouddin Naqshband architectural complex, there are on-going restorations, renovations and rehabilitations. The western façade has been in part rebuilt. The calotte of the dome of the Khâneghâh has been reconstructed as well as the top of its main *eyvân*. The ribs on the dome have also been restored. Within the painted plaster decoration has been completely restored.

The States Parties indicated threats from increased tourism – but that would appear to indicate a scenario in the future as the current numbers are very low only 100-150 annually. More visitors used to come until the closure of the Samarkand to Penjikent road in 2008 by the Uzbek authorities. Penjikent is only 60 km from Samarkand.

Certainly Penjikent would be threatened if visitor numbers rose sharply as the ruins are not organised to allow large number of visitors to visit the ruins without damage to the excavated areas.

The rising groundwater table and soil salinity in Penjikent is barely noticeable but needs to be addressed particularly on the lower levels of the site. If the tulip paintings in the Lower Palace had not been removed, they would have been destroyed.

Currently, there is no pressure for development of the town at Penjikent and so the setting is not under threat. The situation could change rapidly with an improved economy. ICOMOS considers that there is an urgent need to adequate control measures to be put in place. Currently, the buffer zone to the north of the property (the area most likely to be developed) is narrow. This needs to be widened and new protection zones put in place.

It is crucial to protect the skyline towards the Zarafshan River in order that the siting of the city next to the river can be fully appreciated.

The mausolea are in or near urban areas, as is the minaret, and the potential for insensitive development exists (as can be seen from some existing structures) and needs to be addressed.

The main threats identified in the nomination dossier are extreme temperature variations related to the local climatic conditions, and rising groundwater as a result of agricultural activities.

Temperature variations lead to deterioration of masonry walls particularly at low level. Rising groundwater is a problem for the archaeological sites and for two of the mausolea.

These factors are acknowledged and are being addressed.

ICOMOS considers that the main threats to the property are lack of conservation of the archaeological sites and lack of adequate documentation of recent restoration work on some of the mausolea.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

All the maps presented in the nomination dossier lack technical precision and are inadequate to understand how the suggested boundaries relate to topography. None of them have adequate keys and explanations.

Penjikent

The boundaries of the site are limited to the higher elevations of the ruins.

ICOMOS considers that the slope overlooking the citadel on which the outer protecting South wall was built and the northern strip of land containing the Qaynar Atâ Spring and the "Lower Palace" should be within the nominated area.

The buffer zone needs reconsidering particularly to the north in order to provide adequate protection to the immediate setting.

Voykent Minaret

The boundaries are tightly drawn on one side to avoid the new neighbouring hospital building. Likewise the buffer zone avoids this building. ICOMOS considers that it is essential that the area protected around the minaret is extended so as to allow in the long term for improvement to its context and setting.

Poykent

The boundaries suggested for Poykent do not appear to relate clearly to the archaeological remains. Certain parts of the site such as an important caravanserai with some still standing walls, and the remains of a canal, are

outside the current boundaries. Other areas that appear from earlier maps (such as one of 1939) to contain archaeological remains (and verified by the ICOMOS technical evaluation mission) are even excluded from the buffer zone. ICOMOS considers that both boundaries need careful reconsideration and the buffer zone needs to be provided with appropriate protective skyline policies.

For the remaining properties, the buffer zones are largely token areas as they do not encompass the immediate setting of the sites nor offer adequate protection. They appear to have been drawn to avoid areas that might need managing rather than encompassing areas that contribute to the context of the sites and protect the visual relationship with their surroundings.

ICOMOS considers that the boundaries of the nominated property are currently not clear enough, and are not adequate for Penjikent and Poykent in terms of encompassing the full extent of the key archaeological areas; further the boundaries of the buffer zone needed amending and extending for Penjikent and Poykent to ensure protection of their relationship with the landscape, and for the remaining sites in order that they encompass the context and immediate setting of the property.

Ownership

All nominated sites are State owned.

Protection

Tajikistan

Penjikent benefits from the highest possible level of protection in Tajikistan but it remains unclear what area has been designated. It is also unclear as to the legal status of the buffer zone.

The control measures for the buffer zone, particularly to the north of the property need to be clarified and if necessary strengthened with varying zones related to the appropriate height of buildings.

Uzbekistan

Although strong laws are in place to protect cultural heritage and archaeological sites, it is not clear which of the nominated sites benefits from national protection.

ICOMOS considers that clarification is needed on the scope and extent of legal protection in place.

Conservation

One of the key conservation issues is the lack of information on the past and present state of the sites including their conservation history. This defect is particularly problematic for the standing buildings. No architectural drawings have been presented, or old photographs, or plans and sections of the buildings that could help to elucidate the way the structures have evolved and the extent of recent work that has been

undertaken. Nor is there any indication as to the final extent of on-going work or any details of future plans.

Penjikent

The lack of conservation of the exposed archaeological layers is a cause for concern. The necessary preventive measures have not been taken to address the lack of protection or back filling for the areas excavated over the past 60 years. Even the newly exposed areas resulting from the annual archaeological excavations undertaken by the Hermitage Museum are not completely protected by backfilling. The archaeological team back fills previously excavated areas with the material removed from their new excavations.

The management plan suggests that this issue is being addressed: 'at the beginning of each [year] a work plan is approved by the Institute of History, Archaeology ... of the Academy of Sciences. The activities planned include provision of full-time protection of the nominated area ..., regular control process ... to preserve the monument. Annual backfill of completely investigated sites ... Testing of conservation techniques of mud and clay remains of the monument are conducted by the State Hermitage Museum ...'. The reality on the ground does not appear to bear out these statements.

ICOMOS considers that the enormous challenge of addressing these exposed areas need international support. It also considers that permits for further excavations should only be given by the Tajik authorities if the archaeological teams have the resources and expertise necessary to consolidate or back fill newly exposed areas to an agreed programme.

Poykent

The situation in Poykent is similar to that in Penjikent with a lack of conservation and consolidation of most of the early excavations on this extensive archaeological site, although there are a few examples of where recently uncovered structures have been provided with a plaster shelter coat. In contrast to the situation in the Tajik Republic, there are resources available in Uzbekistan for cultural heritage, but these tend to be directed to sites such as Samarkand and those that attract pilgrims.

Mausolea

Intensive restoration work has taken place at the Bahouddin Nakshband's Architectural Complex. Although the sign at the site refers to the recreation of the complex, complete rebuilding does not appear to have been undertaken.

Nevertheless due to the lack of information provided, as mentioned above, the full extent of the work remains unclear, as does the evidence on which it was based.

ICOMOS considers that the lack of conservation of the excavated areas of the archaeological sites is a source of great concern; for the monumental remains where extensive work has been carried out, much more information is needed to allow understanding of the rationale for the major projects already carried out and future planned work.

Management

Management structures and processes, including traditional management processes

International coordination

The overall management of the Tajik-Uzbek Corridor of the Silk Roads is carried out on a transnational level by a coordinating committee in charge of providing the necessary tools and training to the managers and of encouraging research as well as joint activities for the protection and promotion of the sites. ICOMOS notes that how this transnational committee will proceed and what are the means at its disposal remain unclear. Nevertheless, the fact of its existence is a positive sign as it creates a potential permanent communication pathway between the two countries.

Under this transnational coordination, there needs to be coordination at a national level so that sites can understand their part in the overall series and can have dialogue with each other. As there is only one site in Tajikistan, the main need is within Uzbekistan to allow all sites to be able to work within a common framework – and this needs to include the cities of Samarkand and Bukhara – see comment below.

Tajikistan

Penjikent is managed by the Tajik Academy of Science embodied in the Sarazm-Penjikent Archaeological Base.

A Master Plan dating from 1984 regulates the development of the town of Penjikent and its immediate neighbourhoods which include old Penjikent. Since 2011, the Master Plan has been under revision and is due to be submitted to the authorities at the end of 2013. From the plans reviewed by the ICOMOS technical evaluation mission, Old Penjikent is delineated in two parts: the Citadel and the City, but no buffer zone appears to be defined. Thus this revised Master Plan does not coincide with the plans provided in the nomination dossier. If the Master Plan is to support adequately the defined site and its buffer zone (both amended as suggested above), then it appears as if more detail will need to be added to the Master Plan.

Uzbekistan

The main authority for all the sites is the Board of Monuments of the Ministry of Culture who would have responsibility for ensuring Outstanding Universal Value is sustained. This Board undertake major restoration projects. Regional Inspectors are the de facto site managers. Regional and City municipalities are

responsible for planning matters in the sites and their buffer zones.

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

Tajikistan

A management plan with immediate, medium and/or long-term actions and how these should be addressed does not exist for Penjikent. In spite of the current difficult economic situation in Tajikistan, the Tajik government is aware of the weaknesses in Penjikent and has allocated resources to the Penjikent-Sarazm Archaeological Base for the 2014-16 period to address immediate problems.

ICOMOS considers that a basis for further plans could be the extensive *Technico-Economic Study for Development of Archaeological Research, Restoration, Conservation and Museology in the Territory of the Old Penjikent*, produced between 1987 and 1990.

Little information is provided in the nomination dossier on resources. A small yearly budget for salaries at Penjikent is in place and it is clear that the cost of the current (rather inadequate) consolidation work has to be borne by the Hermitage Museum.

On site documentation and presentation of Penjikent in terms of its relationship to the Silk Roads, or to the Penjikent-Samarkand-Poykent Corridor, is non-existent, although there are some signboards and a good small museum constructed in 1992. Penjikent is one of the best sites in Central and Western Asia when it comes to documentation on its archaeological excavations and thus there is ample material to be used as a basis for interpretation. However the infrastructures for facilitating the visit of the site by tourists are rudimentary.

Uzbekistan

Adequate management plans do not exist for sites in Uzbekistan.

Overall there is a need to develop management plans for each of the sites but also to foster a shared approach between sites in terms of restoration programmes, documentation and management in order to strengthen the shared value of the Corridor.

Considerable funds are available for the on-going work at the Bahouddin Naqshband's shrine but no details are available as to who provides these funds.

On site documentation and presentation of the various sites in terms of their relationship to the Silk Roads, or to the Penjikent-Samarkand-Poykent Corridor, is non-existent, although there are some signboards and museums at Poykent, Bahouddin Naqshband, and Qosim Shaikh provide information on the history of the sites. Some have guides but not all.

All the sites are well organized to receive visitors.

Involvement of the local communities

There appears to have been no involvement of local communities in the management of the sites or in the development of the nomination.

ICOMOS considers that the management system for the property is not yet adequate in terms of providing an effective means of managing the sites as a serial nomination with dialogue between the various sites.

6 Monitoring

Monitoring indicators have been developed related to conservation, use, environmental quality, and management. ICOMOS notes that, at the moment, these indicators are general in nature and monitoring regularity in some case very long, up to five years. Nor is it clear who reacts to the findings of the monitoring.

The indicators are also not related to specific attributes of the various sites. More specific indicators should be developed that are linked to documentation so that a long-term record is built up of the property and its condition.

Indicators also need to be related to awareness of the relationship between the sites and the overall Silk Roads and long distance trade.

ICOMOS considers that monitoring needs to be augmented to include indicators that are related to the specific attributes of each site and to knowledge of links between the sites and the overall Silk Roads.

7 Conclusions

The Penjikent-Samarkand-Poykent corridor and its wider hydrological basin was identified in the ICOMOS Silk Roads Thematic Study as the 5th corridor out of 54.

The submission of this trans-boundary nomination from two States Parties is a major milestone in the process of recognising the Silk Roads on the World Heritage List. It is the outcome of more than seven years collaborative work and of many more years of survey and research.

The challenge of how to capture the extraordinary impact of the Silk Roads trade over 1,800 years has been debated by all the States Parties contributing to the wider Silk Roads project during many seminars and meetings. The way forward that emerged, to define corridors which enclosed a series of linked sites reflecting particular facets of the Silk Roads, allowed a series of serial sites to be put forward that would incrementally convey the full impact of the Silk Roads.

This nomination is one of the first two to be nominated, it is anticipated that many others will follow. It is axiomatic that these first sites will provide the foundations of the overall Silk Roads nominations.

ICOMOS considers that it is essential that the various corridors that are nominated clearly reflect certain specific geo-cultural-political facets of the Silk Roads trade in a particular area, as well as conveying the fundamental characteristics of the overall routes. In this nomination, what has not come out particularly clearly in the justification for Outstanding Universal Value are the defining characteristic of this particular corridor of the Silk Roads. These need to be strengthened to set out clearly how and why this corridor might be seen to reflect the particular geo-cultural-political realities of this area, particularly acknowledging the way many sites within the corridor relate to the River Zarafshan, and to the interface between settled and monadic societies.

The potential Outstanding Universal Value needs to be easily understood and readily communicated.

The selection of sites needs to be further considered in relation to what sites are needed to convey the value of the corridor, as currently certain key aspects of the corridor appear to be not reflected. It is the series as a whole that needs to convey Outstanding Universal Value but each of the individual sites needs to contribute to the overall series in a specific and meaningful way. In putting forward the sites as part of a series, it thus needs to be clearly set out how each of the sites contributes to the series as a whole.

Another limiting factor is the serious state of conservation of the excavated sites of Penjikent and Poykent, where decades of excavated areas are being destroyed by the elements, in the absence of back filling or consolidation of the exposed remains. Although at both sites, there are areas still unexplored that in the light of future researches could enhance not only the understanding of the property but also shed light on the cities that thrived on Silk Roads trade, it cannot be justified to excavate these until means and resources have been found to consolidate those already uncovered.

As the series that is being nominated is part of the overall Silk Roads network, it is essential that for the series as a whole and for each of the sites there is a clear understanding of how they relate to the wider Silk Roads network. This understanding needs also to be part of the way the sites are interpreted for visitors and pilgrims.

As the network is called the Penjikent-Samarkand-Poykent corridor, it is necessary to clarify the way Samarkand, although already inscribed on the World Heritage List, contributes toward the Outstanding Universal Value of the proposed series. Bukhara is not mentioned in the title and yet is in the nomination dossier and likewise its status needs to be clarified.

The creation of a trans-national coordinating committee is a major step forward. Nevertheless this needs to be underpinned by mechanisms that would allow sites within the network to collaborate with each other at a national and local level.

8 Recommendations

Recommendations with respect to inscription

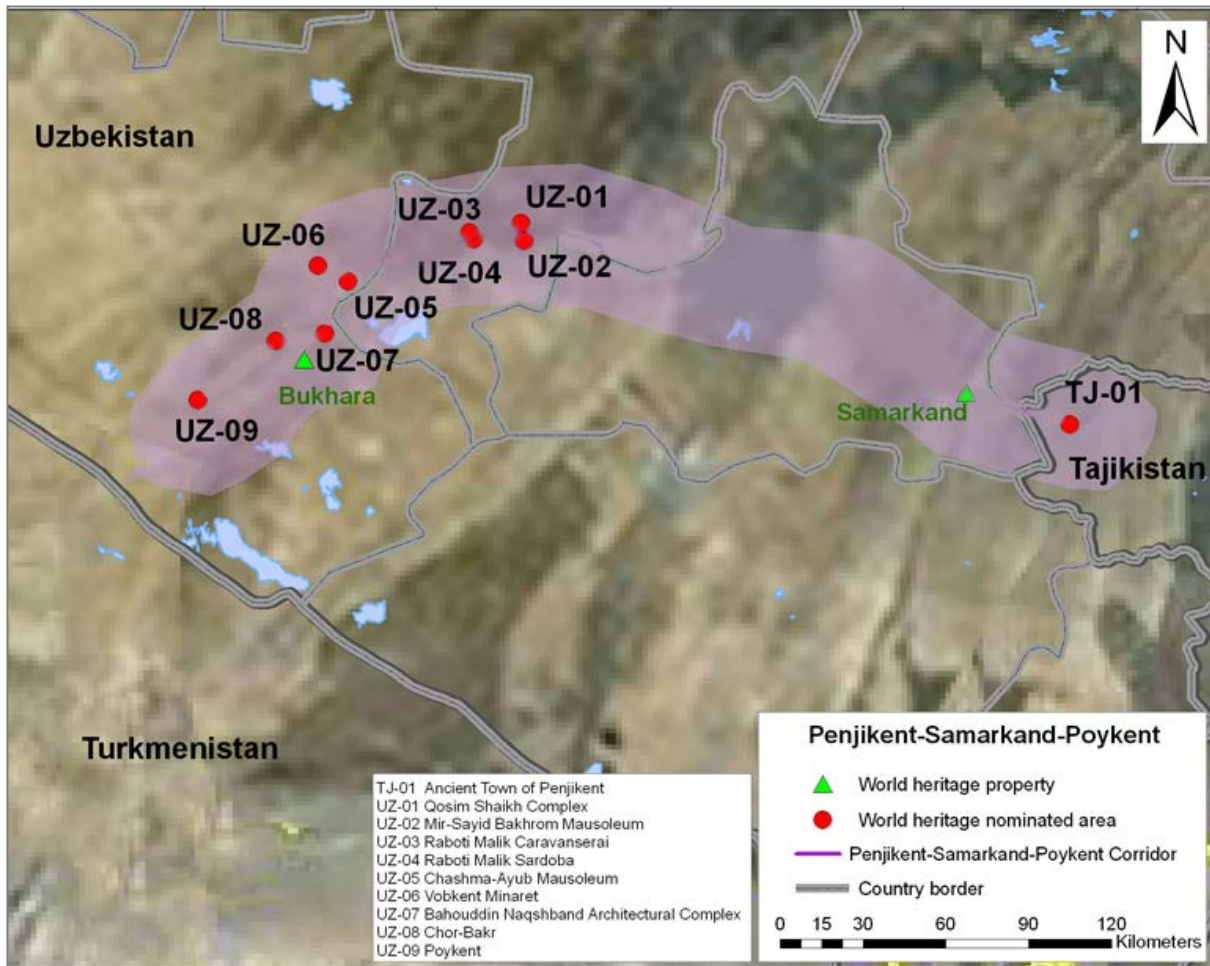
ICOMOS recommends that the examination of the nomination of Silk Roads: Penjikent-Samarkand-Poykent Corridor, Republic of Tajikistan, Republic of Uzbekistan, to the World Heritage List be **deferred** in order to allow the States Parties with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Re-appraise and refine the justification of the Outstanding Universal Value for the overall corridor in terms of the specific way it developed in cultural, political and geographical terms in response to the Silk Roads trade, particularly in relation to the influence of the river Zarafshan and the interface between settled communities and nomadic societies;
- Augment the internal comparative analysis to broaden the selection of sites considered in relation to the re-appraised Outstanding Universal Value;
- Re-consider the selection of sites in order to allow the series to fully reflect the specific characteristics of this Silk Roads Corridor;
- Provide more detailed information on each of the nominated sites in order to allow a fuller understanding of their structures and the way they have developed over time;
- Also provide more detailed and accurate maps that show the precise location of the boundaries of the sites in relation to the topography;
- Reconsider the boundaries of Penjikent and Poykent to allow the sites to include all the key archaeological areas, and extend the buffer zones in order that they provide adequate protection for the context and setting of the sites;
- Develop conservation plans for the consolidation and/or back filling of the highly damaged and vulnerable excavated areas of Penjikent and Poykent and seek means and resources for the implementation of these plans;
- Provide clarity as to how the already inscribed sites of Samarkand and Bukhara contribute to the value of the series, and whether Bukhara should be included in the title;

- Strengthen the management arrangements to allow coordination between the sites in the series on a national basis;
- If necessary, request an ICOMOS Advisory Mission to advise on the implementation of the above recommendations in the framework of the Upstream Processes.

ICOMOS suggests that the international community might be invited to consider support for projects to conserve and consolidate the excavated areas in Penjikent and Poykent that are currently threatened by severe erosion.

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



Map showing the location of the nominated properties



Raboti Malik Caravanserai (Uzbekistan)



Mir-Sayid Bakhrom Mausoleum (Uzbekistan)



Bahouddin Naqshband Architectural complex (Uzbekistan)



Chashma-Ayub Mausoleum (Uzbekistan)



Ancient Town of Penjikent (Tajikistan)



Ancient Town of Penjikent (Tajikistan)

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

Sites of Great Moravia (Czech Republic/Slovak Republic) No 1300

Official name as proposed by the State Party

Sites of Great Moravia: The Slavonic fortified settlement at Mikulčice and the Church of St Margaret of Antioch at Kopčany

Location

South Moravian Region, Hodonín District
Czech Republic
Trnava Region, Skalica District
Slovak Republic

Brief description

The fortified settlement at Mikulčice, an archaeological site, and the standing Church of St Margaret of Antioch at Kopčany, on opposite banks of the River Morava, are said to reflect the early mediaeval Moravian state which flourished briefly for around a hundred years in the 9th-10th century and came to be known later as the Great Moravian Empire. Between the spheres of influence of the much larger Carolingian and Byzantine empires, the Great Moravian Empire is considered to have unified the Slavonic tribes of the central Transdanubian region.

The results of excavations at the two sites are considered to have revealed evidence for the culture, economic, and political impact of this short-lived Slav state on the processes of state formation in early medieval central Europe as well as on the Christianisation of Europe.

The sites are also considered to be linked specifically to a living Cyrillo-Methodian tradition, associated with two brothers Cyril (Constantine) and Methodius of Thessaloniki who were sent as Christian missionaries to Moravia in 863 (although there is no evidence they visited the two sites).

Category of property

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

1 Basic data

Included in the Tentative List

6 July 2001 (Czech Republic)
30 January 2007 (Slovak Republic)

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2013

Background

An earlier nomination submitted in 2007 was withdrawn by the State Party in 2008 after a negative evaluation by ICOMOS.

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 9 to 12 September 2013.

Additional information requested and received from the State Party

None

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The property consists of two sites on either side of the River Morava, which forms the border between the Czech and Slovak Republics.

The two sites – a standing church and the buried excavated remains of a fortified settlement - are put forward to represent the Great Moravian Empire (or Great Moravia) in Central Europe which flourished between 833 and the early 10th century. Its core territory covered both sides of the Moravia River, in present-day Slovakia, the Czech Republic and Austria.

Evidence for the Moravian State comes mainly from later chroniclers and extensive archaeological excavations. The Church of St Margaret is said to be the only extant Moravian building.

Forty-one fortified sites associated with Moravia are known from later historians or from archaeological evidence in Hungary, Austria, Ukraine as well as the Czech and Slovak Republics. 30 out of the 41 sites were on the territory of present-day Slovakia. The only sites which are mentioned in written texts are Nitra, Devin (today in Bratislava), Bratislava, Uzhhorod (Ukraine) and Staré Město. A defining characteristic of these fortified sites of Moravia – not emphasised in the nomination dossier – is that they were in the lowlands, not perched on hilltops. Second, they were centres of power before anything else, and their fortification, as is recognised in the text was not primarily the result of military decisions. Indeed defence could only be partially accomplished on sites in the lower valleys of the Morava and Dyje rivers, a region of swamps and meanders.

These sites were trading centres for a network of routes along which passed salt, skins, oil, spices and other goods.

The precise site of Moravia's capital is not known but the fortified town of Mikulčice is said to be one of the candidates. However, the early rulers would have almost certainly have had several royal estates in different places around their realm.

A key aspect of Great Moravia is said in the nomination dossier to be the way local Slavonic culture and that of the Carolingian west is fused with Byzantine and other Oriental influences.

The Empire reached its greatest extent under King Svatopluk I (871-894). Early in the following century, weakened by frequent wars with the Frankish Empire, Great Moravia was overrun by Magyar invaders. Its lands were divided between Hungary, Bohemia, Poland, and the Holy Roman Empire.

The two components of the property will be considered separately:

- Slavonic Fortified Settlement at Mikulčice
- Church of St Margaret of Antioch at Kopčany

Slavonic Fortified Settlement at Mikulčice

The former fortified settlement lies in the alluvial plain of the river, 3 kilometres southeast of the village of Mikulčice, about halfway between Mikulčice and the Slovak village of Kopčany. Results of over 50 years of archaeological investigations show that it is among the most important sites of the Great Moravian Empire.

Around 30% of the site footprint has been excavated.

The settlement was on a river island. It had a fortified core of about 10 hectares, within which was a fortified castle and a preurbium. The castle has a well-preserved peripheral mound, whereas the outer fortification has been proven archaeologically but is hardly visible.

It is said that the function of the acropolis as the Prince's castle is obvious. The castle appears to include a concentration of church buildings and important residential and production buildings, although it has proved difficult to reconstruct the pattern and layout of the buildings and speculation about courts that served as residential and economic units are said to be merely working hypotheses. No such unit has so far been uncovered in its entirety. Next to the Castle are the largest church (see below) and a burial ground with evidence of a rich assemblage of iron-bound coffins. Above churches I and II, a museum building was constructed in the 1960s.

The preurbium between the castle and the fortifications was purely residential with no sacred buildings or burial

grounds. Evidence has been obtained for urban-type wooden houses.

Outside the fortified area, was the suburbium, a populated area of about 30 hectares, which contained houses, churches and further burial grounds. The suburbium was between the tributaries of the River and as these have moved over time much evidence has disappeared and the internal structure remains unclear. Questions remain as to whether the individual settlements were fortified and whether there were feudal lord's residences next to the churches. Although evidence of iron foundries and forges suggest that a manufacturing area might have existed in the northern suburbium, it is not clear whether a certain proportion of the area was for agricultural production.

Beyond the suburbium – and with no defining landmark in between – were further populated areas of scattered settlements and burial grounds, which extended to the Slovak side of the river and St Margaret's church.

The central part of the overall fortified settlement is now a meadow, surrounded by a compact belt of floodplain forest, which also covers a part of the former settled area of the suburbium.

The most significant excavated remains are more than 10 churches, five in the preurbium and five in the suburbium, a stone-built palace, wooden bridges, three gateways, a wooden "cult" structure, a foundry and a forge, and the fortifications.

The large number of churches is said to distinguish Mikulčice from other Great Moravian fortified settlements. The churches were discovered in the earliest excavations. However the attribution of some of them has been questioned. Although built of mortared stone, this was robbed after the settlement was abandoned and the excavated evidence is in the form of 'negative' trenches. The churches varied in size and complexity from a simple rectangular shape with apse to a triple-aisled basilica with apse. Evidence for non-figurative mural paintings was discovered in two churches. Several were associated with large graveyards of up to 600 graves. So far it has not been possible to say whether the churches existed concurrently or were built sequentially. A reassessment of these early excavations is planned to start in 2013 – see below.

Church of St Margaret of Antioch at Kopčany

The church is sited on a sand dune to the south of the river. A burial ground and settlement are in the northern part of the dune. The existence of the settlement at this site is seen to be related to the protection of the access road to the main Mikulčice fortified settlement. Information on the internal structure of the settlement is so far only of a general nature.

Near the church is a masonry tomb with graves of members of the Great Moravian elite. Evidence from geophysical research suggests that there was a large building to the south of the church.

The church is a small single-nave building, some 11.9 x 5.21 metres, with an irregularly rectangular barrel-vaulted presbytery. The nave is open to the rafters of a new roof. The walls are of thin sandstone slabs from local quarries. The church has two original windows with triangular keystones in the northern wall of the nave. The northern and eastern façades of the church have been restored keeping original plasterwork. The original entry to the nave in the western façade has been reconstructed.

The floor has been removed for archaeological investigation which uncovered an underground tomb near the southern wall of the narthex and numerous graves with a wealth of grave goods – although these are not yet dated.

Inside, current conservation work on three phases of mural wall paintings is revealing evidence of the remains of a primary fresco surface beneath which evidence for construction and mortaring techniques can be determined.

Excavation on the west side of the church has provided evidence for a 9th century date of parts of the structure. Overall the current building (excluding the modern roof) is said to reflect architecture before the year 1000 AD.

The church is surrounded by a churchyard with graves from the 9th to 17th/18th centuries. The location of graves in the 11th–13th centuries is indicated by rough gravestones. The overall size of the burial ground is unknown. The graveyard is currently laid to grass.

The nominated territory includes remnants of a facility for catching wild ducks, established in 1736 by Franz of Lorraine for the Imperial Court in Vienna. The duckery consists of an artificial lake and gamekeeper's cottage. In 2010 further excavations documented a settlement between the duckery and the Church. This suggests that the site possesses deep, complex habitation stratigraphy, reflecting an intensity of occupation and settlement that is not seen on many other known sites of the period.

History and development

The territory of Moravia spread over the lower valley of the River Morava, the south-western part of which is now in Slovakia and the Danubian regions of what is now Austria and western Hungary. To the east was the powerful East Frankish Empire from where Christianity spread to Great Moravia.

The Moravian state was formed when in 833 Prince Mojmir, ruling in the region of the lower valley of the River Moravia in today's Czech Republic, a principality of

Bavaria, succeeded in dominating Prince Pribina with his seat at a fortified settlement in Nitra in today's Slovakia.

Mojmir's successor, Ratislav, was also given his power by Ludwig from Bavaria but subsequently sought to shake off Bavarian influence and that of the Eastern Frankish kingdom in both political and religious matters. He requested the Pope to give Moravia a Bishop and when this request was declined turned to the Eastern Catholic church. Emperor Michael III met this request and two brothers Cyril (Constantine) and Methodius of Thessaloniki were sent as missionaries to Moravia in 863. They developed the Glagolitic script and the Slavonic alphabet, translated religious texts and the bible into the Old Slavonic language and paved the way for a Bishopric. The Slavonic script encouraged the development of Slavic literature and the translation of the civil code which became the first Slavic law code. There is no evidence that the two brothers visited Mikulčice or Kopčany (although they are known to have visited Pohansko, an excavated site in the south-east of the Czech Republic).

The Moravian Empire seemed to have reached its maximum size and influence under the reign of Rastislav's successor, Prince Svatopluk (870–894) who gained territory outside the Frankish State, probably encompassing Cracow. Sources referring to eastward expansion to Zemplin and the Tisza Valley are however incomplete and scarce. Legend suggests that he also annexed Bohemia to Moravia, possibly in a non-military manner, to build a political alliance with a powerful neighbour. It is suggested that Svatopluk was able (like other Christian rulers at that time) to combine the spread of Christianity with territorial expansion.

The wealth of Moravia was built on trade, in amongst other things, salt, leather, silver, oils, and spices, connected to the Amber route from the Baltic to the Mediterranean. It is not known today whether the Mikulčice-Kopčany agglomeration was the main centre of the Great Moravian state: written sources only refer to the "Old City of Rostislav" or "Rostislav's unspeakable fortress".

In 885 Methodius died and the primacy of the Slavonic liturgy ended when Pope Stephen V banned it in Moravia, and Methodius' disciples were driven out of the country. Nine years later Svatopluk also died in 894 and the Moravian Empire began to disintegrate. It was finally destroyed in 906, when Moravian troops were crushed by Hungarian nomadic peoples in a battle somewhere near Nitra in today's Slovakia, a destruction that permanently separated the Western Slavs from the Southern Slavonic tribes.

It is suggested that Moravia provided inspiration for the early state and administrative institutions of the Czech, Polish and Hungarian states, which are, in essence, its successors.

The term Great Moravia was first used by Constantine VII Porphyrogenitos in his work *De Administrando Imperio* of around 950 AD.

The site of Mikulčice functioned fully for a period of around 150 years, with the 9th century being the period of greatest prosperity. After the collapse of the Moravian State, the buildings ceased to fulfil their original functions and were gradually abandoned. People first moved to the edges of the river valley and then from the 13th century the site was deserted. By the 15th century there was only a military base at the river crossing. St Margaret's church continued to be used sporadically until modern times.

After the fall of Moravia, the two sites became parts of two different states.

Archaeological research

Almost all the information about the Moravian state comes from archaeological research at Mikulčice and many other fortified sites within its former boundaries.

At Mikulčice the first archaeological investigations were undertaken in 1954. These were followed by 38 seasons of field research. Most of the material from these extensive excavations is still awaiting systematic processing, analysis and publication. Such work will need to deal in particular with the differing quality of fieldwork undertaken between 1954 and 1992.

ICOMOS notes that although the challenge of processing this material is considerable, there is a significant commitment from the State Party to this task as evidenced by the development of the new research facility at Trapíkovo, adjacent to the site.

A programme of verification of earlier research was started in 2005. Since 2008, a review of the masonry architecture of Mikulčice has been taking place. Starting in 2013, all finds of masonry buildings will be re-examined. It is said that this should back up a new view of Moravian ecclesiastical architecture.

In 2010 a geo-physical survey of the overall site was begun. This should be completed by 2013. There has therefore been progress with survey, documentation, analysis and research since the first nomination was submitted.

A severe fire recently destroyed most of the archives associated with the property.

ICOMOS notes that although the bibliography is extensive it does omit important works such as those in Czech on Pohansko, a site very close to Mikulčice.

3 Justification for inscription, integrity and authenticity

Comparative analysis

Mikulčice and Kopčany are nominated to represent the achievements of the Moravian State, in cultural, economic and religious terms, and the influence it had on the process of state formation in Central Europe. It is logical to nominate these two sites together as a serial nomination, as they are now considered to be part of one Moravian fortified settlement.

The comparative analysis thus needs to consider why Mikulčice and Kopčany, rather than any of the other known fortified centres of Moravia, could be said to convey this representation.

What is missing from the comparative analysis is an understanding of the overall characteristics of the Great Moravian state and the overall range of known sites that it included. Instead the two nominated sites are compared rather in isolation as fortified urban centres with other similarly fortified centres in what was the area covered by Great Moravia and with urban areas elsewhere.

Comparisons are made with each of these sites. The comparative analysis also provides comparisons with agglomerations in Bohemia (Prague Castle, Budeč, Libice and Cidlinou), Poland (Gniezno, Ostrów Lednicki, Poznań, and Krakow), Russia (Kiev – the first State of the Eastern Slavs, Ladoga, Novgorod), Germany (Starigard-Oldenburg, Haithabu), Sweden (Birka), Denmark (Jelling) and Bulgaria (Pliska).

ICOMOS considers that there are some difficulties with these comparisons. First some of the other comparators are of later date (e.g., Prague, Budeč, Libice and Cidlinou), while others of a quite different nature (Jelling, Pliska) and neither groups are relevant.

Perhaps more fundamentally, comparisons with Kiev or Pliska, are based on the stated assumption that the nominated sites are 'the first urbanized seats of the Central European Western Slavs'. This assumption is not really sustained. ICOMOS considers that it would be more appropriate to see the nominated sites as strongholds that were at the same time seats of political power (their organization and layout being dictated by that primary function) and centres of regional and long-distance trade rather than as cities. In which case Haithabu, Birka, and Staraja Ladoga, would be relevant comparators.

Furthermore the one defining characteristic of these sites of Mikulčice and Kopčany is that they are in the lowlands near a river and this has not been recognised within the various comparisons made as some comparators are fortified settlements on hills.

Of all sites compared to Mikulčice-Kopčany, only Zalavár—at the westernmost end of Lake Balaton in Hungary—could offer a similar choice of a particular landscape for the siting of a seat of power. No other site is characterized by the deliberate placing of a stronghold not only in the lowlands, but also in the everglades of a river—an area of swamps and marshy terrain. Nowhere else in Europe is there such a preference for this kind of landscape, a key characteristic of the settlement pattern in Great Moravia, especially in its western regions (in Slovakia, sites such as Pobedim appear at a relatively higher altitude). The issue has implications for the supplying of those large strongholds and their inhabitants with food, given the lack of good agricultural land in the immediate vicinity. That food was collected from satellite settlements and transported to the strongholds raises fundamental questions about the form of social organization responsible for the appearance of the strongholds and of the polity of which they were such a visible hallmark.

In term of comparing the two nominated sites with other Moravian sites in order to understand why the two nominated sites should be seen as representing Great Moravia, comparisons are made with the following other important Moravian centres of Staré Město - Uherské Hradiště, Nitra, Olomouc, Břeclav-Pohansko (in Moravia) and Bratislava or Devín in Slovakia. Located close to Great Moravia's centres is also Zalavár in the valley of the River Zala near Balaton Lake in Hungary. Staré Město – Uherské Hradiště is said to be larger than Mikulčice-Kopčany but only partly fortified and its extent is unknown as it is under later buildings. It has been researched for around 150 years. Tradition associates the nearby monastery of Velehrad with late mediaeval written references to this name. Graves have been 'identified as (probably) belonging to the ruling family of Great Moravia or important church officials'.

For Nitra, the evidence so far gathered is much less than for Mikulčice-Kopčany or Staré Město, as the early levels lie under more recent development. It is however clear that Nitra belonged to the central agglomerations of Great Moravia. It is also one of only two centres (*Nitrava* and Devín, *Dowina*) where Moravia is referred to in written sources.

Rescue excavations at Olomouc are revealing more of the city and its functions but the finds and the investigations await further processing.

At Zalavár excavations have been undertaken since the 1940s. It is said that its historical importance with sacred buildings - including a church still standing and burial grounds – and the state of preservation is similar to the Mikulčice-Kopčany agglomeration. Cyril and Methodius briefly visited the place in 867.

Although Břeclav-Pohansko is said to be the largest and probably best investigated of the Great Moravian fortified sites, it is stated not to have the same political and religious importance as Mikulčice-Kopčany. Pohansko

was also a major centre of Moravia and appears in Carolingian, Byzantine, and Germanic references. Saints Cyril and Methodius are both known to have visited the site and historical records document at least five major military campaigns launched by the Germanic kingdoms against their Moravian rivals at Pohansko. Like Mikulčice there is an acropolis, or inner fortified area, where it is said that the royal or leading lineage lived alongside its stone church, although this use is still debated.

Another two fortified settlements, Devín and Bratislava are also mentioned, but are much smaller than Mikulčice-Kopčany.

In summary, several appear to have been associated with powerful families: Mikulčice, Staré Město – Uherské Hradiště which is said to 'probably belonging to the ruling family', Zalavár which is said to be of similar importance to Mikulčice, and Pohansko where there may have been a palace for members of a royal lineage.

The key difference between Mikulčice and the other settlements of similar size and significance is said to be the fact that it was abandoned and thus not built over with later development – although that is also true for Břeclav-Pohansko.

Although Mikulčice-Kopčany was one of the principle strategic fortresses, princely 'courts' and settlements of Great Moravia, others had similar high-status attribution.

Three sites in the Morava valley could be candidates for a monument or complex which embodies the values in question discussed in section 2 above. They are: the Mikulčice – Kopčany agglomeration, Pohansko (16 km to the southwest) and the Staré Město / Uherské Hradiště complex (40 km to the northeast).

ICOMOS considers that it has not been demonstrated why Mikulčice-Kopčany alone can be said to represent the Moravian State, nor how it can be said to represent the influence that state has had on its successor states and thus ultimately on the boundaries of Eastern Europe.

The overall characteristics of the Moravian State and its component sites have not been clearly and relevantly articulated in a way that would allow a clear understanding of how Mikulčice-Kopčany might be seen as an exceptional reflection on its own. A much greater level of definition is needed in respect of its specific attributes and its particular status among its comparative sites.

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

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:

The Sites of Great Moravia at Mikulčice-Kopčany:

- Is one of the few archaeological sites of abandoned Great Moravian settlements not subsequently built over, that reveals evidence of 9th century state and town formation;
- Through its now mainly buried architectural evidence, provides a unique combination of inherent traditions and habits of the Slavonic population and a broad range of influences from various place of the then known world, transmitted through the Frankish Empire;
- Proves through its church architecture that Great Moravia produced an original and distinct culture;
- Contributed to the Christianisation of Europe in a profound way and is an international symbol of Christianity with essential influence on the current shape of Europe;
- Contributed in an essential way to the recognition of the roots of a highly developed mediaeval culture of the West Slavs;
- Represents a concentrated source of information related to the cultural, economic and political roles of the Great Moravian centres within the process of state formation in Central Europe;
- Includes in the Church of St Margaret at Kopčany the only identified Great Moravian building which still stands.

The justification for Outstanding Universal Value has been amended since the first nomination but it still does not present a convincing case for why these two sites might be seen as outstanding.

Although the extensive archaeological research at Mikulčice-Kopčany and in other contemporary settlements has revealed a wealth of information on the layout of fortified lowland communities in the 9th century, ICOMOS does not consider that the reasons put forward for the sites of Mikulčice-Kopčany being outstanding for their association with a Slavonic population, whose culture was transmitted through the Frankish Empire can be sustained, nor for the way these particular remains of Great Moravia can convey specific symbols of Christianity and state formation, or for links to the roots of Slavic culture.

Great Moravia is interesting from a historical and archaeological point of view, as it is unlike anything in existence at that time either in the Frankish West or the Byzantine (and Bulgar) East (or Southeast). It needs to be understood in contrast to the Frankish world rather than for its associations with it.

The claim that St Margaret's church is the only extant Great Moravian building is contradicted in the nomination dossier where it is stated that the Romanesque chapel of St Peter and Paul at Budeč, was built at the end of the 9th century as indicated by written sources and is the only still standing building from the Great Moravian era in Bohemia.

ICOMOS considers that Mikulčice-Kopčany are interesting settlements within the Great Moravian state with significance for the history of the Middle Ages in Central Europe. The issue is how their specific characteristics might be more appropriately and specifically defined to show how they could be considered as outstanding.

Integrity and authenticity

Integrity

Integrity relates to whether all the attributes that carry outstanding universal value are within the boundaries and on whether these attributes are in themselves intact.

ICOMOS considers that the boundaries of the two sites encompass the key archaeological evidence in Mikulčice and the church and archaeological evidence of its surrounding settlements at Kopčany.

The overall landscape, although fundamentally changed from how it would have looked at the time of the Moravian State, through the straightening and draining of the Morava River during the 1970s, provides open surroundings for the archaeological sites which allow their relationship to be understood.

Both component sites are exceptionally intact in an archaeological sense, with low earthworks defining the former alignments of fortifications and enclosures.

Visual integrity is guaranteed by controls in place for the building and settlements of the surrounding towns and villages, where the height of buildings is limited to two stories (ground floor and first floor).

Authenticity

There is no doubt about the authenticity of the archaeological or built fabric in terms of it all relating to the property. However, there are some difficulties – as acknowledged in the nomination dossier – with the interpretation of the archaeological evidence. The precise use of some of the structures excavated is not always agreed. This uncertainty appears to relate to the differing qualities of fieldwork between 1954 and 1992.

ICOMOS notes that since the first nomination this issue has started to be addressed in places through re-excavation which is facilitating and clarifying reinterpretation of the early phases of excavation work. It is also showing that even upon re-excavation some can still be understood and re-interpreted with confidence using modern scientific methods.

Concern is expressed by ICOMOS with regard to authenticity in relation to a proposal to reconstruct one of the main entrance bridges, within a framework of 'experimental archaeology'.

ICOMOS considers that overall the condition of authenticity is adequate and could be strengthened by current work, and that the condition of integrity has been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), (iv), (v) 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 States Parties on the grounds that the property provides a uniquely preserved example of the way ancient patterns of the former Roman provinces were absorbed and reshaped with impetuses mainly from the Frankish Empire.

The remains of Mikulčice-Kopčany, based on an older Slavonic settlement, are said to be the best visible example of an intense interchange of influences between the territories of the former antique world and the realm of the West Slavs.

It is suggested that the fast growth of these Moravian settlements in the 9th century can be compared to the process of the so-called *incastellamento* in early Mediaeval Europe or with the *melioration terrae* of the High Middle Ages.

ICOMOS considers that these interchanges are difficult to justify.

Such an absorption is not known in the 9th century, even within the territory of the former provinces of the two Pannoniae, which were included into the Carolingian Empire after Charlemagne's victory over the Avars.

Remnants of ancient civilization in the archaeological record of 9th century Moravia could more easily be seen either as the result of simple recycling of building materials from nearby ruins of Roman forts on the Danube frontier (e.g., the Roman bricks found in Staré Město) or imports from the Byzantine Empire (ancient gems).

While individual finds from Mikulčice, especially swords and spurs, have clear Carolingian analogies, there is nothing of the size and quality of those settlements anywhere in the Carolingian Europe that would justify cultural and civilization impetuses mainly from the Frankish Empire.

The association of the massive fortifications, of which Mikulčice is the best known example, with *incastellamento*, is difficult to sustain as this phenomenon is dated after ca. 900, and thus after the Moravian strongholds. Also unlike the medieval fortifications of central Italy, the strongholds of Moravia

were in the lowlands, not perched on hilltops. Second, they were centres of power before anything else, and their fortification was not primarily the result of military decisions. Nor can the establishment of those forts be associated with the *melioratio terrae* of the High Middle Ages, which was essentially a process of colonization and expansion of the settlement on a large scale.

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 is justified by the States Parties on the grounds that Mikulčice-Kopčany reflects the possibilities and political ambitions of the historically attested ruling Great Moravian House of Mojmir and witnesses the state and structure of the civilisation of the West Slavs in the 9th century. The property is also said to offer an extraordinarily complete and almost perfect testimony to important extinct West Slavonic state formation. For almost a century the Great Moravian Empire strongly influenced European politics and after its fall early mediaeval States - such as Bohemia, Hungarian and Poland - continued its traditions. It was Great Moravia and the related Cyrillo-Methodian mission, who gave rise to Slavonic literature and a new script is still in use by many even Non-Slavonic peoples.

ICOMOS does not consider that the strong links between Great Moravia and the 'Western Slavonic states' have been substantiated to suggest it was a Slavic state. There were many more Slavic communities and tribes in the 9th and 10th centuries farther to the West, all the way into the central and northern parts of what is now Germany. "West Slav(on)ic" is a phrase usually employed in reference to language, but next to nothing is known about the language spoken by Moravians in the 9th century. What is known as Old Church Slavonic is based on the dialect spoken in the hinterland of Thessaloniki, the city in the Balkans from which the two brothers, Constantine/Cyril and Methodius hailed, who were later sent to Moravia. There is also no evidence provided for the claim that Great Moravia contributed to "the preservation of Danubian cultural traditions with their Classical Antique roots." There is an historical and cultural chasm of more than four centuries between the disappearance of the Roman structures in the (Middle) Danube region and the rise of Great Moravia.

What is not mentioned is the link between Great Moravia and the Avar Khaganate, which is both historically and archaeologically much more evident.

ICOMOS considers that what has not been demonstrated is how Mikulčice-Kopčany can on its own as a twin site be considered to be exceptional as a reflection of short lived 9th century the Moravian State.

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 States Parties on the grounds that the property is an outstanding example of the development of the first urbanised settlements of the Central European Western Slavs.

Archaeological finds have enabled an accurate reconstruction of the social, economic, and political structure of the 9th century community, thus contributing to the formation and refinement of a model of an important period in the history of Central Europe with the first early mediaeval state and gradually developing urban formations.

St Margaret's church at Kopčany is the only small standing masonry representative of the church architecture of Great Moravia. Mikulčice is also seen to embody the exceptional cultural traditions of early Christianity in Central and South-Eastern Europe.

Overall the property is seen as a model of an important period in the history of early mediaeval state formation and gradually developing urban formations.

ICOMOS considers, as set out above, that Mikulčice-Kopčany cannot really be described as an urban centre. The Moravian strongholds were seats of political power and centres of regional and long-distance trade rather than being urban centres or demonstrating the way urban centres and centralised states evolved.

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 States Parties on the grounds that the property is an outstanding example of an extinct early mediaeval settlement of Western Slavs, including its landscape setting. It provides evidence for the history of a short-lived but highly advanced early mediaeval state from the unification of the Slavonic tribes of the central Transdanubian region in the early 9th century until the beginning of the 10th century, when it was destroyed by the invasion of nomadic tribes from the south-eastern regions of Europe and from Asia.

ICOMOS considers that what has not been demonstrated is how the landscape of the property can

be said to be exceptional, nor how its specific connections with the Western Slavs substantiated.

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 States Parties on the grounds that the property is related to the modern Cyrillo-Methodian cult, based on the conviction of the real stay of St Cyril and Methodius at the time of their mission to Great Moravia.

It is also justified on the basis that the extensive archaeological excavations have allowed the site in public perceptions to become synonymous to Great Moravia, and this in turn has been linked to the 'creation of symbolic values of a couple of modern European states, from the 1950s to the present' and thus to the shaping of present day national cultural identity.

ICOMOS considers that although Saints Cyril and Methodius clearly had a pronounced influence on Moravia, there is no direct evidence of their specific association with Mikulčice-Kopčany.

No direct or tangible evidence is put forward for the way the two sites are linked to modern cults, which are in turn linked to Saints Cyril and Methodius. Nor is it clearly shown how perceptions of Great Moravia or ideas of national cultural identity can be seen as being of outstanding universal significance.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the serial approach of nominating the two sites as one property is justified.

ICOMOS does not consider that the criteria have been justified at this stage.

4 Factors affecting the property

In order to connect the two sites, which are divided by the River Morava, a bridge is planned. The design of this bridge and its location have seen a number of developments and alterations since the first nomination. The changes have been occasioned both by concerns in relation to the visual integrity of the nominated property and environmental considerations. The current proposal for the bridge is focused on a location outside the boundaries of the property, with its use limited to pedestrians and cyclists. ICOMOS considers that subject to adequate impact assessments, the

development of this pedestrian bridge seems to be beneficial.

The nomination dossier reports the activities of the Mir lignite mine at the edge of Mikulčice village. No extension of the mine is foreseen.

The approaches to the small sports aerodrome near Holič in Slovakia impact slightly but any increase in activity will be monitored for adverse impact.

As stated below under *Management*, plans to reconstruct element of the property to enhance understanding of tourists might impact on its authenticity.

In particular, there is a proposal to reconstruct one of the main entrance bridges, within a framework of 'experimental archaeology'.

Visitor numbers are currently low. Around 12,000 paying visitors visit the Mikulčice site and many other enjoy the surroundings without paying; and around 3,000 visit St Margaret's church, where there is no charge.

A proposal to create an 'Archaeological Park' and the requirements to provide visitors with a site-based infrastructure will need to be handled with care, particularly as ICOMOS noted a certain lack of engagement between the research archaeologists and those charged with the presentation and management of the site.

The property is far from industrial agglomerations and is not threatened by emissions or air pollution. Neither of the individual sites are vulnerable to flooding of the river Morava, which was regulated in the last decades.

The property is situated in a moderate climatic zone and serious disturbances by climatic phenomenon or by earthquakes can be excluded.

The property could be damaged by very dry weather that could lower the water table and negate the value of the current meadow and tree cover. Similarly extreme rainfall could have an impact in terms of waterlogged ground. The risk appears to be slight.

ICOMOS considers that the main threats to the property are from reconstruction which needs to be carefully considered.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the property generally encompass the known archaeological sites. At Mikulčice the boundary has been designed to take in the entire enclosed/fortified hilltop settlement and its three known Suburbia: the

Northern Suburbium, the extra-mural settlement of Kostelisko and the 'ritual enclosure'/ Klášteřisko. At Kopčany the boundary encloses the dune upon which the church, 'court', settlement, 'Guard's settlement' and burial evidence are found, and within which the 18th century landscape features are also located.

The buffer zones are generally determined on the basis of various parameters such as topographical relief, the hydrography, the protected areas of nature and wildlife and by the widest extension of the supposed archaeological evidence.

The buffer zone of Kopčany component at its western boundary is virtually coeval with the boundary of the nominated property, even though the land beyond is well protected as a conservation zone and as part of the designated National Monument zone. This boundary should be extended.

ICOMOS considers that the boundaries of the nominated property are adequate and the buffer zone for Mikulčice is adequate while the buffer zone for Kopčany should be extended slightly to the west.

Ownership

Czech Republic

The majority of the property is held by public owners such as the Masaryk Museum at Hodonin (5%), the Region of South Moravia (37%), the Archaeological Institute of the Czech Academy of Sciences (4%), the Czech Republic Forests State Agency (28%), the River Morava Water Management State Agency (5%), and the Forest Agro Company (13%). 8% belongs to private owners. The Czech Republic intends to acquire the privately owned land.

Slovak Republic

The church of St. Margaret of Antioch is owned by the Roman Catholic Vicarage of Kopčany. The area surrounding the church is owned by a number of different parties such as the Roman Catholic Vicarage of Kopčany (24%), the Slovak Water Supplies Management Company (19%), and the Slovak Land Fund (4.5%). 52.5% is owned by individual private owners. Slovakia intends to acquire the privately owned land.

Protection

Czech Republic

The Czech part of the Mikulčice-Kopčany agglomeration enjoys the highest national protection level as a National Cultural Monument as does its buffer zone.

The Regional Authority in Brno is responsible for heritage protection at the local and regional levels, and the Ministry of Culture of the Czech Republic is responsible for the protection at the national level. The professional guarantor of national heritage is the

National Institute for the Protection and the Conservation of Monuments and Sites, which is directly subordinated to the Ministry of Culture.

Slovak Republic

The nominated area represents the most valuable and important part of an archaeological conservation area (Pamiatková zóna Kopčany), which has been designated in 2008 under the Act No. 49/2002 on the protection of Monuments and Historic Sites by the Ministry of Culture of the Slovak Republic. The church enjoys the highest national protection level being listed as a National Cultural Monument. There are two other national monuments – the gamekeeper's lodge and the duckery. However the precise boundaries of the areas designated as National Monument remain unclear.

The Ministry of Culture of the Slovak Republic is responsible for the protection at the national level. The professional guarantor is the Monuments Board of the Slovak Republic. At the regional level, responsibility is the task the regional Monuments Board in Trnava, the Kopčany community and the Municipal Museum in Kopčany.

In summary, the legal protection measures are adequate.

ICOMOS considers that the legal protection in place is adequate, but the scope of protection in the Slovak part needs to be clarified.

Conservation

The property has been the subject of over 50 years of intensive excavation and research. Detailed inventories exist for most of the excavated areas and the recorded finds.

The excavated features have been re-buried. The churches and buildings of Mikulčice are marked out with modern outlines, apart from the original preserved masonry of church Nr. 2 which is sheltered by a museum building. The archaeological layers not excavated in the years between 1950 and 1990 are generally covered with meadows and forest.

There have been no major excavations since the 1990s. The Mikulčice site has 'settled' into its 1950s-70s post-excavation state. The former excavations have been backfilled both completely and discretely.

With the exception of the conservation work on the interior of the Church of St. Margaret at Kopčany, conservation is seen more as a function of allowing material to rest 'in situ' rather than attempting overt conservation actions. These are not warranted in any case as the earthworks are in such low relief (albeit visible) that they, and their sod covering, are quite stable. All conservation work (including small finds) has been, or is proposed to be, linked to presentation and research.

The archaeological sites in the property are protected against ploughing as arable agriculture is not allowed. This ban also extends to the buffer zone of Mikulčice. The buffer zone of St. Margaret's church, until now leased by the Catholic Vicarage as farmland, will soon revert to grassland.

Overall the entire area of the property has been stabilised on a long-term basis.

The conservation measures in place are adequate to protect the archaeological and built evidence.

ICOMOS considers that the conservation of the property and its buffer zone is adequate.

Management

Management structures and processes, including traditional management processes

Czech Republic

The site of Mikulčice is managed and administered by several organisations that each has responsibility for different aspects of work.

A field office of the Archaeological Institute of the Academy of Sciences of the Czech Republic in Brno is located at the site, and is responsible for archaeological surveys and supervision of experts. The Regional office of South Moravia in Brno, Section of Preservation of Historical Heritage is responsible for the on-going maintenance and repairs of the buildings and relics of buildings above the ground level, archaeological survey and research and maintenance and upkeep of greenery growing on the site.

Forest Agro s.r.o. is responsible for forestry aspects of the nominated site, based on Forest Economic plans.

The Masaryk Museum in Hodonín, belonging to the South Moravian Region, manages the care and presentation of the site, including the museum work.

The settlement of Mikulčice is also part of National Nature Reservation "Mikulčický luh" and the Dolní Morava (Lower Moravia) UNESCO Biosphere Reserve. The work connected with nature and landscape preservation is organised by the Region of South Moravia.

For on-going maintenance and conservation, all the various bodies involved appear to have adequate funding. For an upgrading of the museum and exhibitions, funding has been put in place. For further improvement projects, funds are to be applied for from the European Union and other donors.

Slovak Republic

The church of St Margaret is likewise managed by several different organisations. The Monument Board of

the Slovak Republic is responsible for restoration work, archaeological surveys and historic building research. The Monument Board also has overall responsibility for providing scientific advice. The Kopčany community manages the care and presentation of the site with advice from the Monument Board.

Funds for on-going maintenance and conservation have been allocated by the Municipality and the Trnava Region. The Roman Catholic vicarage of Kopčany also contributes and it is anticipated that grants will be applied for from national and European Union sources.

In both parts of the property there is ample access to well trained professional staff.

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

The management framework at both sites is highly developed and effective. The management plan was updated in 2007 and the new 2012-22 plan has already started to be put into effect. In addition, a plan for the 'Archaeological Park Mikulčice - Kopčany' has informed and continues to inform management planning.

An executive steering group has been established. This is the Working Group for the "Archaeological Park Mikulčice - Kopčany" which was established by the Council of the South Moravian Region in 2006 and confirmed by resolutions of the same council in 2010 and 2012.

The members of the Steering Group represent the Regional Authority of the South Moravian Region, Masaryk Museum at Hodonín, Archaeological Institute of the Czech Academy of Science – Field Station at Mikulčice, Regional Authority of the Trnava Region and Municipal Museum at Kopčany. Depending on the matters arising during its work, the Steering Group is able to invite other professionals or representatives of entities concerned (i.e. owners of properties within the nominated property or buffer zones).

The Management Plan includes the need to set out appropriate policies and projects to sustain the sites, to raise awareness of the values, and to improve visitor facilities. It sets out principles to over-arch the management approaches and general objectives covering conservation, management of change, accessibility, and presentation. It also has a section on general proposals for urban design, landscaping, transport, and interpretation. It also contains specific proposals re-presenting the outlines of excavated churches and reconstructing certain aspects.

The reconstruction proposals do, in ICOMOS's view, need careful re-appraisal. They appear to be proposed directly above the archaeological evidence and it is not clear that sufficient evidence exists for reconstructions to be accurate.

The interpretation and presentation of this property for visitor and tourists, albeit at different stages in both component parts, is very effective at both sites because it has been securely researched. However, there is a concern that archaeological team are not adequately engaged with the Working Group for the "Archaeological Park Mikulčice - Kopčany" and may not be centrally involved in all discourse relating to presentation planning at Mikulčice. The Management Plan lacks clear policy in this regard.

ICOMOS considers that policy in respect of placing the archaeological remains at the centre of all management planning should be articulated in the Management Plan. The Institute of Archaeology of Brno should have a more visible and engaged role in the Working Group for the "Archaeological Park Mikulčice - Kopčany".

Currently insufficient use is made of the potential for linking the property with contemporary sites of Pohansko u Břeclev and Stare Město that are located relatively nearby.

A severe fire in 2007 destroyed most of the museum and laboratory facilities at Mikulčice causing a severe loss of documentation. For Mikulčice, here is now a fire response team 8km away, while for Kopčany there is in place a voluntary fire team.

Involvement of the local communities

On the Slovak side, the local community is involved in the presentation of St Margaret's church.

ICOMOS considers that the management regime is adequate.

6 Monitoring

Key indicators have been identified which recognise the special characteristics of this archaeological property. Detailed multi-media monitoring records will be deposited and kept as part of the overall documentation of the property.

ICOMOS considers that the proposed monitoring regime is adequate.

7 Conclusions

Although the Moravian state was comparatively short-lived, it was formative in the political and cultural map of Central Europe. Mikulčice-Kopčany is one of several urban settlements within the Moravian State that have been excavated and contribute to an understanding of its power and influence. This place has the potential to be of significance for the history of the Middle Ages in Central Europe.

The key issue is precisely what does it convey of that history, in terms of influence, on its own or as part of the Moravian state? What is its relationship to other contemporary states and how does it relate to other Moravian sites?

ICOMOS considers that first it is necessary to define more clearly the specific characteristics of Mikulčice-Kopčany as a lowland, riverside settlement that was primarily a trading centre and centre of political power rather than a military stronghold and cannot really be described as a city or urban centre. The way such a centre was supported by its hinterland is relevant in terms of information on settlement structures in its hinterland.

Secondly ICOMOS suggests the relationship between Mikulčice-Kopčany and other Moravian sites needs clarifying in terms of their form and role, particularly Pohansko, a site, which has been claimed as ‘the largest and probably the best-investigated Great Moravian fortified site’.

It is suggested that Moravia was a western Slavic state, or that Mikulčice-Kopčany was the first urbanized seats of the Central European Western Slavs and ICOMOS does not consider that either of these claims can be justified.

Perhaps most fundamentally there needs to be a clearer understanding of what the specific archaeological and landscape remains at Mikulčice-Kopčany reveal about the Moravian state and its relationships with other states in the Region, to show how it brought together many diverse cultural strands from civilizations of medieval Europe—Frankish as well as Byzantine—while at the same time continuing the political and cultural traditions of the Avar Khaganate. It needs to be understood in contrast to the Frankish world rather than for its associations with it.

Since the first nomination, work has begun on re-interpreting the early excavations and on surveys of the wider landscape. Both of these have the potential to contribute substantial new evidence that might provide answers to the questions posed.

ICOMOS considers that an emphasis on what might be called the mythology of the Great Moravian Empire has perhaps obscured the more rigorous historical claims that might be put forward on the basis of considerable recent research and of future research.

8 Recommendations

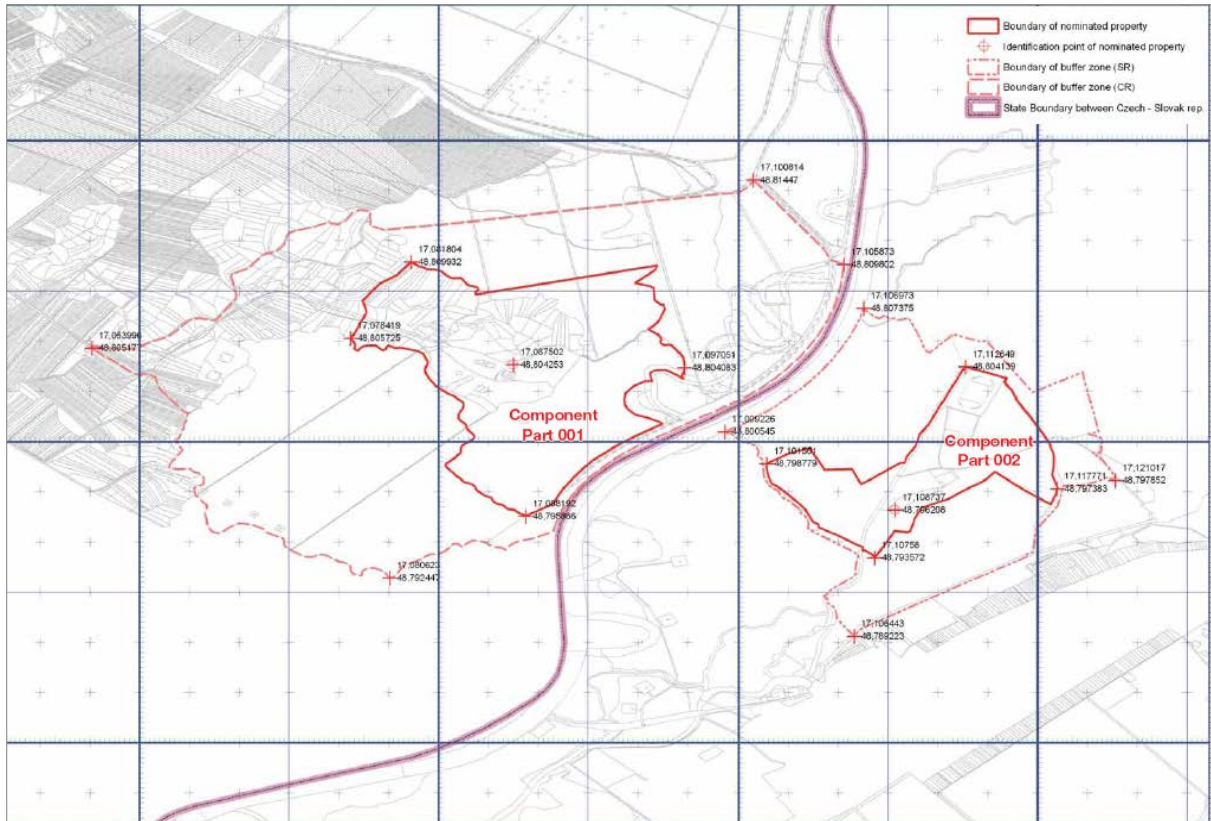
Recommendations with respect to inscription

ICOMOS recommends that the examination of the Sites of Great Moravia: The Slavonic Fortified Settlement at Mikulčice and the Church of St Margaret of Antioch at Kopčany, Czech Republic and Slovak Republic, to the

World Heritage List be **deferred** in order to allow the States parties to:

- Progress the planned re-assessment of excavations and further research into the two sites and their Moravian context;
- If substantial new evidence emerges of Mikulčice-Kopčany and its relationships with settlement structures in its hinterland, with other Moravian sites, and with other States in the region, then consider re-nominating the property to show how the archaeological and landscape remains might be seen to convey in a specific and distinct way the diverse cultural strands from civilizations of medieval Europe -Frankish as well as Byzantine- and the political and cultural traditions of the Avar Khaganate.

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



Map showing the boundaries of the nominated properties



Aerial view of the fortified settlement at Mikulčice



Fortified settlement at Mikulčice, Church III



Aerial view of the Church of St Margaret of Antioch at Kopčany



Church of St Margaret of Antioch, interior view

Decorated cave of Pont d'Arc (France) No 1426

Official name as proposed by the State Party

Decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc, Ardèche

Location

Vallon-Pont-d'Arc, Département de l'Ardèche
Région Rhône-Alpes
France

Brief description

The Grotte Chauvet, located in a limestone plateau of the meandering Ardèche River in southern France, contains the earliest known pictorial drawings, dating back to as early as the Aurignacian period (30,000 to 32,000 BP). The cave was closed off by a rock fall approximately 20,000 years BP and remained sealed until its rediscovery in 1994. The cave contains more than 1,000 drawings, predominantly of animals, including several dangerous species difficult to observe at that time, as well as more than 4,000 inventoried remains of prehistoric fauna.

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*.

1 Basic data

Included in the Tentative List

29 June 2007

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2012

8 November 2012

Background

This is a new nomination, which was initially received by the World Heritage Centre on 31 January 2012. On 10 April 2012 the State Party informed the World Heritage Centre that the atmospheric conditions inside the cave constituted such an eminent threat to its preservation, that the dossier qualified for application of the emergency procedure for nominations defined in paragraphs 161-162 of the *Operational Guidelines*.

The ICOMOS evaluation under the emergency mechanism in 2012 concluded that the climatic conditions

inside the cave remained almost unchanged since 20,000 years and that the excellent and pristine condition of the cave did not face any serious or specific danger. ICOMOS recommended that the nomination dossier should be resubmitted according to the regular timeframe for evaluation. In response, the State Party of France withdrew its nomination under the emergency mechanism and submitted the nomination for the following cycle.

Consultations

ICOMOS has consulted its International Scientific Committee on Rock Art and several independent experts.

Technical Evaluation Mission

An ICOMOS technical field visit to the property was undertaken as part of the emergency evaluation from 8 to 9 May 2012. This technical visit considered only the state of conservation of the Grotte Chauvet. A full technical evaluation mission to the property was undertaken from 11 to 14 May 2013.

Additional information requested and received from the State Party

During the emergency evaluation cycle, a letter was sent to the State Party on 24 April 2012 requesting clarification on the nature and seriousness of the dangers that were considered to provide the need for an emergency nomination. A response was received on 27 April 2012.

A letter was sent to the State Party on 13 December 2013 requesting to consider a change in the name of the property. The State Party responded by letter on 14 February 2014 proposing an alternative name. This name has been considered more appropriate by ICOMOS and has been integrated in this evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The Grotte Chauvet is an underground cave which stretches into several branches along approximately 800m of so-called halls and galleries with a width of up to 59m and a ceiling height of up to 17.9m. The cave has a surface area of approximately 8,500 square meters. It is located to the north and left bank of an ancient meander of the Ardèche River, which the river abandoned after it created the natural arch of Pont d'Arc. The arch of Pont d'Arc and the meander, approximately 25km west of the confluence of the Ardèche and Rhone Rivers, has been classified as a site of natural heritage value in 2013. Together with its immediate surroundings in the limestone plateau, which have been designated as part of the historic monument, the proposed property covers an area of 9 hectares and is surrounded by a buffer zone of 1,362 hectares.

The main opening to the cave is located in the Cirque d'Estre, about 100m above the meander plain and 200m above sea level. This opening had been closed off by a

stone fall dated to approximately 20,000 years BP, which sealed the cave until it was rediscovered and opened for scientific investigation in 1994. The two extreme ends of the cave are very narrow and have downward slopes; in the remaining central sections the floor level of the cave is predominantly even.

The geomorphological features of the cave reveal with rare precision the exact description of its geological evolution before any human use or occupation. For the purpose of research and documentation, the spaces of Grotte Chauvet have been divided and named in a series of halls and galleries, which are – from the entrance towards the north – as follows: Salle d'entrée, Salle Morel, Salle Brunel, Salle des Bauges, Galerie du Cactus, Salle des Panneaux Rouges, Galerie Rouzaud, Salle du Cierge, Salle Hillaire, Salle du Crâne, Galerie des Megacéros, Galerie des Croissons, Salle du Fond and Galerie du Belvédère with the so-called sacristy.

The cave contains archaeological and paleontological evidence, which provides traces of the human use and occupation of the cave, but also to its frequentation by Palaeolithic fauna. More than 4,000 finds have been inventoried, a large majority representing the species *ursus spelaeus* (the cave bear), which may have frequented the cave for hibernation. Other finds point at a variety of other species, both carnivores like the brown bear, wolf, fox, panther, wild cat, hyena and sable, or ungulates such as deer, horses or ibex. The cave floors show further record of a variety of human foot prints.

In addition to the archaeological and paleontological evidence the most remarkable features of the cave are pictorial drawings, which at present are the oldest known human artistic testimonies of this kind. The pictorial representations found in the cave can be divided into three principal techniques. The first and perhaps oldest are engravings, which were implemented either with flint stones or by hand into the soft limestone sections. Secondly one finds red drawings, in particular in the first section of the cave, which were applied in different pigments, predominantly pure hematite or hematite mixed with calcite or ochre. The red drawings are mostly of ground pigment bound with paste and were applied with bare fingers or printed as positive or negative hand prints. The third kind is black drawings, which are exclusively drawn in charcoal. For these representations, pieces of charcoal were used as drawing tools or they were made of grounded charcoal bound by water and applied with help of drawing tools.

Rock art features in Grotte Chauvet combine a variety of anthropomorphic and animal motifs. Over 1,000 figurative images have been inventoried with more expected to be found as some remote areas of the cave have not yet been fully researched and documented for reasons of accessibility and conservation. 55% of the drawings are anthropomorphic representations, a majority of these hands, with the remaining 45% showing zoomorphic imagery. The animal representations are characterized by a majority (67%) of

very dangerous species, the observation and study of which was only possible under life risk for the Aurignacian people. These species include mammoth, wild cats, rhinos, bison, bears, and aurochs. 423 detailed and identifiable animal representations have been counted. Some of these have very naturalistic features, including tendencies towards three-dimensionality and indications of movement or action scenes, such as fights among animals. The range of illustrations appears to include reflections of ethological observations.

Since the drawings are not equally distributed in the cave, it is assumed that the Aurignacian people have deliberately ignored certain spaces. 35% per cent of all animal representations can be found in the comparatively small Salle du Fond at the furthest end of the cave. Researchers suggest that Grotte Chauvet was never inhabited or domestically used but was instead of sacred character and it has been hypothesized that it was used for shamanist ritual practice. This hypothesis could be supported by the increase in density and quality of imagery towards the inner parts of the cave which could be related to concepts of an almost theatrical landscape of gradual ritual initiation towards the inner parts of the cave.

History and development

The Grotte Chauvet was initially formed as a result of three subsequent geological events, the Messinian Salinity Crisis (around 5.7 million years ago), the Pliocene Marine Transgression (5.3 -4.7 millions years BP) and the Alpine Elevation in the Pliocene (up to 3 million years ago). In this historic context, the internal shapes of the cave were created through water infiltration in the cavities during the Pleistocene and Holocene. Deposits and karsts erosions are the testimony of floods and flow-off streams. There are indications that animal frequentation of the cave may have started even earlier than human, at around 40,000 years BP.

The finds and drawings obtained in Grotte Chauvet can be dated to two separate phases of artistic production. The first phase is dated to between 32,000 to 30,000 years BP following C¹⁴ analysis, which may in reality even extend to as early as 36,000 years ago. This is usually referred to as the Aurignacian Period, the first Homo sapiens culture in Europe, which left a large number of paintings and engravings behind. The second phase of later human occupation has been carbon-dated to between 25,000 and 27,000 years BP, in the Gravetian Period, bringing forth the graphics of great mastery which suggest multidimensional effects.

A cliff collapse and resulting landslide around 23,000 years BP sealed the cave by closing off its only access. This rapid and accidental closure of Grotte Chauvet, which was retained until its equally accidental re-discovery in 1994 by Jean-Marie Chauvet, Éliette Brunel-Deschamps and Christian Hillaire, preserved an interior environment exceptionally unchanged since the Upper Paleolithic. Since its discovery and heritage designation just weeks after, immediate measures

towards its best possible preservation were taken. These included a restriction of visitors for reasons of climatic control. Since then several expert meetings have discussed the best possible approach to its study and preservation.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis is divided into three thematic sections, with each considering a variety of sites with relevant comparative features. The first theme compares cultural manifestations of the Aurignacian people, the second is focused on early archaeological and paleontological evidence which provides testimony to cave frequentation and use in the Early Upper Palaeolithic, and the third theme compares rock art ensembles, in particular those already inscribed on the World Heritage List, which are of the earliest or most significant expressions of human artistic ability or which are known as masterpieces of rock art. These three themes will be considered separately.

In the context of cultural manifestations of the Aurignacian people, the comparative analysis considers the cave figurines in the Swabian Jura (Germany), the Aurignacian paintings in the cave of Fumane (Italy), the Peña de Candamo Cave, inscribed on the World Heritage List as part of the serial nomination of the Cave of Altamira and Palaeolithic Cave Art of Northern Spain, (1985, 2008, (i), (iii)), the cave of La Clotilde (Spain), as well as several others, in particular in France.

ICOMOS considers that the Grotte Chauvet illustrates a far richer quantity and quality of cultural manifestations of the Aurignacian people than any other site that is compared. Several of the other Aurignacian sites do not include naturalistic drawings and are hardly comparable with the quality of rock art and variety of motifs presented in Grotte Chauvet, which provide a unique insight into the cultural traditions of the time.

The comparative analysis of caves which preserve rich archaeological and paleontological evidence for the understanding of cave frequentation and use in the Upper Palaeolithic compares the Cave of Lascaux, inscribed as part of the Prehistoric Sites and Decorated Caves of the Vézère Valley, France (1979, (i), (iii)), the cave of Foz Côa, Portugal, inscribed as part of the Prehistoric Rock Art Sites in the Côa Valley and Siega Verde, Portugal (1998, 2010, (i), (iii)), the cave of Altamira, Spain, inscribed as the Cave of Altamira and the Paleolithic Cave Art in Northern Spain, (1985, 2008, (i), (iii)), and a number of other well selected examples.

ICOMOS considers that this part of the comparative analysis has illustrated that the Grotte Chauvet contains the oldest and at the same time largest variety of zoomorphic representations in the drawings, which are of exceptional quality and variety in terms of their

depiction of species, in particular dangerous species. It has equally shown that the amount of archaeological and paleontological vestiges found in Grotte Chauvet provides clearer evidence to the frequentation of caves in the Upper Palaeolithic, than comparable finds in other caves, including those already inscribed on the World Heritage List.

In the third section of the comparative analysis, the "masterpieces" of rock art are compared with regard to their age and the aesthetic quality of drawings. Here, Grotte Chauvet is compared to Tassili n'Ajjer, Algeria (1982, (i), (iii), (vii), (viii)), Tsodilo, Botswana (2001, (i), (iii), (vi)), Kakadu National Park, Australia (1981, 1987, 1992, (i), (vi), (vii), (ix), (x)), Kimberley, Australia, again to Lascaux, Foz Côa and Altamira (see above), the Rock Carvings in Tanum, Sweden (1994, (i), (iii), (iv)) and the Rock-Paintings of the Sierra de San Francisco, Mexico (1993, (i), (iii)).

ICOMOS considers that the comparative analysis of the "masterpieces" of rock art could have been extended by considering the rock art of Cape York, Australia, which also contains very early evidence of pictorial drawings. The comparison available however has illustrated that the rock drawings in Grotte Chauvet are the oldest carbon-dated pictorial drawings known at present and, given their early creation, have very high artistic and aesthetic qualities, which allow for their consideration among the masterpieces of global rock art.

ICOMOS further notes that the 2002 ICOMOS global thematic study of rock art sites noted the strong potential of Grotte Chauvet for World Heritage Listing.

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:

- Grotte Chauvet contains the earliest and best preserved expressions of artistic creation of the Aurignacian people, which are also the earliest known figurative drawings in the world.
- The large number of over 1,000 drawings covering over 8,500 square meters, as well as their high artistic and aesthetic quality, make Grotte Chauvet an exceptional testimony of prehistoric cave art.
- The zoomorphic drawings in Grotte Chauvet illustrate an unusual selection of animals including very dangerous species, which were difficult to observe or approach. Some of these are uniquely illustrated in Grotte Chauvet.

ICOMOS considers that this justification is appropriate because Grotte Chauvet contains not only an unusually large collection of drawings of high artistic and aesthetic

quality, but also at present the earliest known human figurative drawings, which have been dated on the basis of C¹⁴ analysis to 32,000 to 30,000 years BP. In addition, its state of preservation is exceptional as a result of its concealment over 23 millennia.

Integrity and authenticity

Integrity

The nominated property comprises the entire Grotte Chauvet and further includes the structurally relevant parts of the limestone plateau around the cave as well as its entrance situation and immediate surroundings. These combine all the elements of its Outstanding Universal Value as well as the layers above, which are an important component for the protection of the cave features.

The current entrance restriction and air ventilation, which was maintained in the exact characteristics of the time of discovery, ensures the integrity of the property and averts potential dangers of human impact. The management of the property, and in particular its strict access limitations and the strong emphasis on conservation, limit the risk of deterioration to the minimum possible.

Authenticity

The authenticity of the property is evident and based on its pristine condition, sealed off for 23,000 years and carefully treated and access-restricted since its rediscovery. The dating of the finds and drawings has been confirmed by C¹⁴ analysis as between 32,000 and 30,000 years BP and is agreed upon by the majority of the scientific community.

Thanks to its current access policy, the property remained entirely authentic following its rediscovery. It is obvious that the rock art as well as the archaeological and paleontological vestiges are almost free of human impact or alterations. The only modification is the installation of completely-reversible, stainless steel bridging elements to allow access to parts of the cave whilst preventing disturbance of floor traces or finds. ICOMOS therefore considers that the condition of authenticity is met in an exemplary manner.

In conclusion, 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) and (iii).

Criterion (i): *represent a masterpiece of human creative genius;*

This criterion is justified by the State Party on the grounds that Grotte Chauvet contains the first known expressions of human artistic genius and more than 1000 drawings of anthropomorphic and zoomorphic motifs of exceptional aesthetic quality. These drawings are unique in the range of species represented and the variety of techniques applied, including illustration of

three-dimensionality and suggested movement, and have as such become a reference for the understanding of Palaeolithic artistic capacity and rock art.

ICOMOS considers that the property is a remarkable testimony of the earliest human, artistic expression and it contains a large variety of animal drawings in different techniques and of high quality, which illustrate the creative genius of the Aurignacian artists. ICOMOS further notes that the artistic quality is underlined by the skilful use of colours, the combinations of paint and engravings, the precision in anatomical representation and the ability of the artists to give an impression of volumes, movements and ethology.

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 iconographic representations in the natural environment of Grotte Chauvet provide a unique testimony to the development of the artistic traditions of the Aurignacian people. The archaeological, paleontological and artistic evidence in Grotte Chauvet illustrates like no other cave of the Early Upper Paleolithic period the frequentation and use of caves, including cultural and ritual practices of the time.

ICOMOS considers that the cave provides an exceptional testimony to the frequentation and use of caves by the Palaeolithic fauna, and also provides testimony to ritual cave usage of the Aurignacian people. However, it has limited capacity to provide testimony to other forms of cave usage, in particular cave habitation at the time, and therefore cannot be considered a more general testimony for cave usage.

ICOMOS further considers that Grotte Chauvet bears a unique and exceptionally well-preserved testimony to the cultural and artistic tradition of the Aurignacian people and to the early development of artistic human activity in general. In this context, the fact that the cave was sealed for more than 20 millennia makes it an unparalleled testimony, which has transmitted this artistic masterpiece without disturbance.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the conditions of integrity and authenticity have been met and the nominated property meets criteria (i) and (iii).

Description of the attributes

The attributes of Outstanding Universal Value comprise Grotte Chauvet's geomorphologic features, as well as its archaeological and paleontological evidence. These provide traces to the early human and animal use of the cave, as do the highly significant pictorial drawings

which comprise both human and animal depictions, made with different painting or charcoal drawing techniques. The more than 1,000 rock art features inventoried today may not yet represent the complete artistic creation or human evidence to be found in Grotte Chauvet, and further features to be discovered will surely contribute to the Outstanding Universal Value.

4 Factors affecting the property

Key factors to the long term preservation of the Palaeolithic paintings and drawings in natural pigments only bound by water, are the environmental and in particular climatic conditions inside the cave. The exceptional state of preservation of these early paintings is a result of the extremely stable interior climate over millennia as well as the absence of natural damaging processes, such as physical or chemical erosion.

Any changes in relative humidity and the air composition inside the cave may have severe impacts on the condition of the drawings and paintings. It is due to this risk that the cave will not be open to the general public, and that future visits of experts, researchers and conservators will need to be restricted to the minimum necessary. Even expert visitors are not permitted to come into close or direct contact with the walls or floor of the cave to prevent physical or chemical damages. Environmental studies of the climatic changes in the cave over the past years have led to a redesign for the cave opening aimed at allowing for better natural ventilation to contribute to a stabilization of the cave microclimate.

Grotte Chauvet is unlikely to be affected by urban development pressures. The closest settlement is kilometres away and the region does not seem to be affected by strong population growth. Although in theory the cave could be negatively affected by extractive, agricultural, industrial and recreational activities, these risks seem contained following the extension of the classification of the property's surroundings as the natural heritage site of *la Combe d'Arc* in January 2013. The legal protection prohibits any construction, limits human activities and prevents any action that could affect the natural filtration of the site.

Potential natural hazards are limited and the cave has not been affected by natural disasters since the landslide which caused its closure. The seismic risk in the Department of l'Ardèche is negligible. Previous floods have occurred in the region but never reached anywhere close to the elevation of the cave and landslides have nowadays become far less likely. Nevertheless, any ground water saturations in or below the limestone massive which may cause future destabilizations are carefully monitored.

ICOMOS considers that the main threats to the property are environmental, in particular climate changes inside the cave.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The limit of the property can be expressed at two different levels, subterranean and on the land surface. At the subterranean level, the extension corresponds to the complete length and height of the cave and its various galleries. The area comprises ca. 8,500 square meters and galleries of up to 400 meters in individual length.

Since the property is located below more than 20 meters of soil, the property also includes the vertical soil layers above and to the sides of the cave which may affect its structural stability. The State Party acquired around 9 hectares of land surface above the cave to ensure strict conservation policies for a surface projection amounting to ten times the size of the cave itself. ICOMOS considers it a correct decision to include these larger areas into the property boundaries given the immediate structural interdependence with the subterranean cavity of Grotte Chauvet. ICOMOS hence considers that the property boundaries are of appropriate size.

The buffer zone of Grotte Chauvet covers 1,362 hectares, and corresponds to the classified natural heritage site of *la Combe d'Arc*. It includes not only the entire rain catchment areas that may affect ground water streams around Grotte Chauvet but also the complete surrounding hydrological basin. ICOMOS considers that the buffer zone is well selected, provides adequate protection and allows the continued controlling of all environmental conditions.

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

Ownership

Following recent land acquisition from private owners, the complete property is now in state ownership and administrated by the Ministry of Culture, represented by the Regional Office for cultural affairs of Rhône-Alpes. The buffer zone remains in partially private and partially public ownership.

Protection

The Grotte Chauvet is protected at the highest national level as a historic monument, a protection status which was attributed merely weeks after its re-discovery in early 1995. This legal protection extends to the related ground surface of 9 hectares and corresponds to the boundaries of the nominated property.

Likewise the buffer zone benefits since early 2013 from the highest possible national protection based on natural characteristics. The buffer zone in addition benefits from previously-issued special regulations concerning the protection of biotopes (of 1990 and 2007) and as a special conservation zone under Natura 2000.

ICOMOS considers that the protection of both property and buffer zone is of adequate status and is effective in its implementation of the regulatory framework. It should be retained in its current status and extension. Any deletion or alteration decreasing the protective status should be prevented and modifications of the nominated area should only be allowed if increase of the territory seems necessary.

ICOMOS considers that the legal protection in place and the protective measures implemented for the property and the buffer zone are adequate.

Conservation

When the Grotte Chauvet was rediscovered in 1994 it represented such an exceptional State of Conservation, that the responsible authorities took almost immediate and the strictest possible measures for its future conservation. Conservation measures have not been applied to the fragile paintings, drawings or other Palaeolithic remains but are focused on preventive conservation, in particular of the environmental and climatic conditions of the cave. Most efforts are directed at reducing all kind of risks that could potentially change the climatic conditions, including but not limited to human access.

Several monitoring systems have been installed in Grotte Chauvet which form an integral part of the preventive conservation efforts. These include 24-hour surveillance of the cave entrance to prevent unauthorized human access. The responsible authorities equally installed a permanent system recording internal environmental parameters, such as relative humidity, temperature, Radon concentration and CO₂ levels. The preventive conservation efforts are supervised by an expert conservator in the Rhône-Alpes regional directorate for Archaeology.

No active conservation has been carried out in Grotte Chauvet and it is intended to retain all paintings and drawings in the fragile but pristine condition in which they were discovered. The only change which occurred after the cave's rediscovery was the excavation works undertaken at the cave entrance and the adjoined narrow gallery, to allow for human access. A gate was introduced to close the cave to unauthorized visitors. Later the gate was changed and the entrance was opened a little further to prevent cave climate disruptions by providing the same amount of ventilation and air exchange that must have existed before the cave's rediscovery.

Inside the cave a new stainless steel walkway of 60cm width and 350meters length was installed but remains completely reversible. It allows researchers to transit the cave galleries without risk of causing damages to the delicate remains on the cave floor and walls. Other additional walkways produced of anodized aluminium and titanium are flexibly-installed in areas of research focus. The climatic recording devices inside the cave are all installed against this walkway frame and not directly attached to the cave walls. These are categorically protected from any human impact, including during the annual research season.

Researchers entering the cave are given full-cover protective clothing – limiting the introduction of alien substances into the cave – as well as footwear specifically dedicated to the cave visits. The team of researchers is in the process of developing new strategies for the study of rock art which aims at allowing the maximum scientific knowledge to be gathered within minimum access time and hence minimum impact to the cave environment. Previous scientific seasons have allowed for the compilation of an inventory of approximately 4,000 archaeological and paleontological vestiges (mostly bones) and approximately 1,000 figurative drawings and paintings. As new discoveries are made during every season these inventories are constantly expanded.

ICOMOS considers that the vestiges and rock drawings in Grotte Chauvet are exceptionally well preserved and that the State Party has managed to successfully control the climate in the cave, which remains basically unchanged since 20,000 years, including its CO₂ and Radon concentrations. The fact that the measured values of Radon and CO₂ are dangerous to human health in case of long-term exposure, constitutes an additional aspect of climatic protection as it will limit researchers' access not only by means of legal but also health restrictions.

ICOMOS considers that the state of conservation of Grotte Chauvet is exceptionally pristine. ICOMOS further considers that the preventive conservation mechanisms in place are adequate and supports the policy that no direct conservation interventions are envisaged.

Management

Management structures and processes, including traditional management processes

The management system rests on the cooperative arrangements between national, regional and local institutions concerned with management processes affecting the Grotte Chauvet. This process is guided by the Ministry of Culture, which is not only the property owner but also the key responsible agency for the conservation and management of the cave. The ministry has created three full-time positions dedicated to the conservation and management of the property. An overarching management framework, the Comité de gestion, is responsible for the implementation of the management plan. The State Party should however pay specific attention to ensure that the large number of stakeholders involved in the management of the property will not slow down its functioning.

A number of cooperation projects with and by other institutions were formed to support the management efforts. The Rhône-Alpes region is a key partner participating in the Grand Projet Grotte Chauvet (Grand Projet de Rhône-Alpes "Grotte Chauvet"), which is dedicated to the management of the cave in the wider context of regional factors related to development, transport, cultural activities and tourism. The Département

de l'Ardèche also participated in these efforts with its resources.

Only months after the re-discovery of Grotte Chauvet it became obvious that the cave would never be opened to the public. Following wider discussions on possible alternatives for interpretation and presentation, the idea of a facsimile reconstruction emerged and the Grand Projet Espace de Restitution de la Grotte Chauvet (ERGC) was established. The aim of this project lies in the creation of a facsimile reconstruction of the cave and its paintings and drawings, with a discovery and interpretation area to attract visitors. This shall be at a distance which excludes any potential impact on the Grotte Chauvet and will be located to its north outside the buffer zone. ICOMOS considers that the management arrangements for the Grotte Chauvet, its buffer zone and the future facsimile visitor centre are adequate in their respective focus.

It should be highlighted that apart from this initiative to allow for better public access to a representation of the cave, the management is strongly focused on preventive conservation and research. Both areas seem adequately equipped with financial resources and while conservation is coordinated by ministry staff members, trained in archaeology, conservation and heritage curatorship, the continuous investigation support has been tendered and is undertaken by expert consultants.

To prevent the key risk of climatic changes in the cave, human access is strictly controlled and, apart from the researchers, access permission can only be granted by the curator and the prefecture of the responsible department. According to the nomination dossier less than 200 people visit the cave annually, a number which in ICOMOS' view should under no circumstances be exceeded.

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

The management plan is based on five strategic objectives emphasizing the protection, conservation and research of Grotte Chauvet, the administration of surrounding processes in view of holistic World Heritage protection and the promotion of the Grand projet Grotte Chauvet-Pont d'Arc. The plan further elaborates strategic management activities including concrete actions to be implemented between 2012 and 2016. The actions are presented with approximate timeframes, financial requirements and performance indicators which make the management plan a precise working tool for the forthcoming years.

The construction and opening of the comprehensive facsimile and interpretation centre of Grotte Chauvet features prominently in several strategies of the management plan. Intended as a visitor attraction which allows for public experience of a Grotte Chauvet representation, the planned complex combines a cave facsimile, a discovery and interpretation area and a variety

of visitor services. The location was selected to the north of the buffer zone and will not increase visitor movements in the vicinity of Grotte Chauvet. The agreement of all professional and political stakeholders to channel visitor flows and marketing activities towards a facsimile rather than attempting to exploit the property, and the retention of strict access limits to Grotte Chauvet is commendable.

Apart from interpretation and presentation, several other management tools are intended to be improved. The Schéma de cohérence territoriale (SCOT), an urban planning and management tool, is planned to be applied to this rural area. A fire risk detection and prevention assessment is currently being undertaken, and water and water quality management, which form an essential factor in the property's environment, are considered. An accessibility plan restricting access and movement not only in but also around the cave is also included.

Involvement of the local communities

To improve the involvement of the local community, citizen workshops were undertaken in the region of Rhône-Alpes. They encouraged the local community to participate in the planning and implementation of the Grand Projet Espace de Restitution de la Grotte Chauvet (ERGC) but also raised awareness of the management requirements within the buffer zone and natural heritage site of *la Combe d'Arc*. These workshops are amply documented and have brought forth preference indications for activity fields suggested by community representatives.

ICOMOS considers that the current management processes and cooperation work effectively and that the elaborate management plan is a helpful planning tool under implementation. The indicators provided will allow for full quality assurance after the first cycle of implementation in 2016, and the management plan will have to be adjusted for future management processes, past its current validity.

ICOMOS considers that the management system for the property is adequate and that the management plan provides a good basis for the implementation of specific action plans and protection strategies.

6 Monitoring

Environmental and climatic monitoring in Grotte Chauvet is continuous, based on permanently-installed devices which are adjoined to the walkway structures inside the cave. Through these, the conditions of the cave can be observed and controlled despite the strict access prohibition which would otherwise make regular monitoring activities difficult. The data generated is observed and interpreted by two specialist laboratories.

The technical sensors continuously measure the humidity, temperature and hydrological conditions as well as CO₂ and Radon concentrations in the air. In addition to this data, researchers conduct annual inspections of the

microbiological situation. The responsible authorities further document the visitor numbers per year, attempting to keep them as low as possible.

Monitoring of the effectiveness of the management system will be carried out based on the indicators attributed to the different activities in the management plan. These combine process and result-based indicators aimed at ensuring that actions are completed within the prospected time frames but also affirming that these actions illustrate the envisaged impacts and results.

ICOMOS considers that the permanent monitoring of the cave is of high importance and that the annual monitoring procedures and indicators for management quality assurance are satisfactory.

7 Conclusions

ICOMOS considers that Grotte Chauvet is an exceptional testimony to the earliest-known creative production of the Aurignacian people, which illustrates Outstanding Universal Value. The great potential for Outstanding Universal Value had already been highlighted in the 2002 ICOMOS Global thematic study of rock art sites and has been fully demonstrated in the nomination dossier.

Grotte Chauvet does not only contain an unusually large collection of paintings and drawings of exceptional artistic and aesthetic quality, it is also the earliest known example of human figurative drawings, based on its C¹⁴ analysis dating to 32,000 to 30,000 years BP. In addition, its state of preservation and authenticity is exceptional as a result of its concealment over 23 millennia. Annual research inside the cave allowed for the compilation of an inventory of 4,000 archaeological and paleontological vestiges and approximately 1,000 figurative drawings. These numbers continue to increase as new discoveries are made each season.

Conservation attempts are exemplary in their strong focus on preventive conservation. No additive conservation measures have been applied to the fragile paintings and ICOMOS commends this approach of no intervention. Most efforts are directed at reducing all kinds of risks that could potentially change the climatic conditions, including but not limited to human access.

To ensure an adequate property size and its long-term legal protection, the State Party acquired 9 hectares of land surface above the cave, which correspond to the extension of the property. ICOMOS considers that this larger surface area constitutes an essential element of the protection approach. ICOMOS agrees with the property and buffer zone boundaries suggested and confirms their adequacy for the property protection.

The Management System is based on partnership of the national, regional and local authorities which respectively contribute human and financial resources. It seems clear that the cooperation follows agreed upon and shared objectives. A number of these are outlined in the elaborate management plan which further includes management activities as well as concrete actions to be implemented between 2012 and 2016. The actions are presented with approximate timeframes, financial requirements and performance indicators which make the management plan a precise working tool for the forthcoming years.

ICOMOS considers that the property fulfils all requirements for World Heritage listing by demonstrating Outstanding Universal Value, including the conditions of integrity and authenticity, and by having set up adequate protection and management standards. The key emphasis in the years to come will be to keep the status quo in terms of climatic conditions in the cave, but also rigor of management and protection mechanisms, and to provide an interpretation facility to interested visitors.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc, Ardèche France, be inscribed on the World Heritage List on the basis of **criteria (i) and (iii)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc is located in a limestone plateau of the meandering Ardèche River in southern France, and extends to an area of approximately 8,500 square meters. It contains the earliest known pictorial drawings, carbon-dated to as early as the Aurignacian period (30,000 to 32,000 BP). The cave was closed off by a rock fall approximately 20,000 years BP and remained sealed until its rediscovery in 1994. It contains more than 1,000 drawings, predominantly of animals, including several dangerous species, as well as a large number of archaeological and Palaeolithic vestiges.

The cave contains the best-preserved expressions of artistic creation of the Aurignacian people, constituting an exceptional testimony of prehistoric cave art. In addition to the anthropomorphic depictions, the zoomorphic drawings illustrate an unusual selection of animals, which were difficult to observe or approach at the time. Some of these are uniquely illustrated in Grotte Chauvet. As a result of the extremely stable interior climate over millennia, as well as the absence of natural damaging processes, the drawings and paintings have been preserved in a pristine state of conservation and in exceptional completeness.

Criterion (i): The decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc contains the first known expressions of human artistic genius and more than 1,000 drawings of anthropomorphic and zoomorphic motifs of exceptional aesthetic quality have been inventoried. These form a remarkable expression of early human artistic creation of grand excellence and variety, both in motifs and in techniques. The artistic quality is underlined by the skilful use of colours, combinations of paint and engravings, the precision in anatomical representation and the ability to give an impression of volumes and movements.

Criterion (iii): The decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc bears a unique and exceptionally well-preserved testimony to the cultural and artistic tradition of the Aurignacian people and to the early development of creative human activity in general. The cave's seclusion for more than 20 millennia has transmitted an unparalleled testimony of early Aurignacian art, free of post-Aurignacian human intervention or disturbances. The archaeological and paleontological evidence in the cave illustrates like no other cave of the Early Upper Palaeolithic period, the frequentation of caves for cultural and ritual practices.

Integrity

The nominated property comprises the entire subterranean space of the cave of approximately 8,500 square meters and all structurally relevant parts of the limestone plateau above the cave as well as its entrance situation and immediate surroundings. These spaces contain all the attributes of Outstanding Universal Value and the property is of adequate size. Strict preventive conservation policies including access restrictions have allowed for the maintenance of an almost identical situation to the time of discovery. These access restrictions and the continuous monitoring of the climatic conditions will be key factors for the preservation of integrity of the property and for averting potential dangers of human impact.

Authenticity

The authenticity of the property can be demonstrated by its pristine condition and state of conservation, having been sealed off for 23,000 years and carefully treated and access-restricted since its rediscovery. The dating of the finds and drawings has been confirmed by C¹⁴ analysis as between 32,000 and 30,000 years BP, and the materials, designs, drawing techniques and traces of workmanship date back to this time. The rock art as well as the archaeological and paleontological vestiges are free of human impact or alterations. The only modification is the installation of completely-reversible, stainless steel bridging elements to allow for access to parts of the cave whilst preventing disturbance of floor traces or finds.

Management and protection requirements

The decorated cave of Pont d'Arc, known as Grotte Chauvet-Pont d'Arc is protected at the highest national

level as a historic monument. Likewise, the buffer zone benefits from the highest level of national protection since early 2013. The buffer zone accordingly will not permit future development.

The focus of management is the implementation of a preventive conservation strategy based on constant monitoring and non-intervention. Several monitoring systems have been installed in the cave which form an integral part of these preventive conservation efforts. Any changes in relative humidity and/or the air composition inside the cave may have severe effects on the condition of the drawings and paintings. It is due to this risk that the cave will not be open to the general public, but also that future visits of experts, researchers and conservators will need to be restricted to the absolute minimum necessary. Despite the delicateness of paintings and drawings, no conservation activities have been carried out in the cave and it is intended to retain all paintings and drawings in the fragile but pristine condition in which they were discovered.

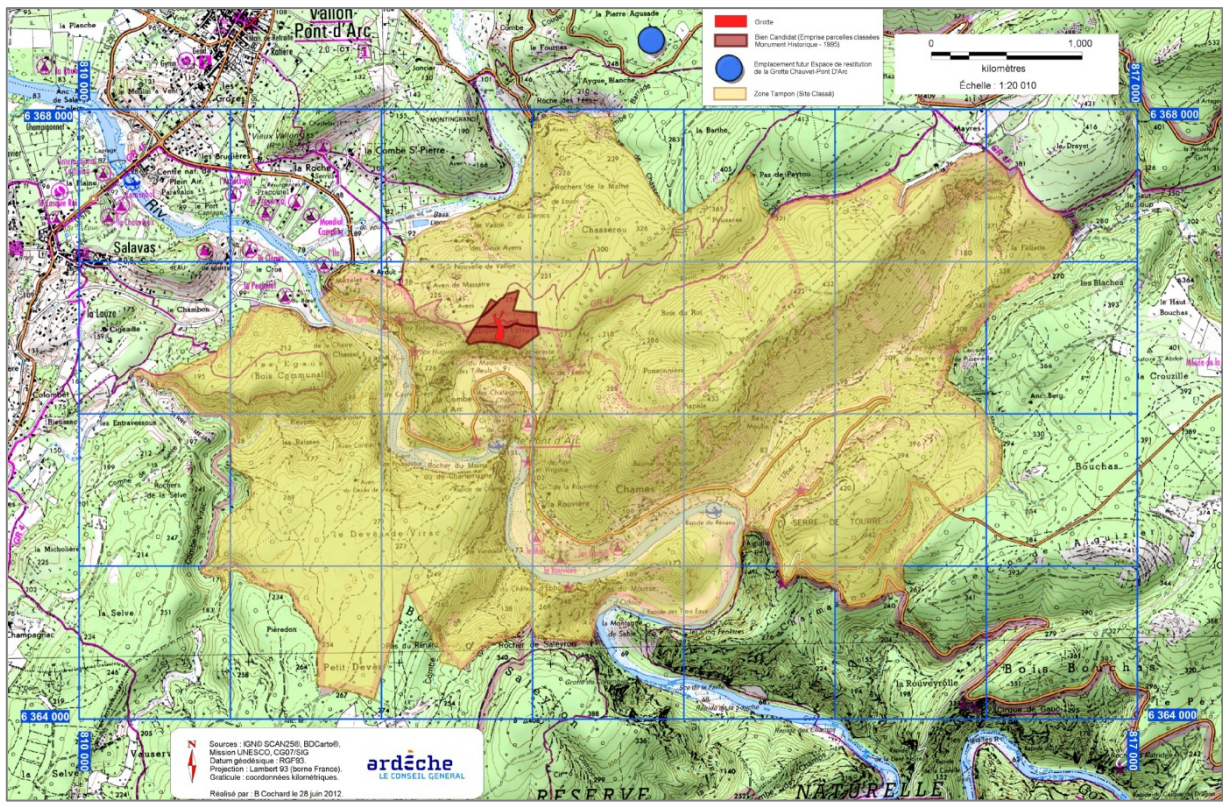
The management authorities have implemented a management plan (2012-16), based on strategic objectives, activity fields and concrete actions, which are planned with time frames, institutional responsibilities, budget requirements and quality assurance indicators. The latter will allow for full quality assurance after the cycle of implementation in 2016, following which the management plan will have to be revised for future management processes.

After it became clear that the cave would never be accessible to the general public, the idea of a facsimile reconstruction to provide interpretation and presentation facilities emerged. The Grand Projet Espace de Restitution de la Grotte Chauvet (ERGC) was established, with the aim of creating a facsimile reconstruction of the cave with its paintings and drawings, and a discovery and interpretation area to attract visitors.

Additional recommendations

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

- Creating a long-term legal framework that retains the current access restrictions for visitors to a maximum annual number and which continues to prevent direct physical contact with the walls or floors of the cave.



Map showing the boundaries of the nominated property



Salle Brunel



Salle du Fond



Engraved owl



Black bison



Red panther

Corvey (Germany) No 1447

Official name as proposed by the State Party

Carolingian Westwork and Civitas Corvey

Location

North Rhine-Westphalia
Detmold administrative region
Germany

Brief description

The Carolingian Westwork and the Civitas Corvey are located along the river Weser on the outskirts of the town of Höxter where they were erected between 822 and 885 AD in a largely preserved rural setting. The Westwork is the only standing structure that dates back to the Carolingian era, while the original imperial abbey complex is preserved as archaeological remains which are only partially excavated. The baroque monastic complex and the abbey church complement the medieval vestiges and contribute to the understanding of the significance and past role of the property.

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* comprising also a *group of buildings*.

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

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 10 to 13 September 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 27 September 2013 requesting additional information on the following points:

- Existence and structure of an overall management body;
- Clarifications on existing formal protection layers of the nominated property and its buffer zone;
- Details on the provisions contained in existing planning instruments and on a timeline for their revisions;
- Details concerning the delineation of the northern boundary of the buffer zone;
- Details on disaster risk preparedness;
- Details on involvement of the local communities;
- Details on budgeting and fund raising for the implementation of the conservation and enhancement programme.

The State Party responded on 5 November 2013. The information provided has been incorporated into the relevant sections of this document.

On 12 December 2013 ICOMOS sent a second letter to the State Party requesting further information concerning the implementation time-scale for:

- The establishment and enforcement of a management authority;
- The extension of the management system to establish co-operation for protection and management purposes of the neighbouring state of Lower Saxony;
- The formal approval and implementation of the management plan and its related master plan;
- The finalisation of the study on panoramic views and the approval and enforcement of related protective measures;
- The elaboration of a Heritage Impact Assessment according to ICOMOS guidance for all planned wind farms.

The State Party responded on 26 February 2014 and the additional information provided has been considered in the evaluation process.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Surrounded by a still largely preserved rural setting and revealed from a distance by the pointed roofs and the bare-stone towers of the westwork, the monastic complex of Corvey lies along the eastern side of the river Weser in the north-western outskirts of the town of Höxter.

In addition to the church and the westwork, and the former abbey (now housing the Duke of Ratibor's residence, a museum and a library), the complex of the nominated property (12ha) also comprises service buildings as well as the archaeological remains of the early medieval imperial monastery and of the associated fortified village (in the buffer zone). As they appear today, the monastery district and the church date back to the baroque epoch but the Carolingian Westwork is still standing, clearly recognisable in its form and substance.

The westwork

The term *Westwerk* – westwork - was invented in the 19th century to indicate a massive, tower-like western front of Carolingian churches which contained an entrance-vestibule with a chapel and other upper rooms or galleries opening towards the nave. Research has ascertained that this building type originated in the Carolingian era as a combination of different ancient architectural models with the cult exigencies of the early medieval epoch within the Frankish Empire. The use of these structures is still debated: either they had functions related to the emperor (i.e. as a royal chapel or an audience chamber) or they might be ingenious solutions to provide an additional liturgical focus on the opposite side of the main altar, to replicate the roman tradition of west-facing choirs.

Although several historic documents referred to this structure, although calling it a *castellum* (fortified structure or watch tower) or *turris* (tower), only the Westwork of Corvey appears to survive from the Carolingian period.

The Westwork of Corvey presently consists of two corner towers enclosing a multi-storey structure, the result of 12th century changes to the original Carolingian three-towered body. However, the central projecting porch, although added to with further storeys, and the three arches to the entrance hall, date back to Carolingian times. Originally the exterior surfaces of the walls were decorated with painted plaster, now lost.

A precious inscription with inlaid and gilded capital letters positioned on the front of the structure – now removed and replaced by a copy for conservation reasons – attests to the very high rank of the abbey and also that *Civitas* was the appellation for Corvey.

Through the three-arch entrance, one accesses the vestibule and then, through the portal, the crypt-like central room. This is covered by nine cross vaults supported by four central columns with Corinthian capitals and by perimeter pillars and wall projections. The inner space is surrounded on the north, south and east sides by outer vaulted aisles. A staircase in the western corner leads to the upper chamber, a double-height space surrounded by rooms on the north, south and west sides. These open onto the central chamber by means of three arches each side, surmounted by three mullioned windows. A wall with double three-arcade

openings – the result of 1950s reconstruction and restoration works – divides the chamber from the intermediate, shaft space to the east.

The central chamber preserves portions of mural paintings and the *sinopias* of six stucco figures, which complemented and emphasised the architectural space and elements. One of the painted scenes depicts a mythological episode: Ulysses fighting against Scylla; other fragments of the paintings reveal that the main scene was part of a frieze with sea motifs. The full-size stucco figures, four male and two female, have been lost and only fragments could be recovered. The nature of these figures has not been ascertained yet. The mythological theme of the painting is a rare survival that demonstrates how much classical literature was part of the Fathers of the Church's educational and cultural background, to be used as a religious parable: the 'bad sea' of the earthly temptations.

The Carolingian abbey church

The Carolingian abbey church does not survive as a standing structure; it was in fact replaced by the present baroque edifice (1667), but it has been documented through archaeological excavations which allowed the reconstruction of its plan. The church was built between 822 and 844, the choir was extended around 870 and the westwork completed the church between 873 and 885. The building had a basilica plan with three aisles and, originally, a simple rectangular choir, with an external crypt connected to the passage below the choir floor. Excavations have made it clear that it would have been considerably higher (2m at least) than the nave. Archaeological evidence shows that the choir was enlarged and lengthened by adding an additional space to the choir, an apse and two lateral chapels, and an ambulatory around the choir replaced the previous crypt.

The monastery district

Archaeological remains and investigations demonstrate that the monastic complex was located north of the abbey church. Investigations and surviving surface traces of the medieval moat and perimeter walls confirm that the medieval and Carolingian monastery precinct coincided approximately with the baroque ditch and walls. Inside the boundary of the walled area investigations have revealed the existence of cellars, wells, pit houses, workshops for glass and non-ferrous material processing. Written sources suggest that there were also an infirmary and a graveyard for the monks, a hospice for pilgrims, dwellings for important guests, the medieval abbot's residence, as well as other functional buildings and mills.

The buffer zone

The buffer zone (69ha) includes the immediate surroundings of the nominated property and corresponds to the area of the town, deserted since the 13th century. At present the area comprises cultivated fields, service buildings for farming activities, the fluvial harbour – now out of use – the railway line, the excavated remains of a

monastery and graveyard in Niggenkerken, the former market church and of the route of the Hellweg (salt road). Surveys have yielded information about the archaeological potential, the extent and the age of the deserted town.

History and development

The monastery was founded under Charlemagne's successor Louis the Pious in 815 AD by monks sent from Corbie, a convent in Picardy, northern France. The monastery took its name from the mother convent: *Nova Corbeia*, now Corvey. The original seat was in a different location but in 822 the monastic community resettled to its current location. This was made possible by Louis the Pious, who transferred the ownership of the site to the monks. The Benedictine abbey was granted privileges by the Carolingians – free choice of its abbots, immunity, market and minting rights (833) – and these, along with the transfer of the relics of St Vitus from Saint-Denis in 836, favoured the monastery's growing importance and influence within Saxony.

Corvey soon became a prominent cultural and religious centre with a school and a library. One of the largest-known Carolingian settlements grew up west of the monastery gates to develop into two distinct towns: Höxter and Corvey. The latter developed into a town between the 9th and the 12th centuries: it was given a secular monastery (Niggenkerken) as well as a market church, and was fortified in the second half of the 12th century; the construction of a bridge over the river Weser and a self-governing council ensured further economic and administrative autonomy.

The prosperity of the town of Corvey was to cease within a century: in 1265 it was destroyed by a coalition including citizens of Höxter and the bishop of Paderborn and never recovered. By that time the monastery had already lost its importance, and its neglect culminated in the transfer of the relics of St. Vitus from the abbey church to Prague Cathedral in 1355. The abbey regained some of its importance at the beginning of the 16th century but during the Thirty Years' War it was devastated, large parts of the library being lost as well as St. Vitus's shrine. In 1792 the abbey was secularised and converted into a diocese which survived until 1825; in 1803 the Principality of Corvey was abolished. After the Congress of Vienna, the monastic complex and its property changed ownership until it came by inheritance into the possession of the Duke of Ratibor and Prince of Corvey.

The complex underwent an extensive restoration campaign between 1947 and 1966. The interventions aimed to restore the Westwork to its Carolingian layout on the basis of scientific findings and evidence. The main room in its current aspect is the result of the interventions carried out between the 1950s and 1960s: further interventions concerned the stabilisation of the foundations (1960s) through the insertion of a concrete slab underneath and injection of liquid cement into the walls.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The State Party has developed the comparative analysis firstly by defining the typological, chronological and regional framework of the nomination – religious early Christian sites of Central Northern Europe – and then selecting relevant examples to carry out the comparison in relation to the most important features of the nominated property, namely its role as an imperial abbey within the Frankish Empire, the westwork, and the mural paintings.

The State Party notes that although several buildings, among them churches, monasteries, convents, and cathedrals, are known from this period, only a few of them survive entirely or partially and only a limited number are represented on the World Heritage List. They are: Aachen Cathedral (1978, (i), (ii), (iv) and (vi)), the Monastic Island of Reichenau (2000, (iii), (iv) and (vi)), Abbey and Altenmünster of Lorsch (1991, (iii) and (iv) – all in Germany –, Abbey of St Gall (1983, (ii) and (iv)), and Benedictine Convent of St John at Müstair (1983, (iii)), both in Switzerland, and Cathedral of Notre-Dame, Former Abbey of Saint-Rémi and Palace of Tau, Reims (France, 1991, (i), (ii) and (vi)).

They have all been included in the comparison, which has been further complemented by other properties which are relevant for the present nomination but which do not survive in their original configuration or were destroyed: the Abbey of Corbie, from which Corvey originated, and the Abbey of St Riquier – former Centula, both in France. Each building has been examined in the light of its specificities and, where present, commonalities with the nominated property and of their role in depicting the Carolingian Renaissance.

ICOMOS believes that the comparative analysis demonstrates that each of the examined World Heritage properties contributes specifically and exceptionally to illustrate the Carolingian renaissance of arts and culture which played a central role in the subsequent artistic, historic and cultural development of Europe. ICOMOS also believes that the comparison highlights that the nominated property significantly adds to the representation of the Carolingian Renaissance provided by the other monuments already inscribed on the World Heritage List as one of the very first examples of a westwork – a new type of building which originated in the Carolingian era – and a cycle of mural paintings depicting classic mythological subjects applied to a religious building.

However, ICOMOS considers that comparison with later examples of early Romanesque churches would have contributed to make even more explicit the relevance and influence throughout Europe of the nominated property on the development of religious architecture in the Romanesque, Gothic and Baroque eras.

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:

- Corvey contains the only preserved westwork building from Carolingian times.
- The structure and decoration of the westwork outstandingly exhibit the integration of innovative Carolingian elements with ancient models to give form to an original and distinct artistic expression.
- The surviving sculpted and painted decorative cycle represents the only known example of ancient mythology reinterpreted within the Christian worldview.
- Corvey, as it survives in its present layout, with its standing structures and archaeological remains, demonstrates its links with other Carolingian cultural centres, further corroborated by a robust historic tradition.
- As an imperial abbey and with its scriptorium and one of the most important libraries existing at that time, Corvey played a crucial role not only as an intellectual and religious centre but also as a political stronghold of the Frankish empire.

ICOMOS considers that this justification is appropriate. The unique relevance of the Westwork of Corvey has been recognized for a long time; scholarly research has positioned it in its chronological and international context as one of the earliest prototypical examples of a *westwork* which was then widely adopted as a distinctive architectural element of Romanesque and Gothic architecture in Europe, and later reinterpreted by the Baroque architectural narrative.

The understanding of the major relevance of the Westwork of Corvey has been in recent years complemented by publications on its wall paintings and stucco work and on the archaeology of the church. All this body of knowledge scientifically substantiates the justification proposed for inscription on the World Heritage List.

However, ICOMOS notes that the Benedictine library was largely destroyed and dispersed during the Thirty Years' War and part of its collection is now housed at the Archbishop's Academic Library in Paderborn. Therefore the importance of Corvey as a centre of Christianity within the Frankish Empire rests solely on its surviving built fabric and archaeological remains.

Integrity and authenticity

Integrity

ICOMOS concurs with the State Party's view that the nominated property meets the conditions of integrity as set

out in the *Operational Guidelines for the Implementation of the World Heritage Convention*. There are no relevant elements outside of the nominated area and other important features are included in the buffer zone. The physical fabric of the property is in a good condition. It does not suffer from any major adverse effects of development or neglect: conservation issues, such as the leaning of the façade and salts inside the masonry, have been or are being addressed and constantly monitored.

Authenticity

ICOMOS considers that the Westwork, built between 873 and 885, forms the core of the property. Despite some modifications carried out over the centuries, restoration and limited reconstruction works, the *Westwerk* layout and its physical substance with its murals, do credibly convey the proposed outstanding universal value. In addition, St John's Choir is still used as a chapel.

The archaeological remains of the abbey church have been excavated and investigated, whilst those of the Carolingian monastery and its district have been only partly analysed and the archaeological deposit remains largely intact. However, investigations have yielded evidence of the size and age of the complex. They also may be taken as evidence, along with the associated existing historical documentation, of the importance played by the monastery in Carolingian times.

The present-day church was erected in 1667 whilst the convent was reconstructed between the 17th- 18th centuries. They are all architectural monuments of value: the abbey church has become a parish church and is still in use, whilst the monastery houses the owner's residence, a museum and a library. ICOMOS believes that they complement the surviving tangible evidence of the Carolingian Westwerk and the archaeological remains to support the proposed Outstanding Universal Value and provide the most appropriate setting for the understanding of the nominated property.

ICOMOS considers that the conditions of integrity and authenticity have been met, in spite of some limited reconstructions carried out in the 1950s on the westwork.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), (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 nominated property preserves the only almost complete Westwork from the Carolingian era and that its layout is based on ancient models in its form and decoration. The Westwork was to become the basis for

further technical and morphological developments in religious architecture over the centuries to come until the end of the Romanesque period.

ICOMOS considers that the extensive research carried out in the history of architecture at the international level and on the nominated property over almost a century supports the claims for this criterion. The Westwork of Corvey uniquely illustrates one of the most important Carolingian architectural expressions. It is a genuine creation of this period which assimilated pre-existing motifs and elements, which were then incorporated into the church structure. ICOMOS further observes that the first part of the justification for this criterion also strengthens criterion (iv).

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 layout of the monastery, its surviving archaeological traces demonstrate the consistency of the former Carolingian convent and its former functions. Additionally, the architectural articulation and decoration of the westwork illustrate clearly the role played within the Frankish Empire by imperial monasteries in securing territorial control, administration, as well as the propagation of Christianity and of the Carolingian cultural and political order throughout Europe.

ICOMOS considers that the surviving physical remains of the nominated property, along with the extensive body of knowledge elaborating on the Carolingian phenomenon and specifically on the Abbey of Corvey, sustains the justification proposed for this criterion and represents an outstanding testimony to the Carolingian political and cultural vision.

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 Westwork of Corvey represents an outstanding example of Carolingian religious architecture, whilst the archaeological remains of the abbey illustrate a settlement pattern in which convents played a central function in spreading the Christian creed but also in gaining and defending territorial sovereignty so as to aid the development of the country.

ICOMOS considers that the Westwork of Corvey represents the only surviving example of this type of building, which is a genuine and original architectural expression from the Carolingian era, and, along with the excavated and surveyed archaeological remains of the

imperial abbey, complemented by the standing structures of the baroque phase of the convent, supports the arguments put forward to justify this criterion and also reinforces criterion (ii).

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 Corvey became a pre-eminent centre of spirituality and knowledge in the region, thanks to the imperial privileges conferred on the monastery, its library and school. Here Widukind von Corvey wrote the "History of the Saxons" which is among the most prominent works of western historiography. Finally, Corvey Westwork has been the object of intense research in architecture, art and church history for more than a hundred years, which has shaped our understanding of early medieval religious architecture in northern and central Europe during the Frankish Empire.

ICOMOS firstly observes that the early medieval library no longer exists following the destruction and dispersal suffered during and after the Thirty Years' War; the rich library which is presently contained at Corvey dates to a later period. Also, the Carolingian monastery survives only as an archaeological, partially excavated site.

ICOMOS further notes that the comparative analysis carried out by the State Party has essentially focussed on the aspects and tangible evidence supporting criteria (ii), (iii) and (iv) whilst the comparison has not been developed in this direction to support the claims proposed to justify criterion (vi).

ICOMOS finally considers that the surviving fabric of the nominated property does not support the justification for this criterion.

ICOMOS considers that this criterion has not been demonstrated.

ICOMOS considers that the conditions of authenticity and integrity have been met, in spite of some limited reconstructions during the restoration works carried out in the 1950-60s on the Westwork. ICOMOS finally considers that the nominated property meets criteria (ii), (iii), (iv) and that, taken together, the justifications provided for these criteria reinforce each other. However, ICOMOS also considers that criterion (vi) has not been demonstrated.

Description of the attributes

- The westwork layout, architectural form and material substance, construction techniques and architectural elements, particularly those parts dating back to the Carolingian phase, demonstrate the reference to

antique typological or architectural models and convey the importance of the westwork as a building type.

- The surviving fragments of the mural paintings, original Carolingian or early medieval plaster still *in situ*, and the *sinopias* of the stuccoworks attest to the role of surface decoration in defining architectural spaces and of classical literary tradition as a cultural reference during the early Middle Ages.
- The excavated and buried archaeological remains of the monastery and its fortified district bear tangible witness to the consistency of the Carolingian complex.

The retention of a religious function for the westwork contributes to the understanding and appreciation of this structure.

The baroque monastery complex contributes to the continuity of the monastic and religious functions of the site throughout the centuries; the reconstruction of the church in its baroque form allowed the retention of the religious use of the westwork. The buried traces of the fortified village outside the monastery also strengthen the comprehensibility of the important role played by Corvey Abbey in the settlement pattern of the region. The rural setting constitutes the appropriate context for the understanding and appreciation of the significance of the nominated property.

4 Factors affecting the property

The Management Plan for the nominated property informs that the area is not subject to development pressures: no plans exist for new roads, bridges or industries. Current agricultural activity within the buffer zone will be moved outside of it.

Despite its proximity to the river Weser, the monastery site is not prone to flooding, thanks to its relative altitude in respect to surrounding areas, which, on the contrary, may be affected by exceptional flooding.

In its letter sent on 27 September 2013, ICOMOS asked the State Party whether bicentenary and five-hundred year disaster scenarios had been developed for the area of the nominated property and whether any disaster mitigation measures were established. ICOMOS also requested information about plans for wind energy exploitation in the area.

The State Party responded that the required water levels leading to flooding scenarios were prepared by the Detmold district government within the framework of the Flood Risk Management Guidelines and that 1000 years is used as an extreme scenario. In this case, the water level would rise to affect the southern external walls of the complex and the eastern annex of the monastery church. No protection plan has been prepared for an extreme event but only for HQ100 floods and these do not concern the nominated property since it would not be affected by HQ100 floods.

With regard to wind energy exploitation, the State Party also informed that within Höxter municipality the Development Plan for the city currently in force has identified two areas suitable for wind energy utilisation: Bosseborn (5.5km SE of Corvey, area: 43ha) and Fürstenau (8.2km NW of Corvey, area: 30ha); the maximum height for the installations would be 100m. However, early in 2013 the City of Höxter resolved to modify the existing land development plan, adding new areas eligible for wind power production: these are adjacent to the already approved sites in Bosseborn and Fürstenau, the respective size of each area is 55ha and 95ha, which would double the size of the first site and quadruple the latter (89ha and 135 ha). Also an increase in the windmill height would be allowed. According to the State Party a visualisation has been done, demonstrating that no visual impact would occur on the nominated property.

Further risks deriving from fire, vandalism and theft are addressed thanks to a set of technical and organisational measures. The nomination dossier also mentions that the mural paintings are subject to decay and loss due to moisture penetration and the presence of soluble salts, which are to be addressed through a conservation programme, based on preliminary analysis already carried out in 2011.

Despite the 1950s structural stabilization of the foundations of the westwork, its leaning continues – studies are planned to identify the causes and define any intervention that may be needed.

ICOMOS expresses its concerns regarding the possibility that wind farms be developed in areas close to the nominated property.

ICOMOS requested further information on the planned wind farms in its letter sent to the State Party on 12 December 2013 and the State Party responded informing that the city and District of Höxter are considering a possible redesignation of areas for wind parks, which need to pass through amendments to the current planning requirements. The State Party has also informed that an analysis of the possible impacts of the wind farms on the nominated property, based on visualisation and photo-simulations, is currently under examination by the Landschaftsverband Westfalen – Lippe.

ICOMOS welcomes this information and expects to receive the Heritage Impact Assessment as well as the considerations of the competent Office of monument conservation.

ICOMOS further notes that information provided on the planned wind farm sites has been limited to the territory under the jurisdiction of North Rhine-Westphalia; however, given that the boundary with Lower Saxony runs on the opposite side of the river Weser near the nominated property, it would be necessary to receive information on planning provisions in force or foreseen for areas in Lower Saxony in the vicinity of the nominated property, with

regard to industrial and commercial development and wind power production, that might have an impact on the nominated property.

In this regard, the State Party informed that the representative for World Heritage of the Standing Conference of Ministers of Educational and Cultural Affairs of the Länder in the Federal Republic of Germany, sent a letter on 16 January 2014 to the State of Lower Saxony requesting it to ensure that building or developments do not have any negative effect on the nominated property.

ICOMOS is pleased that this step has been taken and expects the State of Lower Saxony to formalise its engagement to take into consideration the values of the nominated property in their planning provisions.

Finally ICOMOS notes that a railway line runs very close to the southern boundary of the nominated property: preparedness measures against accidents should be envisaged for the nominated property.

ICOMOS considers that the main factors affecting the property concern the mural paintings and the plaster and are the leaning of the westwork, the possible installation of wind farms in areas close to the nominated property, and flooding.

ICOMOS recommends that the planned comprehensive conditions assessment and monitoring of the westwork be implemented as soon as possible. ICOMOS expects to receive as soon as possible the results of the Heritage Impact Assessment according to the ICOMOS guidance, being carried out on the possible negative impacts of planned wind farms in the surroundings of the nominated property.

ICOMOS considers it advisable that an overall risk preparedness plan be developed for the nominated property, to include consideration of flood and railway accident threats.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property and of the buffer zone are clearly delineated and include areas that in the light of future research have the potential to contribute to the understanding of the property. The nominated property limits correspond to the Civitas Corvey, that is, the assumed extent of the medieval monastery. The area is a large undisturbed archaeological archive; only the church, the medieval ditches and the curtain wall have been excavated.

ICOMOS requested additional information in September 2013 concerning the precise course of the northern boundaries of the nominated property and the buffer zone;

the State Party has clarified this point by providing a more detailed description of the property limits.

The buffer zone includes the immediate surroundings of the property corresponding to the site of the 13th century deserted town: the boundaries have been defined through indirect archaeological surveys, including augering, trial trenches, construction monitoring, geophysical survey, and airborne laser scanning, to determine the archaeological potential of the area.

Further protection to the skyline and the renowned panoramic views over and from the nominated property is also needed. An inventory of the most important views towards and from the nominated property and of their condition has been elaborated on.

ICOMOS understands that the buffer zone has been designed to include all elements and remains functionally linked to the nominated property whilst the State Party has referred to different means for the protection and safeguarding of visual corridors and panoramas.

ICOMOS considers the above-mentioned inventory of views as a preliminary step in ensuring the protection of the visual integrity of the property in relation to its setting; however, following this study, appropriate protective measures should be developed and incorporated into the relevant planning tools as soon as possible.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate. However, ICOMOS recommends that the study for protecting the panoramic views from and towards Corvey be finalised, and protection measures approved and incorporated into the relevant plans as soon as possible and before any decision concerning wind farm location is finalised. ICOMOS recommends that the State Party provides information on any progress made in this regard.

Ownership

The ownership is mixed. The westwork, the church, the forecourt and the graveyard to the south of the church is owned by the Parish of St Stephanus and Vitus. The area included in the former monastery district and the buffer zone belong to the Duke of Ratibor and Prince of Corvey. The harbour and related buildings are owned by the Federal Republic of Germany, the railway lines belong to German Rail, whilst the roads belong to the municipality or the district authorities.

Protection

The nominated property is protected under the provisions of the Act for the Protection and Conservation of Historical Monuments of the State of North Rhine-Westphalia and recorded in the historic monument list of Höxter since 1986 and 1990, which is the highest level of protection. Any work or project concerning listed monuments requires authorization by the Lower Monument Protection Authority in consultation with Westphalia-Lippe Regional Association (LWL) - Department for Heritage Preservation, Landscape and Building Culture.

Spatial planning is articulated at the State, regional (district), and municipal level. Landscape planning is established by federal law, regulated at the State level and developed at the district level. The Regional Plan defines the spatial planning goals at the district level (District of Detmold, Paderborn–Höxter section) and includes a functional section for wind power. The management plan mentions a revision procedure to be initiated. Landscape plans include binding measures for landscape and ecosystem preservation and recovery and identifying outlying areas deserving protection.

In the buffer zone construction works and protection of views are regulated by the existing plans and design and conservation bylaws. The *Wesertal and Fürstenauer Bergland* landscape plan includes the buffer zone in its scope, thus providing forms of landscape protection. According to this plan, important views from and to Corvey need to be inventoried and protected. The municipal development plan defines the nominated property as devoted to cultural use, the buffer zone as agricultural areas; additionally, information about its status as an archaeological monument is included in the plan. Design and conservation bylaws aim at preserving the view of the monastic complex with the bend of the river Weser and the Corveyer Allee, excluding visual disturbances and preserving the monument and its surroundings.

ICOMOS notes that both the regional and the municipal plans are about to be modified, the latter to increase the size of areas for wind power production. In this regard the State Party has informed that an analysis of the possible impacts of planned wind farms is underway (see Section 4 of this report).

ICOMOS also observes that the legal and planning protection framework is articulated and multi-layered, therefore it requires careful coordination between respective goals and measures, in order to achieve effective protection of the nominated property.

ICOMOS finally observes that the additional information provided by the State Party on the planning provisions have been strictly limited to the buffer zone and have not concerned the wider setting. Further information on this aspect is necessary.

ICOMOS considers that the legal protection in place for the nominated property appears adequate. On the other hand, the protective planning measures for the property and its buffer zone established through the different levels of planning will be adequate when measures to protect important views from and towards Corvey are elaborated, approved and implemented. Additionally, provisions to increase wind power plants should be verified against Heritage Impact Assessments and the aforementioned protective measures for panoramic views.

Conservation

Systematic recording of the nominated property was first carried out in the 1950s and concerned old plaster and

mural paintings of the westwork, but this has been revived only recently. On the contrary, archaeological research has taken place since the end of the 19th century. In the 1970s an extensive investigation based on modern methods laid down the bases for the history of the building complex. Further archaeological research using non-destructive methods is planned at the nominated property and in the buffer zone.

The current state of conservation of Corvey may be considered good overall; however, some specific decay problems to the mural paintings, partly caused by conservation works carried out in the 1950–60s, and structural defects in the westwork structure require further investigation and monitoring before any intervention is designed. A comprehensive assessment of the conservation conditions of the Carolingian monument was expected to begin in 2013. However, some of the detected problems are currently being addressed.

ICOMOS considers that the nominated property is overall in good condition, despite its age and early conservation interventions which caused some decay problems, currently being addressed. ICOMOS also considers that further systematic research has to be continued both for conservation and research purposes.

Management

Management structures and processes, including traditional management processes

The nomination dossier describes the overall management framework in force at the federal and State level, based on the existing legal, administrative and planning system and explains that at the property level the Kulturkreis Höxter–Corvey gGmbH was founded by the District and Town of Höxter and the Duke of Ratibor to carry out the museum's cultural and educational programme.

ICOMOS noted that no management authority involving all relevant stakeholders has been established yet and in its letter sent on 25 September 2013 requested additional information from the State Party, who responded that a steering committee for the preparation of the nomination had been set up and this will remain in place until the Kulturkreis Höxter–Corvey gGmbH is restructured or a foundation will be established for co-ordinated management purposes.

ICOMOS considers that any of the aforementioned solutions should be implemented as soon as possible.

ICOMOS sent a second letter on 12 December 2013 requesting further information concerning the formal establishment of a management authority for the nominated property and the buffer zone involving all relevant stakeholders.

The State Party responded on 26 February 2014 explaining that the nominated property belongs to the Prince of Ratibor and to the Parish of St. Stephanus and Vitus, therefore the owners form the management authority.

Since the buffer zone also comprises infrastructures (i.e. a road network, the port, the railway line) owned by entities other than the Parish and the Duke of Ratibor, ICOMOS considers that co-ordination among all stakeholders in the exercise of their rights, duties and competencies needs to be formalised through the establishment of a body suitable for this task, and confirms that this should be finalised as soon as possible.

ICOMOS also considers that steps should be taken to ensure that the State of Lower Saxony and relevant local authorities under its jurisdiction bind themselves to avoid adverse impact on the nominated property through projects or planning provisions concerning areas close to the nominated property.

In its letter sent in December 2013, ICOMOS also asked for further information regarding this issue.

The State Party responded that the City Councils of Hörter and of Holzminden had already expressed their joint support to the nomination. Additionally, on 16 January 2014 a letter was sent to the State of Lower Saxony requesting that buildings and developments in Lower Saxony should not impact negatively on the nominated property. An ad-hoc decree will be issued by the Ministry of the Interior of Lower Saxony requesting that the visual qualities of the property – after it has become a World Heritage property – be taken into consideration in future planning projects.

ICOMOS considers that finalisation and formalisation of this measure is particularly relevant to ensure the effective protection of the nominated property and recommends that a timeframe for the approval and enforcement of the above-mentioned decree be provided to the World Heritage Centre and ICOMOS.

ICOMOS notes that the translated document submitted by the State Party concerning the joint support of the nomination by the Municipalities of Hörter and of Holzminden does not include any commitment to ensure the protection of the nominated property and its buffer zone. ICOMOS considers that a more substantial engagement by the neighbouring municipalities to guarantee the safeguarding of the values of the nominated property would be beneficial, particularly in relation to the proposed wind farms (see above).

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

A management plan has been elaborated with the owners and relevant authorities. It has been designed to integrate existing legal and planning tool provisions for daily

protection and management of the nominated property and its buffer zone. In addition to the management plan, a master plan has also been envisaged to enhance the nominated property and its buffer zone with a view to improve infrastructure, facilities and offers for visitors. Projected actions include the reorganisation of traffic and vehicular access, improvement of the surroundings in terms of architectural quality, vegetation, moving incompatible functions, and design of an archaeological park within the buffer zone. A visitor strategy for the region has been planned: it integrates the nominated property with other cultural resources aimed at placing Corvey in its wider territorial and historic-thematic contexts.

ICOMOS requested in September 2013 further information from the State Party with regard to the budget and possible sources of funding for the implementation of the master plan. In its response, the State Party has provided a list of the available federal and state programmes that the nominated property and its buffer zone would be eligible for. These are: the Protection of Urban Historical Documents support programme; the World Heritage Programme, the Valuable National Cultural Monuments Programme. It also informed that an exact schedule and financial plan are being prepared.

ICOMOS asked for additional information on 12 December 2013 on the implementation timeframe and financial plan. The State Party responded on 26 February 2014 informing that the legal protection as described in the management plan does not need further confirmation. It also provided details concerning the resources needed to carry out various conservation measures and the corresponding implementation schedule. Further interventions would be subordinated by inscription to the World Heritage List, because the new status would open access to financial resources which are allocated at the federal level for World Heritage Properties.

ICOMOS observes that, although the system for protection is in force and may not need further formalisation, the Management Plan foresees coordination and conservation/enhancement measures (see e.g. paragraph 5.1.3 p. 51 or chapter 5.2 pp. 51 – 67 of the Management Plan) that need to be formalised through the approval of the management plan by all owners and relevant stakeholders. ICOMOS also believes that the envisioned Steering Committee (see p.51) should be established.

ICOMOS also notes that the budget submitted in the additional information concerns works scheduled for short-term implementation but does not clarify whether it reveals resources currently available or only the resources needed to carry out the interventions planned.

Involvement of the local communities

ICOMOS requested in September 2013 additional information on this point and the State Party responded informing that several activities and awareness-raising

campaigns have been undertaken to involve the local communities in the nomination process.

ICOMOS considers that special attention is needed with regard to the co-ordination of legal and planning tools at different administrative levels within North Rhine-Westphalia and then with those of Lower Saxony.

In conclusion, ICOMOS considers that formalisation of Lower Saxony's engagement to ensure that no adverse effects may derive from building or development activity in areas close to the nominated property under their jurisdiction is of the utmost importance, and expects to receive a time-frame for the approval of the above-mentioned Lower Saxony Minister of Interior's decree.

ICOMOS considers that a management body should be established and enforced as soon as possible and that the management plan and its operational master plan should be equipped with a timeline implementation, an adequate budget and a financial strategy and then be approved and implemented.

Finally ICOMOS considers that the presentation of the "Carolingian Westwork and Civitas Corvey" in the museum and outside the church should be expanded with regard to the Carolingian era.

6 Monitoring

The nomination dossier informs that monitoring for the nominated property is carried out by the owners in co-operation with the relevant authorities. Monitoring indicators on specific conservation issues of the westwork have been identified and continuously measured. Data are archived with the owners and the relevant conservation offices.

ICOMOS considers monitoring indicators should be identified and set out in relation to the objectives pursued through the management plan and not limited to conservation issues. Appropriate periodicity should also been identified for each of the indicators. ICOMOS recommends that an overall monitoring strategy be set up, integrating also current monitoring exercises.

7 Conclusions

The "Carolingian Westwork and Civitas Corvey" form an integral and authentic architectural and archaeological monumental complex that illustrates the influence of the Westwork of Corvey on the evolution of this building type in medieval religious architecture and of the role played by the abbey in the development of the territory under the Carolingian empire and beyond.

The nominated property is very well researched, and adequately protected as an architectural and archaeological monument. However the safeguarding of its setting needs to be reinforced and particularly important views from and towards the monastic complex require that protective measures be set up and

incorporated into the relevant planning instruments or bylaws. Additionally, there are unanswered questions with regard to the arrangements of the management structure, partners and the management plan that need to be addressed before inscription, to ensure that the property is equipped with an adequate set of protective and management instruments. The monitoring system also needs to be strengthened and provided with a wider scope, not just limited to structural or material conservation issues.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends the nomination of the Carolingian Westwork and Civitas Corvey, Germany, be **referred back** to the State Party in order to allow it to:

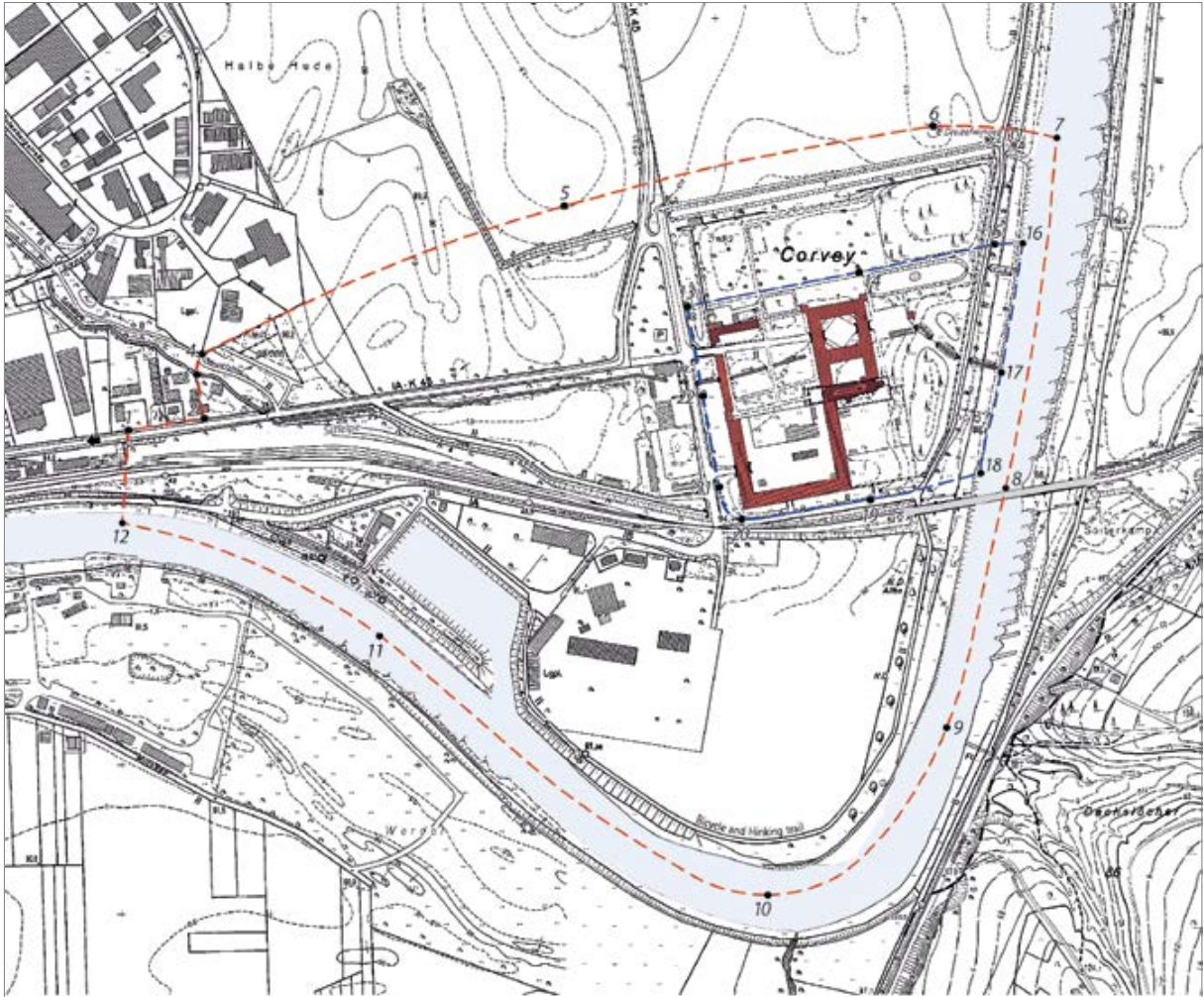
- Formally establish and enforce a management authority for the nominated property and its buffer zone that involves all relevant stakeholders so as to co-ordinate and to integrate protection and enhancement goals, functions and actions carried out by owners and stakeholders;
- Provide information on the time-frame for the approval and enforcement of the decree by which the neighbouring State of Lower Saxony engages itself and its constituencies to ensure that no adverse effect may derive from building or development activity in areas close to the nominated property under their jurisdiction;
- Approve formally and implement the management plan and its operational master plan with a budget and an implementation timescale;
- Finalise the study for protecting the panoramic views from and towards Corvey, approve and enforce related protective measures as soon as possible and before any decision concerning wind farm location is finalised;
- Transmit the results of the Heritage Impact Assessment according to the ICOMOS guidance for all planned wind farms, currently being carried out, to the World Heritage Centre and ICOMOS.

Additional recommendations

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

- Implementing promptly the planned comprehensive conditions assessment and monitoring of the westwork;
- Developing an overall risk management plan for the nominated property, including also risk preparedness against floods, explosions and other types of accidents, considering the proximity of the railway;

- Continuing further systematic research and non-destructive archaeological investigation both for conservation and research purposes;
- Expanding the presentation of the “Carolingian Westwork and Civitas Corvey” in the museum and outside the church with regard to the Carolingian era;
- Reinforcing the monitoring system with regard to the identification of indicators related to the objectives identified in the management plan.



Map showing the boundaries of the nominated property



Aerial view of the nominated property



View of the Westwork of Corvey



The westwork, ground floor



Archaeological excavations in the Carolingian atrium

The Caves of Maresha and Bet Guvrin (Israel) No 1370

Official name as proposed by the State Party

The Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves

Location

South District of the Ministry of the Interior
Regions of Yoav and Lachish
Israel

Brief description

The presence in Lower Judea of a thick and homogenous layer of soft chalk has enabled the excavation of numerous man-made caves. The property contains a very comprehensive selection of chambers and subterranean networks, with varied forms and functions. They are situated below the ancient twin towns of Maresha and Bet Guvrin, and surrounding areas, constituting a "city under a city". They bear witness to a succession of historical periods of excavation and usage, stretching over 2,000 years. The original excavations were quarries, but these were converted for various agricultural and local craft industry purposes, including oil presses, columbaria (dovecotes), stables, underground cisterns and channels, baths, tomb complexes and places of worship, and hiding places during troubled times, etc.

Category of property

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

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

28 January 2010

23 January 2013

Background

The property was presented for examination at the 35th session of the World Heritage Committee (Paris, 2011) under the name: The Land of caves and hiding places of the Judean Lowlands, Maresha, Bet Guvrin and Adulam.

ICOMOS recommended that the examination of the nomination be deferred, and it was withdrawn at the request of the State Party (35COM 8B.32).

Consultations

ICOMOS has consulted its Scientific Committee on Archaeological Heritage Management, and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 1 to 3 October 2013.

Additional information requested and received from the State Party

ICOMOS requested additional information from the State party by letter on 25 September 2013, concerning:

- The correspondence between the inventory of the artificial caves and the mapping of the property;
- The question of whether or not the property is included in its entirety in the archaeological park;
- The involvement of the two regional councils in the management of the property;
- The boundaries of the north-western section of the buffer zone.

The State Party sent additional documentation on 21 October 2013, which is taken into consideration in this evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The nominated property is situated in Lower Judea, in a region of hills and plateaus including the ancient neighbouring cities of Maresha and Bet Guvrin. It is limited to the subterranean remains of these two archaeological sites and their surrounding areas. It is representative of a type of human settlement which managed and used over a long period a particularly favourable subsurface formation. The above-ground remains, which are not an intrinsic part of the nomination, provide the historical context and enable a functional understanding of the whole site.

The subsurface rock of the region consists of limestone or chalk marl of the Eocene period. It is a compacted and homogenous rock, but which is soft and relatively easy to excavate and work. The subterranean layer below the site reaches a thickness of between 30 and 100 metres. Close to the surface, the original chalk rock has been transformed by climatic and hydrological conditions into a more resistant limestone, called *nari*, between 1 and 3 metres thick. This crust was suitable for forming the cave roofs, and was also conducive to the formation and retention of arable soils rich in humus.

Lower Judea is a land of very early human agricultural and urban settlements. The chalky subsurface allowed the quarrying of materials for constructions above ground. The quarries were converted to caves and subterranean complexes that considerably extended the area of the farms and villages. Developed and used over almost two millennia, these man-made subterranean complexes came to form extremely dense networks, in particular below the ancient twin cities of Maresha and Bet Guvrin. The property lists 973 entrances to the man-made caves, for a total of 475 subterranean complexes. These may contain from one or two caves, up to 70-80. This density, associated with the diversity of uses, the variety of construction types, and their architectural qualities, form the basis of the property boundaries. Some fifteen key caves have been opened to the public. The entire nominated property is included in the National Archaeological Park of Bet Guvrin – Maresha.

The nominated property includes the following elements:

1. The Maresha archaeological site is situated 1.5 km south of the present-day urban centre of Bet Guvrin. It includes the remains of an upper city, and of a later lower city. A dense complex of man-made caves and underground networks was developed beneath the latter, in close synergy with the above-ground constructions. 169 complexes, comprising an average of 17 rooms each, have been identified below the lower city. They were directly accessible from the dwellings above via stairways, providing various economic functions.

The remains and the archaeological finds have enabled fairly precise dating, and the reconstruction of past ways of life. Complex n° 75 clearly shows a first level of occupation during the 8th and 7th centuries BCE. It was used and completed during the following Persian and Hellenistic periods, until the 3rd century BCE. Complex n° 53 is very typical of the Hellenistic period, bearing witness to the close relationship between an underground complex and a villa, which were used up until the end of Maresha (2nd century BCE). Complex n° 61 corresponds to a residential area above ground which is closely related to a subterranean complex of remarkable dimensions (2,000 sq. m.) and complexity (26 main rooms).

The man-made caves of Maresha were used in particular as workshops for the pressing and storage of olive oil (28 sites recorded). Maresha was one of the major olive oil centres of Hellenistic times, exporting oil to Egypt. Tanks and presses hewn directly into the chalk rock still remain. The caves were also used for raising pigeons (85 sites), which was a flourishing business. Niches were hollowed out of the cave walls, and their subterranean location provided good protection against predators. The subterranean quarries were often transformed into cisterns, sometimes with settling tanks, rainwater drainage systems and systems for drawing water, forming complexes that are very extensive in some cases. Other excavated chambers were used as stables for animals or for the storage of food and goods (particularly cereals). Some vestiges show the role played by the caves in the

textile industry, supplementing the activities carried out above ground. The excavated chambers also played a role in daily social life, as baths, cellars, places of worship or hiding places during troubled times.

Some forty burial sites were dug into the ground at the foot of the hills close to Maresha, including three main necropolises. The majority of the burial chambers date from the 4th and 3rd centuries BCE, bearing witness to a Hellenistic cult of the dead inspired by Alexandria. To the East, the necropolis of the Sidonian tombs is in two parts, richly decorated with wall paintings and inscriptions. The frieze portraying animals is particularly important as a rare example in Hellenistic art. To the South-East there is a second underground necropolis, characteristic of the same period. The third, to the North, dates from slightly later, comprising four main groups of funerary niches in the rock-face, which were re-used by the Jewish population. The epigraphy and wall paintings of the burial sites demonstrate the multi-cultural and cosmopolitan dimensions of the city during the Hellenistic period.

2. Bet Guvrin (Eleutheropolis) is an urban site which developed from the 2nd century BCE onwards, near to, and following on from, Maresha. It was one of the most important cities of Roman Palestine and a crossroads for trade. It had large-scale facilities, including two aqueducts, public baths, and a theatre. Its population was replenished in the 3rd and 4th centuries by the arrival of a large Jewish community, for whom it became one of its cultural centres. Its prosperity continued during the Byzantine period.

West of Bet Guvrin lie subterranean complexes dating from the Roman period, such as the Cave of the Horses. Its decorative elements reflect a pagan cult that seems to have persisted into the Christian period. It was subsequently converted into an oil press and then re-used as a quarry during the Islamic period.

The underground hydraulic system of Bet Guvrin, which can be entered from the Nigbot cave, re-used a natural karstic network which was managed and developed by man in order to supply the city with underground water, in addition to the supply from the aqueducts. The man-made channels and cisterns were added during the Islamic period.

Necropolises were dug into the hillsides near the city, as at Maresha. Five main burial sites have been identified as well as some minor sites and isolated tombs. They provide important insights into the way of life of the inhabitants. Initially, the burial customs mainly reflect pagan cults, onto which were grafted Jewish and later Christian customs. Eight types of tomb have been identified. The most notable sites are those of the south cemetery, including tombs n° 28 and n° 12, and the east cemetery with mausoleum n° 37. The use of hypogea declined during the 7th and 8th centuries and then stopped.

The subterranean complexes were also used as hiding places for inhabitants during times of trouble. This use was one of the specific features of the underground

complexes of Lower Judea. Hiding places are found frequently in the villages, but are also found at Maresha and Bet Guvrin. They consist generally of concealed living spaces, linking several existing complexes. The largest such hiding places are linked to the Jewish revolt of Bar Kokhba against the Romans in the 2nd century.

Bell-shaped excavated chambers are the most prevalent in the Bet Guvrin region. This shape is linked to their initial use as quarries, and this activity intensified at the end of the Byzantine period, and reached a peak during the Islamic period. At this time efforts were made to optimise the volumes that could be exploited by digging vertically rather than horizontally, resulting in this bell-shape, which was better suited to resisting the pressure from the earth above and hence the collapse of the roofs. 800 chambers of this type have been identified throughout the region, with depths varying between 12 to 15 metres, sometimes more. They were typically re-used as cisterns and grain silos.

The buffer zone corresponds to either a forest or scrubland environment, or to zones of traditional agriculture, on the lowlands or terraces.

In the additional documents provided in October 2013, the State Party supplied a set of maps identifying the subterranean complexes along with the borders of the Park and the buffer zone.

History and development

Lower Judea is close to the ancient route linking Mesopotamia to Egypt; this is a region of very ancient agricultural settlement which gave birth notably to the Jewish people, but which also saw the flourishing of other cultures. The property and its region have had a complex history, as a crossroads of influences and interchanges between the interests of the major empires of the East (Mesopotamia, Persia), the Mediterranean (Hellenistic, Roman, Byzantine) and Egypt, and finally as one of the first areas of expansion of the Islamic world.

The nearby cities of Maresha and Bet Guvrin, which succeeded each other, reflect, with their subterranean complexes, these successive eras and their main characteristics in terms of troglodyte architecture and the diversity of their economic and cultural uses.

Israelite period, Iron Age II (8th-6th centuries BCE): Like most of the settlements in Judea, the region in which the property is situated was occupied by the tribe of Judah, at the end of the 2nd millennium, and then by the kingdom of Israel. The upper city of Maresha is sited on a defensive position, with the surrounding lower city devoted to economic and cultural activities. The practice of subterranean excavating as quarries and annexes for dwellings and villages began in the 8th century BCE. (complex 75).

Persian period (6th-4th century BCE): In the early 6th century, Judea was controlled by the Babylonian empire, and then by the Persians (539 BCE). The Edomite

populations were then in a majority, and Maresha became a flourishing town, systematically making use of its subsurface, first for quarrying and then as a space for economic development. Several subterranean complexes in Maresha bear testimony to this period.

Hellenistic period (4th-1st century BCE): In the 4th century BCE, a Phoenician, and then a Greek presence established itself, and finally a predominantly Hellenistic culture. In the 2nd century BCE, Judea regained its independence. This marked a first zenith in terms of its territorial development through the use of subterranean complexes. These networks were numerous and systematically utilised, with many specialised uses. So-called "Maresha" architectural and utilitarian typologies were established. They reflected the accumulation of knowhow over a long period: the excavations spread out horizontally beneath the hard layer, with rectangular spaces for olive oil plants, cruciform spaces for the columbaria, and cylindrical spaces for the cisterns, etc. The underground economic activities were diversified and underground installations with religious purposes and tombs began to appear outside the town. Bet Guvrin (Eleutheropolis) was an urban site that developed from the 2nd century BCE, close to Maresha, which was later abandoned.

Roman period (1st century BCE-4th century CE): Judea was conquered by the Roman general Pompey in 63 BCE. During periods of trouble the underground complexes served as refuges. With the beginnings of Christianity, a complex cultural and religious situation marked the end of the Roman period, as witnessed by the hypogea and underground places of worship. Bet Guvrin was the seat of a Roman governorate during the 2nd and 3rd centuries CE. It was at this time one of the most important cities in Roman Palestine and a major crossroads.

Byzantine period (5th-7th centuries): During the Byzantine period, Bet Guvrin became an important Christian centre. The period was marked by the digging of a necropolis into the hillside, and large-scale use of the caves for agricultural purposes. At the end of the Byzantine period, the quarrying resumed, but using a different method. The caves were quarried downwards, beginning from a hole in the hard layer, in the shape of a bell. It was thus possible to enlarge the volume at the base whilst maintaining the stability of the vault.

First Arabic-Islamic period up to the Crusades (7th-12th centuries): After a troubled period of clashes between the Byzantines and the Persians, the region was occupied by Islamic armies arriving from the south (634-640). There was a gradual process of Arabisation and Islamisation of Palestine, while Bet Guvrin and the surrounding region fell into decline. Underground quarrying in the form of bell caves resumed, but for the benefit of coastal towns which were rapidly expanding at the time. Quarrying continued until the beginning of the 11th century, when the first Crusades profoundly changed the regional socio-economic situation. It seems probable that the caves were

used at later periods, but the configuration of the subterranean complexes underwent no further changes after this.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The excavation and management of man-made caves, in appropriate subsurface strata, is a very widespread phenomenon throughout the world, and throughout history. Several comparative parameters should therefore be taken into account for the excavated chambers themselves, as well as for the cave networks or complexes.

A first characteristic is considered: the development of subterranean complexes was generally carried out with a single specific purpose: a quarry, a troglodyte dwelling, cisterns, hiding place, tombs, places of worship, domestic and agricultural stores, etc. From this point of view, the situation of Maresha-Bet Guvrin is presented by the State Party as being particularly remarkable, because of the large diversity in uses and cave types. The close links with the above-ground dwellings are also presented as being relatively rare.

The layer of chalk limestone and the protective layer on the surface is also a factor conducive to these relatively rare man-made excavations, resulting in an especially high density of artificial caves, notably inside the lower city of Maresha, and for the bell-shaped cave quarries.

The regional comparisons include the Biblical Tels - Megiddo, Hazor, Beer Sheba, which are already inscribed on the World Heritage List (2005, Israel), and the Old City of Jerusalem (1981, proposed by Jordan), or the Beth She'arim necropolis (Israel, Tentative List). Other sites in Lower Judea are also referred to, such as the cities of Beth She'arim and Zippori, as well as the excavations in Lower Galilee, although this region is less favourable. The Maresha site constitutes, it is claimed, the richest and most complete complex for the Iron Age, and the Persian and Hellenistic periods; more specifically, in terms of the diffusion of the Ptolemaic-Alexandrian style, the Sidonian tombs are unique. Bet Guvrin is a place where both the density and the quality of caves hewn during the Roman and Byzantine periods are remarkable. The hypogea are comparable with the catacombs of Rome, and with the Petra caves (1985, Jordan), and with the regional site of Beth She'arim already referred to.

A thematic comparative study draws on a number of international comparisons, essentially in the Mediterranean basin and in the Middle-East. The most similar property seems to be Göreme National Park and the Rock Sites of Cappadocia (1985, Turkey). On a thematic basis comparisons can be made with the underground quarries in Tunisia (which are however on a far more modest scale) and in Syracuse (a vast

example, but with lateral openings). For the hiding place networks, few direct comparisons can be made, except for Cappadocia, but the characteristics differ. The very elaborate system of military hiding places at Agongointo-Zougoudo in Benin dates from a later period (16th century); etc. Finally, the diversity of uses and types forms one of the most important characteristics of the nominated property, although it should be noted that certain uses of subterranean complexes found elsewhere are not present, in particular troglodyte dwelling activity.

In conclusion, the general antiquity of the man-made caves, the breadth of the historical periods represented (from the Iron Age to the Crusades), the diversity of uses and forms, the very great density of the underground complexes, and finally the quality of numerous technical, functional or decorative elements, form the unique character of the property, even if none of the constituent elements on their own attain a really exceptional character. It is a good example of this type of subterranean architecture, and of the diversification of possible uses, over a very long period of human settlement encompassing a succession of different cultures.

Whilst acknowledging the more thorough approach in the comparative study carried out by the State Party, compared to the nomination file presented in 2011, ICOMOS regrets however that more global comparisons were not made with cities built entirely on chalk soils.

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 caves and tunnels of Maresha – Bet Guvrin are an emblematic example of a region richly-endowed in this respect, because of the density and exceptional diversity of man-made subterranean elements dating from the Iron Age through to the Crusades.
- The property expresses the very great variety of uses - economic, domestic, technical, social, spiritual and funerary - of the man-made caves, over a period of nearly 2,000 years.
- The property bears witness to a dense and well-organised relationship between the above-ground dwellings and the associated underground networks.
- The site bears testimony to the long duration and the diversity of the know-how involved in the development of this vast subterranean complex, from the Iron Age through a succession of different periods of antiquity; Persian, Judaic, Hellenistic, Roman and Byzantine.

- Towards the end of the Byzantine period and during the first Arabic-Islamic period a new bell-shaped type of underground quarry was developed, of which this ensemble is the most remarkable example.
- The ensemble is very complete and well-preserved, because it was abandoned and forgotten for many centuries, after long periods of use and maintenance.
- The ensemble bears particularly credible witness to the human aptitude for using the subsurface when it is favourable, as at Maresha-Bet Guvrin.

ICOMOS considers this justification to be appropriate, since the whole range of underground excavations at Maresha-Bet Guvrin covers a very great variety of subterranean construction types, and highly diversified socio-economic uses. Whilst none of the elements considered on their own are unique or even exceptional, the concentration of the excavations, the typological diversity, and the long succession of historical periods of occupation, justify the assertion that the site attains the value of an eminent and very remarkable example of the relationship between Man and the subsurface of his territory.

Integrity and authenticity

Integrity

The integrity of the composition of the property is embodied in a rich, diversified and well-preserved ensemble of man-made caves and subterranean networks. They correspond to the archaeological sites of the twin cities of Maresha and Bet Guvrin and the immediately-surrounding areas. All the different types of construction and the socio-economic and symbolic uses are well-represented within the boundaries of the property, and by the eminent and representative examples of subterranean heritage which extends throughout the chalk zones of the Judean Lowlands.

Structural integrity is provided on the one hand by the functional relationships between the caves and by the organisation of well-ordered and functional subterranean complexes. It is also demonstrated by the relationships and synergy between this underground network and the above-ground dwellings. These are referred to on several occasions in the nomination file, but the care taken to distinguish the above-ground elements from the underground attributes of the property has led to a minimal analysis and illustration of the relationships between them. It is important to demonstrate the continuity between above-ground elements and underground complexes.

The integrity of the landscape has not been dealt with for the same reasons; it does however play an important role for the visitor, as does the perceived integrity between the exterior archaeological elements, even if they are not part of the property's attributes, and the excavated elements that carry its value.

The functional knowledge of the subterranean complexes is appropriate, but suffers from a lack of analysis of their relationships with the above-ground elements.

The integrity of the individual caves open to the public has often been reinforced by restoration, consolidation and maintenance work, for safety reasons and for greater comprehensibility. Elsewhere the roofs of a certain number of caves have collapsed under the action of natural processes, notably rain water run-off.

ICOMOS considers that the integrity of the subterranean property is satisfactory, even though the links with the surface have been neglected in the nomination file.

Authenticity

Following their abandonment at the time of the Crusades, the subterranean complexes of Maresha and Bet Guvrin have been well-preserved. Many of them are today still filled with sediments and are inaccessible, and only a limited number of cleared caves and networks can express an authenticity that can be experienced by the visitor, particularly from a tourism viewpoint.

The various classical aspects of authenticity are thus present: the form and design of the caves and the underground networks, and of course the chalk material of the subsurface. Testimony to use and functions is intrinsically present, but a great deal of work is necessary to present it to visitors. The State Party is relying heavily on those sites that have been reconstructed for visitors, in the course of its documentation of the values of the property, while at the same time stressing the small number of sites concerned. It also underlines the care taken in the restoration and repair work in order to conserve the perceived authenticity, and to distinguish properly between what has been added and the original state of the site as discovered during the archaeological excavations. For example, the wall paintings of the large Sidonian tomb have been reconstructed on movable panels, based on records made prior to their destruction, without any intervention on the present state of the walls and vaults.

ICOMOS considers that the conditions of authenticity of the subterranean complexes are generally satisfactory. Nevertheless, sometimes substantial restoration and consolidation work has been necessary in certain caves open to the public, and facsimiles have in some cases been made of the walls or the decorative panels.

ICOMOS considers that the conditions of integrity and of authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criterion (v).

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 large number of subterranean complexes of Maresha – Bet Guvrin constitute an exceptional example of land-use and the adaptation of Man to his material environment, in this case the underlying soft chalk rock. The variety of construction types and uses bears testimony to the wealth of forms taken by the development and use of the caves and the underground networks. Numerous civilisations and cultural groups have succeeded each other in the Judean Lowlands in the use of the man-made caves over a period of some 2,000 years.

ICOMOS considers that the underground archaeological site of Maresha – Bet Guvrin bears testimony to an eminent example of a traditional use of chalk sub-soil, through the establishment of man-made caves and networks conducive to multiple economic, social and symbolic uses, from the Iron Age to the Crusades.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets the conditions of integrity and authenticity and criterion (v).

Description of the attributes

The property appears to be a representative selection of subterranean caves and networks hewn by Man in the chalk rocks of the Judean Lowlands, over a succession of historical periods from the Iron Age to the Crusades. Its main components are as follows:

- The initial activity was quarrying, with two main historical quarry types: horizontal excavation during the most ancient periods, and vertically hewn chambers in bell-shape form, mainly during the Arabic-Islamic period.
- These excavations were subsequently re-used and re-developed, representing types of subterranean construction and a large diversity of technical, economic, social, cultural and funerary uses. The property includes principally: columbaria, olive oil presses, stables, grain stores, cisterns and hydraulic systems, underground baths in Maresha, hypogea and tombs and places of worship.
- The synergy of the subterranean complexes and the urban structures above are demonstrated in particular by the entrances and stairways, some of which are spiral. The Sidonian tombs with their wall decorations constitute a remarkable example of the diffusion of the Hellenistic culture of Alexandria.

4 Factors affecting the property

The property itself is not affected by pressure from economic, urban or agricultural development. The northern edge of the buffer zone could be affected by agricultural development linked to the Bet Guvrin kibbutz.

Tourism is satisfactorily organized and does not constitute a threat. The dispersal of the caves and the sites contributes to a good distribution of visitors within the park. The number of visitors to the park has remained stable since the mid-2000s. It amounts to around 150,000 visitors per year. The property in its present state could support a reasonable increase in the number of visitors, without significant consequences for the conservation of the site.

The region is wooded and dry in summer, presenting risks of forest fire, but these are limited by authorised grazing practices.

The main factor affecting the property is natural erosion and water infiltration into the roofs and walls of the caves. While the hard and resistant surface crust (nari) has played an important role in the preservation of the caves since their excavation, the chalk rock is very susceptible to the effects of water and the slow phenomenon of physico-chemical erosion that results. Depending on their position within the site, not all the caves are susceptible to this phenomenon to the same degree. In the worst cases, a vault may partially or totally collapse, suddenly and without any particular advance warning signs.

The State Party considers that there is no particular risk of natural disaster threatening the site, or extreme natural conditions. The increase in violent storms, linked to global warming, could accentuate the phenomenon of erosion locally and accelerate the weakening of some cave vaults.

ICOMOS considers that the main threat to the property is the phenomenon of erosion caused by water run-off and infiltration affecting the rock.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The nominated property has a surface area of 259 ha. There are no inhabitants.

The buffer zone has a surface area of 305 ha. There are no inhabitants.

ICOMOS considers that the boundaries of the nominated property and those of the buffer zone are satisfactory.

Ownership

The property belongs to the State of Israel. The exercise of ownership rights is entrusted to a specific legal

authority, in cooperation with the public institutions Israel Nature & Parks Authority (INPA) and Israel Antiquities Authority (IAA), and with the regional councils of Lachish and Yoav.

Protection

With the exception of a small strip of land in the North-west, the property is placed under the protection of the National Archaeological Park of Maresha and Bet Guvrin. General rules concerning national parks are applied, within the framework of the INPA, which issue directly from the laws of the State Party. The property is also protected as an ancient site, in accordance with the law. The laws and regulations that apply to the protection of the property are:

- The Israel Lands Administration Law (1960);
- the Planning and Building Law (1965), and its amendment 31 (1991);
- the Antiquities Law (1978, revised in 1989);
- the National Parks, Nature Reserves, National Sites and Memorial Sites Law (1998).

It is also subject to National Master Plans 8 (nature reserves and national parks), and 35 (construction, development and conservation). Different regional and local plans complete and contextualise the national master plans.

The Agreement of 23 January 2005 between the INPA and the IAA establishes the role of the IAA as the professional authority in the field of archaeology and conservation of antiquities.

The buffer zone is largely protected as part of the Park, as is the property itself, but is also protected by the National Forestry Plan (n° 22). For the northern section close to the Bet Guvrin kibbutz, possible future constructions will be restricted in terms of surface area and height. The land consists of agricultural zones.

ICOMOS considers that the legal protection in place is adequate and that it is effectively applied.

Conservation

Following on from the numerous research campaigns carried out on the archaeological sites of Maresha and Bet Guvrin, the National Park is developing a continuous programme of archaeological excavation in partnership with specialists, for better understanding of the property. This research is under the responsibility of the Israel Antiquities Authority (IAA), and its conservation department, and benefits from the support of a research centre specialising in man-made caves (ICRC).

All the conservation measures are laid out in the conservation and improvement Plan for Maresha – Bet Guvrin. A plan of this type is a legal obligation for national parks. The general conservation objectives concern the cultural heritage, natural spaces and landscapes. The central theme of the plan in this case is the archaeological

dimension; the natural spaces and their landscapes constitute a condition of environmental conservation for the property and the buffer zone. They are backed up by existing documents: *INPA regulations* and the *Regional management and conservation portfolio*.

Two recent major archaeological campaigns of excavation took place from 1992 to 1996, and 1997-1998, and several chambers filled with rubble were cleared. The move today is towards more inter-disciplinary research on the understanding of elements that have already been uncovered: epigraphy, research into pagan cultures, studies of tomb graffiti, etc.

The programmes to prepare caves to receive tourists have led to various works of restoration, consolidation, and reconstruction, justified by conservation, safety and teaching requirements. The State Party declares that these works have been carried out with scrupulous respect for what already exists, and under specialist control. Reconstructed elements are carefully distinguished from original elements. The wall paintings, the epigraphy, the bas-reliefs and all remarkable architectural elements are the object of specific measures. The stairways used by the visitors are covered with a resistant material which recreates the shape of the steps and protects them in a reversible manner. A list of these works and their justification has been supplied.

The painted decorations of the Sidonian tombs have been restored, along with the supporting walls, following contemporary vandalism. The work was carried out according to observations and records drawn up in 1905.

The main interventions concerning the risks of water infiltration and the possible destabilisation of the vaults consist of carrying out appropriate drainage work above ground, detecting and filling gaps in the roofs with reinforced concrete, filling in the cracks with adhesive filler, propping up the threatened vaults, and reinforcing the vaults of the bell-shaped caves with invisible reinforcement arches.

Above ground, the dwelling elements have been restored and sometimes rebuilt, to illustrate their link with the subterranean elements. These works have followed the same rules for respecting existing elements as in the caves.

The State Party considers that the general state of conservation of the property is satisfactory, since it has benefited from a consistent policy in place for more than 15 years, and is subject to rigorous and systematic monitoring by the Park services, with the support of numerous external specialists. The most recent conservation report dates from December 2011.

ICOMOS considers that the state of conservation of the property is satisfactory, and that the conservation measures are also satisfactory. Particular attention should however be paid to the preservation of authenticity in the ongoing and projected restoration and

development work; the reconstruction work should be minimised and carried out in a reversible way.

Management

Management structures and processes, including traditional management processes

The management structure of the property is the National Archaeological Park of Maresha – Bet Guvrin, under the auspices of the Israel Nature and Parks Authority (INPA). This national institution is supervised by the Ministry for Environmental Protection. In terms of cultural heritage, the INPA and the Maresha – Bet Guvrin Park benefit from the permanent scientific support and the control of the Israel Antiquities Authority (IAA).

The National Archaeological Park of Maresha – Bet Guvrin was created in 1987, and opened to the public in 1989. The Park benefits from funding from the Jewish National Fund (KKL-JNF) and the Israel Government Tourist Corporation (IGTC) to develop its interpretation programmes and its tourism potential.

In management terms, the Park applies the general directives of the INPA, which are valid for all national parks, and which include guideline documents for both the conservation and the management of the property. Rules of good conduct are outlined for visitors, notably by the distribution of an information leaflet for guidance in visiting the park.

The Park has a fire surveillance system, and a motorised intervention infrastructure to deal with any incidents. The Army, which has a training camp nearby with fire-fighting equipment, can also supply rapid manpower and logistical help to fight any possible forest fires which might threaten the site.

The Park has a staff of 11 permanent employees, in charge of the daily management of the site, its maintenance and conservation monitoring. There are also up to fifteen temporary personnel to welcome visitors. When required, several conservation specialists can be called upon with the support of the INPA and the IAA, in addition to specialist organisations and companies. The daily maintenance of the property is carried out by the Park services.

For the functioning of the Park, it receives an annual grant from the INPA for its conservation activities, the development of the site, the maintenance of the property, and to cover the employees' salaries (US\$ 500,000 in 2011). The revenue generated by the Park is allocated directly to the INPA budget (US\$ 575,000). The structure therefore makes a profit (2011), but heavy costs are to be expected for future projects such as lighting. Cooperation projects can be set up by the INPA, for example to fund the organisation of campaigns of archaeological excavation.

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

The actions being implemented currently are outlined in the Conservation and promotion plan, drawn up in accordance with the *Regional management and conservation portfolio*. This was validated for the Park in 2008. The Park has chosen to highlight 14 archaeological sites, including 10 cave sites, indicated on the plans by the numbers 1 to 14. This ensemble is linked together by various interpretation and discovery circuits for tourists.

The programme for the restoration and making safe of the caves open to the public, which was referred to earlier, has been completed by three phases of development for the complementary elements such as access roads, sign-posting, lighting and facilities for the tourists (reception building, toilets, parking areas, benches, etc.), along with elements of landscape rehabilitation. The programme consists of the following phases:

- Phase 1. The bell-shaped caves area (14) and the necropolis (1).
- Phase 2. The columbarium cave (3), the 'Polish' cave (2), the bath cave (4), the olive-press cave (5), up to the underground cistern system (6)
- Phase 3. The cistern system (6) up to the subterranean dwelling complex (7) and the Sidonian tombs (8 and 9).

Two observation points need to be installed on the heights overlooking the property, to provide an overall view of the archaeological site.

Visitor reception, sign-posting and the preparation of the paths for the discovery circuits in the Park have been a major concern since the creation of the Park. Since then, they have been continuously maintained and developed while respecting the integrity and authenticity of the site. The circuits encompass the subterranean sites and the archaeological sites above ground.

The other regional or local plans concerning the Park are: camping regulations, the tourism development of the 'Villas Hill' site, and the diversion project for Route n° 35 which currently goes through the Park.

Involvement of the local communities

Local communities are involved through the regional councils (Lachish and Yoav), the Kibbutz councils (Bet Guvrin and Bet Nir) and the municipal councils (Lachish and Nehusha). Various professionals from the tourism sector are also involved. The two regional entities have no role in the management of the Park.

ICOMOS considers that the management system of the property is well established and is appropriate. However, the 'Villas Hill' project, if confirmed, should be submitted for examination by the World Heritage Committee in

accordance with Paragraph 172 of the *Operational Guidelines*.

6 Monitoring

The subterranean property of caves and excavated complexes of Maresha-Bet Guvrin is fragile and subject to slow deterioration by natural factors. In particular the deterioration of vaults may result in collapse. Very regular monitoring of the sites is therefore necessary, backed up by strict safety measures for underground areas open to the public.

Since the opening of the caves to the public, the Park and INPA staff have acquired a considerable level of knowledge. Systematic monitoring is carried out on a quarterly basis, but regular maintenance tasks enable anomalies to be rapidly detected and dealt with. The monitoring of technical aspects is entrusted to experts from the INPA; they implement rigorous procedures based on indicators specific to each site, which are detailed in the *Portfolio*. Specific monitoring with sensors and digital data recording has been in place since 1990 to monitor the stability of the rocks, in particular in the bell-shaped caves. This monitoring is carried out by a Soil Mechanics Laboratory (Ben Gurion University).

ICOMOS considers that the monitoring of the property is satisfactory, but it would be appropriate to reinforce the system for monitoring the physical parameters (temperature and humidity) within the man-made caves, and the monitoring of the rocks and land there which have a tendency to deteriorate.

7 Conclusions

ICOMOS considers that the group of excavations and subterranean complexes present at Maresha-Bet Guvrin is in a good general state of conservation, that it brings together a very great variety of subterranean construction methods, and that it bears testimony to diversified socio-economic uses. Since the submission of the first nomination, the definition of the property has been focused more specifically on the subterranean elements which have been better understood in comparative analysis terms, and whose boundaries have been scaled down to a zone of greater density and greater interest in terms of underground remains. Whilst none of the elements on their own are really unique or exceptional, the concentration of excavations, the typological diversity, and the long occupation over successive historical periods allow the assertion that the ensemble attains the status of an eminent and exceptional example of the relationship between Man and the territory in which he has settled. The property as a whole constitutes a particularly credible and universal testimony to human aptitudes in using the subsurface when it is favourable, like it is at Maresha-Bet Guvrin.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Caves of Maresha and Bet Guvrin in the Judean Lowlands as a Microcosm of the Land of the Caves, Israel, be inscribed on the World Heritage List, on the basis of **criteria (v)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The presence in the Judean Lowlands of thick and homogeneous chalk sub-strata enabled numerous caves to be excavated and managed by Man. The property includes a very complete selection of chambers and man-made subterranean networks, of different forms and for different activities. They are situated underneath the ancient twin cities of Maresha and Bet Guvrin, and in the surrounding areas, constituting a "city under a city". They bear witness to a succession of historic periods of excavation and use, over a period of 2,000 years. Initially the excavations were quarries, but they were later converted for various agricultural and local craft industry purposes, including oil presses, columbaria, stables, underground cisterns and channels, baths, tombs and places of worship, and hiding places during troubled times, etc. With their density, diversified activities, use over two millennia and the quality of their state of preservation, the complexes attain an outstanding universal value.

Criterion (v): The underground archaeological site of Maresha-Bet Guvrin is an eminent example of traditional use of chalk subsurface strata, with the development of man-made caves and networks conducive to multiple economic, social and symbolic purposes, from the Iron Age to the Crusades.

Integrity

The integrity of the property is expressed in the first place by the diversity of the excavations and their arrangements, intended for a variety of economic, social, funerary and symbolic purposes. It is also expressed by the exceptional density of the subterranean structures which are found beneath the ancient twin cities of Maresha and Bet Guvrin. The integrity of the property also concerns its relations with the outside and the preservation of a landscape of ancient ruins in a well-preserved environment of Mediterranean vegetation.

Authenticity

The underground structures of Maresha-Bet Guvrin are authentic. They have been well-preserved, firstly because of the quality of their architectural design at the time of their excavation, then by their maintenance over a long period of use, and finally by a prolonged period of abandonment, filling up naturally over time, which has contributed to their preservation. This authenticity is however relatively fragile, with the risk of infiltrations of

water leading to possible collapse of the vaults. It will furthermore be necessary to pursue a policy of low-key restoration, avoiding possible over-interpretation with reconstruction, and ensuring that the necessary technical consolidations are carried out in a way which respects the authenticity perceived by the visitor.

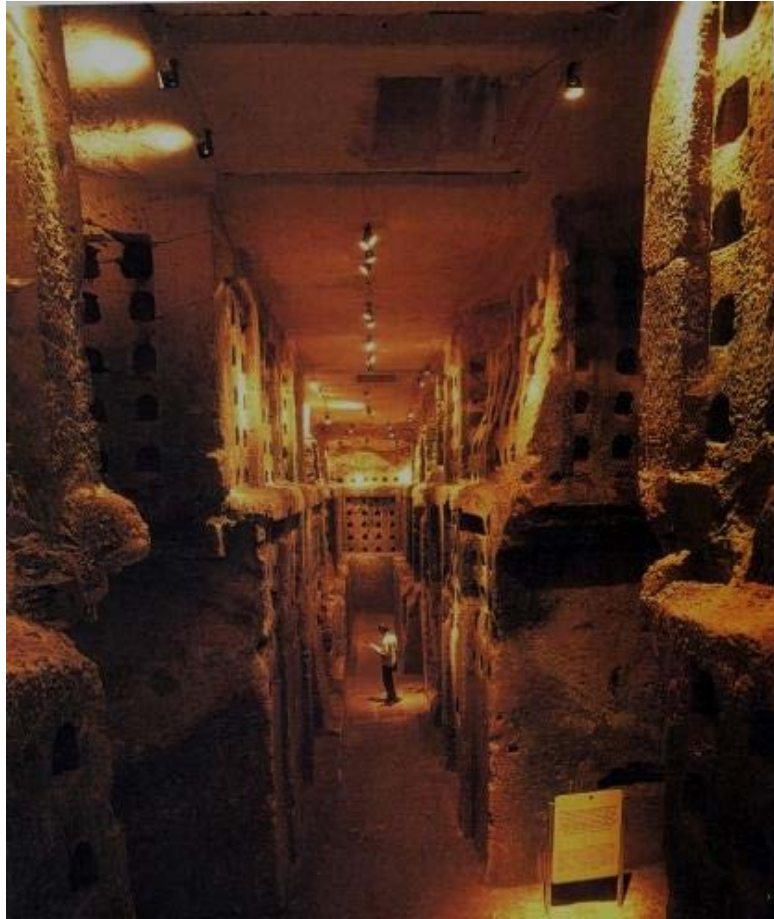
Management and protection requirements

The management system of the Maresha-Bet Guvrin National Archaeological Park has been in place now for many years and functions efficiently. It is supervised by the Israel Nature and Parks Authority (INPA) and benefits from the Authority's system of protection, which also covers most of the buffer zone. The regulations concerning this zone are completed by a National Forestry Plan and directives on the limitation of size and height of possible surrounding constructions. The conservation of cultural elements is guaranteed by the Israel Antiquities Authority (IAA), and benefits from specialist assistance for highly technical issues such as the monitoring of the rocks forming the walls and vaults of the threatened caves. The tourism development project is based on a long-standing tradition and is well managed.

Additional recommendations

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

- Paying particular attention to the conservation of the authenticity with regard to the ongoing and projected restoration and development work; the exterior reconstructions must be minimal;
- Submitting the 'Villas Hill' development project, if confirmed, to the World Heritage Committee for examination, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*;
- Reinforcing the monitoring system for the physical parameters (temperature and humidity) within the man-made caves and the monitoring of the rocks and land in places where they are tending to deteriorate.



Maresha, the columbarium cave



Maresha, olive oil plant



Cave in the necropolis of Bet Guvrin



Bell-shaped caves in Bet Guvrin

Van Nellefabriek (Netherlands) No 1441

Official name as proposed by the State Party

Van Nellefabriek

Location

Province of Zuid-Holland, City of Rotterdam
Netherlands

Brief description

Built in the 1920s, the Van Nellefabriek bears witness to extremely accomplished industrial architecture, in a built complex consisting of several factories side-by-side. The structure of the main buildings consists essentially of steel and glass, and makes large-scale use of the curtain wall principle. In accordance with the common aims of the entrepreneur and the architect, the Van Nellefabriek is the tangible embodiment of an ideal factory, in which the working spaces can evolve according to needs, and in which natural daylight is used to enhance employees' working conditions. It also illustrates how hygienist concerns were taken into account in the design and construction of a new factory which has become a symbol of functionalist architecture in the inter-war period. Finally, it bears witness to the long tradition of Dutch ports in the processing and packaging of tropical products (coffee, tea, tobacco) and marketing them in Europe.

Category of property

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

1 Basic data

Included in the Tentative List

17 August 2011

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

28 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted the International Committee on 20th Century Heritage, and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 15 to 17 October 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party dated 12 December 2013, requesting that it should:

- Extend the boundaries of the property to include the green space in front of the entrance and next to the canal;
- Clarify the boundaries of the buffer zone in the south-west;
- Confirm the promulgation of the Municipal urban development plan and the future regulation of the buffer zone;
- Specify the composition and the running of the Management Committee;
- Confirm that the potential creation of a visitor centre will not result in the creation of new buildings.

The State Party sent additional documentation on 26 February 2014.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The Van Nellefabriek is located in the north-west of Rotterdam, in the Spaanse Polder industrial zone, along the banks of a canal. The factory complex as a whole occupies a surface area of roughly 10 hectares. However, the nominated property consists only of the northern and eastern half of the complex, comprising the main historic buildings dating from the late 1920s. This area forms a single block with a surface area of slightly over 5 hectares. Used for the processing, packaging and dispatching of tea, coffee and tobacco, the factory comprises an ensemble of buildings that are side-by-side or close to each other, with extensive traffic areas and access to the waterway and road.

The main ensemble consists of three factories side-by-side, each one with a different volume, in alignment along the internal street. The three buildings have large flat roofs at different levels. This ensemble is laid out along a grand north-west/south-east axis. The largest and tallest of them, the tobacco factory (1926-1929), is in the centre. To the north of it is the coffee factory (1928-1930), which is slightly less tall, followed by the tea factory (1928-1929), whose height is in turn lower. To the south, the alignment of the curtain wall facades is continued by the office building (1928-1930) which forms a concave line in the perspective. The run of glass curtain walls is some 220 m long. It is dominated by horizontal lines, which are punctuated by three vertical stair well blocks, the tallest of which culminates in the rotunda-shaped tea room (1926-

1929), which provides a panoramic view of the factory and the surrounding area.

Opposite the main architectural ensemble and the series of glass curtain walls, there is a series of functional buildings along the other side of the internal street: the boiler house and its lofty chimney (1927-1929), the large dispatching hall (1929-1930) with five overhead bridges linking it to the factories, the warehouses (1942-1943 and 1967), and finally along the canal and closing off the space to the north, the workshop building (1929-1930). The nominated property includes, in addition to the main factory street, a green space close to the entrance and the porter's lodge.

The load-bearing structures of the main buildings form an interior skeleton of concrete and steel. The exterior facades are covered with large windows in metal frames, following the curtain wall principle. The extensive use of glass, not only on the outside but also inside, particularly in the offices, allows the passage of daylight and improves visibility. The factory spaces are designed to receive as much natural daylight as possible, and also to provide spaces that can be quickly adapted to changes in production needs. The interior octagonal columns are strong enough to bear the weight of the concrete floors necessary for industrial equipment. The boiler heating system, initially coal-fired, was later converted to oil. The conveyor system connecting the buildings via the overhead bridges was part of the original design. It is completed by a port area with cranes for the direct loading of cargo vessels opposite the warehouses.

In addition to the architectural and functional qualities specific to each building, which are typical of the inter-war period, the ensemble provides a series of perspectives of a complete and well-preserved industrial complex, engaged in an industry that processed, packed, stored and commercially distributed industrial food products after the great tradition of the Dutch port-based economy.

History and development

Long-distance trade in spices and other overseas products was the basis of the wealth of the Netherlands, particularly through the VOC (Dutch East India Company) and the GWIC (Dutch West India Company) in the 17th and 18th centuries. Alongside Amsterdam, the port of Rotterdam grew substantially during this period. It specialised very early on in the processing of food commodities and in warehouse trade, reselling the goods in Europe and later throughout the world. The Van Nelle company was founded by Johannes van Nelle in 1782 to trade in tobacco, coffee and tea. A family-owned firm developed after him, carried on during the 19th century by the Van der Leeuw family, under the original company name.

Benefitting from its river links to the European hinterland, Rotterdam became one of the largest ports in the world. In the 19th century, it continued to grow steadily, as the port developed and industrial and commercial companies were established.

The eldest son of the third generation of the Van der Leeuw family, Kees van der Leeuw, conceived the vast project of the Van Nellefabriek, to be built on an undeveloped site on the Spaanse Polder, on the banks of a canal. Kees van der Leeuw was also a philosopher and an artist. His interests strongly influenced his approach to industrial architecture, as he wanted the new factory to embody his humanist and social convictions. He was determined to foster good social relations in the working environment. The project began to take shape in the second decade of the 20th century. After extensive design studies, the plans for the new factory were drawn up in 1923 by the architect Michiel Brinkman, who died during the initial construction work in 1925. His son Jan, a young civil engineer who had already been involved in the project, took over, alongside the architect Leen van der Vlugt. They completed the plans, and over the following years carried out the construction work of the project, designed as an organic and functional whole.

The aim was to organise an industrial production complex that was spatially coherent, to enable large-scale storage and dispatch using all methods of transport. The complex was laid out around an internal street running parallel to the canal which also forms a major visual axis. It takes the form of a series of grand facades in a line along one side, facing the warehouses and boiler house with its great chimney lined up along the other side. The visual concave arc of the office block, at the entrance, directs the eye towards the main perspective. The completed complex is an early example of industrial urban planning, successful both in functional and aesthetic terms.

In the years 1910-20, the Spaanse was an ancient agricultural polder on the edge of the rapidly expanding city of Rotterdam. It was linked to the navigable waterways by various canals which were then extended and deepened. The soil, which was soft and flooded, was topped with a layer of sand some 2.5 metres thick (1925). The foundations were supported on numerous long reinforced concrete piles, which consolidated the stability of the ground. The piles were prefabricated on-site from 1926 onwards, and were inserted by a steam pile-driver. This was a foundation technique pioneered in the Netherlands at the time, and is still today considered to be a remarkable technical achievement. The load-bearing structure for the buildings is in reinforced concrete, using mushroom-shaped vertical columns supporting horizontal girders and a floor. This is a technical variant, devised by Michiel Brinkman (1913), of a reinforced concrete column and girder construction system which had already become standard for factory building in Western Europe.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The State Party proposes the starting point of the comparative analysis to be the great values of the property, which – it is suggested – should even be the context of the comparative analysis. The analysis is

supported solely by reference to the history of Modernism, and there are a number of omissions and inaccuracies in terms of the history of building techniques.

The comparative study itself is limited solely to industrial architecture contemporaneous with the property, taking the form of a table in which the main guiding ideas are the links with water and the environment, the idea of designing for openness to daylight, the expression of dynamism in architectural design and techniques, and finally types of construction in which reinforced concrete mushroom columns are used. In these contexts, a quite detailed series of individual properties is evoked, but they are referred to schematically. It is essential however to acknowledge the particularly important work of the predecessors of the creators of the Van Nellefabriek (Michiel Brinkman, Jan Brinkman, and Leen van der Vlugt), particularly in Germany with the Fagus Factory in Alfeld (Germany) by Gropius, which is already inscribed on the World Heritage List on the basis of criteria (ii) and (iv). This pre-World War One factory quite specifically looks forward to the Van Nellefabriek project and its agenda, in terms not only of industrial urban planning and architectural options, such as the use of large curtain walls, but also of social humanism in the business world.

The Van Nellefabriek is part of the spread of Modernist and functionalist architecture applied in the industrial domain, but also in other fields. The movement emerged in the mid-1900s, and then developed further in the inter-war period and in the post-World War Two period. This theme is already quite well represented on the World Heritage List: the Centennial Hall in Wrocław (Poland, 2008, criteria (i), (ii) and (iv)), Bauhaus and its Sites in Weimar and Dessau (Germany, 1996, criteria (ii) (iv) and (vi)), the Rietveld Schröder House (Netherlands, 2000, criteria (i) and (ii)), Berlin Modernism Housing Estates (Germany, 2008, criteria (ii) and (iv)), the White City of Tel-Aviv (Israel, 2003, criteria (ii) and (iv)), *Ciudad Universitaria* de Caracas (Venezuela, 2000, criteria (i) and (iv)), Central University City Campus of the *Universidad Nacional Autónoma de México* (UNAM) (Mexico, 2007, criteria (i), (ii) and (iv)), and the Tugendhat Villa in Brno (Czech Republic, 2001, criteria (ii) and (iv)).

Despite the shortcomings of the State Party's comparative analysis, ICOMOS recognises the particularly accomplished nature of the Van Nellefabriek, as an example of industrial urban planning designed to increase efficiency in production methods, and as a major icon of Modernism.

ICOMOS considers that, despite its initial 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:

- It is an example of industrial urban planning, constructed in an open polder area, close to a canal, roads and the railway; the urban planning, and the architectural choices, represent the combined achievement of the humanistic entrepreneur who commissioned the factory and a team of architects and engineers taking their inspiration from Modernism.
- Through its industrial urban planning approach, and its architecture which is open both in spatial terms and in terms of admitting daylight, the Van Nellefabriek quickly became an icon of Modernism. It is considered to be a particularly accomplished and coherent example of the way an industrial complex can be integrated with its environment.
- The facades make systematic and large-scale use of curtain walls, consisting of continuous windows in metal frames, giving them a specific tone which is both sober and bright.
- The general architectural choices reflect outstanding use of verticality and horizontality, to maximise the functionality of the space and its overall aesthetics.
- It reflects an open and progressive design of the interior spaces based on the rationalisation of the processing of food products (tea, coffee and tobacco) and adaptability to changes in industrial processes.

ICOMOS considers that this justification is for the most part appropriate, and that the Van Nellefabriek is indeed an icon of Modernism in industrial architecture. It bears witness to the contribution made by the Netherlands in this field, and is particularly successful in terms of industrial urban planning, the architectural quality of the spaces and the treatment of the facades. Its influence as an architectural model has spread throughout Europe and the United States. However, the exceptional historic value of particular features is only relative, as most of the solutions used already existed, and in some cases were used in emblematic ways in earlier buildings. The same applies to the progress made in managing the use of machinery and industrial processes, which has a long history prior to the Van Nellefabriek. The property is particularly worthy of attention because of the balance between a series of factors (use of land and the logistical environment, management of working spaces and the use of natural daylight, etc.) along with the conceptual maturity reflected in the property as a whole. Furthermore, the Van Nellefabriek bears outstanding testimony to the history of the Netherlands with regard to its ports and economy, and their role in the development of world trade in the modern and contemporary eras.

Integrity and authenticity

Integrity

The Van Nellefabriek was well preserved during the course of its industrial use, up to 1998, and this has continued in the rehabilitation and adaptive reuse projects that immediately followed. The architectural elements that constitute the property's value, along with the elements

relating to the movement of the goods and the visual relationship of the built structure with its environment have been preserved, and their initial integrity is still intact and perfectly visible today. Changes have of course occurred in an industrial area which has remained in constant use up to the present day. The growing role of motor vehicles for example led to the creation of parking areas on available land (1972-74). More generally, the industrial spaces have been adapted to changes and innovations in production and marketing, but without serious consequences to an industrial space and buildings that had been devised with such changes in mind, and which have lived up to expectations in this respect. Throughout the history of the property, changes of use have taken place, and buildings of secondary importance have been added or removed, but generally to the rear of the main buildings, to the west and south-west, in a part located in the buffer zone but outside the nominated property. The change of manufacturing owner in 1989 led for example to the creation of a new silo, but this was subsequently demolished.

Since the 1990s, decisions about structural and architectural modifications have been taken in conjunction with the cultural authorities of the Netherlands. The adaptive reuse conversion in 1998, overseen by the VNOF consortium (*Van Nelle Design Factory*), aims to preserve the property's urban and architectural value, whilst providing spaces for offices and for industrial services involving limited use of machinery. A specialist architect has been engaged to ensure the satisfactory conservation of the property during the conversion of the economic function of the premises. The architect follows a strict specification drawn up with the public heritage conservation authorities. The programme has a long-term approach, and the results seem to be very satisfactory.

Following the request made by ICOMOS, the State Party has extended the boundaries of the nominated property to include part of the canal adjacent to the factory and the green spaces between Schuttervaergweg to the south and Delfhavense Schie to the east.

ICOMOS considers that the conditions of integrity, in terms of urban composition (locations of buildings and organisation of territory, functional relationships, panoramic views, etc.) and in architectural terms, from the various exterior and interior aspects, are satisfactory.

Authenticity

The good preservation of the site throughout its history has also strongly contributed to the retention of authenticity. As indicated earlier, changes have been made to cater for new uses, along with maintenance and repair work on structural elements such as interior fittings. But almost invariably the work has been carried out with great respect for the original urban and architectural features. The most jarring changes (for example, the silo in 1989 that detracted from landscape authenticity) have since been corrected, thanks to an active policy of heritage conservation carried out by the owner in

association with the relevant municipal and state public departments. The history of the Van Nellefabriek reflects architectural continuity, and this is also true of its present-day adaptive reuse. The exterior alterations have remained minimal, and an active policy of conservation research for this type of 20th century building has been conducted over the last few years to pave the way for future preservation work.

The location of the buildings and their relationships with their environment have not changed since the factory was built. The general forms and spaces of the buildings have been retained, along with the curtain wall facades. The facades have retained their initial function of allowing daylight into the factories, a feature which is combined with the openness of the interior spaces. The curtain walls have also been preserved in the technical annexes, but they had to be restored because their condition had deteriorated with age. Various works were carried out in the 1980s on the office building (aluminium window frames and the introduction of double glazing) and more recently on the tea-room at the top of the building. Fire escape stairways were also installed in the 1990s, but they are easily reversible. Some works were also carried out on the walls, in order to house new production facilities (coffee factory). The ensemble remains authentic in its utilisation, because even though the original industrial activities (coffee, tea, tobacco) have been discontinued, the premises are still being used by industrial and service companies. The new consortium Van Nelle Design Factory is continuing and renewing the original industrial use, whilst reorientating it towards the production and economic values of the present day. In this sense, it is an authentic and living place.

ICOMOS considers that the restructuring/restoration of the property undertaken for economic reasons between 2000 and 2006 has been well integrated into a property that has been generally well maintained, and which has undergone no major reconstruction or alteration since it was first built. The work has been conducted with great care, in a model works project which is today considered to be a benchmark. The various aspects of authenticity of the property have thus been satisfactorily maintained, and this authenticity is clearly visible to the Van Nellefabriek's visitors and users.

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;*

This criterion is justified by the State Party on the grounds that the splendid Van Nellefabriek is the collective result of creative interaction - between the intellectual aspirations of an employer inspired by humanist principles, and architects and engineers involved

in the Modernist architectural movement of the inter-war years - to design a vast industrial complex which is both aesthetically pleasing and technically advanced. This collective genius designed and brought to realisation an ideal factory, whose transparency and architectural dynamism reflect the social, economic, constructive and architectural progress of the period.

ICOMOS considers that the Van Nellefabriek is one of the most accomplished industrial installations of the inter-war years, in terms of modernism in the industrial world and functionalism in architecture. The synthesis that it represents however brings together trends in architecture and in the planning of industrial areas that considerably pre-date the Van Nellefabriek, and the values advanced here are explicitly recognised under criteria (ii) and (iv).

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;

This criterion is justified by the State Party on the grounds that the clear layout and carefully organised construction of the buildings of the Van Nellefabriek are an expression of the values of Modernism. Its construction marks the beginning of a new era in 20th century urban planning, as it moved towards the “open city”. The light-filled factory in a verdant environment has become a universally recognised symbol of modern culture and design, in conjunction with social concerns and the development of an open and free civil society.

ICOMOS considers that the Van Nellefabriek embodies the bringing together and use of technical and architectural ideas that were born in various parts of Europe and North America, just before World War One and in the years that followed. It is successful in terms of its location with its harmonious functional relationship with its environment, and its accomplished architectural realisation. It became one of the great international icons, in Europe and the Americas, of Modernism in the industrial field, and constitutes an exemplary contribution by the Netherlands to this movement. It illustrates the long-established importance of the port of Rotterdam in the international food product trade.

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 Van Nellefabriek is a remarkable example of a daylight factory, achieved through the

vertical organisation of the factory during the “Machine Age”. This resulted in a very modern conception of industrial architecture, involving the large-scale use of curtain walls with fine metal frames that afterwards became very well known for its transparency, its elegance, its functionality and the spirituality that it inspires.

ICOMOS considers that the Van Nellefabriek is technically one of the most accomplished industrial complexes ever built, and one of the great aesthetic successes of Modernism and Functionalism in architecture during the inter-war period. In terms of industrial architecture, it is an eminent example which illustrates the values of the relationship with the environment, particularly with the canals and transport networks, of rational organisation of production and mechanical handling flows, and of maximum use of daylight through the large-scale use of a curtain wall of glass reinforced with iron. It expresses the values of clarity, fluidity and the opening up of industry to the outside world.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets the conditions of integrity and authenticity, and meets criteria (ii) and (iv).

Description of the attributes

- The Van Nellefabriek embodies the industrial urban planning of a complex located on an open polder site, connected to the immediately adjacent canal, railway line and roads.
- This urban planning, and the architectural choices embodied in the Van Nellefabriek, are the result of collaboration between a humanistic entrepreneur and a team of architects and engineers inspired by Modernism.
- Through its industrial urban planning choices and its architecture, largely open in terms of space and daylight, the Van Nellefabriek quickly became an icon of Modernism and one of the most accomplished examples of the movement.
- The facades make systematic large-scale use of continuous glazed curtain walls, giving them a specific tone that is both sober and bright.
- The general architectural choices reflect outstanding use of verticality and horizontality to maximize the functionality of the space.
- The design of the industrial space is at once functional and adaptable, in order to accommodate changes in production processes.
- The Van Nellefabriek expresses and renews the grand tradition of the Netherlands in warehouse trade and the packaging of food commodities from other continents (tea, coffee and tobacco) for the benefit of European consumers.

4 Factors affecting the property

There are no plans to modify the exterior structures and buildings of the property or to make any changes in its immediate vicinity. The former railway area is to be decommissioned as part of the municipal urban development plan, and will become a green space also used for sports activities. A residential complex is however currently under development close to the canal, but outside the buffer zone. More generally, Spaanse Polder is undergoing a programme of economic revitalisation and is to become a centre for businesses and service companies.

There is a network of roads, running through or along the edge of the polder. The railway line to Delft is open for the transport of hazardous substances, but it is located some 1 km away from the property.

Visits to the Van Nellefabriek, which were numerous in the late 1990s (up to 80,000 a year), have been sharply reduced since then because of the development of economic activities on the premises. In response to the request by ICOMOS, the State Party has indicated that its current visitor reception project does not involve the creation of new buildings, but that it cannot totally exclude this possibility in the future.

There is no significant volcanic or seismic activity in this region. However, there is a permanent risk of flooding in polder zones in the Netherlands.

ICOMOS considers that the main threats to the property are urban development in the buffer zone or nearby, and the risk of flooding. Any proposal for a project for the construction of a visitor reception centre at the entrance to the property must be examined by the World Heritage Committee in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The property has an area of 5.3 ha. In accordance with the request made by ICOMOS, it has been extended to include part of the canal adjacent to the factory and the green spaces between Schuttervaergweg to the south and Delfhavense Schie to the east. There are no permanent residents, but the property is occupied during the day by some 900 employees of the 90 to 100 companies on the premises.

In accordance with the ICOMOS request, the buffer zone has been clarified as regards the south-west part and the green spaces and sports grounds on the eastern boundary. The buffer zone has an area of 89.3 ha and has 59 inhabitants.

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

Ownership

All the companies involved in the ownership of the property and its current economic exploitation form a holding company that is linked to a Foundation (*Van Nelle Design Factory*). The land and real estate are owned by the private company *Design Factory Monument*. Economic ownership of the property has been entrusted to the limited liability company *cv Van Nelle Ontwerpfabriek (Van Nelle Design Factory)*, founded in 2000, which also acts as the manager and administrator of the property.

Protection

The Van Nellefabriek has been a listed National Monument since 1985, and has been protected by the national Monuments and Historic Buildings Act since 1988. Its conservation and the rules governing its reuse are subject to the provisions of the Netherlands Department for Conservation ("Cultural Historical Reconnaissance" document, 1998). They are reflected in the Structural Plan of 1999. Rules governing utilisation by the tenant companies also apply.

Any works inside the boundaries of the property are also governed by the Environmental Licensing Act of the Netherlands (1988) and the Environmental Law Decree (amended in 2012) which stipulates the cases in which exemptions may apply (maintenance, non-listed buildings, etc.). Since 2010, a new type of public authorisation, including the previous urban criteria along with environmental and civil security criteria has been enacted (WABO Licensing Act). The advantage is that this law brings together the previously existing procedures in a single dossier, which is used for guidance at municipal level. There is also a best practice guide for private individuals. On a scale indicating the environmental impact of construction and development projects ranging from 1 to 6, it is expected that the Van Nellefabriek will be classified as level 2, while the Spaanse Polder environment should be level 3 or 4.

The public funding of the conservation of national monuments and historic buildings will now be governed by the Dutch Conservation of Monuments Decree (2013).

The Municipality of Rotterdam is the competent authority to apply the regulations on works and constructions. It applies the rules on heritage and environmental compliance via the municipal Heritage Bureau, which forms part of the Urban Development Department. A recommendation, which may have the power to suspend, is mandatorily given by the independent consultative body of the Committee for Building Aesthetics and Heritage. Its reference charter is the Rotterdam Building Aesthetics Policy Document. The most important applications are also submitted to the Cultural Heritage Agency of the Netherlands, which makes a recommendation. The Agency is responsible for the application of the National Monuments and Historic Buildings Act.

Furthermore, the Municipality of Rotterdam has established a buffer zone around the perimeter of the property in order to preserve its visibility by regulating any possible alteration or construction works. The whole of the property and its buffer zone are included in the "Spaanse Polder" protected zone of the new Municipal urban development plan, whose drawing up is nearing completion. This overall area of the property and its buffer zone will include measures regulating construction, which was not previously the case. An inventory of buildings more than 15 metres high has been announced. Five other zones surround the zone formed by the property and its buffer zone, for which protection measures are also in preparation.

The factory is guarded 24 hours a day, with a permanently-occupied entrance lodge.

ICOMOS requests the confirmation of the completion and the promulgation of the new Municipal urban development plan relating to the property and the whole of its buffer zone.

ICOMOS considers that the legal protection of the property in place is adequate; for the buffer zone, it will be fully in place once the Municipal urban development plan has been promulgated. It is also necessary to pay attention to the height regulations for the areas close to the buffer zone of the nominated property, in order to protect the main visual lines.

Conservation

The property was protected as a historic ensemble before its original industrial and commercial activities were discontinued in 1998. This has enabled a well-controlled transition in conservation terms, by means of restoration works covering all aspects of the property carried out under a partnership between the owner and the Cultural Heritage Agency of the Netherlands. They were carried out in accordance with extensive technical and historical documentation. Unlike many other early European industrial buildings, the industrial activities of the Van Nellefabriek have never stopped, and the property has thus benefited from a well-organised continuity of use, both in economic and heritage terms. The conversion to service activities, offices and research and innovation facilities took place from 2000 to 2006. All the grand architectural forms, the openings, materials and surfaces and interior design have been kept in conformity with their original state. The furnishings correspond to the original designs, and reflect the modernism of the inter-war years. Other restoration works have been carried out more recently, for example on the canteen in 2011, and additional works are planned in the near future (e.g. the garage). There are other projects relating to the green spaces and the parking areas behind the factory.

A maintenance plan was drawn up to accompany the restoration works, and this has recently been supplemented by a Five-Year Plan (2013-2018). Today the property is well preserved, well maintained and in good condition.

The buffer zone covers 9 urban sector plans. Restrictions to preserve visual values will be included in the plans as they are revised in accordance with regulations. It is stipulated particularly that the factory must remain clearly visible from the various roads and urban access points in the vicinity.

ICOMOS considers that the works carried out on the property have appropriately preserved the urban values and architectural exteriors, and that the interior alterations are in keeping with the spirit of interior design specific to the period of conception.

ICOMOS considers that the conservation measures are appropriate.

Management

Management structures and processes, including traditional management processes

The property's management structure centres on the owner and operator of the property, the private group *Van Nelle Design Factory* and on cooperation with the heritage departments of the City of Rotterdam and the Cultural Heritage Agency of the Netherlands (Ministry of Education, Culture and Science). They jointly drew up the property's management plan (January 2013).

Under the terms of the Management Plan, a Joint Management Committee (comprising the owner, the local authorities and the Heritage Agency of the Netherlands) was set up in 2013, and is to be put in place in 2014. It is to take over from the Conservation Working Group set up during the restoration works and then the drawing up of the nomination file. It is mainly focused on the conservation of the property, in order to direct and guide the works. It will monitor changes in the occupation of the property by the various companies, to ensure that uses and interior alterations are in keeping with the values of the property. Its composition has been broadened to include experts from the Heritage Agency and external experts.

The everyday maintenance of the property is performed by a specialist subcontractor acting under the control of the owner, and in conformity with the criteria for the conservation of the property's values.

The other partners in the management of the property are: the Foundation "Friends of the Van Nellefabriek", the Province of Zuid-Holland, the Rotterdam Chief Marketing Office and the Werelderfgoed Foundation of the Netherlands.

A system of local authorities for the management of natural water, particularly in polder zones, has long been established in the Netherlands. It is coordinated by the regional water regulation authorities. The National Water Plan covers the period 2009-2015. It includes nationwide measures and directives: preventive hydraulic engineering work, planning of land use in conjunction

with water levels and an action plan in the event of major flooding. It takes account of parameters related to climate change and the rise in sea levels.

Since the start of the works in 2000, the company has invested more than 50 million Euros in the maintenance and conservation of the property, a sum which includes a certain number of allocations of municipal and governmental aid. The maintenance cost for the next ten years is estimated at slightly more than 5 million Euros. Properties inscribed on the World Heritage List are given priority by the state in the granting of funding for restoration and conservation work.

The restoration of the Van Nellefabriek, with the dual aim of adaptive reuse and heritage conservation, has been a model project, both in terms of preliminary studies and implementation. A great deal of national and international expertise in the fields of architecture, industrial heritage, history of construction, art history, etc., was assembled for this purpose. The project has won many international awards, and it enabled the setting up of a large number of teams of qualified trades people with industrial heritage restoration expertise.

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

The main management plans and measures are concerned with the conservation of the property, particularly the 5-year Maintenance plan (2013-2018) and the measures controlling constructions in the buffer zone for the visual protection of the property. The Plan sets out the measures to be taken to improve the functionality of the buildings for their new uses, whilst maintaining integrity and authenticity. It includes a code of best architectural practices approved by the Cultural Heritage Agency of the Netherlands.

The current maintenance works for the property also comply with the *Modernisation of Monument Conservation Policy Document* (2009).

The Van Nellefabriek is above all a centre for economic activities. It is accessible to the various enterprises' customers and suppliers (about 5,000 visitors a year). Up to now, tourist visits had not been a management objective, and while visits by small groups are possible, they remain very limited and require special authorisation (groups of architects, students, professionals, etc.). However, in view of the growing number of requests for visits, a plan to bring in an external agency to manage tourist visits is currently being considered. In this connection, a visitor centre is being considered. The objective of the Foundation "Friends of the Van Nellefabriek" (2012) is to promote the property and to organise a certain number of cultural and professional events there.

ICOMOS has obtained assurances that the reception of visitors will not lead to any new construction inside the

property in the short term, but the possibility of a future project cannot be completely ruled out.

Involvement of the local communities

Local communities are involved through the participation of the Municipality of Rotterdam in the management of the property and its buffer zone, and through the Foundation "Friends of the Van Nellefabriek".

ICOMOS considers that the management system for the property is in place and that it is effective, but it is necessary to confirm that the enlarged Committee has effectively been set up and that it is in fact functioning; furthermore, if the reception of visitors one day leads to a construction project inside the property, the project will have to be submitted in advance to the World Heritage Committee for examination.

6 Monitoring

The three partners involved in the management of the property have agreed on indicators, the frequency at which they are monitored, and the implementation of the monitoring. Everyday surveillance of the condition of the property, and of any anomalies which may appear, is the responsibility of the maintenance company Grontmij Vastgoed. The main monitoring indicators are as follows:

- Attributes of outstanding universal value; memoranda for state of conservation reports;
- Evaluations to maintain the conditions of integrity and authenticity of the property;
- Evaluation of management results;
- Environmental and landscape impacts occurring inside the buffer zone;
- Zoning plans;
- Technical maintenance, restoration works, implementation and realisation of the 5-year plan;
- Financial management;
- Risk management;
- Information, promotion and education.

ICOMOS considers that the monitoring of the property is satisfactory.

7 Conclusions

ICOMOS considers that outstanding universal value for the property has indeed been demonstrated. The Van Nellefabriek bears outstanding tangible witness to the long commercial and industrial history of the Netherlands in the field of importation and processing of food products from tropical countries, and their industrial processing and marketing in Europe. Conceived as an "ideal factory", it bears exceptional testimony, and is one of the most outstanding and emblematic achievements of Modernism in the field of industrial urban planning and architecture during the inter-war period. It marks the contribution of the

Netherlands in the design of processing plants, and is one of the icons of 20th century industrial architecture.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Van Nellefabriek, Netherlands, be inscribed on the World Heritage List on the basis of **criteria (ii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Designed and built in the 1920s, the Van Nellefabriek demonstrates an extremely accomplished industrial architecture. It comprises a complex of buildings consisting of several factories aligned along the perspective of a large internal roadway, and close to several means of transport (canals, roads, railway lines). Supported on an internal structure of reinforced concrete, the facades of the main buildings consist essentially of steel and glass, making large-scale use of the curtain wall principle. Via a common purpose agreed between the entrepreneur and the project architects and engineers, the Van Nellefabriek embodies an ideal factory, open to the outside world, whose interior working spaces are progressive, and in which daylight is used to provide pleasant working conditions. It embodies the accomplished realisation of a new kind of factory that has become a symbol of the modernist and functionalist culture of the inter-war period. Lastly it bears witness to the long port-related economic tradition of the Netherlands, in the processing of imported food products (coffee, tea and tobacco) and their marketing in Europe.

Criterion (ii): The Van Nellefabriek brings together and makes use of technical and architectural ideas originating from various parts of Europe and North America in the early 20th century. It is exceptionally successful both in terms of its industrial setup and its degree of architectural and aesthetic accomplishment. It represents an exemplary contribution by the Netherlands to the Modernism of the inter-war years, and has since its construction become an emblematic example and an influential reference throughout the world.

Criterion (iv): In the context of industrial architecture in the first half of the 20th century, the Van Nellefabriek is an outstanding illustration of the values of relationships with the environment, the rational organisation of production flows, and dispatch via the nearby communication network, maximum admission of daylight to the internal spaces via the widespread use of a glass curtain wall with metal frames, and open interior spaces. It expresses the values of clarity, fluidity and the opening up of industry to the outside world.

Integrity

Throughout a long industrial history devoted to the same activity of industrial processing and packaging of food products, the various factories and their functional relationships with the logistical spaces (warehousing, dispatching, transport) have remained unchanged. The ensemble of buildings was preserved when the premises underwent an economic conversion in the late 1990s. The conditions of integrity in terms of composition (location and organisation of territory, functional relationships, panoramic views, etc.), and in architectural terms in its various aspects, have been met.

Authenticity

The restructuring and restoration of the property undertaken for economic reasons from 2000 to 2006 was carried out on a property which had been generally well maintained, and had never undergone reconstruction or conversion after its original construction at the end of the 1920s. The works have been carried out with great care, as part of a model project. The property's authenticity has thus been appropriately preserved in each of its aspects, and this is clearly perceptible both to the visitors and to the new business users of the Van Nellefabriek.

Management and protection requirements

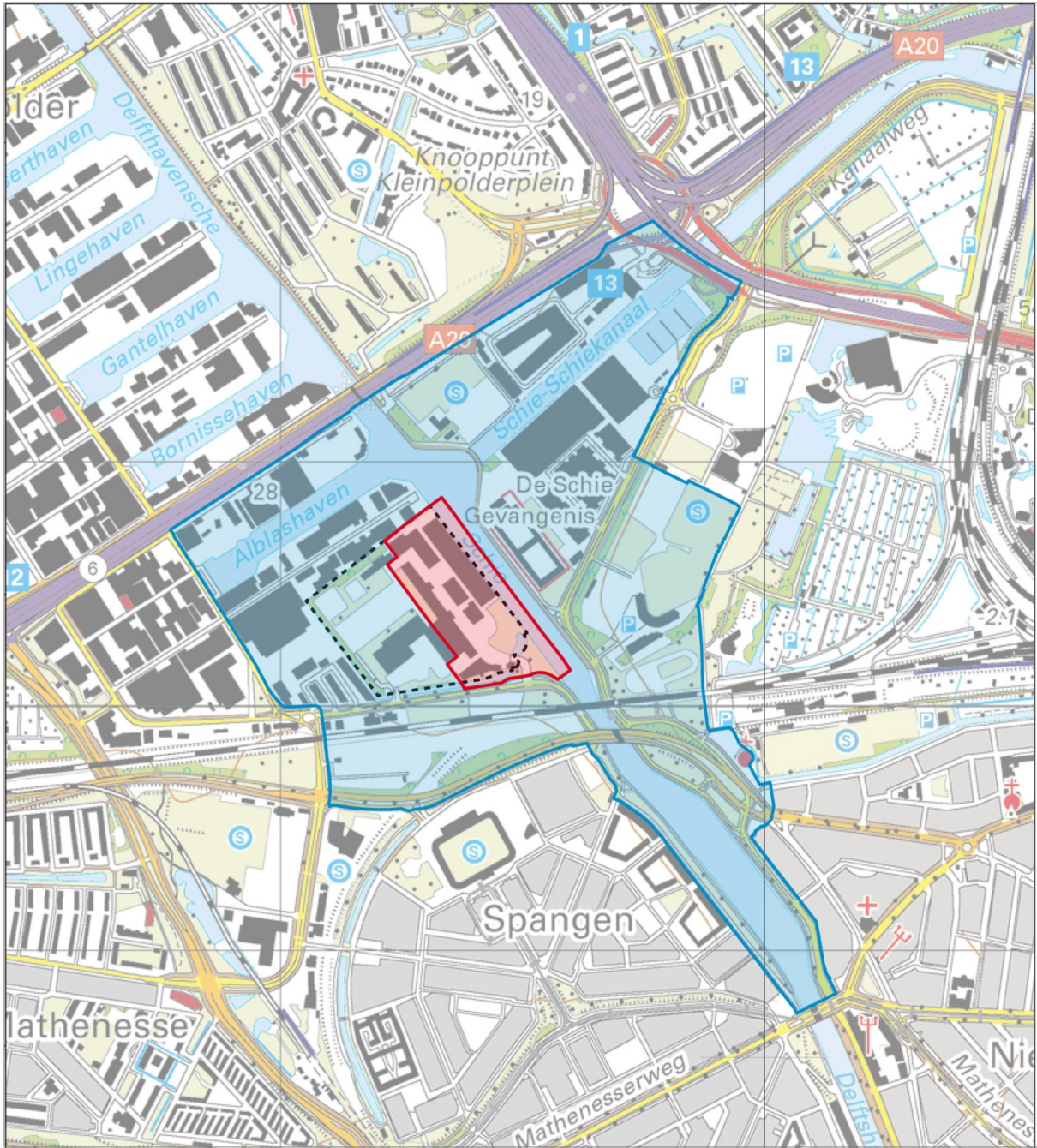
The Van Nellefabriek enjoys the highest level of state protection as it has been a listed national monument since 1985. A large buffer zone has been established to ensure good visual expression of the property in an open environment. The overall protection of the whole ensemble will be guaranteed by the new Municipal urban development plan, whose drawing up is nearing completion, and by the inclusion of environmental preservation measures in the urban development plans for the five zones of its urban environment.

The property is managed by its current owner and operator, the private group *Van Nelle Design Factory*. The management of the conservation of the property's architectural, urban and environmental values is based on the cooperation between the heritage departments of the City of Rotterdam and the Cultural Heritage Agency of the Netherlands. They jointly drew up the property's management plan (January 2013) and their cooperation has been made permanent in the form of a Joint Management Committee which has been enlarged to include new experts. The property's prime purpose is to accommodate economic activities in industrial, commercial and service fields. It is already open for visits, but this is seemingly not a major objective; frequency of visits could however increase over the coming years, giving rise to a need for specific facilities, which in turn must not be allowed to adversely affect the property's integrity and authenticity.

Additional recommendations

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

- Confirming the completion and promulgation of the new Municipal urban development plan for the property and the whole of its buffer zone; it is also necessary to pay attention to the height regulations for the other zones in the vicinity of the property and its buffer zone, so as to conserve visual integrity;
- Confirming the effective setting up of the Management Committee for the property in its definitive enlarged form, and its practical functioning;
- Confirming that there is no threat to the property from the transport of hazardous materials in the vicinity;
- Submitting, by 1st February 2015, a report to the World Heritage Committee setting out the progress achieved in implementing the recommendations mentioned above, which will be examined by the World Heritage Committee at its 39th session in 2015;
- Submitting all proposals for a project for the construction of a visitor reception centre at the entrance to the property to the World Heritage Committee for examination, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.



Map showing the revised boundaries of the nominated property



Aerial view of the nominated property



South-western view



The former roasting house



The boiler house

Valle Salado de Añana (Spain) No 1445

Official name as proposed by the State Party

Cultural Landscape of Valle Salado de Añana

Location

Autonomous region of the Basque Country
Province of Alava-Araba
Spain

Brief description

Located on the slopes of a valley at a confluence of rivers in an inland area of the Basque Country, the salt works of Valle Salado de Añana produces salt from natural springs. Salt production there dates back to the Neolithic and antiquity; it continued without interruption and on a significant scale up to the 1960s. A collection system of channels distributed the brine to a series of evaporation pans on terraces. The salt works was built and maintained down the centuries using local materials (stone, wood and clay) and then cement in the 20th century. After a period of decline and then near-abandonment, a significant proportion of the terraces were reconstructed in the early 2000s. The project aims to restore the general features of the cultural landscape of the salt works, and to bear witness to long-established skills, whilst setting up a socio-economic project based on tourism and cultural activities. The terraces are surrounded by the housing of the village of Añana and by green spaces.

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*.

On the basis of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013), paragraph 47, it is also a *cultural landscape*.

1 Basic data

Included in the Tentative List

27 January 2012

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

29 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Cultural Landscapes and TICCIH.

Comments about the evaluation of this landscape were received from IUCN in December 2013. ICOMOS carefully examined this information to arrive at its final decision and its March 2014 recommendation; IUCN also revised the presentation of its comments in accordance with the version included in this ICOMOS report.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 11 to 15 September 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party on 25 September 2013, requesting additional information about:

- The historical role of the railway in the development of Valle Salado;
- The economic history of the site following the decline in the 1960s, particularly at the end of the 20th century;
- The number of professional salt workers today, and the production that is sold;
- Clarifying the structure and role of the Gatzagak association;
- The Foundation's annual operating budget.

The State Party replied on 22 October 2013, sending additional documentation which has been taken into account in this evaluation.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Valle Salado de Añana is a traditional salt works in an inland part of the Basque Country, close to the Burgos region. Its layout is unusual, with a series of artificial terraces on the slopes of the valley, on which stand the brine evaporation pans. The property is located in the southern part of the province of Alava. Since ancient times the site has always produced salt (sodium chloride).

The brine comes from natural salt water springs located in the upper parts of the valley. Salinity varies depending on the spring, but four of the springs supply the bulk of the brine used, with an average concentration of 210 grams per litre and a natural flow (without the need to pump) of 2.4 litres per second. The springs have been channelled and combined over the course of history. The largest spring is fortunately also the highest; it supplies the terraces by the force of gravity alone; the other springs supplement this flow as the brine descends.

The brine is carried by a network of channels on the ground, that are sometimes raised overhead to cross valleys. The channels are often made of wood, while others are dug out of the ground and traditionally coated with clay. The main brine channel is 3 km long, and forms the central artery of a branching network. It has technical facilities such as sidings, valves, and flow regulation nozzles. The structural principle of the network is ancient, but it has evolved over time as needs have changed. It supplies a set of successive evaporation pans on terraces above the Muera stream and a small tributary; these often run dry, and are then used as pathways for the salt works.

The evaporation pans are set up on flat terraces supported by stone walls; the pans are often extended beyond the slope by horizontal wooden platforms. The platforms are supported by a wooden framework that stands on stone foundations. Their shape and size, sometimes precipitous, depend on their location and the slope of the ground. The pans were for a long time kept watertight by clay, and later by cement. The original salt concentration of the brine, the presence of sunlight and the dry and windy climate make salt extraction relatively easy, and no additional heat source is needed. In the mid-20th century around 5,000 pans were in existence, with an average surface area of 20 square metres.

The whole operation also includes several brine storage wells, to guarantee regular salt production. It was the right to fill these wells that formed the cornerstone of the collective brine distribution system. In the 1950s, 110 active farms made use of some 850 wells. Downstream, the crystallised salt was stored under the wooden substructures of the pans, after which it was collected in external warehouses, of which there were 4 during the royal monopoly period. The whole operational requirement was completed by secondary technical elements and specific salt worker tools. Salt production follows a seasonal cycle: preparation takes place in winter, the production phase from June to September, and salt transport and storage the rest of the year.

An archaeological zone has been preserved around the Santa Engracia spring. This zone has not been affected by the overall reconstruction of the salt works now under way. It includes the remains of a chapel and various salt worker facilities. Palo Bridge is also an archaeological site.

The salty water has furthermore resulted in a natural environment that has always been very specific, with a characteristic ecosystem that is specific to this region, both in terms of fauna and flora. It encompasses the terraces and the village, contributing to an original visual ensemble. This ensemble is presented as an ancient and living cultural landscape, bearing witness to a special and sustainable relationship between man and the natural environment. The very long historical continuity of salt production is highlighted. The near-abandonment in the last third of the 20th century, and the reconstruction project now under way, with its development model (based on cultural activities and tourism), are presented by the State

Party as proof of the property's resilience to historical circumstances.

History and development

One of the major historical characteristics highlighted is the continuity of exploitation of the brine springs of Valle Salado down the ages. The constant interest in the salt resource stems from the crucial importance of salt in the human diet and in the preservation of food. Recent archaeological excavations during the most recent maintenance work (2012) revealed human settlement on the site during the Neolithic, from around the middle of the 5th millennium BC, with traces that testify to the production of salt by heating brine using log fires.

Salt production was also present at Añana during the Roman period, particularly in the 1st century AD, and was encouraged by the nearby Roman road connecting Leon to Aquitaine (present-day France), and the other Roman road linking central Spain to the Bay of Biscay. It was during this period that the use of natural evaporation on terraces appeared, leading to an increase in production. At the end of the Roman Empire, invasions disrupted the organisation of the site (5th century AD); however salt remained a much sought-after and strategic product, and a Mediaeval salt worker community came into being. Evaporation pans developed in the bottom of the valley.

In 822, five Christian monasteries shared the salt production rights between them, and the salt works contributed to the consolidation of the kingdom of Asturias and Leon, and during this period suffered raids by Muslim forces. In 945, five salt-producing villages were recorded, rising to six one century later, when the term *salinas* was used to describe the villages. At that time, the area occupied by salt production extended over a distance of almost 10 km. Rights relating to salt became more rigorous, and control of the terraces gave rise to tensions between feudal lords and the church, as a result of which the villages became more autonomous. The common prerogatives were reinforced, and a unified salt worker community asserted itself, taking charge of the technical and social management of access to the brine by the various villages and their inhabitants, together with its storage and commercialisation.

In the 12th century, the intercommunal power structure was supplanted by the Community of Heirs – an association of the owners of the salt terraces – which exercised power for more than 800 years. However, this involved a compromise agreement between the count and the monasteries, with each keeping a significant proportion of the salt produced. The salt was distributed throughout Castile and Rioja. The villages were subsumed into the single village of Añana, which took on the name of Royal Village of Salinas, under the protection of the king of Navarre and Aragon. Protective walls and a fort were built, and the master of the fort was declared lord of the salt works. The village was granted a charter and significant privileges.

In 1564, Philip II imposed a royal salt monopoly. The status of the royal salt works of Añana was thus reinforced, with the trade continuing for the exclusive profit of the crown. Investments were encouraged, and during this period production greatly increased. A long phase of prosperity for the salt workers ensued. The technical system was improved and salt production reached its peak in the 18th and early 19th centuries. A new terrace architecture was designed and implemented, optimising the brine evaporation process.

A state decree in 1869 put an end to the salt monopoly, reflecting a change that had begun much earlier in markets in Spain and in Europe, as a result of the arrival of sea salt and the development of the railway network. Prices fell quickly, and Añana was not well served by modern means of communication. The railway network finally arrived at Pobes, 8 km from the salt works. A race for competitiveness was then set in motion, leading to an increase in evaporation surfaces, increased storage capacities and the introduction of new materials such as cement and concrete. Less favourable zones were utilised, and large numbers of wooden overhangs were built on the terraces, causing a potential risk of collapse. A lengthy price war was waged with the sea salt producers. The Valle Salado became less well maintained, compromising its future.

By the early 1960s, the situation had become critical. The slopes and terraces made mechanisation impossible. The salt worker population wasn't renewing itself because of the difficulties of salt exploitation. Output fell quite sharply, and the region went into a severe economic recession. In the space of a few years, the town lost three-quarters of its population. The number of evaporation pans in operation dropped from around 6,000 in 1960 to just over 2,000 in 1984, and output from 4,000 tonnes to 1,300. The property was virtually abandoned as an active salt works during the 1990s.

The recent renovation of part of the salt works, as a result of subsidised public initiatives, from 1999-2000, has enabled the return of salt production, redirected towards the production of "fleur de sel" (about 100 tonnes a year), educational activities about the workings of the salt works, spa activities and cultural events.

Established over a very long period of continuous exploitation, the heritage of technical and social knowledge means that the property has significant intangible value. Information about this heritage was compiled in the course of the studies carried out for the salt works renovation plan in the early 2000s. It enables an understanding of the technical, social and historical significance of the property. Other intangible values are expressed in traditions, legends and popular celebrations.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The analysis begins with a comparison with the other types of traditional salt exploitation: natural saline groundwater and salt marshes. To this should be added rock salt mines, even though this kind of extraction is of mineral salt using purely mining techniques, as at Wieliczka and Bochnia in Poland (inscribed on the World Heritage List in 1978 and extended in 2013) and at Cardona (Lleida, Spain); the extraction of crystallised salt in slabs from open quarries at Taoudeni (Mali); and the collection of salt from dried-out salt lakes (Chott el Jerid, Tentative List of Tunisia).

The type closest to Valle Salado de Añana is the exploitation of saline groundwater. In salt works of this type, a distinction must be drawn between two ways of crystallising the sodium chloride from the brine: (1) heating or forced evaporation and (2) natural evaporation by the combined action of sun and wind. The first method was used at Añana in the Neolithic, and then abandoned. It was carried out using pots heated over a wood fire. At a later period, this method is found elsewhere, for example at Salins-les-Bains (extension in 2009 of the Royal Salt Works of Arc-et-Senans inscribed in 1982, France). Another site worked since prehistoric times is Hallstatt-Dachstein / Salzkammergut (inscribed in 1997, Germany), with techniques based on the heating of brine solutions, and later mining.

In Spain, the most similar site is Poza de la Sal (Burgos region), 45 km from Añana. Here the brine collected from springs was extracted using evaporation terraces. However, Poza was less successful in coping with competition, and was abandoned more quickly. Another inland salt works is Salinas de Imón (Guadalajara), where the brine is pumped from wells into large evaporation pans. This salt works, important in Spain's economic history, is vast and is located in a gently sloping valley, which results in a landscape closer to a salt marsh panorama than to Valle Salado d'Añana. As in the case of Poza, salt production was completely abandoned in the 20th century. Gerri (Lleida) is another example that is similar to Añana, but on a smaller scale. Production there has also been abandoned.

On an international scale, the site of Yanjing (China), on a mountain side, is the example most similar to Añana, using evaporation pans in terraces. The architectural structures are entirely made of wood, and no stone is used as in the case of Añana. The situation of the springs is less favourable at Yanjing and there is no gravity-fed brine channel network. Maras Salt Works (Peru) and Pedra Lume Salt Farm (Cape Verde) are also sites of brine spring salt exploitation, but the former uses earthen terraces and the site of the second is almost flat.

The natural evaporation used at Añana makes it similar to salt marshes. It is the origin of the brine which distinguishes it from them, together with the horizontal

arrangement of the pans, with very gentle inclination. Sea salt production has been considerably developed in Europe in modern times, both on the Atlantic coast and around the Mediterranean basin; but, as at Añana, these salt works in many cases date back to ancient times, the Middle Ages, or earlier. The geographic extents attained are considerable in some cases, and are measured in thousands of hectares.

The comparative analysis ends with some very general comparisons with sites only very remotely related to Valle Salado de Añana, along with some remarks about the 2003 Convention on intangible heritage.

ICOMOS considers that Valle Salado de Añana represents a rare and highly specific example of the exploitation of natural brine springs, using pre-industrial techniques. Its origins are very ancient, and it operated continuously from Roman times until the end of the 20th century. Set into the broader context of the development of salt production techniques in Spain and Europe, the site was particularly important at a period when salt was a vital and rare commodity, substantially less so when its technical system was on the decline (19th-20th centuries).

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:

- It is a very specific natural site, because of the presence of salt in the soil and in the water, which has an influence on flora, fauna and biodiversity.
- The hydrological conditions have given rise to significant brine springs; situated high up, the brine is thus able to flow by gravity to a complex system of evaporation pans on the slopes of the Valle Salado.
- Salt production has given rise to a characteristic architecture, with evaporation pans on terraces, resulting in a specific cultural landscape that is highly unusual and spectacular.
- This evolving salt exploitation system has been present over a very long historical period, and the earliest traces date from the Neolithic; it has always succeeded in adapting to changing circumstances.
- The salt workers are the custodians and guarantors of this culture; they transmit salt production skills from generation to generation, along with the ability to maintain the sustainability of this collective production system.
- It embodies a cultural landscape in which man-made and natural elements are harmoniously combined; it forms a practical example of sustainably developable heritage, by the use of wholly natural means of salt production.

ICOMOS considers that the property bears witness to an original socio-technical system for producing salt from natural brine springs, in a rugged inland region. It bears witness to proto-industrial production over a very long historical period of one of the resources that is essential for human diet and food preservation. Natural hydrological and geographical conditions have led to an original form of architecture, with evaporation pans on terraces, made of wood sitting on stone foundation walls. They are fed with brine by force of gravity via a network of channels cut into the ground, or overhead ones made of wood. In this ensemble, the exclusive use of local materials (wood, stone and clay) was the rule over a long period, but substantial use of cement appeared in the 20th century. The property embodies a complete proto-industrial production system, which in itself is rare testimony. The property also reflects the transmission of salt production know-how over many generations. The landscape of the ensemble of evaporation pans on the hillside is visually spectacular, but it is expressed in the setting of a mixed natural and cultural environment. In relation to the natural environment, IUCN has stated that "the biodiversity interest on this site is in the number of halophilous and typically coastal species, and the presence of the Near Threatened damselfly (*Coenagrion mercuriale*), a special form of the brine shrimp (*Artemia parthenogenetica*), and nine locally rare plant species." There is therefore a scientifically established originality, but it is not easily discernible to the visitor. As for the cultural environment, the village is located immediately alongside the terraces, but this is an unexceptional environment in terms of housing and town planning, and some of the recent constructions are both mediocre and anachronistic.

Furthermore, ICOMOS considers that the economic difficulties and lack of maintenance of the salt works, followed by the near-abandonment of salt production during the last third of the 20th century have led to a voluntary reconstruction/restoration project based on a somewhat incorrect vision of the concept of tangible heritage conservation and of transmission of the technical and social skills that are associated with the salt works today. In other words, while the history of the salt works is outstanding, the reconstruction on offer today only partially expresses the values that are claimed.

Integrity and authenticity

Integrity

In terms of integrity of composition, the State Party declares that all the remains preserved have now been conserved, but no comparative data with past situations is really provided. Furthermore, for the most part what is presented does not consist of remains that have been preserved, but rather features that have been reconstructed on the site of the former terraces. Some archaeological remains have been preserved in their original condition, but this is only here and there. The work of reconstructing the terraces and their technical elements

is underway; more than half of the work on the property (how it existed when it was abandoned) has been completed. The notion of integrity of composition is thus difficult to establish, and this is a precondition for the authenticity of the elements proposed. Leaving this consideration aside, the area of the restored property seems to be sufficient for it to be described as a cultural landscape.

All the natural, physical and climatic elements that enabled the historic development of salt production are still present: the topography of the site, constancy of the hydrology (flow of springs and composition of the brine), and the generally sunny, dry climate. The property as it is presented today satisfactorily shows to visitors the constituent technical elements: the architecture of the terraces, evaporation pans, brine ducts, brine and salt stocks, etc., but in a reconstructed version after abandonment, and not based directly on archaeological evidence which has been recorded and preserved, nor from continuous maintenance of production by the salt workers. The survival of salt production rights within the families should not be confused with the actual state of the operation when the terrace reconstruction-restoration project began, in the 2000s, starting from a property that had for the most part been abandoned and was in a very poor condition.

The property is presented by the State Party as an evolving socio-technical system which has had to cope with the demands of change (concept of resilience). It is also presented as embodying a traditional production cycle with an annual rhythm that has been maintained, which is directly related to the seasons and climate (concept of a sustainable technical system).

A certain number of relatively recent buildings impair the visual integrity of the immediate environment of the cultural landscape, with four being extremely visible and jarring. They were built on the edge of the area of the evaporation pans, prior to the Valle Salado de Añana renovation programme.

ICOMOS considers that, in accordance with the educational project set up by the Foundation, the work carried out has satisfactorily reconstructed the terraced evaporation pan system, and has enabled a return to working order. The work enables an understanding of the successive major stages of production and the correlations between the various physical factors involved in this production. The functional integrity of the reconstructed technical system has taken into account the compendium of traditional knowledge, but this know-how is applied primarily to the technical management of the present-day property; social continuity is also claimed, but this is much less persuasive. In the absence of a description of the property in its abandoned state, prior to the work being carried out, it is hard to establish integrity of composition, bearing in mind that elements have already been added (grandstands, visitor trails, etc.). Although the salt works site forms an original and

spectacular cultural landscape, it is impaired by jarring urban buildings in the immediate vicinity.

Authenticity

In the State Party's view, the landscape of Valle Salado de Añana has constantly evolved as a result of human action and natural conditions, right up to the present day, whilst remaining a faithful reflection of the main socio-technical determining factors of salt production using the natural means that are specific to the site. It is a living and evolving landscape, particularly in terms of the regular exploitation and maintenance of the site by the owners or their sponsors. It bears witness to a long-term adaptation effort, in order to produce in the best conditions for the time, the quantities and qualities of salt required by the market.

Its authenticity stems from the skills of the salt workers and the continuous transmission of their know-how and application of it to the artificial terraces and brine channel networks, in order to keep production active and profitable. This is a vital aspect, along with the intensive and technically optimised use of the natural materials found in the environment: dry stone, wooden posts, beams and planks, clay for water tightness. Its architectural elements represent the culmination of the optimisation of the occupation of space and the management of natural elements: gravity to move the brine, exposure to the sun and wind for evaporation. It is the repetitiveness of forms and uses over time which ensures the authenticity of the property, and not the preservation of a fossilised monument which is by no means what Valle Salado is. The social process preserves both the management of the salt works and the economic organisation deriving from it, completing the functional authenticity of the property. Finally, authenticity is expressed in the landscape, through the well-preserved built and natural environment of the salt works.

Authenticity is lastly examined in detail by the State Party in terms of what it considers to be the property's main sets of attributes: natural context, hydrology, architecture relating to salt working, resilience to change, salt farmers and sustainable development.

ICOMOS considers that the evolutionary socio-technical approach to the property's authenticity, including issues relating to the survival of a living technical heritage, is not fully worthy of consideration. Clearly this is an ambitious reconstruction project, based on good knowledge of the technical and social history of the salt works (intangible heritage), but whose tangible authenticity today has not been fully demonstrated. The reconstructions correspond to the layout of the earlier terraces thanks to the remains of the walls, but the other elements correspond to general types which are presented in an educational way rather than through a scrupulous heritage restoration, which is probably virtually impossible today. Furthermore, we are dealing here with a cultural and tourism development project involving many new aspects which are in themselves laudable (grandstands for shows, visitor trails,

a spa, a project for a visitor centre incorporated into the property, etc.), but whose relationship to authenticity is problematic.

ICOMOS considers that the conditions of integrity and authenticity have not been fully met.

Criteria under which inscription is proposed

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

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 the property bears testimony to a cultural tradition of salt production, not just with regard to physical and natural elements and constructions but to intangible testimony too. All these elements are moreover fully preserved, attesting to the origins of this tradition: the hydrogeological system, the brine channels that function by the force of gravity, the use of traditional methods to produce salt, and the collective organisation of production, which has been documented since the 9th century. The water sharing laws are a living heritage, and the technical and social practices have been perpetuated down the centuries since prehistoric times. A substantial oral and linguistic heritage has also been transmitted, relating to the natural and technical elements linked to salt production, and to place names.

ICOMOS considers that the property bears important testimony to one of the traditional methods of salt exploitation, based on natural brine springs in a mountainous region. However, the integrity and authenticity of the present-day reconstructed property do not permit full justification of this criterion.

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 salt production architecture, based on wooden terraces with stone foundations, as presented at Valle Salado de Añana, is outstanding. All the elements forming a complete technical system are present, with great authenticity and with all their refinements. A continuous process of maintenance and adaptation of the site to production needs has allowed its continuous existence for many centuries. The technical changes bear witness to the dynamism of the system. Finally, the skills of the salt workers have been maintained and transmitted, and are still being applied at the property today, giving it the ability to continue production. This is a prime example of very long term sustainable development, which has been able to adapt to extremely

different economic situations, ranging from subsistence to the industrialized world. The cultural landscape of the valley bears witness to the continuous adaptation of man to his natural as well as his economic environment.

ICOMOS considers that Valle Salado de Añana bears witness to an architectural and technical conception that is entirely dedicated to salt production by natural means that are at once simple in their principle and sophisticated in their realisation. The ensemble furthermore forms an outstanding cultural landscape. However, the conditions of preservation of the heritage and the socio-technical continuity of exploitation are only partly met in the present-day renovation/reconstruction project, with its educational, cultural and tourism agenda.

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 property bears exceptional witness to the use of territory and natural resources by wise and rational utilisation of interactions between nature and human industry to obtain salt. This has been expressed in a sustainable management system which has been able to cope with a succession of environmental and socio-economic impacts. It is also a landscape that has been maintained by the know-how of the salt workers and that bears witness to a continuous process of adaptation and transformation by man in his environment.

ICOMOS considers that the property bears witness to a very ancient traditional human settlement engaged in salt exploitation, making use only of the physical and natural elements of the environment. However the conditions of integrity and authenticity that would enable the full expression of these values, in accordance with the 1972 World Heritage Convention, have not been fulfilled.

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the conditions of integrity and authenticity have not been met and that the criteria have not been justified.

4 Factors affecting the property

The project to rehabilitate the Añana salt works is the only significant development project in Valle Salado. Its objective is the educational presentation of generations of

salt production skills, together with the development of cultural and tourism activities. Whilst succeeding in its aims of reconstructing the technical system and the cultural landscape, the project has affected the property's integrity and authenticity. A public space with a wooden grandstand for shows, and visitor trails, have been opened inside the property, along with spa activities.

The population of Salinas de Añana declined sharply in the second half of the 20th century; today it stands at roughly 200 inhabitants. It could increase again in reasonable percentages over the coming years, without having any substantial impact on the existing built-up area.

The development factors that could affect the property and its immediate environment are related to tourism, as in the case of the salt works reconstruction work already carried out. This is related to the need for infrastructure: a project for a visitor parking area, a possible extension of the grandstand, physical exercise areas, teaching areas, and leisure areas, related to salt and understanding about the site, etc.

The illegal removal of stones and rock which are suitable for use in construction (gypsum, ophites, etc.) sometimes affects the property and its environment.

The decline in the activity of the salt works has tended to alter the natural equilibrium inside the property and its environment; tree cover and vegetation have sprung up.

Climate change has not had any noticeable impact on the property up to now. An increase in summer temperatures would have a favourable impact on exploitation of the salt.

Sudden flooding is possible. The severe flooding of 1787 caused damage, and led to a decision to consolidate the brine flow. The property is on the edge of a zone of weak seismic activity.

ICOMOS considers that the main threats to the property are the development of tourism and violent storms.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The property has an area of 13.5 ha and there are no inhabitants.

The buffer zone has an area of 323.5 ha and has a population of 167 (in 2012).

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

Ownership

The *Valle Salado de Añana* Foundation took over legal ownership from the former *Community of Heirs* (traditional salt production owners), at the start of the works. In the additional documentation sent by the State Party, it is stated that a long-term lease of 90 years has been granted, and the new organisation of the former owners, *Gatzagak*, retains ownership of the springs, for which the Foundation pays an annual fee of €70,000.

Protection

The property was declared a National Historic-Artistic Monument in 1984 and a Monumental Site of the Basque Country in 1990. The buffer zone is protected as a monumental site under the Cultural Interest Property regime of the Basque Country. Furthermore the cultural authorities of the region have set up a system requiring the authorisation of alteration and building works, via the Special Integrated Recovery Plan of the Old Quarters of Salina de Añana. This corresponds to the application of Basque Country legislation, and in particular Decree n° 265 of 1984, Act n°7 of 1990, Order n° 71 of 1996 and Decree n° 44 of 2008.

The whole of the valley is protected by a RAMSAR Convention (2002) and a *Natural Resources Management Plan*, which guarantees the conservation of the valley's natural and environmental values. This corresponds to the application of Basque Country legislation, and in particular Decree n° 160 of 2004 and the Act on Landscape of 7 February 2012.

In addition, the property is covered for territory management and renovation measures following the Subsidiary Regulation Plan for Añana and its amendments (2009), and by various provisions of the Master Plan for the Integral Recovery of Añana (2012). This corresponds to the application of Basque Country legislation, and in particular Orders n° 198 of 1994, 129 of 2009 and 76 of 2012.

The traditional rights held by the very long-established Community of Heirs have all been transferred to the Valle Salado de Añana Foundation, which ensures and guarantees their continuation as part of the traditional exploitation of the property.

Finally, it is stated that the following important regulatory texts are in preparation:

- Declaration and Act of the Cultural Landscape for Valle Salado de Añana,
- General Town Development Plan of Añana,
- The promulgation of the Management Plan governing Natural Resources.

ICOMOS considers that the legal protection in place will be fully adequate once all the acts and supplementary plans have been promulgated.

Conservation

The sudden sharp decline in the salt exploitation system in the 1960's-1970's left the property's original physical structures in very poor condition. The actual state of preservation of the property then reached a point that was very close to total abandonment (in the 1990s). Even before the Master Plan and the renovation project were put in place (early 2000s), various attempts were made to repair some of the infrastructures: repair of internal paths, storage spaces, putting the brine channel network back into working order. Some of the work carried out at the time did not respect the property's authenticity, as cement and reinforced concrete were used for example.

In the late 1990s and early 2000s, a series of initiatives involving volunteer workers were carried out to help preserve the property. They then took on a more organised character, and finally turned into a vast project for the renovation of the site as a whole by the local authorities. The aims were to restart salt production and attract new customers by tourist attractions unrelated to the property's past history: a spa, cultural events and leisure facilities. This is basically an attempt to reconstruct the property in order to use it for educational and tourism purposes, involving systematic reconstruction and the addition of new elements inside the property itself to this end. The arguments referring to "resilience" and "sustainable development" to justify this project are worthy of consideration only in economic terms, but not in terms of conservation of material heritage.

These projects were initially led by the Master Plan and its feasibility studies (1999-2003), and then by a programme for the redesign and reconstruction of the property as a whole (2005), which is still under way. The studies are being undertaken by various working groups: architecture, history, society and economy, environment, landscape, geology and tourism development. All the data have been entered into a geographic information system GIS). Three-dimensional models have been generated. The work carried out consists of the renovation of terraces, brine channels, store houses and evaporation pans, internal accesses, etc. They are completed by additions that are typical for a project for the economic rehabilitation of the site, rather than for the preservation of traditional elements (area with grandstands for shows, project for a Visitor Centre incorporated in the property, etc.)

There is no real discussion of the general state of the property's conservation in the nomination dossier, but rather comments on the work already carried out or planned, and some ad hoc presentations of the state of conservation of individual archaeological elements.

ICOMOS considers that the state of conservation of the property in itself is difficult to determine, except in the case of some isolated secondary elements, and that it is essentially the state of conservation of a property whose structures are recent reconstructions (in the 2000s). The reconstructions follow pre-established types, in line with a contemporary redefinition of the operating needs of the site, and are not based on archaeological studies aimed

primarily at the strict preservation of the property. For example, the evaporation pans have been rebuilt by reference to four basic models: 1) Roman - Mediaeval, 2) 19th century type, 3) 20th century type and 4) "21st century" type. The first three are intended for educational purposes, and the fourth is intended for present-day salt production. ICOMOS considers that an economic and tourism development project based on the complete redevelopment of a near-abandoned site cannot be considered to be a property conservation programme as defined in the 1972 World Heritage Convention.

ICOMOS considers that, with a few exceptions, it is not possible to establish the state of the physical preservation of the property, as heritage handed down from the past, because of the programme for the renovation and reconstruction of the property as a whole.

Management

Management structures and processes, including traditional management processes

The Union of Salt Workers of Añana, *Gatzagak*, took over from the former Community of Heirs as the association of holders of salt rights (1999). It signed an agreement with the public authorities, transferring its salt exploitation rights to the Valle Salado de Añana Foundation, in 2009, in return for an annual indemnity.

The central task of the Foundation is the preservation of the cultural landscape of Valle Salado de Añana. It is in charge of the carrying out and monitoring of the renovation works and the Management Plan. It includes a Management Committee bringing together the regional and local public authorities, representatives of *Gatzagak* and a number of experts. It has been constituted on a multi-disciplinary basis, in order to establish rules for good technical, economic and social operation of the property, along with its redevelopment and maintenance. A certain number of Basque Country public and semi-public agencies, European structural funds and private enterprises are participating in the project and/or its funding.

The nomination file contains a list of financial contributors who have up to now provided the funds needed for the renovation work and the operation of the Foundation: Province of Alava, Basque Government (Culture, Environment, Energy and Mining), the Basque Water Agency, Kutxabank, European Structural Funds, etc. The Foundation's annual budget over the last few years has been between €1 million and €1.5 million, of which 20% to 25% comes from its own resources, 10% to 15% from private donations, and the rest from public subsidies. The town of Añana has already committed a sum of €5.8 million for the architectural and urban rehabilitation of the site.

The Foundation employs 11 highly-qualified staff on a full-time basis (engineers, architects, historian, archaeologist,

environmentalist, management and marketing persons, etc.). It also employs descendants of the former salt worker families. It has several divisions: technical departments, culture and communication, maintenance and salt production, finance and general administration. It employs a variable number of seasonal guides, who are in most cases students from the local region. It organises internships for volunteers wishing to help in the maintenance and renovation work. The Foundation also makes use of external expertise, particularly specialist contractors. Salt production is headed by four experienced supervisors. They organise educational courses about salt working techniques and its history. Three people are employed full-time in packaging the salt, and two in the sales department. Jobs are gradually being created and offered to people living in the village.

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

An initial Master Plan was drawn up between 2000 and 2003. It proposed and led to the carrying out of a series of studies for the drawing up of the Comprehensive Recovery Plan for Añana (2005) and then of the current Management Plan (2009). The former provides for the gradual renovation of a vast continuous ensemble of terraces and production pans, which is already well advanced. The latter sets out the operating rules to maintain salt extraction activities; it includes several sector-related plans, in particular the Tourism Promotion Plan, the Landscape Plan, the Plan for the Rehabilitation of the old quarters of the village of Añana and the Strategic Plan for the District of Añana.

The property Management Plan (2009-2012) is claimed by the State Party to have been effective from the outset, and to be a representative example of good heritage practice. It is fundamentally multi-disciplinary, and has won a number of awards. It is based on studies carried out for the purpose of the Master Plan, which it incorporates as the basis for its actions. In the State Party's view, the plan is both a development project and a guarantee for the future preservation of the property. The initial objective was to attempt to revitalise the property in accordance with the agreement signed with the heirs, and thus to regenerate the technical structure of the property and its landscapes by means of regional and European subsidies. Efforts made to focus on the quality of the products and their authentic local origin, at the end of the 20th century, led to the idea that this would open up economic possibilities. The management is intended to be focused on the villagers, and the local and regional population. The management approach is also guided by the European project for an Atlantic salt marsh arc (Portugal, Spain, France, the United Kingdom and Ireland).

In view of the nature of the property, the number of visitors allowed access to the site must remain low and controlled. Access to production zones is not possible. Guided visits

are organised, and this is the only way of really learning about the property. The number of visitors amounted to about 40,000 in 2011 and 2012. Former salt storage hangars have been converted into a visitor reception and salt sales building. One of the current problems with regard to the development of tourism is the lack of a suitable parking area. A project is being prepared in the locality of El Mercato. A doubling of the visitor capacity is possible. In the future, health activities will be developed along with a spa, and cultural events will also be organised. There are also plans to maintain and restore Medieval architectural elements in the town of Añana.

Involvement of local communities

Local communities are involved mainly through the municipality of Añana and the trade union *Gatzagak*.

ICOMOS considers that, in the context of the current economic and tourism development project for the property, the property management system is appropriate.

6 Monitoring

With regard to the conservation of the landscape of Valle Salado de Añana, a series of indicators are to be monitored, in view of the complexity of the landscape and its attributes. The main aspects to be monitored are:

- state of architectural conservation (at intervals of between 1 month and 1 year, depending on the element),
- maintaining of salt production skills (monthly),
- conservation of historic documentation about the cultural landscapes (permanent),
- conservation of urban spaces (annual),
- biological indicators of the conservation of natural environments,
- physico-chemical indicators of biological equilibrium (annual),
- hydro-morphological factors likely to affect the biological equilibrium (annual),
- analysis of brine (annual),
- fauna and flora.

ICOMOS considers that the indicators proposed for the monitoring of the cultural elements constituting the property should be more specific, and should be presented in a more rational way.

7 Conclusions

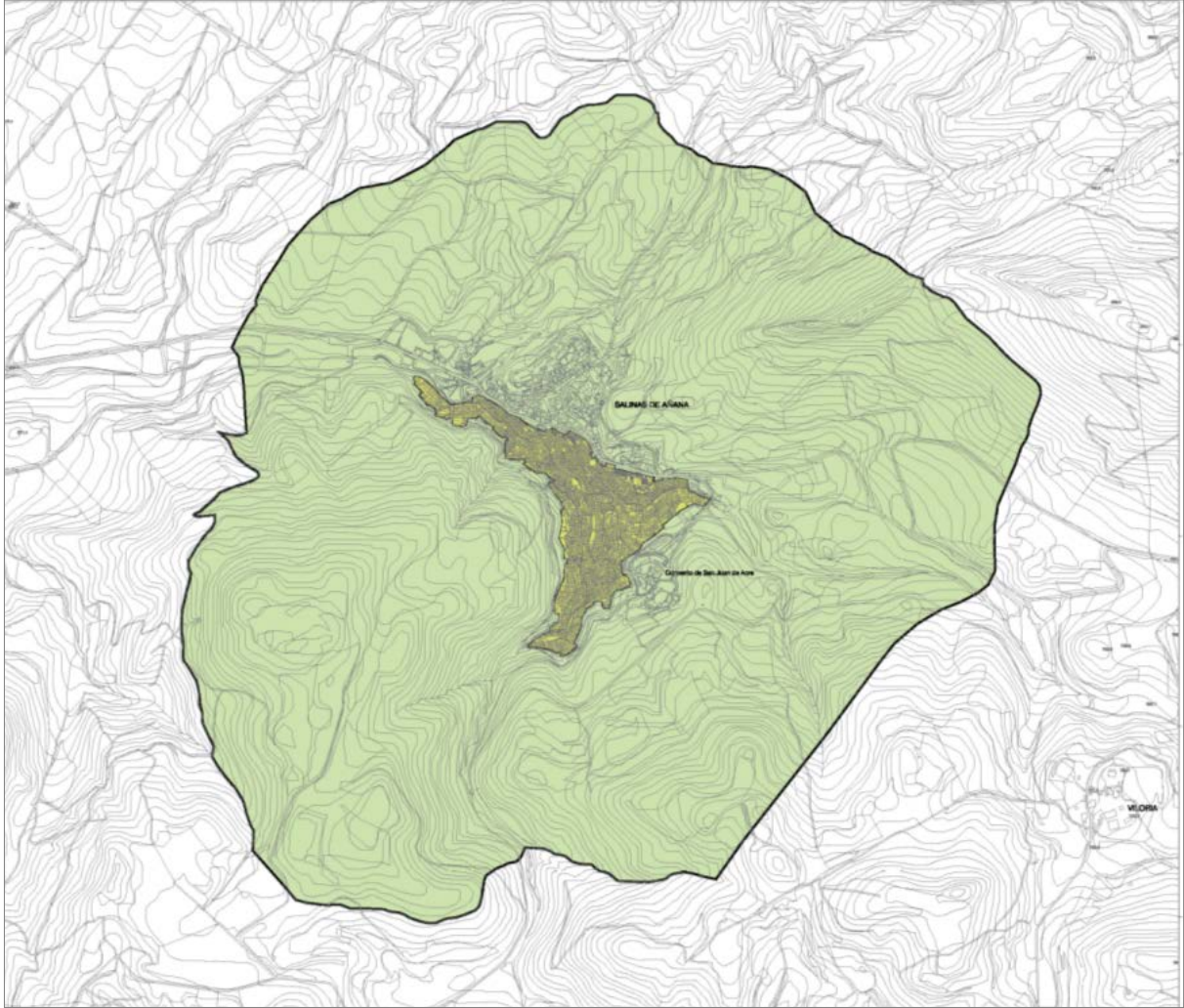
The property embodies an original and ancient technical system for salt production; however it is a contemporary reconstruction for educational purposes. The property offers an outstanding reconstructed cultural landscape, and bears important testimony to know-how in the evaporation of brine in a mountainous area. The

ensemble has been put back into working order, after a period of near-abandonment. It is based on the combined usage of particular natural resources (brine springs at altitude, climate, wind) and skills in the collective management of brine springs, the organisation of evaporation systems in terraces, and salt harvesting. ICOMOS considers however that essentially it is a thoroughly restored and even reconstructed system, in which the conditions of integrity and authenticity have not been met. The management of the property, including the policy of reconstructing material elements by reference to general types, is guided essentially by a development vision based on tourism and cultural activities. The many statements concerning “sustainable development” and “resilience” through adaptation and change to justify this programme do not really answer these criticisms. Also, the Outstanding Universal Value of the property has not been demonstrated. However, the property does illustrate an important intangible value through the preservation of technical know-how, which could be recognised in frameworks other than the 1972 Convention.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Cultural Landscape of Valle Salado de Añana, Spain, should **not be inscribed** on the World Heritage List.



Map showing the boundaries of the nominated property



Aerial view of the nominated property



Terraces during the salt production season



Spa inside the property



Salt worker

Bursa and Cumalıkızık (Turkey) No 1452

Official name as proposed by the State Party

Bursa and Cumalıkızık: The Birth of the Ottoman Empire

Location

Bursa and Cumalıkızık, Osmangazi and Yıldırım Districts
Province of Bursa
Turkey

Brief description

Bursa and Cumalıkızık is a serial nomination of eight component sites which illustrate the creation of an urban and rural system establishing the Ottoman Empire in the early 14th century. The property illustrates key functions of the social and economic organization of the new capital which evolved around a new civic centre. These include commercial districts of khans, kulliyes (religious institutions) integrating mosques, religious schools, public baths and a kitchen for the poor as well as the tomb of Orhan Ghazi, the founder of the Ottoman dynasty. One component outside the historic centre of Bursa is the village of Cumalıkızık, the only rural village of this system intended to show the provision of hinterland support for the capital.

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 8 *sites*.

1 Basic data

Included in the Tentative List

25 February 2000

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Historic Towns and Villages and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 8 to 12 October 2013.

Additional information requested and received from the State Party

ICOMOS sent a letter to the State Party on 27 September 2013 requesting additional information on the selection of serial components, in particular the specific contribution of each component to the Outstanding Universal Value, the justification for criterion (ii) and the comparative analysis, with emphasis on the selection of components in and around Bursa. The State Party provided additional information on 27 November 2013, which included a revised executive summary, new justifications for criteria and two new property components, as well as four boundary and buffer zone revisions. The additional information provided is included under the relevant sections below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The city of Bursa is located on the north-western slopes of Uludağ Mountain in the southern Marmara Region. Seven of the serial components of this nomination are located in the city of Bursa while one component covers the village of Cumalıkızık, located approximately 8km east of the historic centre in the Province of Bursa. Apart from this last component which represents an Ottoman village with its rural land-use schemes, the nomination presents key centres of the emerging capital at the birth of the Ottoman Empire in the early 14th century, comprising civil and religious functions which are selected examples of commercial, religious and civic community centres. The eight component sites shall be described one by one below.

1. Orhan Ghazi Kulliye and surroundings

The Orhan Ghazi complex at the time of its creation consisted of a mosque, a madrasah (religious school), a public kitchen and a public bath constructed adjacent to the khan area, which includes several typologies of commercial buildings. The madrasah and the public kitchen have been demolished and are today replaced by a later town hall construction. Orhan Mosque is the earliest architectural structure of this complex and shows decorative elements of the earliest Ottoman era. The plane tree in its courtyard, said to be the oldest tree in Bursa, is also attributed special associated value, and has become a symbol for Bursa. Orhan Ghazi complex is the urban core and the first element built outside the Byzantine Citadel in 1339; it is therefore considered the distinctive marker of the beginning of architectural production in the Ottoman Empire.

The commercial complexes which form part of this component consist of several historic khans built during early Ottoman times. These include the Emir Khan or former covered bazaar, which has burned down several times since its initial construction, the Bedesten which functioned as the historic banking quarter or stock exchange, İpek Khan, Geyve Khan, Fidan Khan and Koza Khan as well as Piriç Khan.

2. Osman and Orhan Ghazi's Tombs

Bursa was conquered in 1326 by Orhan Ghazi, son of Osman Ghazi who gave his name to the Empire. Both Osman Ghazi and Orhan Ghazi are buried in Bursa and a single memorial building indicates the likely location of both of their graves. The structure currently built above the tombs was constructed in 1863 following the destruction of an earlier Ottoman structure during the earthquake of 1855. The tombs are located in the vicinity of the city's first kulliye and added to this first religious focal point.

The following four components are so-called kulliye complexes, which combine several components, including mosques, Islamic schools (madrasah), public kitchens (imaret), and public baths. They continue to function as religious and social centres. Although not an invention of the Ottomans – kulliyes existed already in Seljuk times – the kulliyes of Bursa became important focal points and the cores of districts for the urban and residential development.

3. Hüdavendigar (Murad I) Complex

Built by Murad I in 1363, this kulliye began the expansion of the city towards the west. The complex consists of a mosque, madrasah, public kitchen and a bath as well as the royal tomb. Mosque and madrasah are combined in one structure in which the madrasah occupies the first storey of the mosque, both richly decorated with byzantine ornaments and patterns. The former kitchen was reconstructed after the earthquake in 1855 and is now used as a cultural community centre.

4. Eski Kaplıca (Old Turkish Bath)

Eski Kaplıca is the old thermal bath of Bursa in the vicinity of Murad I Kulliye. Its exact date of construction is unknown but research suggests that it may have been built by Murad I on the foundations of an early byzantine structure. It is however considerably different from all other Ottoman public baths in its design and building materials, testifying to the architectural styles of the Byzantine era.

5. Yıldırım (Bayezid I) Complex

The construction of this complex commenced under Yıldırım Bayezid in 1390 and it is considered the most impressive of Bursa's Ottoman complexes. Built along the eastern border of the early Ottoman city, it became an important centre of learning. The hospital, which is included in this complex, was recently reconstructed and continues to serve its original function as an ophthalmic hospital. The only component of the kulliye which has not survived is its public kitchen.

6. Yeşil (Mehmed I) Complex

Commenced under Sultan Mehmed I in 1419, this complex is said to symbolize the rebirth of Ottoman rule after its defeat to Timur in 1402. Its mosque, often referred to as the Green Mosque, is covered with İznik glazed tiles and is considered one of the great works of art in ceramic tile production. The simplicity of its forms in combination with the opulence of its decoration gives the architecture a very special character. The complex has experienced several changes of use; whilst the mosque is still in use, the Turkish Bath is used as an artist's studio and the madrasah is now the Museum of Turkish Islamic Art. The İmaret however remains a public kitchen which continues to serve food.

7. Muradiye (Murad II) Complex

The last of the complexes built by the Ottoman Sultans in Bursa, Muradiye was constructed from 1426 onwards. It also contains the first example of a hazire (graveyard) which integrates 12 tombs of Murad II's family members inside the complex. At present conservation activities are underway for the mosque as well as the tombs, the only two elements still dedicated to their original function. The madrasah is used as a dispensary, the public kitchen as a restaurant and the bath as a centre for physically-challenged community members.

8. Cumalıkızık Village and its surrounding areas of agriculture and forests

The village of Cumalıkızık was founded when the Ottomans established their earliest capital at Bursa to which the surrounding villages provided logistical support. It is a waqf village, which implies that the village was the ruler's endowment to the population but at the same time generated income and provisions for the ruler's court. Cumalıkızık is the only surviving one of previously several such waqf villages. It has largely retained its original settlement pattern and setting and is said to provide the closest extant reference to what an early Ottoman village may have looked like. The settlement and its relationship to the surrounding agricultural landscape on the slopes of Uludağ Mountain illustrate the characteristics of the rural Ottoman landscape which provided sustenance to the capital.

History and development

In the 13th century the Anatolian Seljuk State was destroyed following the Mongolian invasions, which resulted in many smaller principalities claiming independence. The transition of Bursa from its earlier status as a principality to the new capital of the Ottoman Empire commenced with the surrender of Bursa to Osman Bey in 1326. During the reign of his son Orhan Ghazi, the person now assumed to be the founder of the Ottoman Empire, the city was designated as its first capital.

The vision for the development of Bursa was to provide a new civil and religious centre for the empire, providing religious institutions for education and charity, markets for trade and infrastructure for sustenance and defence. Historic records make reference to two important factors which facilitated and accelerated the foundation stage of the city and still play an active role in the contemporary

management of the nominated serial property; the Ahi establishments and the Waqf endowments.

The rise of Bursa as an important centre for production and trade in the later 14th century followed the conquests of Antalya and Alanya, both of which subsequently directed their goods coming from the eastern Mediterranean to Bursa. Following the direction of several major transit routes for commercial goods through Bursa at the turn of the 1400s, the city became a major trade hub for spices. According to the nomination dossier, in 1453 Istanbul was conquered and became the new capital of the Ottoman Empire, which gives the impression that Bursa remained the capital from 1335 to 1453. However, what the nomination dossier fails to acknowledge is that the capital had already been moved in 1413 to the second capital of Adrianople or Edirne, an event which was instrumental in Bursa's transformation before 1453. Despite the shift of rulers to Edirne and Istanbul, Bursa kept expanding, as can be seen by the Yeşil (Mehmed I) Complex and Muradiye (Murad II) Complex constructed at this time, and its commercial influence continued until, in the 17th century, it became affected by plundering during the Celali riots. Bursa's commercial significance further decreased in the 18th century as a result of industrialization which enabled production of textile products in other contexts and created different trade routes.

The most significant event in the more recent history of Bursa is probably the severe earthquake which occurred in 1855 and which destroyed the majority of architectural structures in the city. In the course of the major reconstruction attempts which followed this catastrophe, Bursa was declared a 'model Ottoman city.' This declaration initiated a strategy towards restoration and modernization, which emphasized the reconstruction of early Ottoman monuments and the rehabilitation of urban patterns and structures of early Ottoman times.

ICOMOS considers that this phase of the planned 19th century reconstruction of Ottoman elements following the earthquake has not been sufficiently addressed in the nomination dossier and that likewise it falls short of reflecting upon the effects of the turmoil of war in 1922 and the necessary repair and renovation of the city's monuments following it. These later phases of Ottoman city modernization have in fact strongly characterized the contemporary appearance of Bursa and are essential for an understanding of it as an Ottoman city.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis considers the urban development characteristics of cities in a regional context divided into urban plans developed before the 14th century, and Turkish cities after the beginning of Ottoman rule with a special focus on the two other Ottoman capitals. In a subsequent international

comparative analysis the State Party considers plans and developments of other Islamic cities and Western urbanization models with a focus on cities in the Balkans after the 14th century.

The regional analysis starts with a discussion of Seljuk cities like Alaiye, Antalya, Kastamonu, Konya and Kayseri. It is concluded that the cities and key complexes built during Seljuk times differ from Bursa in that their creation and location was not in reference to the creation and spatial extension of the city, while Bursa was created as a model city on the basis of planning ideas. The sections following are dedicated to Ottoman-influenced cities, in particular Edirne and Istanbul, which are considered to differ as Edirne's growth took a concentric pattern rather than following a visionary plan and Istanbul's Ottoman contributions were integrated with already existing commercial and religious structures.

Among other Islamic cities, Aleppo is considered best comparable to Bursa, in particular the spatial organization scheme of its bazaar, which is, in fact, a surprising argument as the bazaar of Aleppo significantly predates Ottoman influences in the city. Cairo and Samarkand are also discussed and the State Party concludes that while similarities can be identified among the different cities, all other cities except Bursa were restricted in their urban development by their pre-Ottoman contexts.

ICOMOS considers that a convincing case has been made for Bursa from an historical and theoretical perspective as the key city developed during early Ottoman rule. ICOMOS further considers that the comparative analysis would have been stronger if it had taken into consideration the state of conservation of key elements of the Ottoman city to determine whether the physical evidence of an early Ottoman city at Bursa surpasses those in other urban contexts.

The comparison of urban structures is followed by a comparison of individual elements which analyses different individual components such as bazaars, kulliyes and Ottoman villages in other parts of Turkey. ICOMOS agrees with the State Party's judgement provided in the additional information sent in response to ICOMOS' request for additional information on the comparative analysis, that this comparison of individual elements in different parts of the country is not relevant to support the case for the selection of components in Bursa.

The comparative analysis does not highlight why, out of all the remaining structures of Ottoman origin in and around Bursa, the specific eight component sites have been selected. In the additional information provided at the request of ICOMOS, the State Party argues that the key characteristic shared among the selected properties is their creation during the expansion of the early Ottoman capital and that the urban plan of the city was guided by the construction of five kulliyes, which are all included in the nominated property.

ICOMOS considers that this argument might be problematic as nine other kulliyes in Bursa were also built during the city's time as capital and probably also played roles in the urban development. The State Party argues that these were not included as they were not commissioned by the rulers themselves but by other high ranking individuals. ICOMOS considers that it has not been convincingly illustrated why the urban planning concept is said to have not been influenced or supported by kulliyes not commissioned by the respective ruler. ICOMOS further considers that, apart from commercial and religious complexes, residential quarters and street patterns must have had a decisive role and influence on the urban development of Bursa but are neither included nor mentioned in the nomination dossier. ICOMOS therefore considers that whilst Bursa is an Ottoman model city in a distinctive way, the selection of component sites within Bursa and in its surroundings has not yet been justified by the comparative analysis.

ICOMOS considers that the comparative analysis justifies consideration of Bursa as an exceptional Ottoman model city but that the approach of a serial nomination and the selection of serial components have not been justified at this stage.

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:

- Bursa was shaped during the founding years of the Ottoman Empire and has been the urbanization model for all Ottoman-Turkish cities that were founded afterwards;
- The city initiated a new approach to city development based on the formation of kulliye complexes at strategic locations as first steps for the development of surrounding trade and residential quarters, taking into consideration the topography of the city;
- The permanence of the complexes constructed by the early Ottoman Sultans has preserved the multifunctional institutions in the centre of the early Ottoman capital, including those for religious, trade and social needs;
- Bursa was not only the first capital of the Ottoman Sultans but also the home of their ancestors and hence always had special status among the Ottoman rulers, which contributed to its conservation over many centuries.

ICOMOS considers the justification that Bursa is a model of an Ottoman city, with significant parts of it developed during the early years of the Ottoman Empire, is in principle appropriate. ICOMOS considers that several parts of the city reflect the Ottoman characteristics as a result of planned conservation and reconstruction of Bursa as an Ottoman model city in the 19th century, which followed the unfortunate large scale destructions of the 1855 earthquake. However, ICOMOS considers that the 19th century influence on the contemporary

appearance of the city and its Ottoman components is not adequately explored in the nomination dossier. ICOMOS further considers that the strict focus on structures built or commissioned by Ottoman rulers during the early years of Bursa as an Ottoman capital city has not been fully justified.

ICOMOS considers that the justification of the serial approach to include all kulliyes built by Ottoman rulers during the city's time as capital, as well as a representative village, in order to focus on the birth of the Ottoman Empire does not correspond well to the city's state of conservation and contemporary urban development. The serial properties seem fragmented and hence have limited capacity to represent an urban planning system which generated the development and expansion of a capital city. Significant functions of the city including residential quarters, the road network and buildings of public administration and governance or public spaces are completely missing in the selected component properties.

ICOMOS considers that Bursa might well have potential to demonstrate Outstanding Universal Value in relation to its function as the first Ottoman capital which evolved and was preserved over centuries, and in particular the 19th century, as an Ottoman model city. However, ICOMOS considers that the selection of serial components and the selection of a serial approach in general have not been justified at this stage. ICOMOS further considers that the relationship of the city and its agricultural hinterland, in particular the relationship between the urban components and the village of Cumalıkızık, has not been justified. ICOMOS considers that the village of Cumalıkızık does not make a meaningful contribution to the significance of the city of Bursa as the first Ottoman capital which developed into an Ottoman model city.

Integrity and authenticity

Integrity

The State Party indicates that the serial components were selected to represent all elements of the city and a village, as a planning and development system. The component parts are said to be selected from the key structures which created the system, allowing for the expansion of a newly built and established capital city, in a short span of time. The authors further claim that the only missing elements of the whole original system are some of the villages, which were originally part of the system, but have not kept their integrity, or do not exist any longer.

ICOMOS considers that it remains questionable whether a bazaar with several khans, five religious complexes with mosques, madrasahs, food kitchens and baths, as well as one village with an agricultural landscape, can successfully represent all the components required for the urban planning and development system of a 14th century capital. ICOMOS considers that little is mentioned or indicated in the nomination dossier about the urban plan in

spatial terms, as it relates to defensive structures, road systems, gates or residential neighbourhoods. ICOMOS considers that additional components may need to be added and that the approach to several selected serial segments within an urban fabric may not be ideal to represent the development of an urban system or plan.

In terms of intactness, it must be stated that none of the kulliye complexes remain complete in their early Ottoman architectural structure or their function. Several major repairs and reconstructions were necessary after the 1855 earthquake in the kulliye complexes of Hüdavendigâr, Yıldırım and Orhan Ghazi. Also, the covering domes of Osman and Orhan Ghazi's tombs are post-earthquake constructions. Few of the kulliye complexes retain all four characteristic elements and in particular some of the food kitchens and baths have been lost over time. ICOMOS considers that with the current serial selection focus on the rulers' kulliye, these missing elements reduce both completeness and intactness of the site. ICOMOS considers that even if considering the individual site components, several (Orhan Ghazi Kulliye and surroundings, Osman and Orhan Ghazi's Tombs, Hüdavendigâr (Murad I) Complex, Yıldırım (Bayezid I) Complex and Muradiye (Murad II) Complex) do not meet integrity in relation to the Outstanding Universal Value proposed.

ICOMOS considers that the integrity of the whole series has not been justified and that the integrity of several individual sites has not been demonstrated.

Authenticity

The consideration of authenticity of the overall series is influenced by the proposed Outstanding Universal Value of Bursa and Cumalıkızık which references the birth of the Ottoman Empire and is presented with strong emphasis on their 14th and early 15th century construction under the first five Ottoman Sultans. In this context, it may be considered a limitation of authenticity that several of the architectural structures in the serial components are 19th century reconstructions, in particular planned reconstructions of the earlier structures following the huge and destructive 1855 earthquake. Other structures, such as several of the commercial units including the Emir Khan, experienced destruction and reconstruction following fire.

In almost every complex changes in use and function have been documented. In Muradiye complex, for example, the madrasah is used as a dispensary, the public kitchen as a restaurant and the bath as a centre for physically-challenged community members. In the Yeşil complex the Turkish Bath is used as an artist's studio and the madrasah is now the Museum of Turkish Islamic Art. These changes reduce authenticity in use and function and some have required adaptive re-uses to the substance and design of the architectural structures which also reduces the authenticity of the physical attributes.

The village of Cumalıkızık in its agricultural landscape provides an overall perception of a higher degree of authenticity. Few of the houses are used for other than residential purposes and the village seems to retain a special atmosphere, providing an impression of earlier times. Several aspects, like the village pattern, the form and layout schemes applied in the houses, the materials with which they are made, in particular the local stone for the ground floor, wood for the upper floors and the typology of roofs, give a largely original impression despite many 19th century reconstructions and regular repairs which have been undertaken at other times.

ICOMOS considers that the property and several of its serial components might have higher prospects of meeting the condition of authenticity if the reconstruction and modernization schemes of the Ottoman model city of Bursa could be seen as part of the significance which formed the current appearance of Bursa as an Ottoman city. ICOMOS therefore considers that authenticity has not been met in relation to the Outstanding Universal Value as the birth city of the Ottoman Empire. However, ICOMOS considers that the city of Bursa and most of the serial components have the potential to meet authenticity with regard to the concept of Bursa as the first capital of the Ottoman Empire which developed towards an Ottoman model city, characterized initially in the 14th century and enhanced as well as ottomanized in the 19th and 20th centuries.

ICOMOS considers that the authenticity of the whole series has not been justified in relation to the proposed Outstanding Universal Value and that the authenticity of the individual component sites has been only partially demonstrated.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity of the whole series have not been justified; also for the individual sites, the conditions of integrity and authenticity have not yet fully been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), (iii), (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 establishment of the Ottoman capital in a timeframe of just a few years but with all its essential institutions is considered an act of mastery. The State Party further argues that the introduction of the new approach to urban planning based on the vision of an urban system for the city is the hallmark of the creative genius of Orhan Ghazi.

ICOMOS considers that approaches to city planning based on a vision and strategic concerns have existed in several civilizations before Ottoman times, even if the physical manifestations differed considerably. ICOMOS does not consider that the state of conservation of Bursa

allows for its consideration as a masterpiece of urban planning or system reflecting human creative genius.

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;*

This criterion is justified by the State Party on the grounds that Bursa, as the first capital of the Ottoman Empire, was of key importance as a reference for the development of later Ottoman cities. The new city development approach that Orhan Ghazi introduced, by constructing his complexes outside the city walls, was adopted and continued by his successor sultans.

ICOMOS considers that this justification is in principle applicable but should also consider the evolution of the early Ottoman complexes and the city over time towards the later Ottoman city which remains today. ICOMOS considers that Bursa has potential to justify criterion (ii) as an Ottoman model city established in the 14th century, and restored and ottomanized in the 19th century. ICOMOS does not consider that the serial component of Cumalıkızık Village could justify criterion (ii).

ICOMOS considers that this criterion has not been justified for the whole series 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;*

This criterion is justified by the State Party on the grounds that the testimonies of the Ottoman ways of life in Bursa and Cumalıkızık are exceptional. This includes the particular vision of the tradesmen culture which is said to have influenced the city up until the present day as well as the continuation of rural life in close proximity to the city.

ICOMOS considers that Bursa has been influenced by Ottoman traditions over centuries and that it is difficult to separate elements of the first 100 years of the Ottoman Empire from all other testimonies created during later centuries of Ottoman rule. ICOMOS considers that Bursa might contain exceptional testimonies of the Ottoman civilization but that the serial components selected cannot provide a holistic impression of a testimony to the cultural traditions of the Ottoman era. In the additional information the State Party provided on 27 November 2013 this criterion was no longer suggested. Since ICOMOS considers that there is potential for this criterion to be demonstrated for a different selection of site components, it remains included in this report.

ICOMOS considers that this criterion has not been justified for the whole series 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 Bursa is an outstanding example of an early Ottoman city with its khans, bedesten, mosques, madrasahs, residential areas, tombs, baths and ensembles (kulliyes and village). A unique architectural plan was developed in Bursa which is called the 'Bursa-style' or reversed "T" Plan in the history of Turkish/Ottoman architectural literature.

ICOMOS considers that both the urban typology of Bursa as an Ottoman model city and the specific architectural style of the Bursa-style or "T"Plan could qualify as an exceptional type of an urban plan or structure which illustrates the city planning and creation of the Ottoman Empire. However, ICOMOS considers that not all components currently nominated contribute to this criterion. ICOMOS also considers that to illustrate the development of an urban typology, all key urban features including roads, public spaces, residential areas and other elements providing characteristic urban patterns would need to be included. ICOMOS further considers that the Cumalıkızık Village does not illustrate an exceptional urban typology, which might be justified under this criterion.

ICOMOS considers that this criterion has not been justified for the whole series 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 Bursa is directly associated with important historical events, myths, ideas and traditions from the early Ottoman period. The State Party highlights the so-called mystic image of the city, created through the presence of the tombs of early Ottoman sultans.

ICOMOS considers that Bursa is closely linked to the early history of the Ottoman Empire and its rulers and also contains the graves of these individuals. However, ICOMOS would like to recall that the World Heritage Convention is a property or site-based convention without mandate for the commemoration of the most outstanding historic individuals. Although the historic events, myths and ideas related to their times could potentially be considered under this criterion, it would need to be demonstrated how these can be perceived as outstanding at a global level and how exactly they are associated with the nominated property.

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

ICOMOS considers that the serial approach is not yet justified and that the selection of component sites is not yet adequate.

In conclusion, ICOMOS does not consider that the criteria have been justified at this stage for the series.

4 Factors affecting the property

Several property components and in particular the commercial district with khans are negatively affected by dense traffic at several times of the day with resultant traffic jams, noise accumulation and air pollution. A new tramway system has recently been introduced in the north part of the city and it is to be hoped that the city reconsiders the public transport links around and in between the property components. With the traffic occurs yet another factor, that of car parking which occurs in all property components including those which are theoretically pedestrian zones. With potential growing visitor pressure in the future, the parking situation may worsen, which constitutes a risk, especially in Cumalıkızık Village where the narrow roads provide for little or no car parking opportunities.

The State Party intends to respond to these issues by accelerating planned large-scale public transport projects such as the projected light rail system. ICOMOS considers that a reduction of traffic would contribute to the conservation of the property but that any new transport infrastructure development plans need to be carefully evaluated by heritage impact assessments to prevent any adverse impacts on the property.

Only approximately 60% of the houses in Cumalıkızık Village are currently occupied by tenants, which illustrates the effects of a global phenomenon of urban migration. However, ICOMOS is concerned that the gradual abandonment of the village poses a risk to its preservation and might further cause significant short term changes in the balance between local inhabitants and temporary visitors. ICOMOS considers that precautions are necessary to prevent Cumalıkızık from turning into an empty museum and tourist accommodation village, which would significantly reduce the authenticity of this serial component and might lead to unintended gentrification processes.

Bursa is located in the North Anatolian fault line system, a zone of considerable seismic activity. The city of Bursa was severely damaged by an earthquake in 1855 and since then has regularly experienced earthquakes, the latest in 1999. Bursa's Provincial Directorate for Disaster and Emergency Management has prepared disaster prevention and action plans at a city-wide scale. Fire is yet another risk, in particular in historic areas which are inaccessible to fire fighting vehicles. During a recent project to strengthen fire prevention mechanisms, additional water hydrants were introduced in such areas. Volunteer fire fighting teams were trained in the use of

fire hose cabinets in these inaccessible areas of the khans and Cumalıkızık.

ICOMOS considers that the main threats to the property are earthquakes, traffic and gentrification in Cumalıkızık Village.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries in all cases surround the existing protected areas. In the five cases of the kulliyes, they also coincide with the original plots reserved for the complexes at the time of creation. This creates continuity between the 14th century complex boundaries and the contemporary historical sites, ensuring that all the monuments are inside their boundaries. The State Party submitted revised boundaries on 27 November 2013 in which it introduced the two serial components of Osman and Orhan Ghazi's Tombs and Eski Kaplıca (Old Turkish Bath) as well as revisions to the boundaries of four other properties.

ICOMOS considers that the boundaries of the serial components are in principle too tightly drawn to reflect the vision and planning schemes of urban development. The serial components are said to illustrate the expansion and formation of the city but merely project a few religious reference points of this process. ICOMOS considers that the serial selection of site components, and hence the boundaries, are not adequate.

In conclusion, ICOMOS considers that the boundaries of the nominated property and of its buffer zone are not adequate to reflect the creation of an urban system.

Ownership

Until 1936 all khans and many of the monuments located in the property of the Orhan Ghazi Complex belonged to the waqf but nowadays many have been transferred into private ownership. Besides the majority which are privately-owned property (67%), 29% remain waqf (charitable endowments) and the remaining 4% are public property. In Hüdavendigâr Kulliyeh the largest share remains waqf (58%) with private properties (33%) and public components (9%). For Yıldırım Kulliyeh 73% remain waqf owned, with just 20% being private property and the remaining 7% public. In Yeşil Kulliyeh private property ownership dominates at 66%, with remaining ownership being waqf (10%), and a larger component of municipal (7%) and state owned property (17%). In Muradiye complex 74% of properties are private, just 13% remain waqf and the other 13% are public and state properties. In Cumalıkızık Village 78% of houses are in private ownership, 11% are waqf administered and the remaining 11% are state owned. No ownership data has been provided for the two recently-added components of Osman and Orhan Ghazi's Tombs and Eski Kaplıca (Old Turkish Bath).

Protection

All the serial components presented in the nomination dossier are protected under the provisions of the Law for Protection of Cultural and Natural Heritage as urban heritage sites. This Law was adopted in 1983 and allows for designation at the national level of the historical, cultural and natural heritage. No information has been provided about the two additional components added in the additional information provided on 27 November 2013.

The legal protection requires that for the preservation and utilisation of urban heritage sites any request or plan for construction or infrastructure development needs to be assessed by the Regional Preservation Board. Structures included in the waqf system require further approval of the General Directorate of Waqfs (religious endowments). The buffer zones of all proposed sites inside Bursa are included in the urban protection zone of Bursa and requests for construction in the buffer zones would also need to be passed by the Regional Preservation Board.

In Cumalikizik the national protection system is enhanced by traditional protection mechanisms, in particular communal application of protective sheltering on upper buildings during specific seasons. For the Bursa historic urban protection zone, policy rules and prescriptions stipulated by the heritage legislation are transferred into the municipal planning schemes, including through very strict provisions for height, type of building, as well as style of material and colour of building elements.

ICOMOS considers that the legal protection in place is adequate and that its implementation is effective.

Conservation

All architectural structures of the serial components have been inventoried as part of their official registration as national monuments. The inventories remain not only with the Bursa Site Management Unit but are integrated into the archives of the Metropolitan Municipality of Bursa and its two district municipalities. Two annexes (2A-1 and 2A-2) of the management plan contain a summary of the inventory of the serial components.

The state of conservation of the serial components varies and is often related to their original date of construction. Many of the monuments have been restored after the massive and destructive earthquake in 1855 and others were restored or rehabilitated to allow for adaptive reuse. Such restoration activities have mostly been undertaken using the same characteristic materials, techniques and details that were used during the original construction, at times without opportunity to identify later additions or read easily the age of an architectural structure.

Active conservation measures are appropriate to maintain the present condition of the site and are implemented according to short-, medium- and long-term conservation maps provided in the management plan. Conservation treatments are conducted following internationally-established standards and by specialized professionals with appropriate, often university, training. Maintenance is

carried out in cooperation with local or religious communities within the waqf system, or private property owners who inform and consult the specialist authorities whenever required. ICOMOS considers that the conservation activities undertaken and conservation plans outlined as part of the management plan seem effective and appropriate.

ICOMOS considers that conservation activities and plans as well as continuous maintenance mechanisms in cooperation with local stakeholders seem adequate.

Management

Management structures and processes, including traditional management processes

The centralised administration of Turkey has facilitated the protection of the nominated components at the highest level. Ultimate responsibility for the serial components lies with the Ministry of Culture and Tourism as the central institution responsible for the conservation and management of all movable and immovable heritage items under national designation. Within the regions, the national authorities are supported by the Directorate of the Regional Board for the Preservation of Cultural Properties which takes full responsibility for implementation of heritage policies.

It is this Board of Preservation that is required to approve all building and development requests in the property's protection zone as described under protection above. As the board is equally responsible for all serial components it provides the overarching management structure. Day-to-day management concerns are under the responsibility of the Bursa Metropolitan Municipality, which has recently established a heritage section named the Bursa Site Management Unit, under the Projects and Investigation Branch of the Bursa Metropolitan Municipality. This Unit includes very competent professional staff and has been authorized to provide coordinated management to all serial components through implementation of the management plan. The unit further monitors the property in cooperation with external stakeholders

A comprehensive risk-preparedness and disaster action plan has been prepared by Bursa's Provincial Directorate for Disaster and Emergency Management. Regular training sessions are conducted with the locally responsible administration of each serial component to build capacity for effective disaster response in case of fire or earthquake.

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

The property management plan submitted with the nomination dossier was officially approved in 2013 and is being implemented by the Bursa Site Management Department. It outlines a specific vision and strategic goals but following on from this it remains rather

descriptive of the different management bodies and legal processes. It integrates clear references to the Outstanding Universal Value suggested and is based on detailed analyses of opportunities and management needs.

The actions to be undertaken and activities to be launched are presented in action plan tables, which include objectives, description, location, responsible institution, financial resources and timeframe for each action. The only aspect missing are quality assurance indicators but these are also listed in the final section of the management plan. ICOMOS considers that the management plan is an adequate management tool which should continue to be implemented.

Interpretation of the whole property is not provided at present although some of the different serial components have smaller interpretation facilities. For example, a plan of the old Orhan Ghazi Kulliye illustrates for its visitors the buildings which have remained in their original use, those that have changed their function, and those that have disappeared. However, ICOMOS considers that presentation and interpretation for visitors is scarce and that facilities should be improved without creating adverse visual impacts in the historic properties.

Involvement of the local communities

Local community representatives and individuals were involved in this nomination through various official activities and informal consultations. At the start of the project a large panel discussion was organized by Bursa Metropolitan Municipality in 2011 which aimed at informing the local residents and property owners in the nominated areas about the consequences of UNESCO World Heritage status and nomination requirements. In addition the International Bazaar Symposium (2010), the International Neighbourhood Culture Symposium (2012) and the Rural Life, Rural Architecture Symposium were organized to promote the nomination and involve a wider public during its course. ICOMOS considers that the management authority is well prepared for the property management and that the management plan is an inspiring and high quality tool guiding the management processes.

In conclusion, ICOMOS considers that the management system for the overall serial property and the adopted and officially implemented management plan are adequate but that interpretation and presentation facilities could be improved.

6 Monitoring

The nomination dossier provides a short list of seven basic so-called indicators which remain at a very general level and provide only basic monitoring schemes. ICOMOS recommends establishing further detailed indicators which would allow the making of judgements on changes in the state of conservation and management

conditions. In particular the risks identified should be carefully monitored and the regular identification of empty houses in Cumalıkızık is a helpful tool in this context. ICOMOS recommends augmenting the indicator list to include additional subjects, such as traffic, and more detailed quantifiable standards for the judgement of indicators.

ICOMOS considers that the monitoring system should be augmented to include additional areas of concern and more detailed benchmarks allowing appropriate judgement on changes in the state of conservation.

7 Conclusions

Bursa is an important if not outstanding example of an Ottoman City and was often referred to as the Ottoman model city during its restoration and modernization in the 19th century. However, ICOMOS considers that it is difficult to reduce the Ottoman characteristics of Bursa to the restricted early 14th century phase of the Ottoman Empire during which Bursa was the capital. Bursa developed under Ottoman rule for centuries as a successful trade centre until it suffered severe losses in the earthquake of 1855. However, following this earthquake the city was again reconstructed under supervision of the Ottoman Empire as an Ottoman model city. ICOMOS considers that the few serial components selected which are in the main religious structures cannot adequately represent the important Ottoman urban characteristics of Bursa.

Not only commercial and religious complexes, but also residential quarters and street patterns, must have had a decisive role and influence on the urban development of Bursa but are not included or even mentioned in the nomination dossier. ICOMOS therefore considers that the selection of component sites within Bursa and its surroundings has not yet been justified by the comparative analysis and should be revised to enable a more holistic representation of Bursa as the Ottoman model city. This holistic representation could combine aspects of the justification provided in the nomination dossier but would be extended to consider the important urban developments which occurred at later times.

ICOMOS considers the justification that Bursa is a model of an Ottoman city with significant parts of it developed during the early years of the Ottoman Empire is in principle appropriate. What would need to be acknowledged and added is that several parts of the city reflect the Ottoman characteristics as a result of the intentional conservation and reconstruction of Bursa as an Ottoman model city in the 19th century, following large scale destructions in 1855. ICOMOS considers that the 19th century influence on the Ottoman components is not adequately explored and that the exclusive focus on 14th century Bursa as a capital city has not been fully justified. ICOMOS considers that the property and several of its serial components might be able to meet integrity

and authenticity if the focus of the nomination was expanded to include the reconstruction and modernization schemes of the Ottoman model city of Bursa.

ICOMOS considers that the serial approach needs to be reconsidered and the boundaries need to be revised to accommodate a wider concept of Ottoman Bursa. The legal protection of the currently nominated serial components is adequate and the conservation approaches are professionally guided and effective. The management system is satisfactory and the responsible management authority, the Bursa Site Management Unit, implements a good and effective management plan. Visitor presentation and interpretation could however be improved and the considerable traffic and parking challenges should be solved.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Bursa and Cumalıkızık: The Birth of the Ottoman Empire, Turkey, to the World Heritage List be **deferred** in order to allow the State Party to:

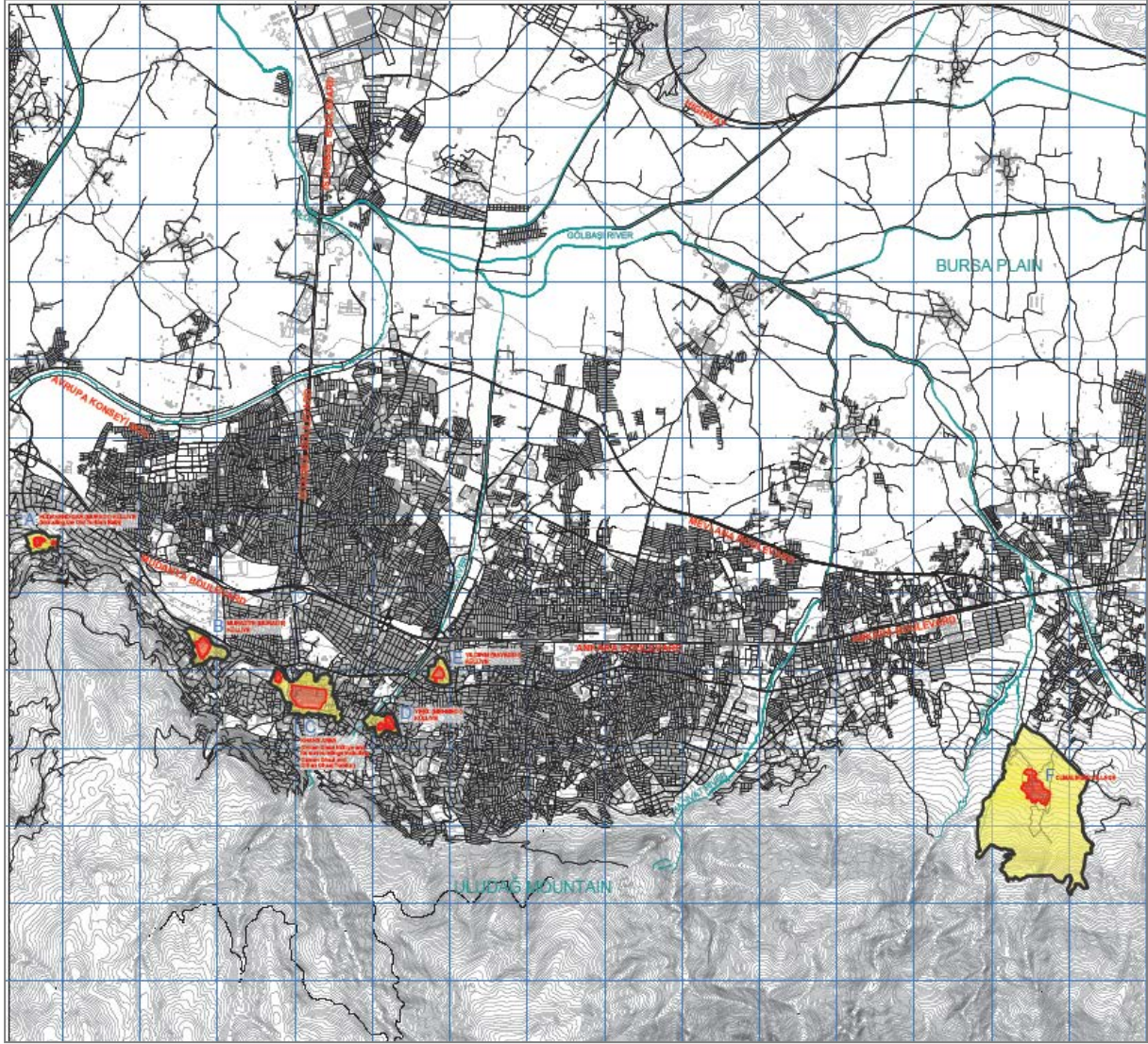
- Revise the focus of the nomination to emphasize Bursa as the early Ottoman capital which developed into a 19th century Ottoman model city, with particular focus on the continuity of development of Bursa from the earliest Ottoman times to the latest stages of the Ottoman Empire;
- Revise the selection of serial component parts based on a comparative analysis in and around Bursa which justifies the consideration of Bursa as an exceptional Ottoman city, which evolved from the birth of the Ottoman Empire to an Ottoman model city in the 19th century;
- Reconsider the inclusion of the village of Cumalıkızık in such a revised approach.

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

Additional recommendations

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

- Augmenting the monitoring indicators to allow for judgement of changes in state of conservation or management conditions and to include additional aspects that may pose risks to the property.



Map showing the boundaries of the nominated properties



Orhan Ghazi Kulliye and its surroundings



Orhan Ghazi Mosque



Muradiye (Murad II) Complex



Cumalıkızık Village

Pergamon

Republic of Turkey

No 1457

Official name as proposed by the State Party

Pergamon and its Multi-Layered Cultural Landscape

Location

Town of Bergama, Izmir Province
Aegean Region
Republic of Turkey

Brief description

Rising high above the Bakırçay Plain the acropolis of Pergamon was the capital of the Hellenistic Attalid Dynasty, a major centre of learning in the ancient world. Monumental temples, theatres, stoa, gymnasium, altar and library were set into the sloping terrain surrounded by an extensive city wall. The rock-cut Kybele Sanctuary lies to the north-west on another hill visually linked to the acropolis. Later the city became capital of the Roman province of Asia known for its *Asclepieion* healing centre. The acropolis crowns a landscape containing burial mounds and remains of the Roman, Byzantine and Ottoman empires in and around the modern town of Bergama on the lower slopes.

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 nine *sites*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013), paragraph 47, it is nominated as a *cultural landscape*.

1 Basic data

Included in the Tentative List

15 April 2011

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

31 January 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 23 to 27 September 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 25 September 2013 requesting additional maps, and information regarding justification of the series, protection and management. A response was received on 30 October 2013 and the information has been incorporated below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

This is a serial property comprising nine component sites, of which the primary and most visually dominant is the acropolis on Kale Hill, a steep-sided ridge between the Selinos and Keitos rivers which join south-east of the hill to run through the Bakırçay Plain. This primary component includes the Roman aqueducts to the north and extends down the slopes of Kale Hill to include the *Asclepieion* to the south-west. It is surrounded by seven tumuli components to its east, south-east and south with the Kybele Sanctuary component located on Kapıkaya Hill six kilometres to its north-west. The primary component and three tumuli components are together surrounded by a buffer zone of 426,928 ha; the other five components each have their own buffer zone.

1. Pergamon city

The Hellenistic upper city of the acropolis was a monumental urban complex tailored to the difficult topography of Kale Hill. The remains of the Athena Temple, Temple of Dionysus, Temple of Demeter, the Great (Zeus or Pergamon) Altar with its famous sculptural friezes (now in Berlin), the steep theatre cut into the side of the hill, the library, palaces, residential and commercial areas, arsenals, upper agora and stoa combine to illustrate the great achievement of the Attalid dynasty from 283 BC, developing the important trading and cultural centre established under Alexander the Great. Water was brought to cisterns and fountains on Kale Hill (which had no source of its own) by ceramic pipes and lead pipelines under pressure from mountains some 50km to the north of the city, using the principle that water finds its own level to run down and up the intervening valley to a height of almost 200m.

In the Roman period, the water supply was improved to serve the greatly increased population (up to 150,000 from 40,000 in the Hellenistic period) by the addition of

aqueducts to the north of the city. The Selinos river running around the southern base of Kale Hill was covered by two huge tunnels in order to create a flat area for the building of the Serapis Temple (*Serapeion*) under the emperor Hadrian with its sacred courtyard (*temenos*), in the area now known as *Kizil Avlu*. The main temple was flanked by two rotundas either side, each with their own galleried courtyard. The Trajan temple (now partly restored) was constructed on the top of the acropolis, and the city theatre, stadium and amphitheatre were cut into the lower bedrock to the south-west of the Selinos river. This became an area of extensive Roman settlement in the 2nd century AD, known now as the Roman Pleasure District (*Musalla Mezarlik*) and includes remains of a Columbarium. Further to the south-west the *Asclepieion* healing centre was developed under the great physician and pharmacist Galen, with its own theatre, temple to Zeus-Asclepius, sacred fountain, circular treatment building, and connected to Kale Hill by a 1km sacred way. The centre reached its peak of importance in the 2nd century AD as a famous sanctuary for pilgrims seeking a cure. Maps provided by the State Party in response to ICOMOS' queries show the grid alignments of the Hellenistic and Roman towns, which differ slightly.

In the Early Christian/Byzantine period from the 4th century AD, the Church of St John, one of the 'seven churches of Asia' known as the Red Basilica (*Kizil Avlu*) was built within the *Serapeion* in a similar way as had the Church of St Peter at Baalbek within the Temple of Jupiter. The northern rotunda was used as a synagogue and later (for the past 600 years), as a mosque. Archaeological investigations in this area have revealed that the rotunda courtyards were encircled on three sides by caryatids and extensively faced with marble. Remnants of the round bastions of the 12th century Byzantine city wall which followed the line of the late Roman wall are evident in front of the Gymnasium terrace. Supplementary maps provided by the State Party show that the Byzantine town occupied the area within the walls.

The area now occupied by modern Bergama south of the Selinos river was initially settled in the Roman period and became a necropolis and settlement in the Byzantine and Ottoman periods. The area on the slopes north of the Selinos river was occupied from the 14th century by the Orthodox Greek population and is partly within the Hellenistic city walls. Its stone buildings follow streets and lanes constructed as terraces along the contours of the slopes. Later in the Ottoman period, during the 18th century the layout was modified by the creation of a public square on the site of the former Greek market.

The Ottoman layout of bazaar, squares with plane trees, and mosques, madrasas, baths, fountains and civil residential properties from the 19th and 20th centuries is clearly evident on the south side of the Selinos. Remains of the earlier periods continue to be evident amongst the modern development including ruins of Roman bath buildings. Six bridges still in use over the river show derivation from the Roman period and line up with the city gates of the Hellenistic Attalid capital of Eumenes II. Only

three are within the property component's boundary; one is in the buffer zone. Supplementary maps show the extent of the Ottoman and modern towns. The total property area of component 1 is 315,460 ha.

2. Kybele Sanctuary

The cult of Kybele, symbol of fertility and nature was practised in natural areas that were difficult to access - usually on mountain tops. The Kybele Sanctuary at Kapikaya is a rural rock-cut sanctuary dating originally from the Archaic period, with many internal niches. Located on a craggy peak overlooking the Selinos river, it was developed from the original cave between 282 and 263 BC and has a direct line of visibility with the sanctuary of Athena on Kale Hill. The property component is 1,772 ha and has a surrounding buffer zone of 38,387 ha.

3. Ilyas Tepe

This tumulus is located east of the acropolis and is included in the buffer zone of component 1. It was discovered and excavated in 2010, but the burial chamber had previously been opened by illegal diggers who smashed the chamber's stone door. A skeleton of a man over forty years old was found in a sarcophagus beneath the debris. The lid had been broken open, possibly in antiquity. It is dated by one clay vessel to the second half of the 3rd century BC. It is thought that this the tomb of an eminent person close to the Attalid dynasty. The property area is 3,232 ha.

4. Yigma Tepe

The largest of the tumuli to the south of Kale Hill with a diameter of 158m and height of 35m, this tumulus is aligned with the west side of the Athena Temple and the stairs of the Great Altar On Kale Hill. No tomb chamber has been discovered but archaeological finds date it to the Hellenistic Attalid dynasty. The property area is 6,921 ha and it is surrounded by a buffer zone of 4,548 ha.

5. Ikili Tumuli

This component comprises three tumuli to the west of Yigma Tepe. These were excavated in 1906 by the German Archaeological Institute, resulting in removal of the mounds and leaving only the circular base. Each contained an andesite sarcophagus. In Tumulus II finds including a golden oak wreath, iron swords and a coin with the image of Alexander the Great indicate connections with Macedonia and date the tumuli to the second quarter of the 3rd century BC, the time of Philetairos. The property area is 82 ha and it is surrounded by a buffer zone of 403 ha.

6. Tavşan Tepe

Located south-east of the acropolis, this tumulus has a radius of 100m and is the third largest. It is yet to be excavated, but surface analysis indicates that it dates to the period of the Hellenistic Attalid dynasty. The property is part of a private estate and has an area of 1,245 ha. It is included in the buffer zone of component 1.

7. X Tepe

Located south-west of İkili Tumuli, the diameter of this tumulus is 80m. It was investigated by the German Archaeological Institute and Kiel University in 2010 but no tomb chamber has yet been found. Publication of the research is still awaited but the tumulus is thought to relate to the Attalid dynasty (280-133 BC). The property area is 573 ha and the surrounding buffer zone is 3,719 ha.

8. A Tepe

This tumulus located north-west of Tavşan Tepe has a diameter of 20m and a height of 4m and is thought to relate to the Attalid dynasty (280-133 BC). It was excavated illegally and part of the mound was removed. The tomb chamber has not been found. The property area is 556 ha and it is included in the buffer zone of component 1.

9. Mal Tepe

Located north of X Tepe and İkili Tumuli, this is the second largest tumulus. It is 180m in diameter and 28m high. The edge of the circular base of the tumulus is formed of trachyte blocks. The stone burial chamber is entered via a 45m long barrel-vaulted tunnel from the north leading to an east-west corridor, which in turn leads to the burial chamber at the east side. Stone remains on top of the mound may relate to a memorial temple or monument. The tomb is dated to the Roman period (2nd century AD) due to the mark of a cross found on its walls.

ICOMOS notes that the alignment of the entrance of the tumulus with monuments on the Hellenistic Acropolis parallels the Roman period grid system in the lower city, suggesting the symbolic tying of the administration of the new political elite with the cultural heritage of the city's founders.

History and development

The first Hellenistic city of Pergamon was established by the former Macedonian army officer Philetairos from 282 to 263BC following the defeat of the Persians by Alexander the Great in 334BC. It included the Athena Temple and the Demeter Sanctuary just outside the new city walls. It is thought that Yigma Tepe (4) was built in honour of Philetairos' mother at this time as well as the İkili tumuli (5). The Kybele Sanctuary (2) was created by Philetairos at Pergamon from a cave containing a water source where the cult originated in the Archaic period. The nomination dossier suggests that its alignment with the Athena Temple was an acknowledgement by the first Hellenistic Attalid Dynasty of the equivalent importance of the goddess of the local Anatolian citizens to the goddess Athena who they themselves worshipped, and that this was a strategic political move to win over the local population. It is also suggested that this axis determined the street alignment of the upper city laid out by Philetairos. Threats from the invading Galatians required strengthening of Pergamon's walls and the earliest phase of the *Asclepieion* became a refuge for war refugees. During the reign of Attalos I (241-197 BC) Pergamon

became an ally of Rome and Attalos I is said to have arranged for the meteorite stone idol of the Kybele cult, which he had taken from the Galatians, to be taken to Rome to assist them in their wars with Hannibal. The water pipelines were laid to the Madra springs 20-40 km distant and the Tavşan Tepe (6), X Tepe (7) and A Tepe (8) may date from this period. The city walls were subsequently extended to enclose the area below the acropolis to the south to the limits evident today during the rule of Eumenes II (197-159 BC). This was a period of great building work, including refurbishment of existing temples and the building of the Great Altar, lower agora, gymnasium and library. With support from Rome the city withstood assaults from the Seleucids and this victory was commemorated with the creation of the famous Gaul sculptures for the Athena Temple by the Pergamon sculpture school, which subsequently also produced the remarkable sculptural friezes around the Great Altar commissioned following the defeat of the Galatians by Eumenes II in 166BC. Pergamon held off more attacks and prospered under Attalos II but following his death and that of his son Pergamon ultimately came under the control of Rome and became the capital of the Roman province of Asia c 129BC. The city flourished under the Roman emperor cults of Augustus, Trajan, Hadrian and Caracalla until the 5th century when earthquakes exacerbated its decline.

Arab attacks during the 6th and 7th centuries prompted the rebuilding of the city walls during the Byzantine period, reusing stones from earthquake-damaged monuments, particularly the Great Altar. During peaceful times in subsequent centuries, settlement and agricultural activity spread into the plain but following the defeat of the Byzantine armies by the Turks at Manzikert in 1071 Turkish settlers arrived in the Aegean region. Pergamon held out under Isaac II (1185-95AD) to become a powerful metropolitan centre with rebuilt, bastioned city walls. The city fell to the Ottomans in 1345, then briefly to the Mongols under Timur before being taken again by the Ottomans under Murat II (1421-1451) and during subsequent peaceful times once again spread into the plain, this time with mosques, madrasas, hans, baths and fountains. During the 15th and 16th centuries development increased with more hans, bazaars, new water supply and treed squares. New trade and dwelling areas were constructed in the 18th and 19th centuries which are still in use today.

ICOMOS notes that the importance of the city derives from its pre-eminence in the Hellenistic period as continued under the Romans, and that there was a strong cultural discontinuity from the 5th century.

Following World War I, the Greek invasion of 1919-22, and the Treaty of Lausanne, which founded the Turkish Republic in 1923, Pergamon became a district of Izmir province. City planning began in 1940-1 with development limited to two storeys. In 1970-1 'archaeological areas' were declared as a protection mechanism and the registration of sites was begun in 1976. The 1980s city zoning plan allowed multi-storey building in the Ottoman

area on the south bank of the Selinos and modern development occurred to the south and east. Multi-storey construction within the Ottoman area was stopped in 2000 and the area was protected as 'historic urban + archaeological areas'.

Details of archaeological excavations and conservation works carried out since 1900 are set out in the nomination dossier. The most extensive restoration work was carried out at the Trajan Temple on top of the acropolis from 1979. Vehicle access was provided to the acropolis in 1935 but the risk of avalanche due to the steep slope led to a cable-car system being constructed at the east side of Kale Hill in 2010. ICOMOS notes that the remains of Byzantine churches other than the Red Basilica (*Kizil Avlu*), notably in the temenos of the Temple of Athena on the acropolis were removed during early 20th century excavations.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The nomination dossier includes a problematic comparative analysis and concludes that while there are many cities of the Classical, Hellenistic and Roman period represented on the World Heritage List, Pergamon is the only Hellenistic dynastic capital that exists to this day – Alexandria and Antioch having been essentially demolished. Within the Aegean Region, comparison is made with the sites of Miletus, Smyrna, and Ephesus and it is argued that these cities did not achieve Pergamon's monumental expression in the landscape due to their topography. Within the wider region of Anatolia and Greece it is noted that while Halicarnassus is comparable as a terraced city it is focussed on the mausoleum; Athens (1987, (i), (ii), (iii), (iv) and (vi)) did achieve domination of the landscape but the city represents the classical period as does Halicarnassus. Aigai (Vergina, 1996, (i) and (iii)) first capital of the Macedonian Kingdom comprises a monumental, decorated palace, remains of a stadium and a series of royal tombs, but was not a great Hellenistic city like Pergamon. Comparison with Rhodes (founded 408 BC) and Priene shows that Rhodes was inscribed on the World Heritage List (1988, (ii), (iv) and (v)) as a medieval city. Priene was a similar size to Pergamon in the Hellenistic period and while terraced on the side of a hill close to the sea and planned on a regular grid, it lacks the adjustment to terrain and monumentality of Pergamon. Hierapolis-Pamukkale (1988, (iii), (iv) and (vii)) developed within Pergamon's sphere of interest and was inscribed for its Hellenistic Attalid remains, Greco-Roman medical treatment centre and Christian architectural complex but lacks Pergamon's town-planning and topographical and architectural monumentality.

It is argued in the nomination dossier that most of the comparative cities do not represent the multi-layered history in the way that Pergamon does, but ICOMOS

considers that the nomination dossier focuses on the Hellenistic and Roman layers and gives almost no information on the Byzantine layer in terms of comparisons. Nothing is presented on the layout of the Byzantine city or details of its structures including other churches. No comparative analysis is made for the Ottoman town. ICOMOS considers that the significance of the Byzantine and Ottoman areas of the site has not been justified by the comparative analysis.

Comparisons are made between individual features of the cities leading to an understanding of the outstanding nature of the Hellenistic monumental buildings, particularly the Great Altar, the great gymnasium, the extraordinarily steep theatre on the western slope of Kale Hill, the water system and the Kybele Sanctuary; the Roman period engineering feat of the platform and tunnels still in use today beneath the *temenos* and former temple of Serapis; extensive development of the *Asclepieion* under the famous physician Galen, and the historical value of the Red Basilica (*Kizil Avlu*) constructed within the *Serapeion*. ICOMOS notes some incorrect statements in the nomination dossier regarding the configuration of Roman theatres and amphitheatres, and Hellenistic figurative decorations in relief.

Selection of serial components

Regarding the serial nomination, the nomination dossier does not include information on burial mounds related to the comparative cities, and these have not been well justified in terms of their functional connection with the city itself beyond archaeological dating. However ICOMOS considers that they are clearly part of the landscape of Pergamon, with a visual connection, and contribute a broader understanding of the social and religious practices of the inhabitants. In response to ICOMOS' query the State Party provided information on the other Kybele/ rock-cut sanctuaries located either side of Kale Hill within the nominated property which are still being investigated, as well as on the Kybele sanctuary 30 km from Pergamon on Mamurt Kale which has remains of a temple built by Philetairos and dedicated to the Mother Goddess Kybele. This was not included in the property due to its lack of integrity and authenticity. Information was also provided on other tumuli within and outside the nominated property. The selected tumuli are those which are seen by their alignments and artefacts to have connections with the ruling elite.

The comparative analysis with the additional information provided by the State Party justifies the selection of sites in showing that Pergamon stands out in combining the Hellenistic/Roman city and its famous monuments with the burial mounds of its rulers and the Kybele sanctuary representing the local Anatolian 'Mother Goddess' cult. It does not justify the significance of the Byzantine and Ottoman part of component 1.

ICOMOS considers that the comparative analysis despite weaknesses has justified consideration of the property for the World Heritage List on the grounds of the Hellenistic and Roman periods.

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:

- Pergamon is the only remaining Hellenistic city which demonstrates urban planning of the period.
- Pergamon's topographical location, terracing, water supply, famous monuments and sculpture make it an outstanding site.
- Pergamon brought together the local Anatolian Kybele culture with Hellenistic beliefs and political strategy in a unique visual combination.
- Although dominated by its Hellenistic acropolis, Pergamon is a rare example of a multilayered city where the later overlays of Roman, Byzantine and Ottoman cultures are still clearly evident.

The justification for the serial approach is the historical and visual relationship between the burial mounds and the city, which are now separated by modern development, and the visual and political relationship between the city and the Kybele sanctuary, which is located at a distance of six kilometres from the acropolis.

ICOMOS considers that this justification does not apply to all areas of the property. The justification should focus on the value of the property as the Hellenistic capital of the Attalids and its subsequent inclusion in the Roman Empire which allowed Pergamon to extend its role as a cultural centre. In this respect ICOMOS considers that the serial approach is justified. However ICOMOS considers that Pergamon has not been justified as a multi-layered city.

Integrity and authenticity

Integrity

The property is of sufficient size and includes all the elements necessary to present the city and its outlying features relating to the Hellenistic and Roman periods. The acropolis archaeological site has been meticulously excavated and recorded over more than 130 years and conserved for presentation to the public, although the famous sculptured frieze of the Great Altar was removed to Berlin in the late 19th century and is now on display in the Pergamon Museum there. The Gaul group sculpture is lost and known today only through a Roman copy. The *Asclepieion* and *Serapeion* (*Kizil Avlu*) have been protected and conserved for visitors over a long period.

The Roman period ruins of the aqueduct; theatre and amphitheatre in the Roman Pleasure District, and the tumuli and Kybele sanctuary have not been excavated and essentially retain their integrity as buried archaeology, except for component 5, Ikili tumuli, of

which the mounds themselves were totally removed by excavation in the early 20th century, and component 8, A Tepe, of which part of the mound was removed by illegal excavation. ICOMOS notes that extremely important artefacts were uncovered at component 5, the excavations were well documented and the base of the tumulus is still evident, demonstrating its visual and spatial connection with the acropolis. The Roman Pleasure District has been partly occupied by squatters and similar illegal construction has encroached on component 7, X Tepe. Steps are being taken by the authorities to relocate the inhabitants and remove encroachments. Component 1 is also impacted by some high buildings within its urban area dating from the 1980s and '90s. Heights are now said to be restricted by the 2012 Conservation Plan to two stories. The nomination dossier states that it is expected that the high buildings will be removed within 5-10 years.

The Ottoman period town contains some abandoned houses and efforts are being made by the authorities to find suitable uses for these, at the same time carrying out a conservation and community education program. Remains of Roman monuments to be found amongst the later town are retained and protected under archaeological legislation. Overall the property is well maintained. However there are modern high buildings within the Ottoman town that detract from its integrity.

The Kybele sanctuary (component 2) was selected due to its visual relationship with the city (component 1) as evidence of the political strategy of the Attalid dynasty to encompass the local Anatolian people in its sphere of influence. The other components (all tumuli) were selected as burials related to the Hellenistic and Roman rulers of the city. The reason for including the Ottoman town in component 1 appears to be largely due to it having been built over Roman remains, which occasionally emerge through the Ottoman layer (such as the baths and bridges).

ICOMOS considers that the extent of the Ottoman town included needs to relate only to the remains that are attributes of outstanding universal value and the areas which have potential to contribute to the understanding of outstanding universal value. The nomination dossier indicates that the key attributes of the Roman period include the platform of the *Serapeion* and its *temenos* supported by the tunnels over the Selinos river, suggesting that a possible property boundary could run along the south bank of the Selinos river projecting further south to include *Kizil Avlu* and the bridges. But more information is required on the significance of Roman remains south of the Selinos river.

ICOMOS considers that the integrity of the whole series has not been justified in terms of inclusion of the Ottoman town; this applies to component 1 and the integrity of components 1, 5, 7 & 8 is vulnerable.

Authenticity

ICOMOS considers that the monuments representing the Hellenistic and Roman periods represent remarkably well the architectural canons of each period. Hellenistic Pergamon was well known as a centre of culture between the civilised world and the barbarians of Galatia – its library rivalled that of Alexandria; for the Romans it was the entrance to Asia. The Great Altar of Zeus was famous for its sculptured frieze (now in Berlin); the *Asclepieion* attracted those seeking a cure from all over the Roman Empire; the remains of the *Serapeion* testify to the extravagance of Hadrian and the Imperial cult, and the Red Basilica (*Kızıl Avlu*) was known to the Christian world as one of the Seven Churches of Asia. The Hellenistic and Roman archaeological remains of Pergamon credibly express the values of Pergamon through their layout, design, materials and location. Their setting is impacted by the funicular railway along the east side of the hill. Roman remains within the Ottoman town are preserved. Component 5 (Ikili tumuli) retains only the base of the tumuli. Components 1 & 7 have been impacted by illegal construction and component 8 by illegal excavation. The Ottoman period buildings are being conserved according to good practice. The layout of the Ottoman town is preserved, but the authenticity of its setting is impacted by the development in the urban area that occurred during the last quarter of the 20th century.

ICOMOS considers that the authenticity of the individual sites that comprise the series is vulnerable for components 1, 5, 7 & 8.

In conclusion, ICOMOS considers that the conditions of integrity of the whole series have not been justified in terms of inclusion of the Ottoman town; this applies to component 1 and for individual sites, the conditions of integrity and authenticity are vulnerable for components 1, 5, 7 & 8.

Criteria under which inscription is proposed

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

Criterion (i): *represent a masterpiece of human creative genius;*

This criterion is justified by the State Party on the grounds of the skill in which the city was built into the slopes at the top of Kale Hill, with its grand monuments dominating the surrounding plain. The Hellenistic piped water supply system bringing water under pressure from mountain springs many kilometres away is considered a masterful technological achievement, as is the Roman construction of tunnels to channel the Selinos River, supporting the *temenos* and temple of Serapis above them.

ICOMOS considers that Hellenistic and Roman Pergamon demonstrates principles of town-planning and landscape design married with monumental architecture, much of it carrying monumental art, to produce an acropolis that is

today without parallel in the Mediterranean world. However ICOMOS notes that the full extent of the Hellenistic water supply system is not included within the nominated property boundaries and the Byzantine layer and Ottoman town have not been justified.

ICOMOS considers that this criterion has not been justified for all areas of the property but could be justified if the nomination is focused on the Hellenistic and Roman remains.

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 city was a meeting point between east and west; that this is reflected in its architecture and sculpture and expressed through the Hellenistic town-planning adapted to the topography. It is also expressed through the visual and political encompassing of the Kybele sanctuary within the city's outlook and the construction of the temple to the Egyptian god Serapis by the Romans over the Selinos river, thus encompassing Egyptian religious beliefs in the city's culture.

ICOMOS considers that the use of Egyptian gods within the Roman Empire in Asia Minor is good evidence for the interchange of human values, as is the relocation of the Kybele meteorite to Rome, facilitated by the Attalids. However the Byzantine layer and Ottoman town have not been justified.

ICOMOS considers that this criterion has not been justified for all areas of the property, but could be justified if the nomination is focused on the Hellenistic and Roman remains.

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 Pergamon bears unique testimony to the Hellenistic Attalid dynasty. The remains of the city's temples, Great Altar, sanctuaries and theatre provide the sole surviving representation of the cultural, artistic and political qualities of a Hellenistic capital. The *Asclepieion* was a renowned treatment centre from the 4th century BCE to the 5th century CE. The offerings and inscriptions found there bear exceptional testimony to the socio-cultural, religious and scientific aspects of healing over this period. The Roman construction over the Selinos river and the remains of the *Serapeion* bear exceptional testimony to the exploits of Rome in its eastern empire. The tumuli bear exceptional testimony to Hellenistic and Roman burial traditions. The Kybele sanctuary bears exceptional testimony to the ancient Anatolian religious cult traditions as adapted under the Attalids.

ICOMOS considers that this argument, while appropriate to the Hellenistic and Roman layers, repeats some of the arguments used for the previous criteria. The Byzantine layer and Ottoman town have not been justified.

ICOMOS considers that this criterion has not been justified for all areas of the property. It is the most appropriate justification if the nomination is focused on the Hellenistic and Roman remains.

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 similar grounds to those argued for the previous three criteria. It is argued that the acropolis is an outstanding Hellenistic ensemble of temples, theatre and other monuments set into and dominating the landscape due to the site's topography. The Hellenistic water supply system and the Roman tunnels under *Kizil Avlu* are considered an outstanding example of technology. The *Asclepieion* represents an important stage in the transition to scientific treatment methods as evidenced in its layout and composition in natural surroundings. Argument is made for the outstanding qualities of the Serapis temple and the brick basilica later built inside it due their size and elaboration. The one new element mentioned is the unusual arrangement of the amphitheatre, which although not excavated is described as being built to hold 50-55 thousand spectators with seats stepping down the slopes of a valley either side of a stream in such a way that the stream could be dammed to fill the amphitheatre. ICOMOS considers that the argument could make more of the siting of the Trajan temple and the layout of the Roman city grid on a slightly different alignment to that of the Hellenistic city, and also of the fact that amphitheatres were not common in the Roman East.

ICOMOS considers that while the argument addresses the Hellenistic and Roman periods, insufficient evidence has been presented for the Byzantine and Ottoman stages of human history.

ICOMOS considers that this criterion has not been justified for all areas of the property and the justification for the Hellenistic and Roman periods is better dealt with under criterion (iii).

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 Pergamon gained sovereignty along the western shore region of Anatolia, while maintaining relations with the Greeks in the west and the Seleucid and Ptolemaic kingdoms in the east largely through the political strategy of accepting the local Anatolian Kybele

cult. This strategy was adopted by Rome in its dealings with Anatolia, due to the transfer of the cult idol to Rome by Pergamon's Attalid king. Due to the subsequent inheritance by Rome of Pergamon due to Attalid bequest in 133 BCE and the consequent settling of Romans in Anatolia, Pergamon is directly associated with the creation of an eastern Roman empire.

Pergamon is also tangibly associated with religious beliefs including the Kybele cult through the Kybele sanctuary; the cult of Serapis through the Serapeion and the Imperial cult through the temple to Trajan and Hadrian. The sculptural frieze of the Great Altar at Pergamon which was removed to Berlin and is now on display there in Berlin's Pergamon Museum is considered to be an artistic work of outstanding universal value, as was the Gaul group of sculptures, of which Roman copies remain in museums in Rome. The location of these is still evident.

ICOMOS considers that these arguments apply to the Hellenistic and Roman areas only, and have already been largely covered under criterion (ii). However ICOMOS considers that the association of Pergamon with the creation of the eastern Roman Empire justifies criterion (vi) in conjunction with criterion (ii)

ICOMOS considers that this criterion has not been justified for all areas of the property but could be justified if the nomination is focused on the Hellenistic and Roman remains.

ICOMOS considers that the serial approach is justified in relation to the Hellenistic and Roman remains and ICOMOS considers that the selection of sites is appropriate, except that the Byzantine and Ottoman period parts of component 1 have not been justified.

ICOMOS considers that part of the nominated property could meet criteria (i), (ii), (iii), and (vi) and conditions of authenticity and integrity if the nomination is focused on the Hellenistic and Roman remains.

4 Factors affecting the property

Urban development pressure is felt primarily in the area of the city south of the proposed buffer zone for component 1 - around component 9, Mal Tepe and to a lesser extent around components 4, Yigma Tepe and 7, X Tepe. An Environment Plan by the Bergama Museum Directorate was submitted to the Izmir Regional Conservation Council for Cultural Properties no. 2, which aims to preserve the landscape connection between Mal Tepe and Kale Hill (component 1). The 2012 Conservation Plan requires a new Environment Application project to decrease development pressure for all tumuli in the modern urban area. Urban development is also an issue in the privately-owned part of the Roman Pleasure District of component 1. Measures are in place to deal with this. Within the buffer zone of component 1, the 2012 Conservation Plan

restricts buildings to a height of 3-5 stories. The population of the property area is estimated to be 11,941, all within component 1, and 7,699 within the buffer zone of component 1, with 69 in the buffer zone of component 9, Mal Tepe.

Other threats include illegal digging, which is being addressed by increased police surveillance; seismic (Pergamon is in a first degree earthquake zone), which is being addressed through construction regulations based on a geological/ geotechnical survey report; and forest fire, which is being addressed through fire protection strategies including fire watch points and access to five fire-fighting helicopters in the surrounding area; municipal emergency response plans in the urban area, with fire hydrants provided in the steep Ottoman district on the north bank of the Selinos which is not accessible to the fire department truck. Flood threat is possible in the Selinos river during the winter and this is being addressed through investigating new drainage strategies, including cleaning the river bed.

Tourism is considered to be well under capacity. It is controlled through ticketing the Acropolis, *Asclepieion* and *Kizil Avlu* sites. Visitors to these sites come mainly with tour operators and a guide and rarely visit the tumuli or urban area. They mostly access the top of the site by funicular railway and may walk down to the other sites and back to the point of departure at the base of the funicular. Some also travel up the rough vehicle track in taxis or private cars. The Kybele sanctuary is not accessible to visitors due to the difficult terrain.

ICOMOS considers that the main threats to the property are development in the urban area and forest fire.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundary of component 1 follows topographical and administrative lines and covers the extent of the town at the end of the Ottoman period. In the nomination dossier the boundary of component 2, Kybele sanctuary was shown as an arbitrary circle and the additional information provided by the State Party shows the boundary now established to cover its archaeological surroundings and protected as a first degree archaeological site on 10 October 2013. The buffer zone remains unchanged. The tumuli property boundaries follow the perimeter of the mounds at their base. In the nomination dossier the boundary of Ilyas Tepe (component 2) was also being investigated and the additional information states that it remains as shown in the original documents and was confirmed as a first degree archaeological site on 29 March 2013.

ICOMOS considers that the value of the property is related to the Hellenistic and Roman periods and that

justification of Outstanding Universal Value does not cover the Ottoman period. ICOMOS considers that the boundary of component 1 could be adjusted to represent the Hellenistic and Roman remains as justified by criteria. The remaining area of the Ottoman town should then be covered by the buffer zone.

ICOMOS considers that the buffer zone boundaries of components 4, 5, 7 & 9 are too tight and that the buffer zone of component 1 should be extended to enclose these components in order to preserve their visual connection with the acropolis. It is noted also that funeral mounds are traditionally located along roads leading to and from the city and these tumuli are located along the route which linked ancient Pergamon to the sea. This route should be protected within the buffer zone.

ICOMOS also considers that the buffer zone for the Kybele sanctuary (component 2) should be extended to comply with the natural protection zone beyond the river to the south and west.

In conclusion, ICOMOS considers that the boundaries of the nominated property and of its buffer zone are inadequate at present.

Ownership

In general all areas of the property declared as first degree archaeological sites are owned by the State. This includes components 1, 3, 4, 6, 7 & 9, except for the south part of the Roman Pleasure District (*Musalla Mezarlik*) in component 1, which is privately owned, and part of its northern area is owned by the Bergama municipality, which also owns the Kybele sanctuary (component 2). The Ministry of National Security uses the eastern part of *Kizil Avlu*, and an area of the eastern part of the *Asclepieion* – all State-owned. The aqueduct area of component 1 is privately owned, as are components 5 & 8 (Ikili tumuli and A Tepe), the second degree archaeological sites within component 1, the third degree archaeological sites and some properties in the urban site within component 1. Some of the properties within the urban site of component 1 are owned by the General Directorate of Waqfs Islamic Foundation.

The unlicensed buildings in the Roman Pleasure District which are on State-owned and privately-owned land are under an evacuation and expropriation process which will take 5-10 years.

Protection

The first degree archaeological sites within the nominated property components including Kale Hill, aqueducts, *Asclepieion*, *Musalla Mezarlik* (Roman Pleasure district), *Serapeion*, tumuli, Kybele sanctuary, and the urban area within the property boundary are said to be protected by the National Law on the Conservation of Cultural and Natural Property no. 2863, 23 July 1983 as amended. All works are subject to approval from the Izmir Regional Conservation Council for Cultural Property no. 2. Also all works in the urban area must be in accordance with the 2012 Conservation Plan prepared by Bergama

Municipality. This covers street facades and traditional construction techniques, details, materials, layout and setting. Other areas within the property are zoned as second or third degree archaeological sites at the national level, but these allow different degrees of protection in terms of what can happen there. The buffer zone includes areas zoned as third degree archaeological and historic urban sites. According to the Urban Conservation Plan building heights can be up to six storeys (18.5m) in the historic urban area, although elsewhere in the nomination dossier it is said that heights are limited to two stories within the nominated property and 5 storeys in the buffer zone.

ICOMOS notes that the protection in place has not prevented illegal settlement in parts of the property, and that construction above two storeys is allowed in the buffer zone.

ICOMOS considers that the whole property including all areas of its components should be protected as one entity at the National level with the highest protection measures. The property and buffer zone should be protected in such a way as to ensure that construction is limited to two storeys.

In conclusion, ICOMOS considers that the legal protection in place is inadequate at this stage.

Conservation

The inventory for the German archaeological investigations over the past 130 years of the Hellenistic, Roman and Byzantine sites is available at the office of the German Archaeological Institute in Istanbul, at the Ministry of Culture and Tourism and also at the Museum of Bergama and the Office of World Heritage Management of Bergama Municipality.

The inventory of the Ottoman town and the archaeological remains within it is regularly updated in collaboration with the office for World Heritage Management and the Bergama Municipality showing the state of progress of the inventory of urban construction not only in the central zone of the hill (Kale Hill and the Ottoman town) but also in the buffer zone. The inventory is currently being extended to the area south of the Selinos river, where it is the responsibility of Bergama Municipality and the Waqf. The ancient bridges and the tunnels under *Kizil Avlu* are regularly surveyed. The 2012 Conservation Plan requires traffic to be restricted over the bridges.

The current program of research is concentrated on conservation of the archaeological monuments and the built heritage of the Ottoman period and on survey rather than excavation. The Ministry of Culture and Tourism is responsible for research and restoration. The work is carried out by the German Archaeological Institute in Istanbul in collaboration with the Ministry and the Director of Museums of Bergama and must be agreed with the Izmir Regional Conservation Council for Cultural Properties No. 2. Conservation measures for the built urban heritage are controlled by the Ministry of Culture

and Tourism in accordance with the requirements of the Izmir Regional Conservation Council for Cultural Properties, No 2.

ICOMOS considers that the conservation measures are appropriate to maintain the integrity of the property. They are carried out according to accepted canons. Traditional techniques are integrated with modern conservation technology. Conservation on the acropolis is concentrated on the Temple of Trajan; Building Z with its mosaic floors (which have a protective roof); the temple of Demeter; repair of the city walls, restoration of *Kizil Avlu* including the statues, and restoration of Mal Tepe is planned. Spoil from ancient excavations is being cleared and boardwalks are installed on the acropolis and in the *Asclepieion* in order to provide access for persons with reduced mobility. The *Asclepieion* is subject to maintenance regulated by the Museum of Bergama.

However ICOMOS considers that monitoring for seismic movement should be carried out in all the archaeological zones particularly on the acropolis but also including the tumuli, theatre and amphitheatre at *Musalla Mezarlik*, the *Asclepieion* and the Kybele sanctuary.

In conclusion, ICOMOS considers that conservation is adequate but seismic monitoring is required.

Management

Management structures and processes, including traditional management processes

Management of all components of the nominated property is coordinated by Bergama Municipality World Heritage Management Office, established at the end of 2011, and by the Advisory Body, established at the end of 2012, which includes representatives of State and local administrative institutions, universities, non-government organisations including ICOMOS Turkey, and the mukhtars.

A risk management plan will be prepared as part of the Management Plan. Funding is provided from the annual budgets of the Ministry of Culture and Tourism; the Bergama municipal budget for restoration and preservation plus 10% of property taxes and 5% of ticket sales; the budget of the German Archaeological Institute; the Waqf foundations for their properties and from other institutions responsible for works to the rivers and roads.

Sufficient well-trained professionals are employed in the relevant institutions. Training has been provided through the Turkish National Commission for UNESCO and personnel also participate in relevant conferences in the region.

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

The current policy framework is provided by the Environment Management Plan for the Manisa-Kütahya-Izmir Region covering the Bakırçay Basin, approved on 14 August 2009 and the Urban Conservation Plan prepared by Bergama Municipality and approved by the Izmir Regional Conservation Council for Cultural Property on 8 June 2012. The World Heritage Management Office and Advisory Body have begun preparation of a Management Plan, of which an outline is included in the nomination dossier. This is expected to be completed by mid-2013. It includes visitor management and presentation projects.

ICOMOS considers that the tourism and presentation plan should be aimed at both general tourists and more specifically cultural tourists, with updated presentations in the museum. The funicular railway has an unfortunate visual impact on the site but is functionally necessary and used by most tourists. The location of a proposed new car park near *Kizil Avlu* for the lower station is of concern, as is the car park at the upper station. It is not clear why the latter is necessary. ICOMOS considers that it would be preferable to ban private cars and allow only taxis to access the acropolis by the track.

Involvement of the local communities

Two objectives of the Management Plan relate to the involvement of local communities in the protection and conservation of the property and in regular discussions regarding the Plan.

ICOMOS considers that the current management system of the property is adequate overall but that special attention is needed to seismic monitoring; restriction of vehicle access to the acropolis; and museum presentation.

In conclusion, ICOMOS considers that the management system should be extended to include seismic monitoring. Furthermore, ICOMOS recommends that vehicle access to the acropolis be restricted to taxis, and that museum presentation be updated. Finally, the Management Plan should be completed and implemented.

6 Monitoring

The monitoring system covers monuments and buildings with one set of indicators, and the overall state of the archaeological sites with another. As provided in the nomination dossier it could be improved by specifying which organisation is responsible for monitoring each indicator – the table gives only the periodicity and the location of records. It should also include seismic monitoring.

ICOMOS considers that the monitoring system should be improved.

7 Conclusions

The nomination is for Pergamon the multi-layered landscape but the nomination dossier is inconsistent in that the comparative analysis focuses on the Hellenistic and Roman areas and does not justify the Byzantine layer and Ottoman areas. ICOMOS considers that the key criteria are (i), (ii), (iii) and (vi), and that the nomination should focus on the value of the property as the Hellenistic capital of the Attalids and its subsequent inclusion in the Roman Empire which allowed Pergamon to extend its role as a cultural centre. The comparative analysis justifies the selection of sites in showing that Pergamon stands out in combining the Hellenistic /Roman city and its famous monuments with the burial mounds of its rulers and the Kybele sanctuary representing the local Anatolian 'Mother Goddess' cult. ICOMOS considers that criteria have not been justified for all areas of the property and that the Ottoman part of component 1 should be reduced to relate to justified Outstanding Universal Value. ICOMOS considers that the conditions of integrity are vulnerable for the whole series and for individual sites, the conditions of integrity and authenticity are vulnerable for components 1, 5, 7 & 8. ICOMOS considers that the boundaries of the nominated property and of its buffer zone are inadequate at present. The property boundaries enclose part of the property for which criteria have not been justified and the buffer zones are insufficient for components 2, 4, 5, 7 & 9. The buffer zone of component 1 should cover the remaining Ottoman area and be extended to enclose components 4, 5, 7 & 9 in order to preserve their visual connection with the acropolis. The legal protection in place for the whole site as nominated is inadequate and vehicle access to the acropolis should be restricted. The monitoring system needs improvement and should include seismic monitoring. The Management Plan needs to be completed and implemented.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of Pergamon and its Multi-Layered Cultural Landscape, Republic of Turkey, to the World Heritage List be **deferred** in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:

- Refocus the nomination on the Hellenistic and Roman periods to justify the value of the property as the Hellenistic capital of the Attalids and its subsequent inclusion in the Roman Empire which allowed Pergamon to extend its role as a cultural centre;

- Reduce the Ottoman part of the nominated area of component 1 to relate to justified Outstanding Universal Value of the Hellenistic and Roman remains;
- Include the remaining area of the Ottoman town in the buffer zone of component 1;
- Extend the buffer zone of component 1 to include all the tumuli and their visual connections to the acropolis;
- Extend the buffer zone of component 2 to comply with the natural protection zone beyond the river to the south and west;
- Provide legal protection at the national level to the whole property including all areas of its components as one entity with the highest protection measures;
- Reinforce the legal protection of the property and buffer zone in such a way as to ensure that construction is limited to two storeys;
- Complete and implement the Management Plan.

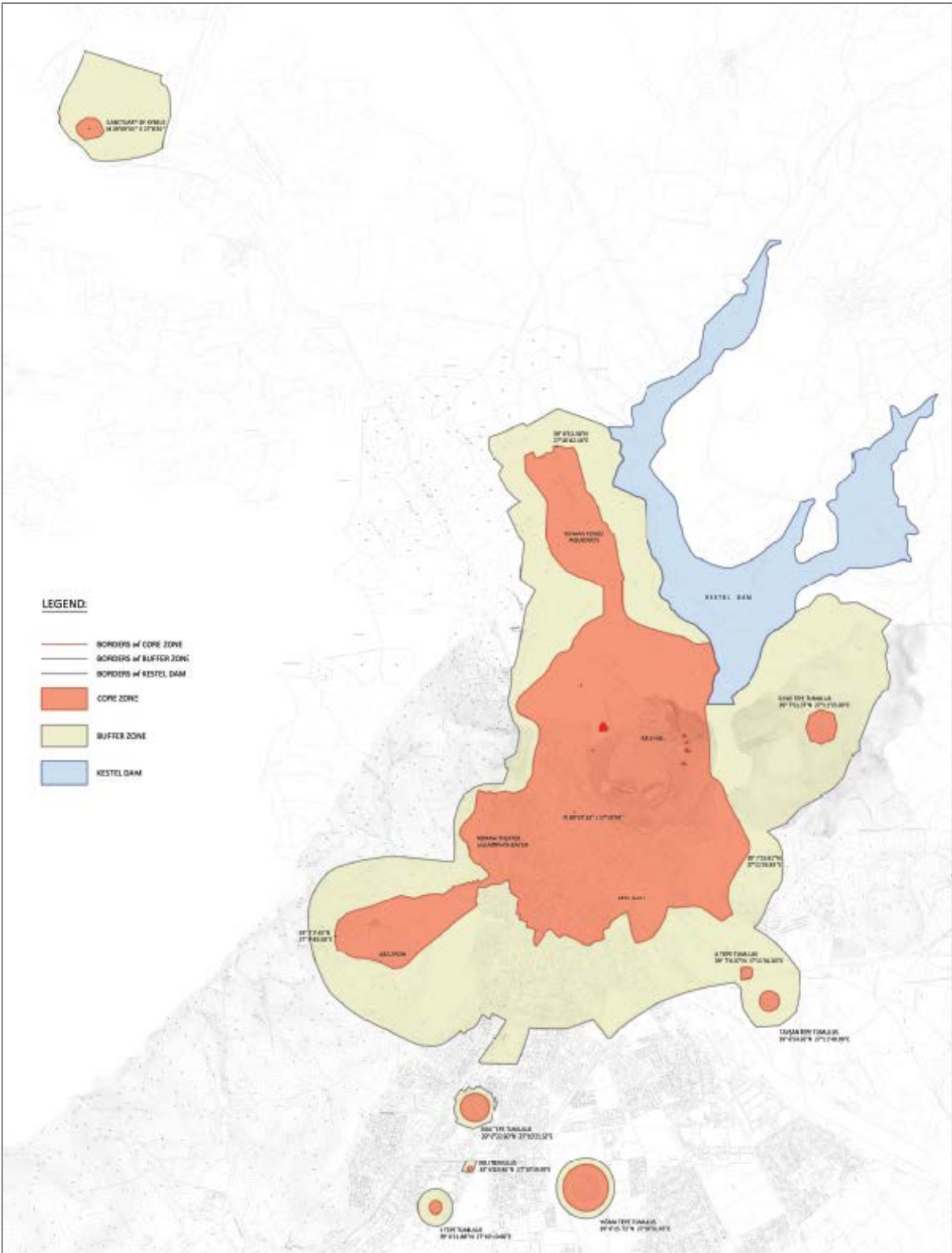
ICOMOS further recommends that the name of the property should not include 'multi-layered cultural landscape' since ICOMOS does not consider that the property belongs in this category.

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

Additional recommendations

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

- Improving the monitoring system by specifying which organisation is responsible for monitoring each indicator and include seismic monitoring;
- Restricting vehicle access to the acropolis to all except emergency services.



Map showing the boundaries of the nominated properties



Aerial view of Kale Hill



Church of St John in the *Serapeion*



Kybele Sanctuary



Yigma Tepe

Poverty Point (United States of America) No 1435

Official name as proposed by the State Party

Monumental Earthworks of Poverty Point

Location

State of Louisiana
West Carroll Parish

Brief description

The Monumental Earthworks of Poverty Point are situated in the Lower Mississippi Valley on a slightly elevated and narrow landform overlooking the surrounding alluvial agricultural lowlands. The complex comprises five mounds, six concentric semi-elliptical ridges separated by shallow depressions, a central plaza, other features and borrow areas arranged to best exploit the natural topography. It was created and used for residential and ceremonial purposes by a society of hunter-fisher-gatherers between 3,700 and 3,100 BP.

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*.

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

4 January 2013

Background

This is a new nomination.

Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 13 to 16 September 2013.

Additional information requested and received from the State Party

A letter was sent to the State party on 25 September 2013 requesting additional information on the following points:

- Type and distribution of development areas in relation to Poverty Point and possible impact on the traffic volume through Highway 577;
- Type and likelihood of adverse impact from the Trunkline underground gas reservoirs;
- Landownership profile of the areas surrounding the nominated property.

The State Party responded on 23 October 2013 and the additional information provided has been incorporated into the relevant sections of this document.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

Poverty Point – so named after a 19th century plantation located near the site – is situated in the Lower Mississippi Valley on a slightly elevated and narrow landform of Pleistocene origin, Macon Ridge, 25km west of the actual course of the Mississippi River. The Ridge is delimited to the east by a meandering brook, Bayou Maçon, while on the west it slopes down gently towards Holocene-age alluvial lowlands.

The site, because of its elevated position, has never been prone to flooding, although due to the nature of the soil, gully formation and permanently wet or boggy areas have always been a common occurrence, as attested to by the ancient land formations, which were already in place at the time Poverty Point was constructed.

The setting of the property today consists of open fields with interspersed clusters of trees and delimited marshy areas. It enables an appreciation of the nominated property's layout as it probably doesn't differ substantially from what existed at the time the Poverty Point earthworks were constructed and used, because the original, more extensive natural woodland will have quickly been impacted upon by human presence.

Poverty Point consists of a large monumental earthwork complex comprising five mounds (one of which is of later date), six concentric semi-elliptical ridges separated by shallow depressions, a central plaza, traces of a causeway, arranged to best exploit the natural topography, and related borrow areas. It was created during the Late Archaic period, between 3,700 and 3,100 BP by a society of hunter-fisher-gatherers. Research has not clarified yet whether the complex had a steady residential function or was a campground occupied temporarily during ceremonies or trading fairs.

At Poverty Point, earthwork construction involved firstly the preparation of the ground surface by levelling and evening-out the terrain, then earth was carried in baskets or leather bags and was built up either by dumping compacted dirt piles or by spreading it. The mounds were finished off with a thick layer of sediments mixed with artifacts.

Three of the four mounds – Mounds B, A and E - have been built along a north-south alignment to the west of the Macon Ridge elevation and of the Plaza, which is a semi-elliptical flat area enclosed by a system of six concentric earthen ridges. Further elements described below complete the compound.

Mound B (3,700-3,400 BP) is probably the first earthwork built at Poverty Point. It originally had a conical profile (H: 6.5m, basal diameter: 55m) now slightly modified by some slumping. It was once believed to be a cemetery area, but today this interpretation is no longer accepted. An artificial ridge connects mound B to the plaza.

Mound E, coeval with or slightly later than mound B, is located south of Mound A and is roughly rectangular in shape (H: 4m, 110mx90m).

Mound C, the dating of which remains uncertain, was built in the plaza at the eastern edge of Macon Ridge; it probably had a conical shape but it was bisected by a road in the historic era; it also suffered from erosion due to its being in the vicinity of the escarpments towards the Bayou Maçon.

Mound A (3,400-3,100 BP) is the largest and latest mound at Poverty Point and one of the largest in North America (H: 22m, 215x200m). It differs from the other mounds not only because of its size but also for its peculiar cross shape, resembling a flying bird. The eastern branch of the mound is shaped into an irregular platform, from which a steep ramp reaches the top of the other cone-shaped branch. To date, the function of all mounds remains unknown.

The *six concentric earthen ridges* are the most peculiar feature of Poverty Point. The diameter of the outer ridge is 1.14km while that of the inner one is 650m. Their height varies between 1-2m in certain cases, dropping to 10-30cm in others. The rounded top of the ridges is between 15-25m wide, the depressions in between – called swales – are between 20-30m in width. These were created by removal of the sediments which were used to build the ridges. These are divided into sectors by four hollowed alleyways or *aisles*. The ridge system appears to have been constructed in different phases. Research and physical evidence indicate that the ridges were the living areas of the complex.

The *Plaza* is today a flat and empty grassy area delimited eastwards by Bayou Maçon and by the inner ridge on the opposite side. Investigations have proved that the flatness of the Plaza was created artificially, by filling gullies and levelling humps; its height was raised through substantial

earthmoving. Traces of several postholes arranged in large circles, often intersecting each other, have been detected below ground. The function of the post circles remains uncertain although an astronomical purpose has been suggested.

The *bisector ridge* in the south western sector runs perpendicular to the ridges and is connected with the *causeway*, which is an elevated linear element connecting the ridges with the area south of a depression in the ground. The only practical way up to the site from the Bayou Maçon is a gentle slope named the *dock*: investigations have demonstrated that the upper part of the slope has been enhanced artificially to improve soil stability.

The archaeological features are today mostly covered with grass, as they probably were at the time of their construction: this is the result of recent management of the site, as abandonment allowed vegetation growth and this covered all the elements until recently. Parts of the ridges still remain wooded but it is planned to remove all trees from the earthworks, and to keep only those which are in borrow areas and boggy spots.

A large amount of stone artifacts (mainly points and flints but also gorgets and vessels) have been found at Poverty Point, although no stone is available in the area. The absence of local stone also led to the production of artificial cooking stones using the local silt and clay: for their quantity and variety these artefacts are known as Poverty Point Objects.

History and development

The ecologically-rich riverine natural environment of the region favoured human use and settlement and the Ridge bears traces of human occupation (artifacts and landscape features) dating back 13,000 years. Distribution and density of these remains in the area around Poverty Point State Historic Site vary according to the length and intensity of occupation and to the level of intactness of the area concerned.

On site, the Paleoindian period (13,000–10,000 BP) is attested to by a small quantity of artifacts of non-local stone. The Early Archaic period (10,000–7000 BP) features an increased amount and diversity of point types, mostly made out of local chert, suggesting a less mobile society.

The Middle Archaic period (7,000–4,000 BP) witnessed even less mobility among hunter-fisher-gatherers and an increased cultural complexity, attested to by various factors and particularly by earthwork construction. In Louisiana several Middle Archaic mound sites survive, variable in size, arrangements, number and types of earthworks. Lower Jackson is the closest to Poverty Point.

Paucity of found lithic artifacts at Poverty Point would indicate a limited Middle Archaic occupation. This, along with a 1,000-year interruption in mound building, would suggest that cultural continuity between the Middle and

Late Archaic periods (4,000–2,500 BP) is unlikely. However, archaeological investigations have revealed that construction of Mounds B, A and E would have begun after the Middle Archaic occupation and research on geometry, measurements and alignments shows that the same measurement system used to build Middle Archaic mound complexes has been adopted at Poverty Point.

The complexity of Late Archaic culture at Poverty Point is attested to by the earthworks and landscape rearrangements and further confirmed by the rich variety of foreign stone types used for artifacts, which demonstrates that this society maintained a wide trade network that extended for hundreds of kilometres.

By 3,100 BP, evidence of Late Archaic occupation falls and nothing similar reappears elsewhere. The reasons remain unclear: some suggest climate change influences, others hypothesize that the complexity reached by this culture could not be sustained economically. Research suggests only limited occupation at Poverty Point during the Woodland period (2,500–1,000 BP) and even less in the Late Prehistoric period (1,000–500 BP).

Euro-American people settled at Poverty Point between the 1810s and 1820s: trees were removed to allow cultivation and farmsteads were built. Manual farming continued from then onwards until the end of the 19th century, with only a 10-year interruption during the American Civil War. After World War II mechanised cultivation and herbicides were introduced and cultivation only stopped at the site when the land was acquired by the State of Louisiana.

Attention to the archaeological importance of Poverty Point dates back to as early as 1953 but it was only in 1962 that the property was declared a National Historic Landmark and added to the National Register of Historic Places in 1966. By 1972 further land around the archaeological site was acquired and donated to the Louisiana State Parks and Recreation Commission which transformed the site into an archaeological park, providing it with visitor facilities. At that time Highway 577 already crossed the property.

In 1977 the Trunkline Gas Company submitted a request to re-use a depleted gas field in the immediate vicinity of the nominated property, and in 1978, following federal procedures for hazard and impact assessment for properties listed in the National Register and as national monuments, a 50 year-long binding agreement was signed allowing the Trunkline company to inject, withdraw and store natural gas.

Improvements to the park and maintenance of the property have been continuing since 1972 and today the park is well equipped with maintenance, research and visitor facilities. Several works to stabilize the ground and prevent further erosion were carried out between 1980-1990.

The first written record of Poverty Point dates back to 1873, while the first brief investigations were carried out in 1913. Between the 1930s and 1970s, collection of artifacts began, carried out by two amateurs. The first scientific excavation campaign was conducted in 1952-1955, only resuming in the 1970s. Since then, research has continued steadily, both to support the park management and to clarify research problems.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis elaborated in the nomination dossier states that the nominated property exhibits a monumental and design complexity not replicated elsewhere.

The discriminating features selected for the comparative analysis are: monumentality, complexity, construction material, subsistence system of the builders. For Poverty Point, particular attention is paid to earthen monuments built by hunter-fisher-gatherers.

The comparison first aims to demonstrate that Poverty Point stands out among other monuments from the same geo-cultural basin. It then examines properties at the world level already inscribed on the World Heritage List or on the Tentative Lists, selecting five relevant sites from each list. Finally it analyses five monumental complexes from Central and South America.

ICOMOS considers that the comparative analysis carried out in the nomination dossier is well grounded and convincing both at the regional and the global scale. Relevant properties have been considered and examined in the light of their specificities and commonalities with the nominated property. The comparative analysis demonstrates that the property exhibits outstanding specificities in respect to other sites both within the same geo-cultural basin and in respect to different cultural contexts.

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:

- Poverty Point is a monumental complex that integrates different forms of earthwork of exceptional size and scale into a man-made landscape with a singular design supporting symbolic, ceremonial, trading and residential functions.
- It is a remarkable achievement in earthen construction in North America that was not surpassed for at least 2,000 years and stands out

both for its age and because its builders were hunter-gatherers and not agriculture-based people.

ICOMOS considers that this justification is appropriate: the dimensions of the earthworks, the extensive earthmoving and soil rearrangement, according to a refined design which appears to have consciously mastered the natural topography to create a man-made landscape, represent an exceptional testimony to the social complexity of a hunter-fisher-gatherer society. This is further confirmed by the large amount of artifacts of non-local stone type which testifies to a well-established long-distance trade network.

Integrity and authenticity

Integrity

The State Party holds that all the physical features conveying the exceptional value of Poverty Point are within the boundaries of the nominated property and so do the associated archaeological deposits. Other earthworks are located in the vicinity of the nominated property, i.e. Lower Jackson Mound (2.9km south of Poverty Point), Jackson Place (immediately southwards) and Motley Mound (2.2km northwards), all filed by the State of Louisiana, but these sites, according to the State Party, are not associated with Poverty Point. Lower Jackson Mound predates it; artefact dating at Jackson Place shows that the earthworks belong to the Late Woodland Period (1500-1000 BP); whilst Motley Mound has not been studied sufficiently for a clear interpretation of its age, function and relation to the nominated property.

The property is well preserved despite some material loss and degradation. The current setting permits appreciation and understanding of the spatial relationships among the site components; the design of the site is still clearly perceivable.

ICOMOS agrees that a significant proportion of the elements currently known to make up the configuration of the nominated earthwork complex are comprised within the nominated property, which, with its components, exhibits a coherence of design able to convey the proposed Outstanding Universal Value of the property.

However, ICOMOS notes that the 1962 designation of Poverty Point as a National Historic Landmark also includes Motley Mound (located 2.2km north of the nominated property) as part of the designated site.

ICOMOS further observes that research has pointed out the alignments of Mound B, A and E with the earlier Middle Archaic Lower Jackson Mound to the south, and of Mound C with Motley Mound to the north. On this basis the possible relationship of these earthworks with the nominated property has been hypothesised as an intentional act to incorporate previous tradition within the wider layout of the complex.

Furthermore, ICOMOS notes that in the immediate setting of the nominated property, other traces of Poverty Point culture, i.e. core encampments or residence sites and scatters of lithics, that relate to the earthworks complex, have been detected. However no buffer zone has been proposed by the State Party.

In this regard, ICOMOS recommends that the State Party establish formalised mechanisms of regulatory protection and management to ensure that the immediate setting of the nominated property be adequately safeguarded and managed.

ICOMOS also encourages the State Party to continue scientific investigations on the features in the immediate setting of the nominated property and, in case research confirms that they were part of the nominated designed earthworks complex, consider extending it in the future as a serial property.

The nominated property is crossed by Highway 577 from north to south, cutting into two parts the Plaza and partly affecting the edges of the ridges. On 25th September 2013, ICOMOS requested clarification from the State Party on this issue, which responded on 23rd October 2013 informing that this road serves local traffic and that no available traffic counts exist for the road crossing the nominated property. However, data were retrieved from locations nearby: the highest average number of vehicles per day is around 1,500, while the lowest is less than 600. The State Party has also informed that no upgrading is foreseen for this road and, in any case, federal law prevents federal agencies carrying out projects that may harm a nationally protected historic site or that federal funds be used without review of their impact.

ICOMOS considers that Highway 577 presents a considerable interference to the experience of the site and is also a danger for visitors: solutions to divert it to outside the nominated property should be looked into.

Authenticity

ICOMOS considers that the tangible evidence of the nominated property as it has survived throughout the millennia, coupled with the extensive information obtained from the archaeological research conducted on the site and with the rich and largely undisturbed buried deposits, bear exceptional and credible witness to the proposed justification for inscription and to the culture that built the property.

ICOMOS agrees that the agricultural landscape of the close and wider setting surrounding the nominated property largely contributes to its understanding and enjoyment and it is therefore of utmost importance that this character be retained in the future.

ICOMOS considers that the conditions of integrity are met but fragile. ICOMOS recommends that the State Party establish formalised mechanisms of regulatory protection and management to ensure that the immediate

setting, including areas and features that functionally support the nominated property (i.e. Motley Mound, Lower Jackson Mound, Jackson Place and stretches of Bayou Maçon) be effectively protected. ICOMOS also encourages the State Party to continue scientific investigations on the features in the immediate setting of the nominated property with a view to consider extending it in the future.

Additionally, the presence of Highway 577 raises concerns in relation to the retention of integrity in the future. ICOMOS therefore strongly recommends that the authorities concerned work jointly to find solutions for diverting this road outside the nominated property. ICOMOS considers that conditions of authenticity have been met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criterion (iii).

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 bears outstanding witness to the Late Archaic cultural tradition of North America. This landscape complex is an exceptional achievement of a population of hunter-fisher-gatherers who, between 3,700 and 3,100 BP, constructed remarkable earthworks in the form of mounds and ridges and rearranged the earth and relief of the land to regularize the terrain and create the plaza.

ICOMOS considers that the unparalleled monumentality of Poverty Point makes it clearly an outstanding site. The masterly manipulation of natural topography to govern and diversify the visual impact of the complex from both distant and closer viewpoints demonstrates a refined culture. Exceptionally massive and precisely planned earthworks bear unique testimony to the articulation and organisational capacity of the Poverty Point culture and contribute to shedding light on the complexity of socio-cultural patterns of prehistoric hunter-fisher-gatherer societies.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the nominated property meets criterion (iii) and conditions of authenticity and integrity. However, ICOMOS also considers that the State Party should establish formalised mechanisms of regulation, protection and management for the immediate setting of the nominated property.

Description of the attributes

- The elevated natural topography of the site above the Holocene alluvial lowlands provided a secure place for human settlement in an area otherwise prone to flooding and influenced the layout of the complex as well as the placing of the earthworks.

- The layout of the complex in which all the components, even the less evident, play a role in defining a designed man-made landscape. All the singular elements that make up the complex as they survive in shape and substance and their reciprocal position: the mounds, the system of ridges and swales and the aisles, the plaza with the posthole circles, the causeway, the bisector ridge, the dock and the borrow areas.
- The archaeological deposits concealed below ground represent a repository of potential further information on the property and its builders.
- The extensive earth rearrangements beneath the above-ground structures attest to extensive earthmoving to combat soil erosion and to obtain the required design.
- The meandering Bayou Maçon, with its riverine vegetation, and the boggy and wooded areas contribute to providing a sense of the natural environment at the time Poverty Point was created.

Although they cannot be considered attributes of Poverty Point, the rural setting of the nominated property and the surviving archaeological remains and features located within it, are functionally important as a support to Poverty Point, and contribute to its protection and reinforce its understanding.

4 Factors affecting the property

The nomination dossier states that major factors affecting the property are: soil erosion, caused by the inherent quality of the ground; the surface water drainage pattern and its man-made modifications; tree-fall, caused by disease and decay and strong winds, which the region is prone to; and the negative impact of invasive species (Nine-banded Armadillos and Red Imported Fire ants).

In its letter sent to the State Party on 25th September 2013, ICOMOS requested additional information concerning development areas and the Trunkline Gas Company gas reservoir, both mentioned in the nomination dossier.

The State Party in its response provided details on both issues. A map showing the location of development sites has been attached. The State Party also explained that industrial development in the vicinity of the nominated property is highly unlikely due to the absence/inadequacy of infrastructure and communications. Additionally, the West Carroll Parish Police Jury, the parish government, on 8th October 2013 approved a resolution that recognises the importance of maintaining the rural, agricultural setting around the nominated property, encourages the continuation of its traditional land-use pattern and confirms that no plans for commercial or industrial development are in place in the vicinity of the site.

With regard to the underground gas reservoir, the State Party informed that at the time the proposal to reuse depleted gas fields as gas reservoirs was advanced, the

nominated property was already a federally-protected site, therefore the project underwent an extensive assessment under the National Historic Preservation Act (NHPA) and the National Environment Policy Act (NEPA), which concluded that it would have had a low impact.

ICOMOS expresses its concerns with regard to the existence of the Trunkline gas storage facility that is planned to remain in use until 2028. The consequences of injection, withdrawal and storage of gas and the technologies in use for these operations interact with the terrain of the site.

ICOMOS considers that the assessment of the potential impact of the underground reservoir should be updated, so as to gain information with a view to reconsidering the allocation of the underground gas storage.

ICOMOS notes that the legal framework in place does foresee impact assessment processes when national agencies or funds are involved, however these procedures do not apply to private initiatives and activities. Damages to small peripheral parts of two components of Poverty Point not included within the boundaries of the nationally protected property were caused by land-leveling carried out by the owners of the farmland where they were located.

ICOMOS considers that the main current threats to the property are soil erosion caused by natural or manmade modified drainage patterns and private agriculture-related activity outside the nominated property. Potential threats may come from privately-driven development initiatives which, although unlikely at present, cannot be stopped by the current legal framework. ICOMOS recommends that the State Party works at state and local level to establish a formalised regulatory protection and management framework to strengthen the protection of the wider setting of the nominated property.

ICOMOS further considers worthwhile the elaboration of an updated assessment of the possible impacts of the gas reservoir and related operations on the nominated property with a view to reconsidering in the near future the allocation of the underground gas storage.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the nominated property (163ha) coincide with those of the Poverty Point State Historic Site. The nomination dossier informs that, in order to include all relevant components of the site, these were determined through the observation of the natural and man-made features: to the east, the Bayou Maçon acted as a clear limit, the Harlin Bayou prevented the extension of the settlement to the north, while to the west a large boggy area, the artificial nature of which is not ascertained, also acted as an obstacle.

No buffer zone is proposed. The State Party holds that the existing physical buffers and the stable agricultural character of the setting as well as the legal framework in place, which affords adequate protection to the nominated property, are, taken together, factors that make a buffer zone unnecessary.

ICOMOS considers that the nominated property contains the majority of the relevant currently-known components and associated cultural deposits that make up Poverty Point as a Late Archaic creation and which are necessary to convey the totality of its proposed value.

However, ICOMOS observes (see Integrity section) that some features that are functionally related to Poverty Point are not within the boundaries of the nominated property nor are they part of a buffer zone, one having not been proposed by the State Party.

ICOMOS further notes that within about a 4km radius of Poverty Point several core encampments or habitations and scatters of lithics have been found.

ICOMOS therefore considers that, in conformity with paragraph 104 of the *Operational Guidelines*, an area surrounding the nominated property with complementary formalized regulatory mechanisms concerning its use and development should be defined to give an added layer of protection to the nominated property. "This should include [its] immediate setting, important views and other areas or attributes that are functionally important as a support to the property and its protection". The buffer zone should be determined through appropriate mechanisms to ensure the effectiveness of the envisaged protection.

In ICOMOS' view, the existence of a buffer zone would prevent possible further damage arising from privately-driven agricultural or development activities and facilities but would also allow for future contiguous archaeological research. As a matter of fact, while the nomination dossier shows the importance of those research projects conducted around the mounds, it barely mentions the results of work in common household areas, and in areas dedicated to the fishing processing and technological support. These kinds of archaeological questions should be addressed in order to reveal much more of the daily life of the general population. In the absence of a buffer zone embracing all these potential areas, opportunities for better and more expanded archaeological projects in the near and further future may be lost.

ICOMOS also notes that the current limits of Poverty Point State Historic Site result from a policy of progressive land acquisition by the State of Louisiana, and therefore encourages the State Party to continue this policy in parallel with archaeological research so as to establish proper conditions to expand the boundaries of the nominated property, in case research results would suggest doing so.

In relation to the absence of a proposed buffer zone, ICOMOS recognises that according to the *Operational Guidelines*, the creation of a buffer zone is not mandatory. The *Operational Guidelines* further state that “clear explanation of how the buffer zone protects the property should also be provided” to underline that designing a buffer area implies providing it with adequate legal, planning or customary mechanisms to protect the nominated property.

The International Expert Meeting on World Heritage and Buffer Zones (Davos, Switzerland, 11-14 March 2008) found that “while every World Heritage property needed protection and management arrangements, not every property would have a buffer zone, as buffer zones are only one means to achieve protection and management. As outlined in the *Operational Guidelines*, there are also legal, regulatory and other methods available.” (*World Heritage and Buffer Zones – Paper Series 25*, p. 187).

However, the meeting further “recognised that actions may take place well beyond the boundaries of a property and any buffer zone that might nonetheless have a significant influence upon the outstanding universal value and integrity of a property. The concept of an area of influence may also be useful to describe a wider zone in which activities may take place that could have an impact upon the outstanding universal value and integrity of a property” (*ibid.*, p. 190).

ICOMOS is aware that buffer zones do not belong in the heritage protection tradition in the United States, where different mechanisms exist, such as the National Heritage Area programme, or others, derived from the UNESCO MAB framework, have, in a few cases, been tried successfully for World Heritage properties through, for example, the ‘cooperation areas’.

Nevertheless, as factors highlighted in Section 4 suggest, ICOMOS considers that forms of regulatory protection of the immediate setting of the nominated property should be set up, considering the necessity to protect the nominated property and to take into account the density of archaeological features inventoried in the surroundings of the nominated property.

In conclusion, ICOMOS considers that most of the components necessary to convey the Outstanding Universal Value of the nominated property are contained within its boundaries.

However, in order to ensure Poverty Point and other attributes that are functionally important as a support to the nominated property have effective protection, ICOMOS recommends that the State Party defines the immediate setting of the nominated earthworks, which should include Motley Mound, Jackson Place, Lower Jackson Mound, a stretch of the Bayou Maçon and minor mapped sites nearby, and establish for it a formalised framework of regulatory mechanisms as part of the management process to allow it to act as a buffer zone. ICOMOS further recommends the State Party to continue its policy of land acquisition in parallel with archaeological

research so as to establish proper conditions to expand the boundaries of the nominated property, in case research results would suggest doing so.

Ownership

The nominated property belongs to the State of Louisiana; the Louisiana Office of State Property manages and maintains the property. The land surrounding the nominated property and forming its historic and geographical setting is privately owned.

Protection

In 1962 Poverty Point was designated a National Historic Landmark under the Federal Historic Sites, Buildings, Objects and Antiquities Act (1935), in 1966 it was placed on the National Register of Historic Places established by the National Historic Preservation Act (NHPA - 1966), and declared a National Monument in 1988 under the Federal Antiquities Act (1906). It is further protected under the State of Louisiana legislation as a State Historic Site.

The Federal legislation foresees review procedures to assess and mitigate the impact of any project on protected historic properties. The NHPA establishes that any federally-funded, licenced or permitted projects that may impact on historic properties must undergo an assessment process to determine and mitigate possible adverse influences on protected properties. Also the National Environment Policy Act (1969) and the Department of Transportation Act (1966) provide measures for the protection of registered heritage properties.

ICOMOS believes that these designations demonstrate that the nominated property benefits from the highest level of legal protection possible in the United States of America. The provisions of federal and national laws protect Poverty Point against development and change.

ICOMOS however notes that the State legal framework protects essentially the nominated property whilst its immediate and wider setting is covered by federal law which foresees assessment and mitigation procedures only when federal agencies or funds are involved. No protection measures exist to prevent damage to the nominated property that may result from activities on private land outside the nominated property, as has already occurred in the past (see Section 4).

ICOMOS considers that planning instruments may play a part in safeguarding the setting of the nominated property and therefore recommends the establishment of a formalised regulatory framework to ensure the protection of the nominated property and its setting.

ICOMOS considers that the legal protection in place for the nominated property is adequate. ICOMOS further considers that the protective measures for the nominated property, being a publicly owned historic park, are adequate. However, ICOMOS notes that legal protective measures do not protect the nominated

property from negative impact resulting from activity carried out by private owners of land in the immediate vicinity of the property unless this requires authorisation or funding by federal agencies. ICOMOS therefore recommends that a formal framework of regulatory and management mechanisms be established to improve the protection of the nominated property and of its setting.

Conservation

ICOMOS notes that threats to the nominated property have been adequately addressed through various integrated active measures and that maintenance of the property components is carried out regularly.

ICOMOS observes that the site has been inventoried, described and documented. LIDAR images of the property (2009) provide a precise model of the earthworks and an excellent set of high-precision geospatial data for future management of the property. Since its establishment (ca. 2000) the archaeological curatorial facility serves as the primary repository for Poverty Point archaeological collections, which are an important resource that contributes to the integrity and authenticity of the site.

ICOMOS congratulates the State Party for the work done during the past decades to protect and preserve Poverty Point.

ICOMOS considers that the nominated property is in a stable and very good condition as a result of an active policy of maintenance and protection allied to regular monitoring on the ground. Continuous maintenance to counteract soil erosion remains fundamental for the long-term preservation of the nominated property.

Management

Management structures and processes, including traditional management processes

The management structure of the nominated property has been established according the legal framework in force for designated state historic sites under the jurisdiction of the Louisiana Office of State Parks. On site the staff consists of 8 full-time and one part-time employees, which is complemented by three units of the Station Archaeology Programme, established since 1995 through a Memorandum of Understanding between Louisiana Office of Cultural Development, Louisiana Parks Office and Northeast Louisiana University.

The primary source of funding derives from the State of Louisiana, however maintenance is carried out thanks to self-generated income from admittance fees.

ICOMOS considers that resources available on site are adequate for the purpose of protecting and managing the nominated property. Risk preparedness is appropriately addressed through emergency plans set up at the state, parish and park levels.

However, in the absence of a formal buffer zone, ICOMOS considers that management efforts should be extended to address the need for the protection and proper management of Poverty Point's immediate setting and for the retention of its agricultural character.

ICOMOS therefore recommends that appropriate and formal regulatory mechanisms should be put in place as part of the management process to accomplish the same level of protection as a buffer zone would. This would be both in line with paragraph 123 of the *Operational Guidelines* and actively draw on and involve the strength and diversity of stakeholder support for the sustainable protection of the nominated property.

ICOMOS further recommends that as a formal part of the management system, capacity and expertise should be built in to that system to actively use and integrate baseline datasets through a Geographical Information Systems (GIS) approach, to facilitate the process of longer-term planning and review.

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

The detailed *Heritage Management Plan for Poverty Point State Historic Site, National Monument and National Historic Landmark* (HMP, in force throughout 2012- 2018) provides the basis for and documents a detailed integrated management process, grounded on a solid integration of archaeological research and management, with respective funding streams for the site and the research programme. The presentation to the public relies on several means and educational activities. The HMP is complemented by operational plans which facilitate the implementation of management goals, i.e. a Watershed Management Plan prepared in 2012 that sets the framework and measures to deal with erosion issues.

Involvement of the local communities

ICOMOS recognises that local communities and other interest groups have been informed and engaged in the nomination process. This is attested, for example, by the letter of support for the nomination signed on February 2012 by the United South and Eastern Tribes. The active response also demonstrates that involvement of the public and local communities is the fruit of a long process.

ICOMOS considers that the management system for the nominated property is overall adequate. However, ICOMOS observes that management efforts should be extended to set up an appropriate and formal regulatory framework for the protection and proper management of Poverty Point's immediate setting and for the retention of its agricultural character so as to achieve the same level of protection as a buffer zone.

Additionally, ICOMOS recommends that capacity and expertise should be built within the management system to profit from the potential of a Geographical Information

Systems (GIS) approach so as to facilitate the process of longer-term planning and review.

6 Monitoring

A monitoring system has been set up in coordination with the objectives of the management plan. Indicators and periodicity have been defined clearly. Monitoring records are planned to be kept on site.

ICOMOS considers that the monitoring system is adequate. However ICOMOS recommends that, to ensure an augmented effectiveness of monitoring exercises, results should be integrated into a GIS approach.

7 Conclusions

The nomination dossier has effectively illustrated the nominated property, its wider and local geographical context as well as the periodization of its human occupation, making it clear that Poverty Point Monumental Earthworks is of Outstanding Universal Value at the global scale for its age, size and articulation, in that it sheds light in an exceptional manner on the level of cultural and organisational complexity reached by a society of hunter-fisher-gatherers.

Relevant attributes conveying the Outstanding Universal Value of the site are included within the boundaries of the nominated property. However, some important features that would functionally support Poverty Point Monumental Earthworks, although protected as National Landmarks or State Historic Sites, are not encompassed within the nominated property nor included in a buffer zone, since the State Party has not proposed one.

The nominated property enjoys the highest level of protection at the national level as well as a well-established and effective management that ensures adequate maintenance and presentation to the public. However, the absence of a buffer zone coupled with a high density of archaeological features located in the vicinity of Poverty Point and a legal framework which protects designated properties only from publicly-driven or funded development activities raise some concerns with regard to the retention of the integrity of the property in the long term. Additionally the presence of Highway 577 interferes with the enjoyment of the property by its visitors and also represents a danger to them.

ICOMOS therefore considers that efforts to define the immediate setting of the nominated property, which should include important views and other areas or attributes that are functionally important as a support to the property and its protection (i.e. Motley Mound, Lower Jackson Mound, Jackson Place, and stretches of the Bayou Maçon) and to grant it adequate protection through formal

and regulatory mechanisms, should be put in place to act like a buffer zone.

Finally ICOMOS considers that Highway 577 should be diverted to outside of the nominated property and its immediate setting.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the Monumental Earthworks of Poverty Point, United States of America, to the World Heritage List be **deferred** in order to allow the State Party to:

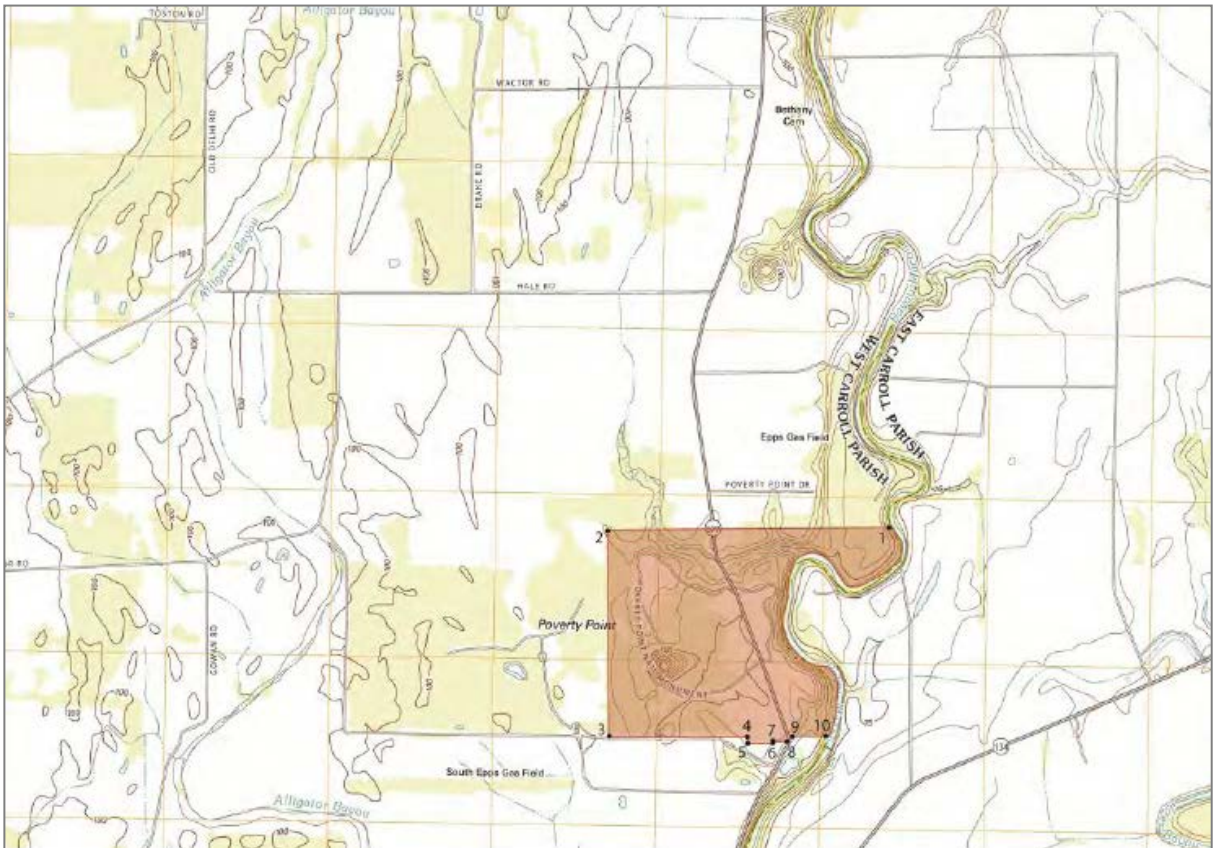
- Define the immediate settings of the nominated property, which should include important views and other areas or attributes that are functionally important as a support to the property and its protection (i.e. Motley Mound, Lower Jackson Mound, Jackson Place, and stretches of the Bayou Maçon), and establish a formal regulatory framework for the immediate settings as part of the management process to allow it to act as a buffer zone;
- Divert Highway 577 to outside of the nominated property and its immediate settings.

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

Additional recommendations

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

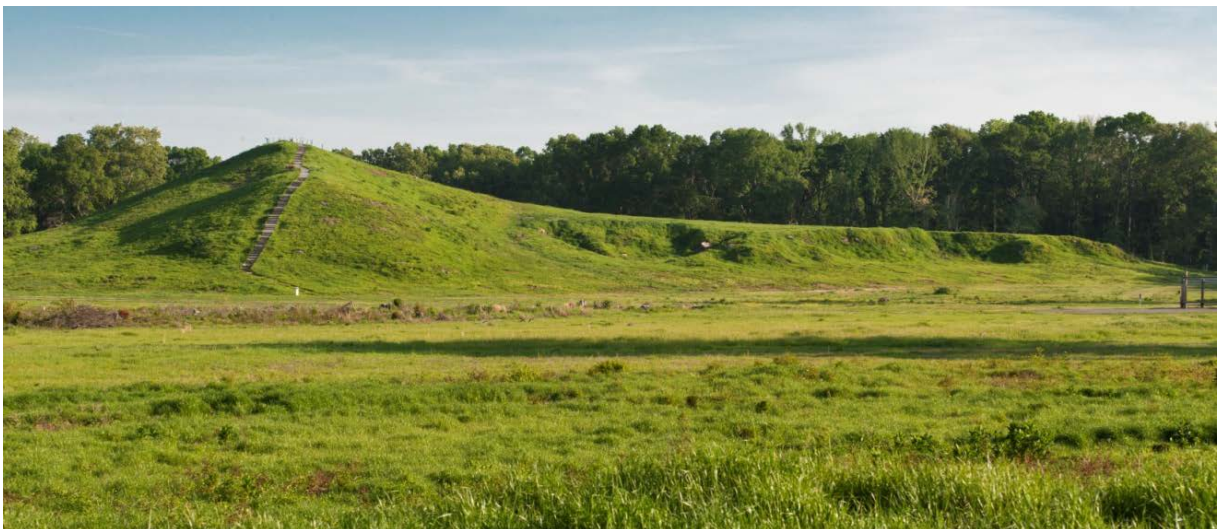
- Continuing its policy of land acquisition in parallel with scientific investigations with a view to establishing favourable conditions to enlarge the limits of the property in case research results would suggest doing so;
- Building capacity and expertise within the management system to profit from the potential of a Geographical Information Systems (GIS) approach.



Map showing the boundaries of the nominated property



Aerial photograph of the nominated property



Mound A



Aerial view of the concentric earthen ridges



The Plaza

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the World Heritage Committee

E Latin America and the Caribbean

New nominations

Úbeda and Baeza and Jaén Cathedral (Spain) No 522 bis

Official name as proposed by the State Party

The Renaissance Monumental Ensembles of Úbeda and Baeza and Jaén Cathedral

Location

Autonomous Community of Andalusia, Province of Jaén
Spain

Brief description

The urban morphology of the two small cities of Úbeda and Baeza in southern Spain dates back to the Moorish 9th century and to the Reconquista in the 13th century. An important development took place in the 16th century, when cities were subject to renovation along the lines of the emerging Renaissance. Jaén Cathedral, built to the design of Andrés de Vandelvira, principal project architect at Úbeda and Baeza, is considered the key reference example of Spanish Renaissance Art. The planning interventions and architecture that were part of the introduction into Spain of new humanistic ideas from Italy influenced the architecture and urban planning of Latin America.

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 two *groups of buildings* and one *monument*.

1 Basic data

Included in the Tentative List

27 January 2012

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

30 January 2013

Background

This is an extension of the serial property "Renaissance Monumental Ensembles of Úbeda and Baeza" which was first assessed in 1989. It was inscribed after a revision of its proposed form and definition on the World Heritage List on the basis of criteria (ii) and (iv) at the 27th session of the World Heritage Committee (27 COM, 2003) (Decision 27 COM 8C.42)

In 2011, a minor boundary modification was proposed by the State Party, which was to add a new monument, the Cathedral of the Asunción in the heart of a third city, Jaén, to the already inscribed serial property. This was not approved by the World Heritage Committee (Decision 35 COM 8B.57).

A dossier for an extension has been submitted.

Consultations

ICOMOS consulted several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 27 to 30 October 2013.

Additional information requested and received from the State Party

A letter was sent to the State Party on 25 September 2013 requesting additional documentation of plans and dates. These were provided by the State Party on 15 October 2013 and the information has been incorporated below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The two small cities of Úbeda and Baeza are located between Castile and Andalusia in southern Spain. They reflect their history of Moorish origin and medieval development, with several medieval churches and convents in Úbeda built in the Gothic-Mudéjar style. Both towns were extensively renovated from the mid 15th century as agricultural development resulted in an improved economy. Public buildings, palaces and churches built from the mid-15th and 16th centuries reflect the ideas and architecture of the emerging Renaissance as the towns expanded beyond their citadels and surrounding walls.

Important historic buildings in Úbeda include the Palace of Francisco de los Cobos, designed by Luis de Vega (1531); the Church and Sacristy of El Salvador (1532-53), the Palace of Vázquez de Molina (1546) and the Palace of the Déan Ortega (1550), all by Andrés de Vandelvira; the Hospital Honrados Viejos (1548); the Pósito (1558); the Palace of the Marqués de Mancera (1580-1600); the Cárcel del Obispo (Bishop's Prison, late 16th century), and the Church of Santa Maria (13th-19th centuries).

The monumental ensemble of Baeza forms an axis running from the Plaza de Santa Maria through Cuesta de San Felipe to the Cañuelo Gate. It includes the Cathedral of Santa Maria designed in its current form by Andrés de Vandelvira in the 1570s with some later additions; the Casas Consistoriales Altas (1511-26); the Fountain of Santa Maria (1564) in the Plaza; the Seminary of St. Philip Neri (1598-1660); the Jabalquinto Palace (late 15th century); the Colegio de las Madres Filipenses; the

Church of Santa Cruz (13th century) and the University (second half of 16th century).

Extension

The Cathedral of the Asunción located in the centre of the old town of Jaén at its highest point was built to the design of Andrés de Vandelvira from the mid-16th century and completed in 1801. Jaén is around 40km south-west of Úbeda and Baeza. Comprising a rectangular ground plan with flat east end wall, three naves all of the same height with chapel niches between the interior buttresses along the exterior walls, and two side chapels, the Cathedral covers a surface area of 8,400 sq m (0.84ha). Only the southern side chapel comprising vestry, chapter house, and sacristy was built by Vandelvira as Master Builder, but the whole is said to have been completed to his overall design concept. A dome set on a drum and pendentives over the transept crossing is topped by a lantern. The choir lined with wooden choir stalls within stone walls runs down the central nave from the transept to the west end. The whole is set on a platform or *lonja* extending from the north side chapel around the west front to the south side chapel and enclosed with iron railings. Beneath the south side chapel in the Old Canons' Mausoleum is the Museum of Sacred Art created in 1962. The Diocesan Archive is located in the upper galleries of the Cathedral. The dome and 76m high bell towers which flank the west facade of the Cathedral dominate the surrounding landscape, which slopes up to the castle on the hill of Santa Catalina. The buffer zone includes the historic urban area surrounding the town up to and including the castle and totals 132 ha.

The additional plans provided by the State Party in response to ICOMOS' request show the six construction phases and their architects. Read in conjunction with the photographs it can be seen that while the completed work has a symmetrical and unified plan, which may well have been laid down by Vandelvira (although the plan provided in the additional information was made by the phase 3 architect Juan de Aranda Salazar, 1635-1654), the architectural detail and spatial treatment of each phase inevitably reflects its own character, tending a little more to the baroque from phase 3 – the presbytery /altar through phase 4 - the West front, phase 5 – choir and finally phase 6 - the northern side chapel is high baroque in its spatial expression and architectural treatment. The additional information describes the "distinctively mannerist" dome and decoration of the vaults in phase 3 by Juan de Aranda, and ICOMOS notes the increasing amount of ornamented wall surface in the north and south transepts. The nomination dossier itself refers to the "Baroque vault of the choir (phase 5) created by José Gallego". ICOMOS notes that the sinuous form of the balustraded choir is also usually termed baroque, as is the use of broken pediments such as above the north door to the transept and there are numerous instances of increasingly flamboyant baroque ornamentation, particularly around the door from the south side of the choir. The west front (phase 4) is baroque. Features include elaborate ornamentation,

statues, finials, projecting balconies on ornamented coved supports resembling mushrabiya supports, projecting window pediments and the cupola-crowned, uppermost stage of the towers.

ICOMOS considers that the Cathedral does not maintain the expression of Renaissance classicism that was practised by Vandelvira in his plain-surfaced vestry, sacristy and chapter house (phase 2). ICOMOS considers that the Cathedral rather exhibits a restrained evolution of Renaissance ideas through to the 18th century.

The proposed surrounding buffer zone of 132 ha covers the extent of the historic walled city as extended in the 16th century including the citadel on the hill of Santa Catalina. The nomination dossier provides little description of the urban and landscape environment of the Cathedral apart from photographs. From these it can be seen that the urban surroundings mostly comprise buildings of much more recent date.

History and development

The Cathedral was built on the site of a Gothic Cathedral which had been built on the site of the old mosque of the Hispanic-Muslim city. The Gothic Cathedral was never completed and had suffered damage requiring the rebuilding of the east end by Pedro López 1500-19 (phase 1). In 1548 the Cathedral Council decided to complete the work in the Renaissance style having consulted architects including Vandelvira, who signed the contract as Master Builder for the new work in 1553. The cathedral was built in 5 further phases: phase 2 by Vandelvira 1553-1575; phase 3 by Juan de Aranda 1635-1654; phase 4 by Eufrasio López de Rojas 1667-1688; phase 5 by Blas A Delgado 1696-1716, Miguel de Quesada 1716-1718 and Jose Gallego 1726-1736; and phase 6 by Ventura Rodriguez 1764-1801. ICOMOS notes that Vandelvira's stone-cutting methods were documented and compiled in a book by his son Alonso after Andrés' death during the period between 1575 and 1591. Presumably this information has come to light during extensive research on the Cathedral carried out by the State Party over the past ten years, and was not available when stating that "Through the publications of Andrés de Vandelvira, the principal project architect, these examples were also diffused to Latin America" in justification of criterion (ii) for the first inscription. Thus the time difference between the commencement of the Latin American cathedrals (mid-16th century) and the date of publication of the stone-cutting treatise which was up to 40 years later would not have been apparent.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis for the first nomination noted that the architect Andrés de Vandelvira was one of the principal architects who contributed to the introduction of the Renaissance style in Spain, founding an architectural

school in the classical manner; and that his main work is considered to be Jaén Cathedral.

The new nomination includes an extensive historic-architectural descriptive annex in which it is argued that the serial nomination of Úbeda, Baeza and Jaén Cathedral encapsulates the introduction of Italian Renaissance design concepts into Spain, providing an architectural and urban planning reference that was then transmitted to the Spanish colonies in South America through architectural treatises, including that of Alonso de Vandelvira, which incorporated his father Andrés' designs and stone-cutting methods. It is noted however that no copy of this work has been proven to have existed in Latin America and that its production was too late to have had a direct influence on cathedrals begun there in the mid-16th century.

Jaén cathedral is said to have influenced the first Renaissance cathedrals in Latin America in the second half of the 16th and early 17th centuries. The specific features of Jaén Cathedral said to have influenced key monuments in Latin America include the spacious hall-type plan with three naves of equal height and a straight east end (*chevet*); pendentive vaults, compound pilasters and Serlian windows. Some or all of these features are said to be found in the cathedrals of Mérida (1561-98), Puebla (1557-1690), Guadalajara (c 1574-1618, towers 1854), and Mexico City (1573-1667, west front and cupola 1813) cathedrals in Mexico; Lima (1535-1797) and Cusco (1559-1654) cathedrals in Peru. ICOMOS notes that Mexico City and Metropolitan Cathedral are inscribed on the World Heritage List (1987, (ii), (iii), (iv) and (v)). The Cathedral of the Virgin Mary of the immaculate Conception in Havana (1748-1777), Cuba, which is also said to have been influenced by Jaén Cathedral, is included in the world heritage listing of Old Havana and its Fortification System (1982, (iv) and (v)). The works of a number of architectural historians are quoted as attributing the designs of these buildings to the influence of Jaén Cathedral, regarding it as a "head of series" of Latin American churches and cathedrals. However ICOMOS notes that there is no evidence that a plan or model or any other kind of description earlier than that of Juan de Aranda of 1642 was available to influence the Latin American churches, and the dates of construction of the later phases of Jaén Cathedral (the presbytery/altar 1635-1654 and choir 1696-1736) are too late to have provided a built prototype for the hall type plan in the second half of the 16th century. According to the Annex to the nomination dossier the hall structure of three equal naves was due to the influence of northern European architects and diffused throughout Spain and the colonies. ICOMOS notes that the Santo Domingo Cathedral (1512-41), Dominican Republic, takes this form but in Gothic style. The Renaissance/baroque features of Jaén Cathedral could have influenced later cathedrals of the 18th century such as Havana, but the influence could have just as easily come from the earlier Latin American examples as from Jaén.

ICOMOS also notes the discussion of Andrés de Vandelvira's involvement in the technical aspects of churches and cathedrals in Spain other than those he himself was building and considers it is clear that there was a shared understanding of the classical rules and building systems deriving from Italian texts and treatises, particularly that of Serlio within the architectural culture of the 16th century in Spain, to which he was a major contributor. That this culture informed colonial architects working in Latin America can be postulated through analysis of their buildings. However a direct connection with Jaén Cathedral and Vandelvira cannot be demonstrated.

The comparative analysis for the extension includes a 'gap' analysis of the cathedrals and large churches already inscribed on the World Heritage List. This concludes that only St Peter's Basilica in Rome represents the architecture and art of the Renaissance period.

ICOMOS considers that the comparative analysis does not justify consideration of this proposed extension for 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:

- Jaén Cathedral reinforces criteria (ii) and (iv) for which Úbeda and Baeza were inscribed (see under 'Background' above).
- Jaén Cathedral integrates the German Hall Church type space with the Gothic form of West Front, interpreted using Renaissance expression inspired by Sebastiano Serlio and enabled by Vandelvira's development of stone-cutting techniques. It became a model to be followed by the masons of cathedrals in the New World.
- Jaén Cathedral is regarded as a fundamental work of Renaissance architecture, representing the period of Spanish colonisation of South America.

The justification for the inscription of Úbeda and Baeza focused on the complementary duality of the two cities, the influence of Humanism on their urban development and the development of constructive solutions in the field of stereotomy which in turn influenced the architecture of Spanish America. The public, ecclesiastic and educational monuments of Baeza together with the aristocratic monuments and palaces of Úbeda make a complete example of Renaissance monumental ensemble.

The serial nomination as now proposed is justified as fully expressing the Spanish contribution to Renaissance architecture and civic planning by including Jaén Cathedral as the key work of Andrés de Vandelvira, which together with Vandelvira's work at Úbeda and

Baeza was a major influence on the architecture and urban planning of Latin America.

ICOMOS considers that this justification is not appropriate because while Vandelvira's contribution to Renaissance architecture in Spain is not disputed, it can be seen that the diffusion of that contribution was part of a more general diffusion of Spanish architectural culture, not able to be directly connected to Vandelvira and Jaén Cathedral.

Integrity and authenticity

Integrity

Jaén Cathedral has not suffered adverse effects from development or neglect. The proposed extension is the Cathedral itself, which contains all elements and completely represents the property's significance. The setting of the property facing onto the Santa Maria square within the old town of Jaén retains its urban form, although buildings around the square and in the surrounding urban environment generally date from the 19th and 20th centuries. The Cathedral retains its dominance over the low scale city and surrounding landscape, acting as a counterpoint to the castle on top of Santa Catalina Hill.

In terms of how the extended property contributes to the integrity of the existing serial World Heritage property, ICOMOS considers that the condition of integrity has not been met.

Authenticity

Only a very small part of Jaén Cathedral, the chapter house, sacristy and vestry express the early Renaissance values claimed for it by the State Party. The buildings surrounding the Cathedral Square are not of equal architectural quality to the Cathedral having been built in later periods but the urban morphology is maintained. The Cathedral remains self-contained on its platform fenced with a metal grille enclosing the Bishopric's property.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have not been met.

Criteria under which inscription is proposed

The proposed extension is nominated on the basis of cultural criteria (ii) and (iv), the same criteria as for the existing World Heritage property.

Criterion (ii): exhibit and 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 same grounds as the existing world heritage property, but with the words in bold added:

The 16th century examples of architectural and urban design in Úbeda, Baeza **and Jaén** were instrumental in introducing the Renaissance ideas to Spain. Through the

publications of Andrés de Vandelvira, the principal project architect, these examples were also diffused to Latin America. **Vandelvira's exceptional technical innovation in Jaén Cathedral, which he started in Úbeda-Baeza, gave rise to a first class masonry school, which is evident in the stereotomy of cathedrals and other buildings in the new world.**

ICOMOS considers that while the Cathedral could be shown to exhibit the development of Renaissance architectural ideas and stands out as an architectural landmark in the city of Jaén, its date as a completed monument is too late to be described as "introducing" Renaissance ideas to Spain. There is also the issue that the new nomination dossier states that the influential publication was by Andrés de Vandelvira's son Alonso. No publications by Andrés are evidenced. There is a larger issue relating to how Vandelvira's stone cutting methods were dispersed to Latin America in that production of the treatise occurred after Andrés de Vandelvira's death, perhaps as much as 40 years after the cited Latin American cathedrals were commenced, and no copy of Alonso's work has been proven to have existed in Latin America.

ICOMOS considers that the proposed extension has not been demonstrated to significantly reinforce this criterion.

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 same grounds as the existing world heritage property, but with the words in bold added:

The central areas of Úbeda and Baeza constitute outstanding early examples of Renaissance civic architecture and urban planning in Spain in the early 16th century. **Jaén Cathedral, as a cathedral, is both innovative and diverse. It is an example of Spanish Renaissance constructive art. It became the essential prototype in the construction of the first Renaissance cathedrals in America in the second half of the 16th century and the beginning of the 17th.**

ICOMOS considers that the proposed justification is not appropriate. Jaén Cathedral, having been constructed in 6 phases each becoming a little more baroque in style from phase 3 up to the end of the 18th century, was not completed early enough to have been a prototype. According to the additional information provided by the State Party the plan of Jaén Cathedral was drawn by Juan de Aranda Salazar in 1642 when building phase 3 (presbytery /altar). The plan is claimed to have influenced that of the cathedrals of Mexico, Puebla de los Angeles, Mérida, Guadalajara, Nicaragua, Panama, Havana, Lima and Cusco from the mid-16th century, but it is not clear how this came about given their dates. Beyond this it is difficult to understand how the cathedral

could be an example to follow in Spanish America in the second half of the 16th century, when the presbytery/altar was not built until the 17th century, the west front in the second half of the 17th century, and the choir in the 18th century.

ICOMOS considers that the proposed extension has not been demonstrated to significantly reinforce this criterion.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have not been met and that the proposed extension to the serial property has not been demonstrated to significantly reinforce criteria (ii) and (iv).

4 Factors affecting the property

The Cathedral is located in the heart of the historic centre of the city, which is protected as a historic urban area. This constitutes the buffer zone for the proposed extension. It has a population of 23,401 inhabitants (177/ha). According to the nomination dossier, no infrastructure or buildings are planned which would impact on the Cathedral and the historic centre is not subject to development pressure. Atmospheric pollution and nesting birds have impacted on parts of the building. The former is being dealt with through municipal environmental policies and the latter by strategies to control the population of birds. Seismic vulnerability has been ameliorated by taking down most of the larger pinnacles, inserting stainless steel rods and reinstating them with flexible jointing material. Earlier preventative treatments involving tensors and iron wedges applied after the 1755 Lisbon earthquake have been removed. The number of visitors, mostly from within the province or nearby was 32,652 in the year to March 2011 and does not constitute a problem.

ICOMOS notes that although extensive roof works were carried out including to the timber structure, no fire protection or alarm has been installed. ICOMOS considers that this should be done as a matter of urgency; particularly as the electrical rewiring is not yet complete and faulty wiring could constitute a danger to the structure.

ICOMOS notes that damage has been caused by an earthquake in the past but no data is given on the frequency of earthquakes.

ICOMOS considers that the main threats to the proposed extension are fire, atmospheric decay, seismic activity and damp penetration.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundary of the proposed extension follows the exterior of the building. The boundary of the buffer zone is the boundary of the declared "Historic Ensemble" of the city of Jaén which follows the line of the former city wall, enclosing the eastern slope of the Santa Catalina Hill and its citadel. The historic old quarter is said to include the relics of the original settlement, retaining its layout and a great number of traditional buildings, but no details of individual buildings are given.

In conclusion, ICOMOS considers that the boundaries of the proposed extension and of its buffer zone are adequate.

Ownership

The Cathedral is the property of the Catholic Church, Episcopate of Jaén.

Protection

Jaén Cathedral was declared a Historical-Artistic Monument in 1931. It is protected by the Law on Spanish Historical Heritage 16/1985 1st Additional Provision as a property of cultural interest and by the Law on the Historical Heritage of Andalusia 14/2007 4th Additional Provision which defined its property boundary as covering any urban plots and spaces within 50 m of the property.

The buffer zone is protected at the State level by Decree 329/1973 as a "Historic Ensemble", and was inscribed as a "Historic Ensemble" by the Regional Government of Andalusia on 11 August 2011. The castle of Santa Catalina is protected as a Monument by Law on the Historical Heritage of Andalusia 14/2007 4th Additional provision which defines its boundary as covering any urban plots and spaces within 200m of the property.

ICOMOS considers that the legal protection in place for the proposed extension is adequate. ICOMOS considers that the protective measures for the property are adequate.

Conservation

Details of extensive conservation works to the fabric carried out since 1990 are set out in the nomination dossier. The most recent work was the final stage of roof restoration in 2012. According to the Master Plan, work on the stained glass windows remains to be finished, along with further stonework restoration to the apse and front façade. In the Lisbon earthquake of 1755 the cathedral suffered structural damage on its north side requiring consolidation works and the northern side chapel (the Church of the Sanctuary) was built. Other structural problems relate to subsidence of the south tower causing cracking and displacement of stone blocks. The dome was banded with stainless steel strips in 1992. Survey and monitoring is required to establish overall movement

problems and consequent repair and consolidation requirements. The vaulted space beneath the *lonja* on the north side is subject to damp penetration but it is proposed to restore this space and use it as a museum/presentation space for the Cathedral. The rewiring of the electrical installation remains to be completed. There is a security camera system but no fire precaution installation. Toilets have been installed in the ground floor of the north tower.

The property has a regular maintenance program for the roof carried out by one dedicated person year round. Other repairs are dealt with as needed by two dedicated personnel. The annual maintenance cost is around 24,000 euros. A more extensive maintenance program is envisaged in the Master Plan involving two people for the roof, two for stonework, one electrical and security specialist and a team for goods and chattels.

ICOMOS considers that electrical rewiring should be completed and fire protection should be installed as a matter of urgency.

Management

Management structures and processes, including traditional management processes

The State Party proposes that the serial property will be managed by the Inter-Municipal Committee of World Heritage of Úbeda, Baeza and Jaén, which comprises the Mayors of the three municipalities (or their delegates). The table set out in the Annex to the nomination dossier shows that it will include representatives of the Departments of Culture, Tourism and Town-planning of each municipality.

ICOMOS suggests that the Church should also be represented on this Committee.

There will be a Technical Board comprising technical experts from the same departments of each municipality as well as other regional public authorities, experts and the Cathedral Construction Council. At present the specific management corresponds to each municipal area, and ICOMOS notes that the joint management arrangements proposed for Úbeda and Baeza at the time of their world heritage nomination have proved difficult to implement. Since March 2009 management of the World Heritage property of Úbeda and Baeza has been co-ordinated by the 'Association for Tourist Development of Úbeda and Baeza'. This follows the agreement of the town councils of the Renaissance Monumental Ensembles of Úbeda and Baeza in 1999 to jointly manage conservation, restoration, culture and tourism and their declaration of Areas of Approved Rehabilitation. According to the nomination dossier funding sources include the autonomous communities, the Church, private sponsorship, and one percent of the budget from the Ministry for Culture. ICOMOS notes however that in fact the primary source of funding is the Spanish State through Spain's National Cathedral Plan, since the autonomous communities are short of financial resources.

According to the nomination dossier there are seven staff looking after Jaén Cathedral, one a graduate in Humanities, and another is a Master draughtsman. One staff member manages the museum, one manages the Diocesan Archives, three work on the religious and cultural presentation of the Cathedral and the other two cover maintenance and cleaning. As well there are two security guards. There is no information on risk preparedness, which is of concern due to the lack of fire protection in the property.

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

The General Plan for Sustainable Tourism of Andalusia 2008-2011 and the Strategic Plan for Tourism in the Province of Jaén provide a regional policy framework for the proposed extension. Management of the Cathedral comes under Spain's National Cathedral Plan (1990); the Cathedral Plan of Andalusia (1998); The Master Plan of Jaén Cathedral (2000) and the Agreement between the Ministry of Culture and the Synod for Cathedral Conservation (2006) which determined the list of Spanish cathedrals in need of priority intervention. As well there is the Management Plan for the Renaissance Monumental Ensembles of Úbeda, Baeza and Jaén Cathedral dated January 2013, included as an Annex to the nomination dossier. This includes the Programme for the Area of Approved Rehabilitation of the Historic Centre of Jaén aimed at improving the quality of rooms, shops, the hotel trade and cultural uses within the buffer zone and at improving the environment around the Cathedral.

Visitors purchase entrance tickets and audio-guide at the entrance, where there is also a space selling objects and books related to the Cathedral. As well as the Museum of Sacred Art and the Archives, there is an exhibition space for temporary exhibitions presenting information on the cultural and artistic heritage of the Cathedral and the Foundation Caja Rural de Jaén. Section 2.1 of the Management Plan details interpretation and information centres, signposting, car parking and visitors' routes through the historic centres of the three towns.

ICOMOS considers that for the presentation and interpretation of the three properties, the contribution of each of the three needs to be clearly identified, together with the linking themes. The Baeza municipality has already installed an interpretation centre in the Old Grain Loft in Baeza; one is planned for Úbeda to be located in the hospital de los Honrados Viejos del Salvador, located outside the property boundary and another is planned for the basement of Jaén Cathedral.

Involvement of the local communities

The Management Plan Section 2.3 sets out the proposed involvement of relevant non-government, professional and neighbourhood associations in the management of the serial property.

ICOMOS considers that while the properties are well maintained, their overall management is not well-co-ordinated although there is said to be co-ordination for tourism purposes. ICOMOS considers that management, including the identification of funding sources, presentation and interpretation of the properties should be better co-ordinated as required by paragraph 114 of the *Operational Guidelines* and the Management Plan should be implemented.

ICOMOS considers that special attention is needed to the setting up of an overall management body for the serial property as required by paragraph 114 of the *Operational Guidelines*. ICOMOS considers that the management system should be extended to include risk preparedness and fire protection and the Management Plan should be implemented.

6 Monitoring

A monitoring programme has been developed for the serial property specifying key indicators for measuring the state of conservation and showing the frequency of inspection and the authority responsible for each one. There is a heading (F) for the Evaluation of safety mechanisms and risk prevention, but the indicators and frequency are not given. ICOMOS considers that this should be addressed as a matter of urgency, particularly in relation to fire protection within the buildings. Seismic monitoring should also be included.

ICOMOS considers that the monitoring system proposed should be improved in relation to risk preparedness for fire and earthquakes.

7 Conclusions

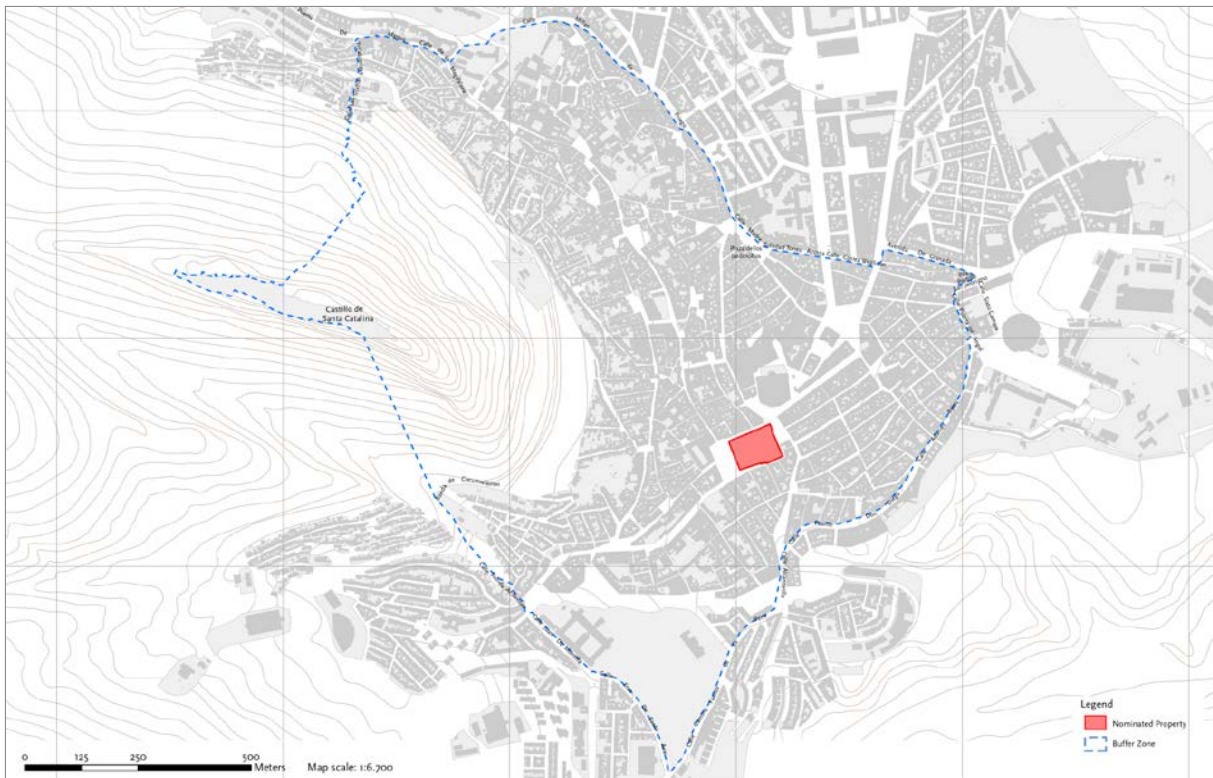
ICOMOS considers that the State Party's justification of the proposed extension Jaén Cathedral is not appropriate because while Vandelvira's contribution to Renaissance architecture in Spain is not disputed, it can be seen that the diffusion of that contribution was part of a more general diffusion of Spanish architectural culture, not able to be directly connected to Vandelvira and Jaén Cathedral. ICOMOS considers that the proposed extension to the serial property has not been demonstrated to significantly reinforce criteria (ii) and (iv). The conditions of integrity and authenticity have not been met. ICOMOS also notes that there is no overall management body operating as such for the existing inscribed serial property and considers that management of the component properties requires an overall management body as required by paragraph 114 of the *Operational Guidelines* to co-ordinate identification of funding sources, and presentation and interpretation of the properties. Furthermore ICOMOS considers that the management system should be extended to include risk preparedness and fire protection and the Management Plan should be implemented. The monitoring system

needs to be improved and should include seismic monitoring.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the proposed extension of Renaissance Monumental Ensembles of Úbeda and Baeza to include Jaén Cathedral and become The Renaissance Monumental Ensembles of Úbeda and Baeza and Jaén Cathedral, Spain, should **not be approved**.



Map showing the boundaries of the proposed extension



View of Jaén Cathedral and its surroundings



Main façade



Sacristy



Transept vaults and dome

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

Vineyard Landscape of Langhe-Roero and Monferrato (Italy)

No 1390 rev

Official name as proposed by the State Party

The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato

Location

The nominated serial property is located in the Piedmont region. It is comprised of six separate components in the provinces of:

Cuneo (properties n°1 Langa of Barolo, n°2 Grinzane Cavour Castle, n°3 Hills of Barbaresco, and part of property n°5 Canelli and Asti Spumante),
Asti (property n°4 Nizza Monferrato and Barbera, and part of property n°5 Canelli and Asti Spumante)
Alessandria (property n°6 Monferrato of the *Infernot*)
Italy

Brief description

The vineyard landscapes of Langhe-Roero and Monferrato in the Piedmont region cover five distinct winegrowing areas and one castle, whose names are emblematic of profound and ancient expertise reflecting the relationship of man with his environment. They express a slowly refined association between a diverse range of soil types, grape varieties that are often native, and suitable winemaking processes. They offer panoramas of carefully cultivated hillsides, following ancient land divisions punctuated by buildings which provide structure to the visual space: hilltop villages, castles, Romanesque chapels, farms, *ciabots*, cellars and storerooms for the cellaring and sale of wine, notably in the small and larger towns on the margins of the vineyards. The property claims to be emblematic in the harmony and balance between the aesthetic qualities of its landscapes, the architectural and historic diversity of its built elements associated with the vineyards and viticulture, and an authentic and ancient art of winemaking.

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 five *ensembles* and one *monument*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013), paragraph 47, it is also a *cultural landscape*.

1 Basic data

Included in the Tentative List

1 June 2006

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

21 January 2011

30 January 2013

Background

This is a nomination whose examination has been deferred (36 COM, Saint Petersburg, 2012).

The World Heritage Committee has adopted the following decision (decision 36 COM 8B.32):

Decision: 36 COM 8B.32

The World Heritage Committee,

- 1 *Having examined Documents WHC-12/36.COM/8B and WHC-12/36.COM/INF.8B1,*
- 2 *Defers the examination of the nomination of the Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato, Italy, to the World Heritage List, in order to allow the State Party, with the advice of ICOMOS and the World Heritage Centre, if requested, to:*
 - a. *Review the application of the selection criteria of the sites and the choice of the series' components, taking into account the central notion of a native grape variety associated with a terroir and a grand cru of truly exceptional value and to demonstrate in what way each site significantly contributes to the potential Outstanding Universal Value of the ensemble,*
 - b. *Review the boundary of each of the sites making up the series as a function of an approach that better integrates all the material elements testifying to the winemaking and wine cellaring values,*
 - c. *Review the buffer zones as a function of the property's redefinition,*
 - d. *Draw up a precise inventory of the monuments and sites covered by national or regional historic heritage listing within the property and an inventory of the vernacular heritage; the maps need to be completed in a way that these elements are easily identifiable by name,*
 - e. *Ensure the conservation measures recommended in the Agreement Act and local town planning rules are adopted by all the municipalities in the property,*
 - f. *Specify the material and human resources of the property's overarching management Association, and more broadly all the staff employed for the property's management, stating their sectors of activity and any training requirements,*
 - g. *Rank the Management Plan actions by order of priority for the explicit benefit of the property's conservation; provide precise implementation schedules for those actions for which finance has been consolidated,*
 - h. *Confirm that monitoring is effectively coordinated by the property's overarching management Association,*
 - i. *Supplement the property's monitoring plan indexes with a group covering tourism and permanent cultural activities,*

3 *Considers that any revised nomination would need to be considered by an expert mission to the site.*

On 30 January 2013, the State Party submitted a revised nomination.

Consultations

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

Technical Evaluation Mission

An ICOMOS technical evaluation visited the property from 9 to 13 September 2013.

Additional information requested and received from the State Party

ICOMOS requested additional information from the State Party in a letter dated 13 December 2013, asking it to confirm whether all the municipalities concerned had signed the Agreement Act and the local development plans including the appropriate building regulation measures. On 28 February 2014 the State Party sent additional documentation that is incorporated into the present evaluation report.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description of the Serial Nomination

The serial property nominated for inscription on the World Heritage List comprises a selection of five Piedmont winegrowing areas, with outstanding landscapes, and the Castle of Cavour, an emblematic name both in the development of vineyards and in Italian history. It is located in the southern part of Piedmont, between the Po River in the north and the Ligurian Appenines in the south, across a wide region of hills, framed by shallow valleys. The soil is mainly comprised of sedimentary rock from the tertiary period, although this does not preclude local geological particularities. Overall, the soil has low organic content but is rich in mineral elements.

With a relatively homogeneous tonality of landscape, the property nonetheless covers a great diversity in its composition and in its winegrowing and winemaking particularities. The landscape is dotted with farms, winegrowers' huts (*ciabot*), isolated winegrowing farms, villages often perched on high ground, larger towns on the edge of the vineyards, castles, Romanesque churches and ancient monastic buildings. The Castle of Cavour (property n°2), together with urban elements at Nizza Monferrato (n°4) and Canelli (n°5), have been added since the first nomination dossier; in contrast, a series of properties whose contribution to overall outstanding universal value was limited have been withdrawn, in accordance with decision 36COM 8B.32.

In winegrowing terms, each winegrowing area is identified by the matching, through expertise and practical experience, of a given soil and a specific grape variety. The grape varieties are often native, such as nebbiolo, barbera and moscato (white muscat with small grapes). The selection of rootstock, which in some cases dates from ancient times, was refined from the 18th-19th onwards. The vineyards are on hills with mild or slight slopes, characterised by the absence of walls and terraces. This gives rise to the systematic arrangement of rows of vines along successive contour lines, which results in a highly original landscape, linked to soil conservation concerns. In terms of vinification, the property is characterised by precise and ancient know-how, that is specific to each of the vineyards, producing a great diversity of unique wines that are specific to each winegrowing area. The property is also characterised by specific installations of winemaking cellars and cellars for storage ready for sale (*Infernot*). The whole range of technical and economic processes relating to the winegrowing and winemaking expertise are adequately represented in the property, which was not the case with the first nomination.

Part 1: Langa of Barolo

This property constitutes an emblematic part of the vineyards of Piedmont, because of the extremely celebrated expertise associated with its red wine, produced from the Nebbiolo grape variety. Its exploitation is regulated by the appellation area of Barolo (DOCG), which covers the whole of the property and extends beyond it. The export of this wine in bottles dates back at least to the mid-18th century. The property forms a large hollow around the village of Barolo. Its landscape is comprised of carefully kept vineyard plots, accompanied by a few fields of cereals and woods on the slopes. The settlement consists of Medieval villages with their central castle, laid out in a circular *bastide* arrangement as at Serralunga d'Alba. The landscape also includes a large number of *ciabots*, and isolated farms, some of which are very old and whose architecture is outstanding.

Part 2: Grinzane Cavour Castle

Comprising the castle and nearby vineyard plots, this property is situated close to Part 1 of the serial property, on a slightly elevated piece of land next to the village of Grinzane Cavour. The castle and its domain were, in the mid-19th century, the property of the Count of Cavour, an emblematic figure of Italian unity, and the driving force behind modern winegrowing in Piedmont. This was a place of pioneering experiments in winegrowing and winemaking, leading to the adoption of many French methods which then gradually spread throughout the vineyards of Piedmont. The castle is a square brick edifice, which is well preserved. With its central courtyard and its many towers, it embodies a mixed style, combining a reorganised Medieval castle with an Italian renaissance villa, notably in its interior decoration. Today the castle houses a regional wine shop, a restaurant and a cultural centre dedicated to winegrowing.

Part 3: Hills of Barbaresco

This is the smallest nominated area within the series, and is situated in the north-east between Barolo (1) and Canelli – Asti (5). The landscape is identified by its clear visual boundaries, between the Tanaro Valley and a line of hill crests close to 600 metres in altitude. This is a second favourable area for growing the grape variety Nebbiolo on clay and marl soils, or sandstone that has high water retention. Vinification of this grape produces the red wines of Barbaresco, also of high reputation (DOCG). Other crops are rare. The wines from this region, like those from the following one, use the typologies applied in France to identify the best vines, using the “cru” and “grand cru” labels. The area includes the village of Barbaresco and the medieval part of Nieve with its castle, along with winemaking establishments with characteristic and ancient architecture.

Part 4: Nizza Monferrato and Barbera

This area is located in the upper part of the region, in which Nizza Monferrato is the main town. The name Barbera denotes both the grape variety and the local wine. The matching of the soil and grape variety dates back at least 500 years, and the wine has the protected appellation Barbera d’Asti (DOCG). The landscape is relatively composite, formed of vines and woods on the slopes, and small valleys with green meadows. The dominant atmosphere is rural, with magnificent russet hues in the vineyards in autumn. Settlement is concentrated in several villages (Castelnuovo Calcea, Vinchio and Vaglio Serra), and dispersed as farms and isolated winegrowing houses. Nizza Monferrato is the historic market town for this wine. Its small historic centre, bearing considerable testimony to an ancient winegrowing activity, has been incorporated into the nominated property, with typical buildings, and traditional storehouses and cellars.

Part 5: Canelli and Asti Spumante

This area, at the centre of the series, has been considerably reduced compared with the first nomination, in order to include only the most comprehensive landscapes and the most significant winegrowing areas. The whitish soil, mixed with limestone, sandstone and marl, is particularly good for growing white muscat grapes (Moscato). Derived from the Champagne method, winemaking here produces the well-known aromatic sparkling wine Asti Spumante (DOCG). The homogeneous and continuous landscape is almost exclusively comprised of vines. Urban skylines are visible in the distance, with their bell towers. The property includes ancient winegrowing market towns, of which the most extensive is Calosso, and a substantial built heritage related to housing and winemaking activities. The centre of the ancient market town of Canelli has been incorporated into the property. The town, with its cellars and its wine production, storage and trading establishments, some of which are on an industrial scale, illustrates the culmination of ancient technical expertise and international trade. This is presented as one of the

major sites for wine cellar architecture in Piedmont and indeed in Italy. The town includes the emblematic houses of Asti Spumante wine merchants, in premises generally dating from the 19th century. It is dominated by the Gancia Palace, which constitutes an image of the economic power attained by the great winemaking families during the last century.

Part 6: Monferrato of the *Infernot*

This part of the property, further north in the Lower Monferrato region, has been considerably reduced in size compared with the first nomination, in order to include only the most significant area. Wine is produced mainly from the Barbera grape variety, corresponding to the controlled appellation Barbera de Monferrato (DOCG). Its soil includes a hard marl that is favourable for the growing of vines. The landscape is rural and fairly homogeneous, with gently rolling hills. It is dominated by mixed farming based on grapes and cereals. Six large villages lie entirely or partially inside this section of the property. On the tops of hills, Vignale Monferrato and Montemagno have fortified urban cores dating from the Middle Ages. The architecture is often outstanding, as in the urban dwellings of the winegrowers, and the cellars (*infernots*) used for the cellaring of the wine.

History and development

Vine pollen has been found within the area of the property dating from the 5th century BCE. This was a period when Piedmont was a place of contact and trade between the Etruscans and the Celts. Etruscan and Celtic words, particularly wine-related ones, are still found in the local dialect.

In the Roman period, vine growing was organised in large vineyards across the Italian Peninsula. A large number of wine amphorae have been found in the region. New grape varieties were introduced at this time, in particular the ancestor of the *Nebbiolo* variety. Pliny the Elder mentions the Piedmont region as being one of the most favourable for growing vines in ancient Italy; Strabo mentions its barrels.

The landscapes and agricultural management of the winegrowing territory underwent change in the Middle Ages, under the authority of the bishops and monasteries. Vast ecclesiastical winegrowing domains were established. A substantial architectural and urban heritage still today bears witness to the development of vineyards during this period: winegrowers’ villages on the hilltops, isolated farms, castles, Romanesque churches, small urban trading centres in the lowlands, remains of monasteries, etc. This medieval settlement established the structure of the winegrowing landscape that is still there today. The settling of the “new towns”, together with the castles, marked the rising baronial power in the 12th and 13th centuries. These various strongholds provided a place of refuge for winegrowing peasants; the production and cellaring of wine became established in these places. Some farms were also fortified.

Starting in the 14th century, then during the Renaissance, the wealthy middle classes tended to take over the winegrowing lands, and even more so the making of wine and its commercial distribution. The urban centres grew, and communication routes were improved. This was a period of growing wealth through the development of the vineyards, which were consolidated and improved by the selection of grape varieties. The names of today's grape varieties appeared for the first time: Nebbiolo, Barbesino, Lambrusca, etc. A new land ownership and social structure was established, distributing the vineyards between numerous owners, title-holders and vineyard and wine production workers. The current vineyards bear witness to the land ownership and landscape heritage from this period, as seen for example in engravings from the 16th century.

Having become wealthy, wine merchants and winegrowers opted for more sophisticated and comfortable styles of housing in the 16th and 17th centuries, grouped in villages and small towns around earlier castles. The wine houses were organised around wine storehouses and cellars. Architectural styles based on a mixture of influences became more defined. Vineyard slopes were sometimes levelled, and planting in regular and ordered rows became consolidated. During this period, treatises on winegrowing and winemaking were printed in the Piedmont region.

In the 18th century, the rising population and the region's enrichment encouraged the construction of farms and annexes within the vineyards, as well as the breakup of the ancient large religious domains. The Savoy dynasty undertook a vast regional land survey with a view to taxing vines (1713); the roads were improved. Baroque elements appeared in urban buildings. Aristocratic villas appeared in the countryside, sometimes alongside older farmhouses. They marked the emergence of a rural gentry in Piedmont. Vineyards and wine production became the target of property speculation and economic investment. The drinking of wines of high quality amongst the richer classes became a social custom in the towns of Northern Italy.

In the 19th century, the vineyards in the Langhe-Roero and Monferrato regions continued to be expanded. Wine production increased by nearly 40% between 1835 and 1864, reaching 3.8 million hectolitres. At the same time, especially in Monferrato, the ownership structure of vineyards was broken up into smaller family-owned holdings. The commercial market for wine expanded geographically with the growing use of glass bottles. The desire for high-quality wine, and the presence of a land-owning aristocracy linked to the political regime in the Kingdom of Piedmont-Sardinia encouraged the introduction of the French model of winegrowing and winemaking, notably under the impetus of the family of the statesman Cavour. French oenologists contributed to improving the technical management of the vineyards, winemaking and ageing. Some French elitist traditions were adopted, such as the concepts of "crus" (Bordeaux region) and "climates" (Burgundy region). The

Champagne method of winemaking was successfully applied to muscat grapes in the Asti and Canelli regions in the 1860s, resulting in the creation of "spumante", a sweet sparkling wine with the specific fragrance of the Muscat grape variety.

The last part of the 19th century saw the *phylloxera* calamity that ravaged the Piedmont vineyards, like all others in Europe. Replanting by grafting to American rootstock provided the Piedmont vineyards with an opportunity to rebuild quality vineyards on the proven foundations of ancestral knowledge. The great grape varieties were then stabilised and described as characteristic of the various regions of the Piedmont vineyards. This period also ushered in a scientific dimension, evidenced by the creation of an experimental oenological station (1872).

This effort to regenerate the Piedmont vineyards paid off at the end of the 19th century, and in the 20th, with national recognition of its wines, through Italian Unity, and then the international export of the best *crus*. The towns became major centres of the international wine trade, and this was accompanied by the appearance of representative architecture at the largest wine houses. Collective initiatives sprang up from the early 20th century to protect the expertise associated with the Piedmont wines and to differentiate them from ordinary wines. A cooperative movement was set in place to group together and improve smallholders' production. Diversification appeared with vermouths in Canelli and Asti.

The 1930s Depression affected the Piedmont vineyards; prices collapsed and the trend towards expanding the vineyards reversed, with a new focus on better vines and more severe pruning practices. Based on the French model of *Appellations d'origine contrôlée* or controlled appellations, a system for standardising winegrowing and winemaking was introduced after the Second World War. This began with the "DOC" label, and then in 1992 the "DOCG" label was introduced for the wines meeting the most exacting standards in terms of codification of practices and expertise.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The State Party takes into consideration the winegrowing landscapes already inscribed on the World Heritage List, those inscribed on the Tentative Lists, and others mentioned in the ICOMOS thematic study. In the first instance, these are the Jurisdiction of Saint-Émilion (France, 1999, criteria (iii) and (iv)), the Alto Douro Wine Region (Portugal, 2001, criteria (iii), (iv) and (v)), the Tokaj Wine Region Historic Cultural Landscape (Hungary, 2002, criteria (iii) and (v)), and Lavaux, Vineyard Terraces (Switzerland, 2007, (iii), (iv) and (v)). Other World Heritage List properties with a winegrowing dimension amongst other components are also taken into consideration: Val d'Orcia (Italy, 2005, criteria (iv) and (vi)), Upper Middle

Rhine Valley (Germany, 2002, criteria (ii), (iv) and (v)), Costiera Amalfitana (Italy, 1997, criteria (ii), (iv) and (v)), Portovenere, Cinque Terre, and the Islands (Italy, 1997, criteria (ii), (iv) and (v)), Landscape of the Pico Island Vineyard Culture (Portugal, 2004, (iii) and (v)), The Loire Valley (France, 2000, (i), (ii) and (iv)). In addition to these are mentioned the vineyard landscapes of Tuscany (Italy), Rioja (Spain), South Africa and Alsace (France).

The constituent elements of the vineyard landscapes of Langhe-Roero and Monferrato are in particular examined. They do not come under the category of "heroic" vineyard landscapes but rather in the category of gentler hillside vineyards, without terraces, of which they are a very harmonious example, with a rich diversity of built and structural components illustrating a particularly long and rich social history of vineyards and winemaking. The typology of these settlements, notably the hilltop villages, differs from the other properties; their diversity and density are exceptional. The Piedmont vineyards have a much older history than most of the other European vineyards, the origins of which date at best from Roman times. Here, Greek, Etruscan and Celtic influences intermingle from remote antiquity. There is also significant testimony from all historic periods from the Middle Ages to the present day. All the elements of winegrowing built heritage are present in the vineyards, with a highly diversified professional architecture, and a heritage of ancient villages, small market towns, wine cellars and storehouses, along with castles, churches and monastic remains.

The State Party compares the grand wines of the Piedmont vineyards making up the nominated serial property with other wines produced worldwide. It stresses the importance of ancient expertise rooted in centuries-old traditions, and also the adaptability shown from the 19th century onwards in taking on board the best practices in the profession, particularly those of the French vineyards at that time. The Piedmont wines are specific in that an exceptional role is played by the vinification of native grape varieties - gradually selected according to the soils and the land - whose roots date back to the Middle Ages.

ICOMOS considers that the comparative analysis shows that the five historic vineyards nominated, and the Castle of Cavour, form a homogeneous and complete ensemble, which bears testimony to a consummate body of expertise, and to cultural landscape values of great aesthetic and historic quality.

ICOMOS considers that the comparative analysis justifies consideration of this serial 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:

- Piedmont is an outstanding example of one of the most ancient wine-producing regions in the world, a meeting place of many influences from high antiquity, notably Etruscan, Greek and Celtic. The vineyards underwent significant development in Roman times, then in the Middle Ages and the Renaissance, and finally in the modern and contemporary period.
- It constitutes an outstanding and emblematic cultural landscape of particularly harmonious hillside vineyards. It presents numerous subtle aesthetic and cultural nuances. It bears testimony to a deep and long-established relationship between man and his natural environment.
- The property illustrates the patient process of building up winegrowing and winemaking traditions and expertise, and their successive improvements which have enabled highly accomplished adaptations between a variety of soils and native grape varieties, to produce some of the world's best-known wines: Barolo, Barbaresco, Barbera, Asti Spumante and Canelli Spumante.
- The property contains highly diverse built components, which provide a large number of significant landmarks in the vineyard landscape and in the urban and village settings.
- The property is an epitome of winegrowing and winemaking culture down the ages within the context of European civilisation.

ICOMOS considers that the new serial property nominated is justified, because it is better selected and comprehensive than the previous nomination. It brings together properly the whole spectrum of the most significant values of the winegrowing district of the Langhe-Roero and Monferrato region. Each of the nominated vineyards corresponds to the historic development of a specific wine, which bears witness to expertise of the highest level, that has long been widely acknowledged. The hillside vineyard landscapes, accompanied by an elegant and diversified built heritage, make this very ancient wine-producing region an epitome of vineyard landscapes in Europe. The property expresses a variety of social and cultural structures, which have continuously evolved over the course of history, and to which it still today bears abundant and diverse testimony.

Integrity and authenticity

Integrity

The State Party claims that the property presents all the essential elements for a complete representation of its values. Considered as a whole, its five components fully express the cultural, residential, architectural, environmental and productive complexity of this region of winegrowing and winemaking. It bears testimony to an ensemble of centuries-old traditions, that have been gradually built up.

All the stages of the production cycle of wine – from cultivation to vinification, ageing and distribution – are

appropriately illustrated. They include a sufficient number of attributes that are distributed in a balanced way across the various properties. Their functional relationships are clearly visible, from the vine to the cellar, from the farm to the large company, from the village set around its castle and church to the urban and commercial centre. The landscapes fully express ancestral social and professional traditions, and their history. Each of the properties is sufficiently complete to express in an understandable way the functional relationships between its elements and the aesthetic qualities of its cultural and urban landscapes. A great wealth of expertise, which is specific to each of the winegrowing areas, is also perceptible.

ICOMOS considers that the nominated serial property is justified as a result of the strict vineyard selection process. The vineyards chosen contain the most comprehensive and emblematic landscapes. They represent the most significant elements of professional, rural and urban architecture. They also correspond with the expression of a full spectrum of consummate expertise and professional traditions, from the vineyard and growing of the vines, to vinification, cellaring and the commercial distribution of the end-product. The choices made in redefining the properties are in line with decision 36COM 8B.32.

ICOMOS considers that the integrity of the whole series has been justified; and that the integrity of the individual sites has been demonstrated.

Authenticity

Abundant and diverse documentation bears testimony to the authenticity of the landscape and cultural components of the serial property. In particular, these include the religious and seigniorial archives, later the archives of the owners and of the wine houses, bearing witness to the transmission of expertise and customs through the centuries. The ensemble is testimony to diverse and authentic winegrowing and winemaking practices.

The land has been used for grape growing since antiquity, as attested by Pliny the Elder and Strabo during the Roman Empire. The collections of maps and plans provide thorough knowledge of the geographic and agrarian structure of the vineyards, and their transformations over time. The various stages in the social organisation of winegrowing and winemaking provide both a characteristic historical dimension of the property and the mark of a living evolving landscape.

The oldest built structures date from the Middle Ages (10th to 14th centuries). As in the case of the more recent constructions, heritage studies have proven their authenticity: Romanesque churches, monastic buildings, forts and castles, farms and storehouses, etc. The hilltop villages and the network of roads and pathways have retained satisfactory structural and architectural

authenticity. The conditions of authenticity of the vineyard vernacular architecture are satisfactory.

The professional practices, as part of a living tradition and a continuation of ancient expertise, offer a high degree of authenticity.

The Piedmont vineyard landscape is undoubtedly one of the most harmonious and most consistent with the ideal of a "scenic" rural and vineyard landscape, accentuated by the gently rolling environment that provides many vistas and panoramas with subtle nuances. The vineyard stakeholders are today aware of these aesthetic values that could be described as "perceived authenticity". The only reservation comes from the presence of several built elements dating from the second half of the 20th century, generally for public or wine industry purposes, which jar somewhat with the surrounding landscape.

ICOMOS considers that the serial property as a whole, and its component parts, are authentic in material terms, but that it is necessary to better highlight the intangible social elements which constitute an essential value of the property and its management (farmers, companies and workers, winegrowing and winemaking trade organisations, transmission of expertise and know-how, popular traditions, etc.).

ICOMOS considers that the authenticity of the whole series has been justified; and that the authenticity of the individual sites has been demonstrated.

ICOMOS considers that the conditions of integrity and authenticity of the whole series have been justified; and that for individual sites, the conditions of integrity and authenticity are satisfactory. However, ICOMOS recommends that the intangible social elements that contribute to authenticity should be given more prominence.

Criteria under which inscription is proposed

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

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;*

According to the State Party, the cultural landscapes of the Piedmont vineyards constitute an outstanding living testimony to winegrowing and winemaking traditions that have a very long history, and that have evolved and been constantly improved right up to the present day. The serial property forms the foundation of a social realm and economic structures that are sustainable, and which are at the heart of an outstanding heritage of knowledge, based on a progressive understanding of the best possible adaptation of a local grape variety to the land and to a given climatic environment, and the development of the best methods for its vinification and ageing. This wealth of expertise, know-how and social

traditions is illustrated in a multitude of landscape, architectural and urban details.

ICOMOS considers that the new definition of the serial property, which is more selective in landscape terms and has been enlarged to include the urban and built components of winemaking and cellaring practices, is an outstanding illustration of an ancient cultural tradition that is still alive. The vineyards of Piedmont, the towns, the rural settlement and the associated castles bear witness to a great diversity of historical periods and of successive adaptations of the socio-technical system of vines and wine production to the natural economic and cultural environment. The entire serial property embodies a great wealth of expertise and know-how, forming an epitome of the traditions of historic vineyards in Europe.

ICOMOS considers that this criterion has been justified for the whole series.

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;*

The vineyard landscape of Langhe-Roero and Monferrato, according to the State Party, represents an outstanding example of human interaction with the environment. Down the centuries, the vines, the farms and the traditional forms of rural life have been continuously organised in a diversified natural environment to form a traditional cultural landscape in which each component expresses mankind's determination to optimise production structures and processes for the benefit of winegrowing. The whole serial property constitutes the characteristic vineyard cultural environment of Piedmont, which is aesthetically very homogeneous but which expresses a multitude of nuances that are specific to each of the components in the series, their physical traits (geology, morphology, hydrology etc.) and their cultural characteristics (growing techniques, socio-economic systems, built environment and architecture, etc.).

ICOMOS considers that the living cultural vineyard landscape of Langhe-Roero and Monferrato represents an eminent example of man's interaction with his environment, following a very long historical evolution. The winegrowing landscape has great aesthetic quality, expressing the harmony between the vineyards and the many built elements that bear witness to the various periods of their history, between the gently rolling shapes of the vineyards and the hilltop villages, and between the multiplicity of autumnal tones, the castles and the ancient churches. It also presents the best possible selection of grape varieties that are adapted to the land with a variety of soil and climatic components, which themselves are related to a winegrowing and

winemaking expertise that has gradually evolved until it has become an internationally recognised hallmark.

ICOMOS considers that this criterion has been justified for the whole series.

ICOMOS considers that the serial approach is justified.

ICOMOS considers that the nominated property meets the conditions of integrity and authenticity, and meets criteria (iii) and (v).

Description of the attributes

- Created in ancient times, the vineyards of Piedmont bear testimony to an interchange of very ancient influences from the Etruscans, the Greeks and the Celts. The vineyards were developed significantly in Roman times, then in the Middle Ages and the Renaissance, and finally in the modern and contemporary period. It is one of the oldest wine growing regions in the world in which wine production has never been interrupted.
- It constitutes an outstanding and emblematic cultural landscape of particularly harmonious hillside vineyards, presenting numerous subtle aesthetic and cultural nuances. It bears witness to deep and long-established relationships between man and his natural environment.
- The property illustrates the long and patient process of establishing winegrowing and winemaking traditions which have enabled particularly successful adaptations between a variety of soil types and native grape varieties to produce wines that bear witness to outstanding and world-renowned expertise.
- The property contains highly diverse built components, which are well integrated into the landscape, and which bear witness to winegrowing and commercial expertise, and to the diversity of social structures and cultural interchanges during its long history. The property quintessentially expresses winegrowing culture down the ages within the context of European civilisation.

4 Factors affecting the property

Housing pressure is being exerted on the villages and towns as a result of demand for holiday homes. Up to now this demand has been channelled towards appropriate restoration of existing buildings.

In the 1960s and 1970s, the renovation and modernisation of winegrowing and winemaking operations in some cases had an adverse impact on landscape quality. This phenomenon is also affecting the buffer zones, where industrial and commercial buildings have appeared, which are sometimes quite visible, particularly along roads.

Tourism in the property is mainly cultural and oenological, and is largely local. The places with the highest tourist traffic are the castles, museums and commercial “caves”. There are approximately 130,000 tourists a year. The State Party does not consider that there is any particular threat from tourism and believes that the available infrastructure can cope with a quite significant increase in the number of tourists.

Earthquake risk is considered relatively low. There is little risk of flooding given the hilltop location of the properties. The lower-lying quarters and the cellars in urban centres (Canelli) could be affected by exceptional river levels. Soil erosion may on occasion affect some parts of the properties as a result of storms, but this is a phenomenon that has always existed, and is usually well managed by the winegrowers and municipalities. More generally, the rows of vines planted along the contour lines, and the drainage systems, are a technical response to erosion.

The vines and grapes are fragile and can be affected by certain exceptional climatic events, such as hail, or endemic diseases, as was the case with *phylloxera* at the end of the 19th century. The Piedmont vineyards also suffered in the 2000s from *flavescence dorée*, and the affected rootstock was destroyed.

There is a degree of fire risk in the villages, towns and woods in summer.

The effects of climate change are so far not noticeable in the property and in its main climatic and hydrological characteristics. The region is under both Mediterranean and continental influences, resulting in dry, hot summers and relatively cold winters. Increased summer drought could eventually occur together with more extreme climate events, such as violent storms, tornadoes, etc.

ICOMOS considers that the main threats to the property are the development of inappropriate modern winegrowing or commercial buildings that are not in keeping with the values of the traditional buildings, over-hasty restorations of vernacular properties, and the presence of the vine disease *flavescence dorée*.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The serial property nominated for inscription on the World Heritage List is comprised of 6 independent elements (from 1 to 6) inside two distinct buffer zones (A and B):

Site name	Surface area (ha)	Buffer zone (ha)
1- Langa of Barolo	3 051	A = 59 306
2- Château Grinzane Cavour	7	A

3- Hills of Barbaresco	891	A
4- Nizza Monferrato - Barbera	2 307	A
5- Canelli and Asti Spumante	1 971	A
6- Monferrato of the <i>Infernot</i>	2 561	B = 16 943
Total	10 789	76 249

The overall property has a population of 51,695, and the two buffer zones have a combined population of 251,945 inhabitants (2011).

The two buffer zones seem to be sufficiently large with regard to the nominated property’s sites; they consist in the main of rural areas and suburban areas around a few lowland urban centres.

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

Ownership

The property covers 29 municipalities. It consists essentially of small and medium-sized private farm holdings and individual family-owned urban or village dwellings. Most of the land and property is owned under private law by families. There are also public properties owned by the State Party, the regional government and municipalities, such as the road network, public buildings, community urban areas, a certain number of monuments, etc.; there are also ecclesiastical land and buildings.

Protection

The property is protected at the national, regional, provincial and municipal levels by provisions that are often interdependent. The same applies to European environmental law and protection of the landscapes. The various levels of legislation affect a large number of areas: monuments, sites, nature, water management, building and housing regulations, and control of economic activities, agricultural ones in particular.

The concept of landscape protection has over recent years defined a level of consolidation and harmonisation of existing legal tools. At the overarching level, all aspects of the protection of the cultural properties and protection of the landscapes are consolidated in the *Cultural Heritage and Landscape Code* (Decree No. 42 of 22 January 2004), under the responsibility of the Ministry for Cultural Heritage and its regional agencies. It defines the responsibilities of the regional and local public authorities and the application procedures; it coordinates and simplifies the prior protection legislation for the monumental and landscape components, and brings it into compliance with the *European Landscape Convention*. In the case of the property, the Code becomes a contractual framework for the various public authorities responsible for the conservation and monitoring policy.

The property is also protected at national level by the various regulations and orders introduced since 1967

relating to guaranteed controlled appellation wines (DOCG);

The principal safeguards in the Piedmont region are provided by:

- Regional Laws 20/1989 and 32/2008, on the protection of cultural, environmental and landscape sites;
- Law No. 14/2008 regulating the promotion and conservation of landscapes;
- Law 56/1977, regarding land protection and usage;
- Laws 20/1999 and 37/1980, regulating wine-producing districts and wine routes;
- Law 16/2000 for the defence and development of the economy in the hill regions;
- Law 47/1995 regulating and protecting biotopes, supplemented by Law 19/2009 on biodiversity.

The municipalities regulate and control building and renovation permits. They do so by referring to municipal regulation plans (PRGC) and urban development plans. In the updated nomination, for both the properties and the buffer zones, the Agreement Act stipulates that the urban zones must not extend beyond the current boundaries of the villages and towns. No new methods of energy production can be authorised. The Region may if necessary exercise a right of suspension for any non-compliant works. All the municipalities in which the six properties are located have updated their land use and building authorisation plans. The Piedmont region has confirmed the buffer zone protection measures by an Act of 30 September 2013.

The traditional protection of the properties consists of the involvement of the professional bodies and their research institutes, and the application of the controlled appellation regulations by the vineyard owners for vinegrowing and winemaking methods. This is an essential contribution to the sustainable conservation of the properties and their landscapes.

ICOMOS considers that the legal protection in place is adequate, both for the serial property and for the buffer zones.

Conservation

There is a very large body of archival documentation, which is both publicly and privately owned. It is held in numerous public archives, libraries, museums, etc. (regional, provincial, municipal, universities, professional bodies, etc.), and in sometimes considerable private collections (descendants of large estates, wine houses, etc.).

The historic monuments and protected sites are listed and described in the national historic heritage database (BDIS) and a regional database of Piedmont rural habitat (*Cascine del Piemonte*). These are shared tools used to aid conservation and monitoring. The property has recently undergone a landscape data inventory, using a

geographic information system (GIS), shared by the stakeholders, under the auspices of the Region and a university institute (SITI).

The numerous research projects carried out in recent years include:

- The programmes of the Ministry of Culture and Heritage, and university-led historical or heritage research;
- Social and economic research by universities and development agencies;
- Research by public bodies in charge of environmental protection;
- Research by institutes specialising in vinegrowing and winemaking scientific research, and work by associations for plant health protection for the grape vines.

A series of aid measures exist concerning the conservation of buildings and of structural landscape elements, consisting of regional or provincial plans drawn up in accordance with the protection regulations (*Cultural Heritage and Landscape Code*):

- The Regional Landscape Plan (PPR) sets out the policy of conservation for outstanding landscapes, vistas and panoramas for visitors. It also provides financial aid for the restoration of dwellings and landscape infrastructures;
- Regional Territorial Plan (PTR) and Coordinated Provincial Territorial Plan (PTCP),
- Hydrogeological Management Plan (PAI, 2001) and the Water Management Plan (PTA).

In this institutional framework, the conservation of the nominated serial property has led to the signing of an *Agreement Act* (February 2008) between the Ministry of Culture and Heritage, the Piedmont Region, Alessandria, Asti and Cuneo provinces and the municipalities. It defines the general objectives for the conservation of the property.

The Management Association is a body which brings together the municipalities in which the properties and buffer zones are located. Its task is to coordinate conservation measures within the framework of the Act in which the Region has confirmed the buffer zones. This leads to the implementation of specific programmes, such as the facade restoration programme, aimed at improving the conditions of integrity and authenticity in the villages.

A large number of restorations of public buildings have been carried out over recent years, or are currently under way, in order to preserve the authenticity of the buildings and their surroundings. All works to be carried out on listed heritage buildings require the prior authorisation of the Regional Council and of the authorities in charge of the architectural and landscape heritage. The restored buildings are made available to communities and to vinegrowing and winemaking or cultural institutions, providing them with new, high-quality capacities for visitor reception, interpretation and retail

sales. Restoration works consistent with the existing urban and village housing is encouraged.

The conservation and tending of the vines is carried out on an everyday basis by the winegrowers. They are supported and guided by professional associations and their research centres. This is done by applying standards laid down for the controlled appellations. There are also collective programmes for parasite and disease eradication, such as the planned measures for combating *flavescence dorée*.

ICOMOS considers that the general state of conservation of the property is adequate, and that the conservation measures adopted are generally effective.

Management

Management structures and processes, including traditional management processes

There are many and varied partners in the property's management. For the public institutions, the main ones are:

- The Ministry of Culture and Heritage and its regional agency;
- The Ministry of Agriculture and its regional and provincial departments;
- At the regional level: the Region itself coordinates regional development through its Environment, Agriculture, Culture and Tourism departments, and regional planning and construction; it is also involved in conservation through the Cultural Heritage and Landscape Protection Department, and the Architecture and Landscape Heritage Department;
- The Planning, Economic and Social Development, Agriculture and Culture departments of Alessandria, Asti and Cuneo provinces;
- The 29 property municipalities and the local development agencies.

The professional, association and private stakeholders are as follows:

- The winemaking and traditional agriculture associations; the professional associations for farmers, merchants and artisans; the chambers of commerce;
- The individual farmers, winegrowers and winemakers; the cooperative production bodies and the large wine houses; industries and commercial enterprises associated with winegrowing;
- Hotel and tourism infrastructure companies and shops; tourist offices;
- Stakeholders in oenological culture, museums, heritage guides, etc.; owners of cultural sites (castles, cellars or historic wineries, etc.);
- Specialist cultural associations and structures; environmental protection associations;
- Dioceses and church representatives.

The overarching structure for the property's management and coordination, and for dialogue between the stakeholders, is the *Association* instituted in February 2011. It currently has 84 institutional and professional members. Its missions are to monitor the implementation of the Management Plan, hold regular meetings between the various stakeholders, establish the management documents and launch their implementation, ensure coordination of services with the ministries and the Region, and to manage communication, information and external relations. For the time being, the *Association* is chaired by the provincial presidents. It has a *Management Committee*, a *Scientific Committee*, a *General Assembly* open to all partners, and a more recently established *Technical Department*. Its headquarters are in Asti and it has two regional offices in Alessandria and Cuneo. The region and the provinces have placed qualified staff at its disposal amounting to around 15 people (2012). Since its inception (as the Nomination Steering Committee), the Association has held more than 150 working meetings. It currently organises between 25 and 30 events of all kinds annually.

ICOMOS considers that an overall management system for all the components of the serial property is in place, constituted by the Association, ensuring coordination between them and the many institutional, professional, associative and private stakeholders. This institution is essentially founded on the good will of each of the partners, and its power is essentially incentivising in nature, as it has neither regulatory power nor the direct management of the properties, which remains in the hands of the Region, provinces and municipalities. Its main powers lie in the Agreement Act whereby the municipalities agree to the conservation and management plan for the properties in their territory, and in its property monitoring mission, but the municipalities do not seem to be adequately represented in the governing bodies of the Association at present.

The State Party and the Piedmont Region have various forecasting and risk surveillance tools, and local and provincial structures which can intervene in emergencies. They consist notably of the forest fire prevention and management plan, flooding risk control programmes, and civil security plans. The plans, which may be at regional or provincial level, are supported locally by the cooperation of the various local authorities, their technical departments and their security and intervention teams.

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

The 2008 inter-municipal *Agreement Act*, established under the dual guardianship of the Ministry of Culture and Heritage and the Piedmont Region, provided a general framework for the drafting of the management and conservation Plan for the property. Today it is a

charter constituting a commitment by the municipalities, Region and provinces to apply the plan.

The *Management Plan* sets out the strengths and weaknesses of the management of the property. Various negative elements emerge, such as the hydrogeological conditions, the large number of partners, the seasonality of tourism and the weakness of public transport facilities. The plan is based on around thirty sector plans, both current and pending, notably those already examined for the property's landscape conservation under the auspices of a Protection and conservation plan. The plan sets out to provide information and tools that are adapted for use by the stakeholders, and to reinforce best practices. It is of a contractual nature, and it is planned to extend it to cover the management of the buffer zones.

Involvement of the local communities

In conservation terms, local community involvement consists mainly of the everyday involvement of winegrowers and winemakers in managing their vines and cellars. However, it would be beneficial to reinforce the presence of the municipalities in the Association, and to incorporate into the Association some professional representatives.

ICOMOS considers that the setting up of the Association as the overarching property management authority, the Agreement Act and the Management Plan constitute significant advances in the management of the property. It is however necessary to reinforce the institutional power of the Association by providing it with relevant financial and staffing resources. It is also necessary to ensure better coordination between the projects put forward by different communities and to consolidate them financially. Many of the projects seem not to have got beyond the stage of intentions, and take the form of studies, without any real commitments being made.

ICOMOS considers that the management system for the overall serial property is adequate, particularly now that the management Association has been set up, but that its resources should be reinforced, and its representativity extended to include the municipalities and socio-professional groups. ICOMOS recommends that the Management Plan projects should be better coordinated, and that a clear distinction should be drawn between those actually approved and those merely at the project stage.

6 Monitoring

The property has long benefited from several regular monitoring systems, by various institutions, in the different fields of its traditional management (agriculture, nature, monuments, habitat, etc.); others, such as the landscape monitoring, are more recent:

- The *Winegrowing Observatory* monitors technical and plant health questions for winegrowers and winemakers;
- Listed monuments, vernacular heritage and the Piedmont rural habitat are monitored by the services of the Ministry of Culture and by the Region's heritage departments;
- The other urban and rural building stock is monitored by the municipal services through the implementation of the local town plans;
- Three landscape observatories have been established for the property itself in Monferrato Casalese, Monferrato Astigiano and Langhe-Roero; they work with the European network of Mediterranean Landscape Observatories;
- The Piedmont region provides monitoring in the following areas: geomorphology, hydraulic resources, and land use;
- Specialist regional environmental agencies monitor climatic and environmental factors, and the state of conservation of the natural heritage;
- A forest and environment institute provides soils and forestry monitoring.

As part of the property's Management plan, a set of indicators has been defined, grouping together and complementing the tasks of the organisations listed above. The indicators are divided into broad categories, in accordance with the inventory and assessment operations, and are in most cases monitored annually:

- Environmental components:
 - Natural, ecological and biodiversity value of environments,
 - Surface areas under vines;
- Historic and cultural components:
 - Historic evolution of the vineyards (baseline 1884),
 - Use of native grape varieties,
 - Training of personnel,
 - Vineyard and wine-related cultural and festive events,
 - Tourism development aspects,
- Landscape components:
 - Panoramic viewpoints,
 - Conservation and rehabilitation projects with landscape impacts.

The coordination of the monitoring of the properties, the compilation of the results and the drawing up of reports on the state of conservation are carried out by the Association's technical department.

ICOMOS considers it necessary to divide the current indicator no. 2 into three clearly identified main areas, each with appropriate sub-indicators, for example: socio-professional data relating to winegrowing and winemaking, conservation of cultural elements and tourism.

ICOMOS considers that the monitoring system is generally adequate, but that the indicators should be reorganised, and made more coherent in relation to the various aspects considered.

7 Conclusions

ICOMOS considers that the Outstanding Universal Value of the Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato has been demonstrated, notably by taking into account the decision adopted by the World Heritage Committee when this property was first examined (36 COM 8B.32). The scope of the property has been refocused on the most important and significant components, which clearly contribute to the serial property's outstanding universal value. Furthermore, urban and built components (Nizza Monferrato, Canelli) directly related to ancestral technical and commercial expertise or major landmarks in the history of the vineyards (Grinzane Cavour Castle) have been taken into account in the new definition of the serial property.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato, Italy, be inscribed on the World Heritage List on the basis of **criteria (iii) and (v)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The vineyard landscapes of Langhe-Roero and Monferrato in Piedmont consist of a selection of five distinct winegrowing areas and a castle, whose names evoke profound and ancient expertise in the relationship between man and his environment. They reflect a slowly developed association between a diverse range of soils, grape varieties that are often native, and suitable winemaking processes. They offer panoramas of carefully cultivated hillsides, following ancient land divisions punctuated with buildings that lend structure to the visual space: hilltop villages, castles, Romanesque churches, farms, *ciabots*, cellars and storehouses for cellaring and for the commercial distribution of the wine in the small towns and larger towns on the margins of the vineyards. The serial property is outstanding for its harmony, and the balance between the aesthetic qualities of its landscapes, the architectural and historical diversity of the built elements associated with the wine production activities and an authentic and ancient art of winemaking.

Criterion (iii): The cultural landscapes of the Piedmont vineyards provide outstanding living testimony to winegrowing and winemaking traditions that stem from a long history, and that have been continuously improved and adapted up to the present day. They bear witness to

an extremely comprehensive social, rural and urban realm, and to sustainable economic structures. They include a multitude of harmonious built elements that bear witness to its history and its professional practices.

Criterion (v): The vineyards of Langhe-Roero and Monferrato constitute an outstanding example of man's interaction with his natural environment. Following a long and slow evolution of winegrowing expertise, the best possible adaptation of grape varieties to land with specific soil and climatic components has been carried out, which in itself is related to winemaking expertise, thereby becoming an international benchmark. The winegrowing landscape also expresses great aesthetic qualities, making it into an archetype of European vineyards.

Integrity

The integrity of the serial property is satisfactory, as it contains all the elements required for full expression of its values. Considered as a whole, its five components fully express the cultural, residential, architectural, environmental and productive complexity of this winegrowing and winemaking region. It bears witness to an ensemble of centuries-old traditions that have gradually been built up. The integrity of the nominated serial property is fully justified, and all the technical and social processes associated with grape production and winemaking, with a high degree of expertise, are properly illustrated.

Authenticity

The authenticity of the landscape elements and the many cultural elements of the serial property has been justified. The use of the soils, the built structures and the social organisation of all the stages of the winemaking process, from tending and harvesting the grapes to vinification, are an expression of continuity of ancient practices and expertise to form authentic ensembles in each component of the serial property. The Piedmont vineyard landscape is undoubtedly one of the most harmonious and most consistent with the ideal of a "scenic" rural and vineyard landscape, accentuated by the gently rolling hills that provide many vistas and panoramas with subtle nuances.

Management and protection requirements

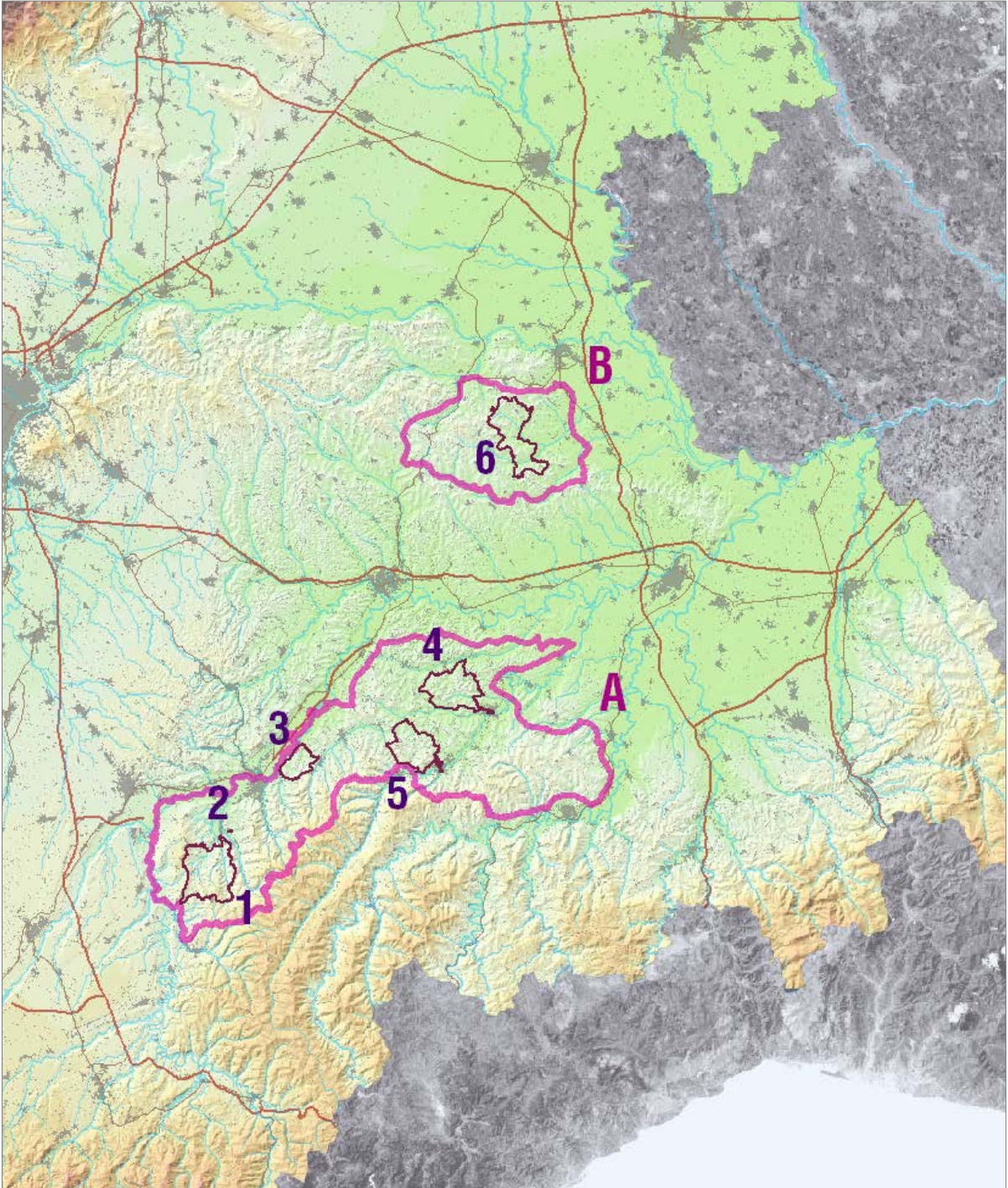
The property is protected under the Cultural Heritage and Landscape Code (Decree n°42 of 22 January 2004), under the responsibility of the Cultural Heritage Ministry and its regional agencies. It defines the responsibilities of the public regional and local authorities and the application procedures. The municipalities regulate and control permits for building and alterations. They do so with reference to municipal regulatory plans and urban development plans. The protection of the buffer zones has been confirmed by the Provincial Act of 30 September 2013.

The Management Association groups together the municipalities covered by the serial property and buffer zones, under the authority of the Region for the purpose of coordinating the conservation measures. This results in the implementation of precisely defined programmes, gathered together in the Management Plan. The Agreement Act embodies the commitment of each municipality and each administration to apply the protection measures and the sector conservation plans, and to actively participate in the management and enhancement of the property.

Additional recommendations

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

- Improving the representation of the municipalities and of socio-professional bodies within the Association;
- Strengthening the financial and staff resources of the Association;
- Paying greater attention to the social values that make an important contribution to the management and conservation of the property: winegrowers, companies and workers, winegrowing and winemaking trade organisations, the transmission of expertise and know-how, popular traditions, etc.;
- Ensuring better coordination between the projects in the Management Plan put forward by different municipalities and consolidate them financially;
- Reorganising the conservation monitoring indicators, and make them more coherent with regard to the different parts of the nomination.



Map showing the boundaries of the nominated properties



Langa of Barolo



Grinzane Cavour Castle



Hills of Barbaresco



Nizza Monferrato and Barbera – Historic Centre of Nizza Monferrato



Canelli and Asti Spumante – cellar in Calosso



Monferrato of the *Infernot*

IV Cultural properties

A Africa

New nominations

B Arab States

New nominations

C Asia – Pacific

New nominations

D Europe – North America

New nominations

Extensions

Nominations deferred by previous sessions of the
World Heritage Committee

E Latin America and the Caribbean

New nominations

Qhapaq Ñan

(Argentina, Bolivia, Chile, Colombia, Ecuador, Peru)

No 1459

Official name as proposed by the State Party

Qhapaq Ñan, Andean Road System

Location

Provincias de Jujuy, Salta, Tucumán, Catamarca, La Rioja, San Juan, Mendoza
Republic of Argentina

Gobiernos Municipales de La Paz, Coroico, Guaqui, Desaguadero, Tiwanacu, Viacha, Laja
Plurinational State of Bolivia

Regiones de Arica Parinacota, Antofagasta, Atacama
Republic of Chile

Gobernación de Nariño
Republic of Colombia

Gobiernos Autónomos Descentralizados Municipales de Tulcán, Montúfar, Mira, Ibarra, Cayambe, Latacunga, Salcedo, Alausí, Cañar, Déleg, El Tambo, Cuenca, Azogues, Naranjal, Loja, Saraguro, Quilanga, Espíndola
Republic of Ecuador

Regiones of Cusco, Ancash, Junín, Puno, Huánuco, La Libertad, Piura, Lima
Republic of Peru

Brief description

Qhapaq Ñan, Andean Road System is an extensive Inca communication, trade and defence network of roads covering over 30,000 kilometres. Constructed by the Incas over several centuries and partly based on pre-Inca infrastructure, the network reached its maximum expansion in the 15th century, when it spread across the length and breadth of the Andes. The network is based on four main routes, which originate from the central square of Cusco, the capital of the Tawantinsuyu. These main routes are connected to several other road networks of lower hierarchy which created linkages and cross-connections. 720.79 kilometres of the Inca trail were selected to highlight the social, political, architectural and engineering achievement of this network along with its associated infrastructure for trade, accommodation and storage as well as sites of religious significance.

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 291 *sites*.

These 291 sites are grouped in 149 sections of the Qhapaq Ñan and contain 314 associated archaeological sites.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (July 2013) annex 3, it is also a *heritage route*.

1 Basic data

Included in the Tentative List

20 July 2010 (Argentina)

20 July 2010 (Bolivia)

12 April 2011 (Chile)

26 July 2010 (Colombia)

13 March 2011 (Ecuador)

13 August 2010 (Peru)

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committees on Cultural Routes, Archaeological Heritage Management, Earthen Architectural Heritage and several independent experts.

Technical Evaluation Mission

ICOMOS technical evaluation missions visited specific segments of the property within the following schedule:

25 September – 6 October 2013 (Argentina)

26 September – 8 October 2013 (Chile)

27 September – 8 October 2013 (Peru, North)

12 October – 16 October 2013 (Peru, South)

17 October – 22 October 2013 (Bolivia)

21 October – 28 October 2013 (Ecuador)

28 October – 1 November 2013 (Colombia)

25 October – 3 November 2013 (Peru, Centre)

Additional information requested and received from the State Party

ICOMOS sent a letter to the six States Parties on 24 September 2013 requesting additional information in form of an inventory or list of all individual component sites, the justification of the respective contribution of each component site to the Outstanding Universal Value of the property and one map or at least one map per State Party at a scale of approximately 1:1.000.000. The States Parties were requested to provide one shared response to the issues raised. The States Parties provided additional information on 22 November 2013, which included a revised inventory of component sites, tables and explanatory notes on the validity of criteria in relation to

each Qhapaq Ñan segment and apologies that maps could not be provided as requested.

On 16 January 2014 ICOMOS addressed the States Parties with a second additional information request, suggesting a reduced selection of component sites and requesting further dialogues as to whether such reduced selection could seem feasible to the States Parties. The letter also requested additional information concerning the overarching management system and suggested a meeting to discuss the revised selection of components with the technical experts. The States Parties responded by letter on 12 February 2014 expressing concerns about the selection methodology applied to reduce the selection of site components but welcoming the idea of a meeting.

A first constructive meeting between ICOMOS and the representatives of the States Parties' Permanent Delegations to UNESCO was organized on 28 Friday February 2014 at the World Heritage Centre. The technical experts of the participating States Parties attended the meeting via online conferencing and made significant contributions. As a result of the meeting, an additional meeting with physical presence of the technical experts was suggested for 7 March 2014. It was agreed that this meeting would not provide for additional information to be presented but allow exchange on the methodologies applied for site selection and if appropriate revise the reduced list suggested by ICOMOS.

On 28 February 2014 ICOMOS also received additional information in response to its letter of 16 of January 2014. Following review of the additional information received, a final meeting took place on 7 March 2014, which included 11 technical experts and representatives of the Permanent Delegations of all participating States Parties as well as 6 representatives of ICOMOS. The meeting concluded in an agreed upon selection of property components. This selection was further confirmed in writing by all 6 States Parties which were received between 11 and 17 March 2014. The additional information provided at all stages of this exchange process is included under the relevant sections below.

Date of ICOMOS approval of this report

7 March 2014

2 The property

Note: Due to limitations on the length of evaluation reports, not all sites in this large series have been described in this report. In the nomination dossier and the additional information, each of the segments is described in text and images.

Description

The serial nomination of Qhapaq Ñan comprises a complex communication, trade and transport system which has been presented as a heritage route. As such it is based on its individual elements of architectural and engineering works but also includes the social, functional

and political relations between the different elements which have been nominated in 149 segments and 291 component sites.

The architectural expressions which are integrated in the Qhapaq Ñan have been divided into typologies under three distinct categories: (1) architecture associated with the road, (2) architecture of religion and power and (3) domestic architecture. The architecture of the road types is predominantly concerned with the technology of the road network construction as well as the auxiliary structures and their construction techniques, for example bridges either suspended on logs or cut in stone, terrace construction (andenes), as well as road surface and drainage channel design techniques. The roadside infrastructure includes storehouses (qolqas), signposts or markers and other elements that were created in other contexts but were referred to as reference points such as rock arts or petroglyphs.

The architecture of religion and power integrates buildings for administrative or gathering purposes, kallankas (large rectangular buildings), or palaces and smaller public buildings. The administrative and functional relations of the Qhapaq Ñan further recognize several different centres in the governance hierarchy. Religious structures are often temples or usnus (ceremonial platforms) but also chullpas (funerary towers) and include the often very sophisticated architecture of summit ceremonial sites. Smaller public buildings like tambos (wayside inns) or pukaras (fortresses or administrative structures) can be found at regular intervals and further orthogonal wayside structures the use of which could not be fully clarified but may be related to cattle gathering have also been included.

In the category of domestic architecture emphasis is given to villages and residential structures which developed alongside the Qhapaq Ñan. Here the predominant architectural types are kanchas (the most basic architectural residence unit), masmas (gabled houses with supporting pillars) and various forms of smaller dwellings described in examples observed along the road network. These also include the characteristic bohíos, small dwellings with circular floor.

In terms of road construction typologies the analysis in the nomination dossier distinguishes unobstructed natural and paved sections, sections which are terraced to pass along steep slopes, walled sections either on one side for stabilization on or both sides for protective purposes. Other road sections have been excavated from the rock surface, structured with stairs to allow for gradual climbs along slopes, elevated sections mostly based on stone elevation in sometimes flooded or swampy areas.

The following sections describe the key Qhapaq Ñan segments in the territories of the participating States Parties. The description highlights some of the different elements rather than aiming to present the complete selection of elements presented:

Argentina

Argentina presents five key sections to the Qhapaq Ñan proposal which are (1) Santa Ana – Valle Colorado, (2) Santa Rosa de Tastil – Potrero de Payogasta, (3) Potrero de Payogasta – Los Graneros de la Poma, (4) Los Corrales – Las Pircas, and (5) Ciénaga de Yalguaraz – Puente del Inca. These sections are presented in 20 sub-sections, 26 component sites and include 50 significant testimonies of architectural and engineering works as well as 33 associated archaeological sites. The length of road in the Argentinean sections of the serial nomination amounts to 118.8 kilometres. The overall size of the Argentinean components amounts to 632.98 hectares, which are surrounded by a buffer zone of 24,114.32 hectares.

The Argentinean components provide testimony to the southernmost of the four main roads, the Qollasuyu. The name of this southern expansion, which also comprises the Chilean parts, western Bolivia and southern Peru is derived from Qollas, a powerful kingdom previously located at the Lake Titicaca Basin, which resisted and rebelled against Inca control until their defeat opened the southward expansion of the Inca Empire. The Qollasuyu was not only the largest but also most diverse of the four suyus and covered deserts as well as the highest mountain ranges included in the Qhapaq Ñan route network. Although not very densely populated, the diversity of cultural traditions and peoples posed significant challenges to the Inca administration and control.

The site components in Argentina provide specific evidence of the road network joining mining operations with central as well as regional power and consumption centres. Key products traded from here were copper and gold but also agricultural produce. In terms of technical characteristics, the road segments in Argentina range from simple or raked to variations of clear and marked paths, paved roads, in particular with stone stairways on slopes, and elements supplemented by special technical devices, such as drains or bridges.

Bolivia

One main section subdivided into 4 subsections occurs in Bolivia, which is Desaguadero – Viacha; and its subsections: Desaguadero – Guaqui, Guaqui – Tiwanacu Cantapa, Cantapa – Yanamuyu Alto, and Yanamuyu Alto – Viacha. These subsections are presented in 9 component sites and include 8 associated archaeological structures. The lengths of the road components located in Bolivia amounts to 85.67 kilometres and the 9 component sites comprise 81.33 hectares and are surrounded by a buffer zone of 94.54 hectares.

The road segments in Bolivia illustrate the integration of earlier and ancestral knowledge into the expansion of the Inca road network, in particular the advantages gained from integration of earlier knowledge and technologies developed in road construction. Of the Inca era, the Bolivian components give evidence of Tambo architecture

as well as strong evidence of ritual and ceremonial elements. The Inca influence in the Bolivian section is indicated as specifically visible in the hierarchical organization which emerged from the Inca state and which created a number of local centres, defensive structures providing protection from groups in the Amazonia region, newly built road works with significant engineering achievements of the Inca era and the strong imprint of ceremonial centres, predominantly along the shores of the Titicaca Lake.

As previously indicated for the components in Argentina, the Bolivian contribution also reflects the main road of Qollayusu in the highlands of La Paz. In engineering typology, the roads include dirt/paved roads or simple footpaths, including original pre-Incan road sections as well as pathways of compacted earth or projections.

Chile

Chile has proposed all its network segments on the level of sub-sections rather than sections of which it contributes five: Putre – Zapahuiria, Incahuasi – Lasana, Cupo – Catarpe, Camar – Peine, and Portal del Inca – Finca Chañaral. These sub-sections are presented in 34 segments according to dedicated inventory numbers, 51 component sites and include 138 associated archaeological sites. The overall length of the road components in Chile amounts to 112.94 kilometres and the component sites combined cover an area of 176.5 hectares which are surrounded by a buffer zone of 6,407.98 hectares.

Two main longitudinal routes are captured in the components of northern Chile, one leading to the Andean western slope highlands linking high plateaus and salt lakes and the second crossing lower altitudes, starting at the Arica coast and passing through the central valley towards headwaters of the Loa River. In Chile the Incas also faced great challenges, such as in the Atacama Desert, which they crossed in desire of southern mineral resources. Like the previous southern states of the Qhapaq Ñan, the Chilean components represent the extension of the Qollayusu. In terms of architectural structure they include tambos and tambillos, supply and administrative centres, strategic control posts, so-called chaskiwasis, food deposits, and places of worship.

Also in Chile, the Qhapaq Ñan integrates many pre-existing roads which were repaired or extended. While in the northern parts of the Chilean territory, the Inca governed and constructed several secondary and tertiary road connections, in the southern regions the roads were concentrated along the key routes required to ensure trade and exchange of mining products. Road typologies range from unobstructed roads to paved roads, at times with side walls or road side markers. The Chilean sections have also preserved the very characteristic milestones along the road side, in particular in remote and desert regions.

Colombia

Colombia contributes elements in one section of the Qhapaq Ñan, Rumichaca – Pasto, which it does not further divide into subsections or segments. The section is presented in 9 site components, which do not contain any associated archaeological sites. The 9 road segments combine 17 kilometres of road components and comprise an overall area of 8.42 hectares, surrounded by a buffer zone of 94.28 hectares.

In Colombia, the Qhapaq Ñan established a trade and communication network which allowed people to quickly access different altitudes of the steep landscape but also a variety of agricultural products produced in the region. The landscape is characterized by canyons in the mountainous territory as well as rocky outcrops and deep, gentle valleys. Most road segments of the Colombian components show terraced roads that were constructed over time as result of material accumulation next to initially built walls on steep slopes or segments where the path has been excavated and often cleared from the surrounding vegetation.

Ecuador

The Ecuadorian contribution differentiates between National Sections and Binational Sections shared with Perú and Colombia. Among the national sections the following are listed: Pulcas - Troya A, Pulcas - Troya B, Mariscal Sucre - El Tambo, La Paz - Quebrada Tupala, Loma Virgen – Chiquito, Juan Montalvo – Cabuyal, Píman – Caranqui, Campana Pucará – Quitoloma, Nagsiche – Panzaleo, Achupallas-Ingapirca, Palcañan Grande - Palcañan Chico, El Tambo - Honorato Vásquez, Cerro de Cojitambo (Loma Curiqinga) - Rumiurco, Pachamama – Llaqueo, Llaviuco – Llaviuco, Mamamag-Mamamag, Paredones-Paredones, Hierba Buena - San Antonio, Santa Martha - Botija Paquí, Caragshillo - Cañaro – Tuncarta, Oñacapa - Loma de Paila (La Zarza), Ciudadela - Vinoyaco Grande, Quebrada Huatuchi - Plaza del Inca - Las Aradas, Jimbura - Puente Roto, San José – Llamacanchi - Las Limas. The sections are presented as 62 site components in 28 inventoried segments and include 50 associated archaeological sites. The length of the Ecuadorian Qhapaq Ñan components amounts to 113.73 kilometres. The size of all serial components in Ecuador is 41.98 hectares, which are surrounded by a buffer zone of 70.990 hectares.

The Ecuadorian components provide evidence to the architectural and engineering capacities of the Chinchaysuyu road expansion. The sections integrate considerable altitude differences from the coastal areas in the west to the high Andean peaks in the eastern part. Here the road network perhaps best illustrates the aim to connect the main centres of political, administrative economic, defence and ceremonial purpose with the shortest road connections possible in the given terrain.

In terms of road typology, the Ecuadorian sections include terraced and plateau road segments in the higher mountain ranges as well as cleared, unobstructed and

more rarely paved roads. Several associated archaeological sites illustrate ceremonial practices including usnu sites on mountain peaks. The binational sections which connect the Ecuadorian components to the sites in Colombia and Peru distinctly illustrate the transnational aspects of this heritage route.

Peru

The Peruvian segments of the Qhapaq Ñan, consist of 8 main sections, which are subdivided into 114 subsections, which will hence not be listed here. The eight main sections are composed of Plaza Inca Hanan – Hauk'aypata, Cusco – Desaguadero, Ollantaytambo – Lares-Valle Lacco, Vitkus – Choquequirao, Quewe – Winchiri, Xauxa – Pachacamac, Huánuco Pampa – Haumachuco, and Aypate – Las Pircas. The segments are presented in 140 component sites in 114 inventoried sections. These also include 85 associated archaeological sites. The length of the Peruvian components amounts to 720.28 kilometres and the overall territory comprised in the property boundaries is 11,406.95 hectares. These are surrounded by buffer zones of in total 663,069.68 hectares.

The Peruvian segments include the centre and core of the Qhapaq Ñan and the point of origin of the four main routes in the Hanan Hauk'aypata Square in Cusco. This centre defines the directions of the four suyus that connect the most remote parts of the Inca Empire. The central parts also best illustrate the complete range of planning of a large-scale territorial integration project and highlight many of the technologies utilized in conception, design and implementation of a road network which enables the policy of colonisation and integration of the Tawantinsuyu.

The Chinchaysuyu is the northern main branch and reaches from the Cusco valley into today's Ecuador and Colombia. The Antisuyu extends to the east and covers high plateaus and areas of the Amazon. It is only represented by Peruvian components in this serial nomination. The Qollasuyu connected the southern territories including today's Argentina, Bolivia and Chile. Finally the shortest of all suyus, the Kuntisuyu, connected Cusco westwards to the coastal areas. Also the Kuntisuyu is exclusively presented in the Peruvian components of this nomination.

The Peruvian component sites illustrate the most significant administrative centres in the heart of the Peruvian empire but also integrated the greatest variety in road and especially bridge construction technologies. The variety of typological features in architectural and engineering achievements is too great to list these in more detail. However, it can be noted that these segments present the skill and mastery of the Incan state system and its governance project in creating the Qhapaq Ñan, which not only enabled the expansion of the empire but also stabilized the state internally and provided its lifeline in trade, communication, administration and defence.

History and development

Since the 3rd millennium BC urban societies based on agriculture had been established in the central Andes as result of the development of irrigation systems which allowed for use of the often scarce water resources. Exploitation of mineral resources soon allowed for the production of metal tools and knowledge about organic fibres found in the natural resources for the production of textiles. Significant changes occurred in the region from the 6th century onwards when a civilization started to emerge around a spiritual centre and a distinctive hierarchical power structure, with primary and secondary chiefs alongside the common population. A severe prolonged agricultural crisis occurred in the 6th century due to climate change phenomena and disrupted regional and local rule and settlement patterns by mobilizing people to seek better living conditions, causing wars among different groups and territories. The Wari turned out most successful in these events and established their capital in Ayacucho as well as gaining access to sufficient agricultural resources. This allowed for the establishment of a first reign, which covered a larger region.

Another large empire pre-existing the Inca expansion is the one of Tiwanaku, which covered the present day territories of Bolivia, southern Peru and Chile and grew from 300 CE onwards towards its height in the 11th century. The Tiwanaku empire can however not be seen as a uniform governance system. It was rather a structure of hierarchies which involved local systems and identities which become part of the larger political system. In contrast to the later Inca Empire the Tiwanaku was based on its ability to encompass multiple political systems. Also in the northern Andes and western coastal regions numerous and diverse Andean societies preceded the Inca expansion and the integration of their infrastructure allowed for the fast expansion of both the Qhapaq Ñan and the Inca State.

The Incas started as no more than a tribal group based around the River Watanay, one of several hundred tribal groups who continued to regularly engage in warfare over territory. They directed their first conquests against Calca, situated north of Cusco and the Yucay Valley. Following this the Inca managed to obtain control of Cusco, a well established regional centre under Wari rule. They continued to expand eastwards along the high mountain plateaus towards the Titicaca Lake. The people of Charcas, Soras, Carangas, Caracaras, Lipes and Chicas who lived in the eastern valleys and the Bolivian high plateau and were fully incorporated by the Incas at this early stage.

The exact events that led to the formation of the Inca State remain disputed among archaeologists and historians. Likely scenarios highlight that the attack on Cusco by the Chancas, a political unit that had its centre in Andahuaylas at the end of the Wiraqocha government allowed the Incas to rise and soon take over its rule. The first key expansion was then started by Pachakuti, who occupied the territories of the Chancas, Soras, Lucanas and other neighbouring nations. From the middle of the

15th century onwards, the Inca territorial possessions were larger than those of any earlier political unit on the continent as well as any other political unit of their time.

The following ruler Topa Inca incorporated the powerful Chimor dominions on the north Peruvian coast. The northern border at this time reached closed to Quito in Ecuador, the southern to the Maule River in Chile. At the time of the eleventh Inca, Wayna Qhapaq, the territory was further expanded into northern Ecuador and south of Colombia. Through these expansions the Tawantinsuyu, soon incorporated the so-called four corners of the world in its influence and pacified lands across a large continent paving the way for coexistence of different people and cultural traditions. This vast expansion happened in little more than one century, which lasted most likely from 1430 to 1532. During this century, the Inca succeeded in uniting the different political entities, multiplied their agricultural and mining resources and integrated the economic and social achievements in a territory expanding more than 5,000 kilometres from north to south. Cusco was the centre of the political, administrative, social and military power of the Incas. The Inca rule was supported by a State Council of representatives of the people that had been subdued, at least one chief for each suyu.

The Incas pragmatically established diverse approaches to managing the wide territories which were controlled by use of arms, diplomacy and establishment of critical alliances. After occupying a territory the administration would conduct a census of people, land and products to judge the potential benefits of the region and calculate the tax incomes. Military defence service was based on the principle of mita, a concept of rotation according to which different groups would be responsible for defence at different times. The Inca economy was based on a system of vertical control, according to which the various ecological systems at different altitudes were managed in similar patterns.

In political and administrative terms, the Inca created a monarchy like ruling class, where the key power lay in the figure of the king-like Inca as the self-proclaimed son of the sun. The Inca class, bound by wider blood ties to the ruler fulfilled all key administrative and governance positions. A third hierarchical level in society was formed by the so-called kurakas, lords of the dominated regions who represented the local people and were associated to the Inca regime. They retained control in the regions and created a more indirect form of Inca governance.

Although the Qhapaq Ñan is often referred to as a key element of the political, administrative, communication and defence structure of the Inca State, much of it already existed before the Inca occupied the respective territories. Two main roads ran along the Tawantinsuyu, the first along the lower coastal areas and the other on the highlands and mountain plateaus. Both were connected by several transversal roads integrating major centres into the network. While the Inca strengthened, maintained and expanded these roads, the new constructions were often networks of secondary roads which linked all the different

Tawantinsuyu populations. At specific intervals along the road and depending on the geography, the Inca constructed structures for the storing of food and other articles and for the refuge of traders and travellers. The largest and best supplied tambos were located in the great centres along the road.

The road network of the Qhapaq Ñan also facilitated the exploration of the continent by the first Spanish Conquerors who arrived from the north in 1526. The Spanish horsemen had military superiority over the Inca in terms of equipment and weapon technology. First battles between the Spanish – supported by several local groups annexed in Central America – and the Inca occurred on the territory of present Ecuador. The Spanish controlled most of the Inca territories by 1533 after they had deposed the ruler and made one of his brothers who was cooperative their assigned head of state. Three years later following some local feuds, the Spanish authorities took full control and the Inca retreated into the remote mountain territories where they ruled for another 36 years.

The end of the Inca Empire did by no means imply a reduction or destruction of the Qhapaq Ñan. It remained the key transportation, communication and trade network of the continent for the following centuries. Today, the remains of the Qhapaq Ñan road network are still used as key transportation roads across five countries, Argentina, Bolivia, Chile, Colombia and Peru and reach into the south of Colombia. Parts of it have been adapted to modern means of transport and have been asphalted or even converted to motorway. Larger sections remain in their original materials of the Inca era and are used by pedestrians and with riding animals, in particular horses, donkeys and mules.

The Qhapaq Ñan is perceived as a practical and living heritage and is maintained and managed in traditional methods by the communities which live along its route. Today, the Qhapaq Ñan remains not only as a tangible road. It continues to exist in the collective memory and is the network that links the myths and tales of the past together. It is a strong connective element of the cultural traditions and intangible heritage practices in the far-stretched regions of the former Inca Empire.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis presented compares the Qhapaq Ñan against other cultural routes, trade and communication networks at an international level. Other networks mentioned include the Camino Real de Tierra Adentro, Mexico, inscribed as a heritage route on the World Heritage List (2010, (ii) and (iv)), the Incense Route, Desert Cities in the Negev, Israel (2005, (iii) and (v)), the Route of Santiago de Compostela, Spain (1993, (ii), (iv) and (vi)), and the Sacred Sites and Pilgrimage Routes in the Kii Mountain Range, Japan (2004, (ii), (iii), (iv) and (vi)). In addition to the cultural routes, the

international comparative analysis also considers sacred mountain ranges or linear defence systems included in the World Heritage List, such as Frontiers of the Roman Empire, United Kingdom and Germany (1987, 2005, 2008, (ii), (iii) and (iv)), or the Canal du Midi, France, (1996, (i), (ii), (iv) and (vi)).

The international comparative analysis further explores the heritage routes included on tentative lists with a focus on Latin America and large scale international projects. Examples analysed include the Gold Route in Paraty and its landscape, Brazil, the Chinese Section of the Silk Road, China, the Silk Road Sites in India, Iran, Kyrgyzstan, Kazakhstan, the Quttinirpaaq in Canada, the Route of The Rivers in Guatemala, the African Slave Route, Timbo to Rio Pongo segment in Guinea, or the Huichol Route through the sacred sites to Huicuta (Tatehuari Huajuye) in Mexico. ICOMOS considers that the international comparative analysis is extensive and justifies on a principle basis the Outstanding Universal Value of the Qhapaq Ñan.

The comparative analysis of the selection of sites within the wider Qhapaq Ñan network is presented in tabular format and based on a number of different qualifiers including historic and modern research available on a road segment and its associated structures, its state of conservation and protection by national legislation as well as the existing management mechanism and potential for future investigations.

It is justified that the selection presented was qualified according to their functional, social and cultural relations to the Qhapaq Ñan, the specific road and architectural typologies illustrated as well as the administrative and legal contexts. ICOMOS understands that the Qhapaq Ñan is presented as a cultural itinerary for which according to annex 3 of the *Operational Guidelines* the cultural significance is to be judged as a whole, where the route has a worth over and above the sum of the elements making it up and through which it gains its cultural significance. However, given that this route has been presented as a serial nomination of 291 component sites, ICOMOS considers that the comparative analysis needs to qualify the specific contribution of each component in line with paragraph 137 of the *Operational Guidelines*, which stipulates that each component part should contribute to the Outstanding Universal Value of the property as a whole in a substantial, scientific, readily defined and discernible way.

In response to a request for additional information by ICOMOS the States Parties submitted further information on the specific contribution of each component site to the overall Outstanding Universal Value. Despite this information the discernible contribution of a smaller number of component sites did not seem clear, which was further discussed in the meetings arranged with the technical experts in Paris. Following these exchanges, ICOMOS can confirm that the comparative analysis justified the Outstanding Universal Value of the large

majority of component sites. The few sites, which could not be qualified at this stage in relation to their contribution to the Outstanding Universal Value, have been agreed to be excluded, in some cases with the potential of future additional information provided justifying their inclusion at a later stage. These sites are the segment Vilcanota - La Raya (PE-CD-05/C-2011), the segment Colquejahuá-Pacaje (PE-CD-07/C-2011), the segment Walla – Kintama (PE-OL-20/C-2011), including its five associated archaeological sites, the segment Toroyoq – Kutacoca (PE-VCH-25/CS-2011) including its 4 associated archaeological sites, the segment Ipsas Grande (PE-XP-28/C-2011), the segment Quebrada Escalera (PE-XP-29/C-2011), the segment Pachamama – Llaoca (EC-PL-15/CS-2011), the segment Oñacapa – Loma de Paila (La Zarza) (EC-OL-24/CS-2011) and the segment Jimbura – Puente Roto (EC-JP-27/C-2011).

In ICOMOS view it has been illustrated that the agreed upon selection of 273 component sites in 137 sections are the best representation of the specific phenomena the Qhapaq Ñan has to offer. The nomination file offers the impression that the choice made is rather exhaustive in presenting all segments and sections of the Qhapaq Ñan which are in acceptable state in terms of conservation and authenticity and which the concerned States Parties intend to preserve. It can therefore be concluded that apart from the excluded segments indicated for potential future integration, serial additions will be very limited.

ICOMOS considers that the comparative analysis justifies consideration of the Qhapaq Ñan as a serial property and that the additional information provided in the course of an exchange process justifies the inclusion of 273 selected site components.

Justification of 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:

- The Qhapaq Ñan, Andean Road System is an extraordinary road network through one of the world's most extreme geographical terrains used over several centuries by caravans, travellers, messengers, armies and whole population groups amounting up to 40,000 people.
- Qhapaq Ñan by sheer scale and quality of the road, is a unique achievement of a built network linking the snow-capped mountain range of the Andes, at an altitude of more than 6,000 metres, to the coast, running through hot rainforests, fertile valleys and absolute deserts.
- The Andean Road System achieved mastery in the architectural and engineering technology used to resolve myriad problems posed by the Andes variable landscape by means of various road construction technologies, bridges, stairs, ditches and cobblestone pavings.
- The Qhapaq Ñan was the lifeline of the Tawantinsuyu, linking in a unique fashion towns and centres of

production and worship over a distance of more than 4,000km together under an economic, social and cultural policy in the service of the State.

ICOMOS considers that these arguments are justified and illustrate the Outstanding Universal Value of a serial property reflecting the key components of the Qhapaq Ñan. However, ICOMOS considered that these may not be justified for all 291 serial components. Following additional information exchanges with the States Parties at the request of ICOMOS, ICOMOS considers that 273 serial components clearly and discernibly contribute towards the proposed Outstanding Universal Value of the property. ICOMOS considers that the substantial, readily defined and discernible contribution to the overall Outstanding Universal Value by each component site, as required according to paragraph 137b of the *Operational Guidelines* has not yet been justified for 13 property components and it was agreed upon with the concerned States Parties, that these will not be included among the sites which justify Outstanding Universal Value at this stage.

Integrity and authenticity

Integrity

In the context of this serial nomination, integrity has to be judged on the basis of whether the collection of serial components has the capacity to communicate the complete range of aspects required to illustrate the proposed Outstanding Universal Value, and on whether each of these components has the required completeness and intactness to fully contribute the aspect it represents. ICOMOS considers that on the basis of the documentation provided in the nomination dossier and the additional information provided, the number of the serial component sites is exhaustive enough and represents the variety of typological, functional and communicative elements, which allow for a full understanding of the historic and contemporary role of the Qhapaq Ñan. The overall series accordingly contains an appropriate number of elements to communicate the key features of the heritage route, despite the fact that these are fragmented in individual site components, which represent the best preserved segments of the previously continuous road network.

Based on its eight evaluation missions ICOMOS notes that for some of the serial components presented integrity cannot be fulfilled in regards to the completeness or intactness of the individual serial components. In several sections, the structures associated with the Qhapaq Ñan segments, including the road segments themselves, are in various states of neglect, and although they are repaired as needed to keep the road passable by the local populations do not always meet the requirement of integrity, as being intact and free of threats. ICOMOS observed waste deposits on road segments or in historic structures, illicit material (stone) extraction from the historic pathway cobblestones, general neglect and consequent decay, road surfaces covered by dirt, soil or

plants, silted or waste filled drainage channels as well as various other phenomena.

In a few cases, infrastructure developments have impacted on the integrity of the site components. In particular major highways or regional road networks bordering Qhapaq Ñan segments limit their ability to communicate the former remoteness of the road network. ICOMOS has accordingly suggested excluding a small number of components from the current selection in which the condition of integrity could not be easily confirmed. In this process, much attention was given to the fact that no sites were excluded which presented unique functional or typological elements which could not be found in other sections as such exclusion would have resulted in a reduction of the overall integrity of the series. The site components suggested to be excluded for concerns regarding their integrity are the segment Ciénaga de Yalguaraz-Puente del Inca, Tambillitos (AR-TAM-19/CS-2011), the segment Desaguadero – Viacha; Yanamuyu Alto Viacha; Quimsa Cruz – Ilata (BO-DV-04/CS-2011), the segment Colquejahuá-Pacaje (PE-CD-07/C-2011) to include the Apacheta structures, the segment San Agustín de Callo – Nagsiche – Panzaleo (EC-NP-10/CS-2011) and the segment Oñacapa – Loma de Paila (La Zarza) (EC-OL-24/CS-2011) to include the sacred site to which the road section provides access.

For several of the other site components in which the condition of integrity remains vulnerable, ICOMOS recommends that the States Parties develop criteria which illustrates intactness benchmarks defined in relation to the different technological and architectural categories identified and the different geographical regions and levels of remoteness. According to these benchmarks, the condition of integrity should be monitored in the future to ensure that intactness can be guaranteed in the long term and that the site components remain free from threats which may reduce the condition of integrity.

ICOMOS considers that the reduced selection of 273 site components agreed upon with the States Parties concerned presents a rich spectrum of various aspects which were related to the Qhapaq Ñan. Although fragmented, these sections allow for the perception of continuity over large distances and varying geographic terrains and accordingly present a significant percentage of elements which allow communicating a formerly continuous network in separate serial component sites. However, the distinct relations between different sites in terms of continuity or fragmentation only became clear during the technical expert meetings arranged at the request of ICOMOS and was made difficult in the nomination dossier by the fact that maps at appropriate scale which would allow for consideration of the interrelation between the components in the wider landscape of the Andes, could not be provided by the States Parties despite ICOMOS' request. Since ICOMOS learned during the consultation meeting that such maps are in fact available and a GIS system exists which allows the superimposition of the selected site components on various scales of maps and aerial photographs, ICOMOS

recommends that these maps are submitted to complete the documentation of the Qhapaq Ñan to allow for better future management and monitoring under the World Heritage system.

ICOMOS considers that the reduced serial selection of 273 site components in 137 sections of the Qhapaq Ñan meets the condition of integrity but remains very vulnerable in a number of cases. ICOMOS recommends that the condition of integrity is carefully monitored to retain a sufficient state of intactness of all property components.

Authenticity

The authenticity of the sites and segments is in the majority of cases very high and ICOMOS notes the generally limited amount of inappropriate human intervention and adequate maintenance. The nominated features retain their form and design and the variety of specific features and types presented in the nomination facilitate communication of the overall form and design of the network. The materials used are mainly stone and earth, with stone type varying from region to region, and repair and maintenance measures, where necessary are undertaken in traditional techniques and material. These are predominantly driven by the local populations, who remain knowledgeable of traditional road management techniques and who are the key partners in maintaining the roadbed and associated features.

At sites which have been of archaeological or cultural interest professional stabilization and restoration techniques have been applied but also these have been implemented with great respect to the original materials and substance. On the road sections, local management systems govern decision-making processes, often with a large degree of community involvement and these have retained authenticity as reuse of the historic materials remains more efficient than the introduction of new materials. The setting and visual surroundings of most Qhapaq Ñan sections as well as associated archaeological sites is very good and in many cases pristine. For several summit ceremonial sites, setting means a horizon range of 360 degrees with kilometres in all directions. The Qhapaq Ñan also passes through very beautiful landscapes, the beauty of which depends on fragile associated view sheds which need to be monitored to ensure that any modern developments in the landscape have as minimal visual impact as possible. Several sites are difficult to access and their remoteness has over centuries preserved them in a very good condition. However, there are occasional exceptions pointed out below and ICOMOS recommended that the cases concerned may have to be excluded from the nomination proposal.

The predominant location of Qhapaq Ñan segments in very rural settings has left them devoid of noticeable modern intrusions. Associated intangible values and management practices remain very strong, especially in the most remote sections of the road network and

contribute to the safeguarding of authentic management mechanisms. Finally, the information sources of spirit and feeling as well as atmosphere are very relevant to this nomination proposal as many of the communities have strong associations to the Qhapaq Ñan and continue to remain guardians of some of the ceremonial structures.

ICOMOS hence considers that the overall condition of authenticity is satisfactory and that the revised series of 273 component sites meets the condition of authenticity. A number of individual sites however illustrate aspects which reduced its authenticity and which may have to be addressed. These sites are the segment Desaguadero – Viacha; Yanamuyu Alto Viacha; Quimsa Cruz – Ilata (BO-DV-04/CS-2011) where motorized traffic has led to functional and material changes in the surface of the Qhapaq Ñan road and also limits the intactness of the section as described under integrity above. In the case of component Ciénaga de Yalguaraz-Puente del Inca, Tambillitos (AR-TAM-19/CS-2011) the contemporary highway construction has limited the authenticity of setting.

ICOMOS considers that the authenticity of the whole revised series of 273 component sites has been justified.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity of the whole series have been justified, although the condition of integrity remains very vulnerable in a number of site components and need to be carefully monitored in the future.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (ii), (iii), (iv), (v) and (vi);

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the States Parties on the grounds that the Qhapaq Ñan constitutes the largest continuous archaeological network remaining. The creation of such a large communication, trade and defence network by the Inca Empire was one of native America's greatest cultural achievements and is a masterpiece of human creative genius.

ICOMOS considers that mastery might be an applicable term for the overall role of the Qhapaq Ñan in linking one of the largest Empires ever existing, in particular in view of its functional relation and complexity of use. However, given that many existing roads and structures of Pre-Inca origin have been integrated into this network it has not been demonstrated how the Qhapaq Ñan could be considered to represent a specific creative impetus at a moment of time, rather than a continuous and gradual development of a network over several centuries, which at its height supported a sophisticated governance and trade system. ICOMOS considers that the specific mastery of the Qhapaq Ñan lies rather in its being a unique testimony of the Inca Empire and its facilitation of communication

and exchange. Both aspects are better reflected in other criteria.

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;

This criterion is justified by the States Parties on the grounds that the Inca network was based on ancestral knowledge of Pre-Inca time which was combined with the local specific community knowledge to inform and enable a state organizational system, the Qhapaq Ñan, which facilitated the exchange of social, political and economic aspects of imperial policy.

ICOMOS considers that the Qhapaq Ñan exhibits important processes of interchange of goods, communication and cultural traditions within a cultural area of the world and allowed for the creation of a vast empire of up to 4,200km in extension at its height in the 15th century. Along the Qhapaq Ñan segments, roadside structures provide lasting evidence of valuable resources and goods traded along the network, such as precious metals, muyu (spondylus shell), foodstuffs, military supplies, feathers, wood, coca and textiles transported from the areas where they were collected, produced or manufactured, to Inca centres of various types and to the capital itself. Several communities, who remain custodians of components of this communication network, are living reminders of the exchange of cultural values and language.

ICOMOS considers that this criterion has been justified for the selected series of 273 site components in 137 Qhapaq Ñan segments.

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 States Parties on the grounds that the Qhapaq Ñan is an exceptional and unique testimony to the Inca civilization based on the values and principles of reciprocity, redistribution, duality and a decimal organization which constructed a singular universe called Tawantinsuyu. The States Parties further highlights that this testimony was the life giving support of the Inca Empire integrated into the Andean landscape which embodied and summarised thousands of years of cultural evolution and was an omnipresent symbol of the Empire throughout the Andes.

ICOMOS considers that the Qhapaq Ñan is a unique testimony to the Tawantinsuyu, leading into the four parts of the world. The Qhapaq Ñan remains an exceptional and unique testimony to the Inca civilization and its values and principles of reciprocity, redistribution and duality.

ICOMOS considers that the arguments presented by the States Parties apply in that the Qhapaq Ñan provides an exceptional and unique testimony to Inca Empire and illustrates thousands of years of cultural evolution which became an omnipresent symbol of the Empire's strength and extension throughout the Andes.

ICOMOS considers that this criterion has been justified for the selected series of 273 site components in 137 Qhapaq Ñan segments.

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 States Parties on the grounds that Qhapaq Ñan, Andean Road System, contains several elements with characteristic features in architectural typology, in terms of its walls, roads, steps, roadside ditches, sewage pipes, drains, etc., with construction methods that vary according to location and regional context. The States Parties further highlight that many of these elements were standardized architectural elements for the control of equal conditions along the road network.

ICOMOS considers that rather than the individual architectural elements but the complete Qhapaq Ñan, Andean Road System has to be considered as outstanding example of a type of technological ensemble which despite the most difficult geographical conditions created a continuously and functioning communication and trade system with exceptional technological and engineering skills in rural and remote settings. Several elements in various sections illustrate characteristic types of typological features in terms of walls, roads, steps and stairways, roadside ditches, sewage pipes, drains, etc., with construction methods unique to the Qhapaq Ñan. This uniqueness is often further stressed in specific approaches developed for particular geographical terrains and materials available in each region. ICOMOS further agrees with the statement presented by the States Parties that many of these typological elements were standardized by the Inca State, which allowed for the control of equal conditions along the road network and provides unity to the features all over the empire.

ICOMOS considers that this criterion has been justified for the selected series of 273 site components in 137 Qhapaq Ñan segments.

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 States Parties on the grounds that Andean civilians achieved high rates of

productivity and thus sustained the vast populations in multiple environments. It is argued, that the basis of this successful sustenance system was directly linked to the possibility of storage, direct access to various resources, a tax on work, shifts and relations between the core and periphery based on reciprocity and redistribution. The States Parties further illustrate that the Qhapaq Ñan is linked to areas of important biodiversity values.

ICOMOS considers that what is described under this criterion refers to a holistic system of knowledge and service exchange, including of skills, natural resources and agricultural products, rather than an outstanding example of land-use or human settlement. The aspect described is however valid but might be better reflected in the exchange of human values over a cultural area which is captured under criterion (ii). ICOMOS considers that the Qhapaq Ñan does not qualify this criterion.

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 States Parties on the grounds that the Qhapaq Ñan continues to connect the communities residing in the area today and continues to be used as a road and means of transport, which keeps its memory and cultural practices alive. Among the intangible associations language and oral tradition feature prominently in that it lives on as part of the Tawantinsuyu vision of the world and is related to the traditions and ancestral techniques passed down from generation to generation.

ICOMOS considers that the associated living traditions and beliefs are in fact strong and that this criterion has high potential to be justified. However, ICOMOS considers that these associated living traditions and beliefs need to be better defined for each serial component to ensure that this criterion can be justified for the overall series.

ICOMOS considers that this criterion has not been justified for the whole series at this stage.

ICOMOS considers that the serial approach is justified but ICOMOS considers that the reduced selection of 273 component sites in 137 segments is appropriate to represent the Outstanding Universal Value.

ICOMOS considers that criteria (ii), (iii) and (iv) have been justified for the series of 273 serial components in 137 segments, including 303 associated archaeological sites. ICOMOS considers that this series meets the condition of integrity and authenticity but that integrity remains vulnerable in several components and requires constant monitoring.

4 Factors affecting the property

One of the threats most often occurring to the road segments of Qhapaq Ñan stems from agriculture or more precisely the accelerated ploughing/tilling of soil in the immediate vicinity of the historic road segments. Some of this is done by traditional agricultural techniques such as wooden plough, but much is now ploughed by vehicular equipment such as tractors. Whereas farming is an acceptable and traditional way to utilize adjacent lands within the buffer zone, caution still needs to be taken to ensure that significant portions of the historic road are not irreversibly impacted.

In important landscape settings of the Qhapaq Ñan network, incompatible visual intrusions are a considerable risk factor. Several examples of structures creeping into the previously pristine cultural landscapes through which the cultural route passes, have been observed by ICOMOS. These intrusions are most often seen in form of communication towers and transmission lines. In the management of the property it should be considered that the night sky has to be seen as part of the visual setting, in particular at and around ceremonial sites. Local communities continue to utilize the star constellation in the night sky to mark their lunar calendar constellations, which can be considered part of the associated living traditions to the property. ICOMOS considers that light pollution of the night sky by artificial lighting introduced by infrastructure developments must be strictly controlled.

In some sections of the Qhapaq Ñan mining of metals and minerals continues to be a risk for the setting but also the illicit extraction of stone from the road network structures reutilized in contemporary buildings has been observed. Urban development and encroachment remains a continuous risk for road segments which are located in the proximity of urban agglomerations or human settlements and this risk is larger the closer the segment is located to one of the key urban centres along the Andean road system.

The States Parties provided tables which analyse for each component site the impact of development pressures including potential urban and rural expansion, infrastructure works, unauthorized or inappropriate usage as well as mining and other resource extraction activities. ICOMOS notes that single or several of these factors are said to be relevant for a number of sites according to the information provided and recommends that the impact of these adverse effects is constantly monitored and evaluated to ensure the integrity of these serial components.

ICOMOS considers that the main threats to the property are agricultural expansion, urban and infrastructure development and visual intrusions in often pristine landscapes. Among the natural factors wind and water erosion as well as landslides and avalanches have to be seen as major risks.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The serial nomination is presented in 291 serial components in 149 segments, of which ICOMOS and the concerned States Parties agreed to consider a reduced selection of 273 site components in 137 sections for potential inscription on the World Heritage List. The initial submission suggested an overall area of 11,406.95 hectares surrounded by buffer zones of in total 663,069.68 hectares. Each serial component is surrounded by a buffer zone and in some cases several serial components share a mutual buffer zone.

With the reduced selection of 273 site components in 137 segments of the Qhapaq Ñan, the total property size has been slightly reduced to 11,296.97 hectares, and the total surrounding buffer zone now measures 627,019.30 hectares. The remaining total road length of the selected sections of the Qhapaq Ñan amounts to 697.45 kilometres.

ICOMOS recommends that boundary changes are made for a small number of component sites. For the separate segments of Cerro Jircancho – Cerro Torre (PE-HH-52/CS-2011) and Maraycalla – Inca Misana (PE-HH-53/CS-2011), which already share a common buffer zone it is recommended to extend the property boundaries which are currently defined by management considerations to become one long segment combining both smaller sections currently designated.

In other cases, ICOMOS recommends minor revisions to the buffer zone to ensure the future protection of the properties. For the segment of Angualasto (AR-ANC-13/CS-2011) it is recommended to extend the buffer zone where it currently coincides with the site boundaries to include the nearby hills and the road structures. For the archaeological sites of Molle (PE-XP-38/S-2011) and Huacán de Cieneguilla (PE-XP-39/S-2011) ICOMOS recommends to establish a shared buffer zone, to support their historic interrelation and preserve the shared landscape features in the wider surroundings. The buffer zone currently discussed and agreed upon with the community at segment Pancca-Buena Vista-Chuquibambilla (PE-CD-06/CS-2011) requires to be legally formalized.

In the long-term, ICOMOS recommends to review the concept of buffer zone designation as parallel strips alongside of road segments towards more dynamic buffer zone designations which take into account the features and view sheds of the surrounding landscape. In reference to the importance of the landscape features around the Qhapaq Ñan segments, ICOMOS recommends to conduct Heritage Impact Assessments for any development which would be visible from a property component, regardless of whether the development location is formally designated as a buffer zone.

ICOMOS considers that the boundaries and buffer zones of the revised selection of 273 serial components are adequate. ICOMOS recommends an extension to combine two site components as well as revisions to or formalization of four buffer zones to provide increased protection for these serial components.

Ownership

The ownership situation of the serial components is presented in tabular format and divided into private and public ownership models. In several participating States Parties, the overwhelming form of ownership is public. In Peru the percentage of private property among the sites put forwards is significant.

Argentina

In Argentina the majority of the included 13 property components are in public ownership. Exceptions are formed only by the segments Las Peras-Sauzalito (AR-PPG-05/CS-2011) and Ciénaga De Yalguaraz-San Alberto (AR-CYSA-17/CS2011), which are exclusively in private ownership. In two additional segments, the property is shared by public (municipal) and private owners, which are Santa Rosa De Tastil (AR-SRT-02/CS-2011) and Abra De Chaupiyaco-Las Capillas (AR-ACHC-03/CS- 2011). Two other segments have constitutional ownership, which means that the property cannot be owned as in the case of Quebrada Grande-Las Escaleras (AR-QGE-01/C-2011) and Los Corrales-Las Pirca (AR-LCLP-10/CS-2011).

Bolivia

All 3 segments contributed by Bolivia are exclusively in public ownership.

Chile

All 34 segments contributed by Chile are exclusively in public ownership.

Colombia

All 9 segments contributed by Colombia are exclusively in public ownership.

Ecuador

All 24 segments contributed by Ecuador are exclusively in public ownership.

Peru

The majority of properties in Peru are under constitutional designation and hence do not have formal owners. However, Peru also contributes two 100% privately owned properties as well as partially privately owned, which often refers to the traditional guardian ownership of local communities. The two complete segments in private ownership are Pancca- Buena Vista, Chuquibambilla-Qhesqa (PE-CD-06/C-2011), Q'omer Moqo- Nicasio (PE-CD-08/C-2011).

A number of properties are in complete public ownership, either at the municipal, provincial or regional level. These are the Plaza Inca Hanan Hauk'aypata (PE-PH-01/CS-2011), the segment Paucarcol- La- Yanamayo (PE-CD-

09/CS-2011), Kancharani-Andenes (PE-CD-10/C-2011), Sipampa-Pomata (PE-CD-13/C-2011), Arbol- Era- Parcco Chua Chua (PE-CD-15/C-2011), Huacahuasi – Tambohuaylla (PE-OL-16/CS-2011), Inca Chaka – Qollotayoc (PE-OL-17/C-2011), Choquecancha - Killa Khawarina (PE-OL-18/CS-2011), Paucarpata-Ichuka (PE-OL-19/CS-2011), Tawis - Puente Ollanta (PE-OL-21/CS-2011), Inca Mach'ay-Samarinapata (PE-VCH-23/CS-2011), Kutacoca-Choquequirao (PE-VCH-26/CS-2011) and Puente Q Eswachaka (PE-PQ-27/C-2011).

Protection

As a transnational serial property, the Qhapaq Ñan covers the jurisdiction of six countries at national and local levels, including, in one instance, regulations of seven regional authorities. A number of international joint declarations and Statements of Commitment have been signed by the participating States Parties between 2010 and 2012 which highlight their agreement to protect the segments of the Qhapaq Ñan at the highest possible level. The protection put in place in light of these agreements shall be described for the respective States Parties below:

Argentina

In Argentina the serial components have been protected according to the Law for the Protection of the Archaeological and Paleontological Heritage, which considers “movable and immovable property or vestiges of any nature located on the surface, underground or submerged in waters (...) providing information about socio-cultural groups that inhabited the country.” The law makes obligatory after designation that all types of exploration and research carried out on site or any kind of other development planned in its vicinity requires authorization. Due to the federal governance of Argentina, the formal protection through gazetting of the sites was issued at the provincial level which is the highest national authority to provide such protection, in which the national legislation acts as an overall framework. ICOMOS considers that the legal protection of the serial components in Argentina is adequate.

Bolivia

In Bolivia, legal protection of the Qhapaq Ñan segments is established in direct reference to the 2008 Political Constitution of Bolivia's Plurinational State, which establishes that the “cultural heritage of the Bolivian people is inalienable, non-seizable and imprescriptible”. Supreme Decree No. 05918 of 1961 remains the reference framework for the implementation of the constitution in this context and regulates the designation of artistic, archaeological, historical and monumental heritage as national monuments. The 3 segments contributed by Bolivia have been designated as such and ICOMOS considers that they are accordingly protected at the highest national level.

Chile

In Chile, the protection of cultural heritage is regulated by National Monument Law 17.288 of 1970. Following the provisions of this law, the Qhapaq Ñan segments have been designated as archaeological sites and in a few

cases as national or historic monuments, all of which range on the same highest national level. The law includes direct references to the protection of the visual and social context of archaeological sites in stipulating that the environmental character of certain populations or places with archaeological ruins needs to be maintained. The legislation provides sufficient protection to the historic remains by prohibiting removal, destruction, excavation, transferral of ownership, acceptance of deterioration or modification in any manner and well as high scrutiny or approval procedures for excavations or scientific interventions.

Colombia

In Colombia, the Constitution of 1991 defines heritage of national interest to be “inalienable, imprescriptible and non-seizable” and stipulates that such heritage resources need to be transferred into public ownership. Law 397 of 1997 and 1185 of 2008, the National Law of Culture and its latest update and addition regulate the designation of cultural heritage sites. The Law allows for any tangible property to be declared as monument, or area of historical, archaeological or architectural conservation. Following declaration the law provides guidelines concerning protection, management, dissemination and sustainability of the archaeological heritage and references to necessary changes in land-use planning. ICOMOS considers that through the protection under the Laws of 1997 and 2008 the serial components in Colombia enjoy adequate protection at the highest national level.

Ecuador

Also in Ecuador the new Constitution adopted in 2008 contains the category of “inalienable, indefeasible and imprescriptible heritage”, designated at a national level. The process of designation is identified in the so-called “Codification of the Cultural Heritage Law” of October 2004, which stipulates that immovable archaeological monuments can be designated as cultural heritage property. The undertaking of activities in violation of the provisions of the Law, which include unauthorized repair, rehabilitation, restoration or modification of the properties of cultural heritage, carries heavy penalties and pursues legal procedures. The site components which Ecuador contributes to the Qhapaq Ñan have been formally designated according to the described law and in ICOMOS’ view accordingly are subject to adequate legal protection.

Peru

In Peru, Law No. 28.296 the General Law of the Nation’s Cultural Heritage provides the regulatory framework for official heritage designation. Following its provisions, archaeological sites, monuments and a number of other categories can be declared national heritage which implies protection at the highest national level. The site components of the Qhapaq Ñan in Peru have been designated under the two categories of “pre-Hispanic archaeological monuments” and “archaeological cultural landscapes”. In addition to the national heritage designation, Peru has issued a Supreme Decree

No. 031-2001-ED, which provides preferential attention to the Andean Road System, known as Qhapaq Ñan in the investigation, protection, conservation and enhancement of the national heritage resources.

ICOMOS considers that the legal protection in place for the reduced selection of 137 segments and 273 site components is adequate.

Conservation

The serial components proposed have been inventoried during the preparation of the nomination and the nomination and its annexes contain a useful database of the serial components. As part of the preparatory surveys, the state of conservation of each site has been recorded in a two-step survey approach. In the first step an assessment of the state of conservation, vulnerability, and threats posed by the natural, cultural and social environment were recorded. This assessment is extended by analyses of the state of conservation of each component site in a second step, which will serve as a baseline for future decision-making processes regarding the type of intervention to be carried out on different serial components including preservation, restoration, upgrading, and maintenance works.

The state of conservation varies considerably between the different road segments and often decreases with the remoteness of the site. Often, roadbeds and associated features or archaeological sites do not have cyclical maintenance programs, except through interventions by the local populations to maintain their use as needed for transport and communication. Although, this may seem to lack governance and sophistication, the system has worked well over many centuries. Use of the historic road segments for vehicular or motorized traffic varies from segment to segment but poses a risk to the state of conservation in several areas. Some segments have obviously been used by vehicular traffic for decades, but this has also left its marks and does not strengthen the authenticity of the sites in question.

In a number of component sites ICOMOS observed conditions of progressive deterioration and decay of structures. Especially structures of earthen architecture seemed very vulnerable to the often difficult climatic conditions and changes over different seasons. ICOMOS recommends that conservation plans are developed for all segments which raise concern in terms of their state of conservation and further that urgent stabilization measures need to be undertaken at a number of specific sites. These include for example the bohio structures in Bohio Calle Larga (EC-PTA-02/CS-2011) or the settlement structures in Santa Rosa de Chontay (PE-XP-36/S-2011) and Angualasto (AR-ANC-13/CS-2011).

ICOMOS considers that despite the fact that active conservation activities are rare and focused mostly on the key archaeological sites, the traditional conservation and maintenance system sustained by the local population is often effective, yet also in need of support

through official agencies and conservation institutions. A few sites require urgent stabilization activities to prevent disintegration of collapse.

Management

Management structures and processes, including traditional management processes

The States Parties have designed two overarching management frameworks, one for the candidature phase of the nomination and a second that will become operational once the inscription is achieved. The preparatory management framework is said to be coordinated by the UNESCO World Heritage Centre and consists of a Management Committee composed by the Permanent Representatives of the six concerned States Parties to UNESCO. Following the inscription this international management committee will further include the Advisory Bodies and International Partner agencies.

One of the key tasks during the nomination phase of this Management Committee is to ensure the exchange of information between the States Parties and the World Heritage Centre and the Advisory Bodies. ICOMOS notes that based on its experiences in additional information requests this arrangement did not seem particularly effective in practice.

During the consultation meetings with the technical experts it became clear that the international Coordination Committee was to be replaced by regional networks among the participating States Parties to facilitate the overarching management cooperation. The State Party of Peru indicated the establishment of a technical coordination secretariat in Cusco where information will be gathered and communication to the participating states and where frequent meetings among the technical experts will be organized. ICOMOS considers such linkages of technical experts through a permanent regional secretariat more promising than an overarching management framework which would in the long-term be directed by institutions based in Paris.

Within the national contexts management systems have been developed in various degrees of formalization, some of which are being actively implemented in cooperation with the local communities and include concerns of perpetuation of the living traditions associated with the Qhapaq Ñan. The majority of these management systems appear to be systems of traditional management which have been in existence for centuries and have developed from the local community levels up to formal and informal understandings with the concerned governmental channels. However, ICOMOS considers that more discussion is needed to stress the importance of preserving the actual road trace in areas that are being cultivated by the communities and that future awareness-raising activities might be directed to these aspects.

During the ICOMOS technical evaluation missions, several local communities explicitly expressed their

interest in tourism activities which they intend to be managed and driven at the community level. ICOMOS considers that based on the complexity and partial remoteness of the serial components management coordination between local levels and the States Parties represents an enormous amount of work and planning. Several of the States Parties have successfully embarked on this task by initiating documented planning processes with community members and authorities to develop close working relationship between the local communities and the State Party representatives at the regional or provincial levels.

The territories of the Qhapaq Ñan, Andean Road System are seismically active areas and especially the architectural structures seem to be endangered by earthquakes. Floods, volcanic activity and landslides are identified as additional reasons for potential disasters. However, ICOMOS considers that the nomination presented gives little indication that adequate risk protection schemes are in place to ensure safety of humans as well as cultural resources in the event of natural disasters and that such risk preparedness and disaster management plans need to be developed, in particular for site components which include architectural structures in regions of high seismic activity.

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

An overall policy framework for the Qhapaq Ñan was created with the Management Strategy document for the Qhapaq Ñan undersigned at high level by the six States Parties on 29 November 2012. In addition to this multinational agreement management plans are intended to be developed at a regional level for each individual section of the road network. Based on training workshops for professionals in the regional administrations of each participating State Party (Paris 2009, Quito 2010, Salta 2010 and Lima 2010), management strategy frameworks were developed and taught for implementation as management plans in the different segments. The workshops further developed matrices to permanently monitor the progress of development and implementation of the Management Plan for each section of the Road.

The management strategy framework illustrates the initial implementation of key management aspects, in particular the social and participation strategies intended to enable local communities to develop owner- and guardianship of the Qhapaq Ñan nomination and its serial components. The community workshops and initiatives undertaken to this end are documented in text and image. In addition the safeguarding of the associated intangible cultural heritage elements plays a prominent role in the strategic management framework.

Limited presentation and interpretation facilities are available along the Qhapaq Ñan segments. Local communities however are more than glad to share their experiences and stories with visitors, but no systemized

method is in place to communicate the Outstanding Universal Value to the visitor.

Involvement of the local communities

Widespread attempts have been made to involve local communities in the nomination and management of the Qhapaq Ñan, which is essential given the crucial role of communities in the maintenance and use of the heritage resource. In several cases successful partnerships emerged between the State Party and the local community representatives, in particular because the Qhapaq Ñan project has always attempted to assist the communities with a lot of problems that had no more than perhaps indirect relationship with the nomination process, but that were key elements to reinforce awareness and support. Many of these problems relate to land tenure. Traditional land owners often do not have formal title deeds that prove their land ownership and have become worried in the process of preparing the nomination that investments may be intended on their lands. However, most of these concerns seem to have resolved and the process has helped to integrate the community's management system into a much wider system, helping to improve social relationships between provincial and national authorities, and local as well as indigenous communities.

Among the communities encountered during the technical evaluation missions, ICOMOS did not feel restraint or disapproval of the nomination initiative. On the contrary the community representatives were very supportive. However, given that not all communities concerned by the vast initiative could be consulted there may always be exceptions to this general impression.

ICOMOS considers that the traditional community based management in cooperation with national and regional institutions is effective and continues the management traditions and systems that have been operational for several centuries. However, ICOMOS considers that the overarching management framework and the establishment of the international technical secretariat in Cusco need to be finalized to ensure effective communication and the functionality of the overarching management framework in the future.

ICOMOS considers that the overarching international management system needs to be finalized through the establishment of a permanent technical coordination office. ICOMOS further considers that the traditional management systems at individual site level are effective but that for several serial components in particular near urban agglomerations management plans should be prepared.

6 Monitoring

Tables entitled key indicators for measuring the state of conservation are included in the nomination dossier. However, these tables contain the same information as

the property inventories which are the name of a section, location of the section, length of section and a one-time judgement on the state of conservation. These tables are followed by a number of tables showing national and international partners, including ICOMOS, which will be involved in the monitoring procedures.

ICOMOS considers that the monitoring section does not at present contain monitoring indicators and that these have to be established to allow for future systematic monitoring which is essential for a property of such size and expansion. These monitoring indicators should be developed in terms of object of study or documentation, means of measurement and benchmarks for judgement of change in condition, periodicity of the monitoring exercise, responsible institution to carry out monitoring and plans for the distribution or sharing of results among the different management levels.

ICOMOS considers that the monitoring indicators developed are not yet adequate and that the monitoring system needs to be augmented to allow for the generation of meaningful data.

7 Conclusions

The Qhapaq Ñan Andean Road system is presented with 291 component sites which are grouped in 149 sections and contain 314 associated archaeological sites, spreading over a territory of more than 5,000km. In ICOMOS' view not all of these sites illustrate the same quality level in terms of their contribution to the Outstanding Universal Value of the property as well as their state of conservation and conditions of integrity and authenticity. ICOMOS proposed to the nominating States Parties a reduced selection of component sites which in its view fulfilled the relevant criteria which would allow for World Heritage Listing and illustrated Outstanding Universal Value.

These selected serial components include sections of the Inca communication, trade and defence network as well as religious and administrative auxiliary structures and domestic architecture. Based on an initial selection suggested by ICOMOS, dialogue with the States Parties allowed for further clarification concerning the contribution of a number of component sites to the Outstanding Universal Value. This allowed for an expansion of the reduced ICOMOS selection as well as an agreement between ICOMOS and the States Parties for a selection of 273 component sites in 137 segments and including 303 associated archaeological sites to be considered as justifying Outstanding Universal Value. The overall presentation of Outstanding Universal Value for the Qhapaq Ñan is convincing and ICOMOS considers that this selection of serial components representing the Qhapaq Ñan qualifies for inscription on the World Heritage List.

ICOMOS considers that the typological framework developed for the Qhapaq Ñan is an excellent theoretical framework for the conceptualization of this nomination. ICOMOS notes that it has greatly assisted the appreciation and understanding of the different typological elements that make up the vast variety of architectural and engineering skills that the Qhapaq Ñan represents. ICOMOS further notes that functional and social relations between different components as well as the traditional management and guardianship of local communities played a decisive role in the selection of site components.

ICOMOS considers that the 273 serial components selected in 137 segments of the Qhapaq Ñan meet criteria (ii), (iii) and (iv) in relation to the cultural interchanges and trade as well as communication processes reflected by this massive road network, the testimony it provides to the organisation and administrative system of the Inca Empire as well as the exception architectural and engineering typologies illustrated for this particular stage in history which allowed for the internal cohesion of one of the largest empires ever existing.

The reduced selection of component sites meets the qualifying conditions of authenticity and integrity. However, the condition of integrity remains very vulnerable in some components and ICOMOS recommends that a revised monitoring system provides adequate focus on the regular monitoring of intactness of the site components. ICOMOS notes that the Qhapaq Ñan passes through very beautiful landscapes, the beauty of which depends on fragile associated view sheds which need to be monitored to ensure that any modern developments in the landscape have as minimal visual impact as possible.

While the boundaries and buffer zones seem adequate for an initial recognition and protection of the Outstanding Universal Value, ICOMOS recommends reviewing the general concept of buffer zone designation as parallel strips alongside of road segments towards more dynamic buffer zone designations which take into account the features and view sheds of the surrounding landscape. In reference to the importance of the landscape qualities alongside the Qhapaq Ñan road segments, ICOMOS recommends conducting Heritage Impact Assessments for any significant development which would be visible from a property component, regardless of whether the development location is formally designated as a buffer zone.

Traditional protection, management and maintenance processes which are strongly built on the participation of local communities seem effective and continue to operate as they have for several centuries. However, ICOMOS considers that the overarching international management cooperation is yet to be finalized through the establishment of an international technical cooperation secretariat which was suggested to be based in Cusco. ICOMOS recommends that the overarching management cooperation would preferably be channelled through close

links among the technical experts in the region rather than through Paris based institutions.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Qhapaq Ñan, Andean Road System, Argentina, Bolivia, Chile, Colombia, Ecuador and Peru, with exception of the following site components: Tambillitos (AR-TAM-19/CS-2011), Quimsa Cruz – Ilata (BO-DV-04/CS-2011), Jimbura - Puente Roto (EC-JP-27/C-2011), Oñacapa - Loma de Paila (La Zarza) (EC-OL-24/CS-2011), Nagsiche – Panzaleo (EC-NP-10/CS-2011), Pachamama – Llacao (EC-PL-15/C-2011), Vilcanota – La Raya (PE-CD-05/C-2011), Colquejahuá – Pacaje (PE-CD-07/C-2011), Walla – Kintama (PE-OL- 20/C-2011), Toroyoq – Kutacoca (PE-VCH-25/ CS-2011), Ipas Grande (PE-XP-28/C-2011), and Quebrada Escalera (PE-XP- 29/C-2011), be inscribed on the World Heritage List on the basis of **criteria (ii), (iii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

Qhapaq Ñan, Andean Road System is an extensive Inca communication, trade and defence network of roads and associated structures covering over 30,000 kilometres. Constructed by the Incas over several centuries, the network reached its maximum expansion in the 15th century, when it spread across the length and breadth of the Andes. The network is based on four main routes, which originate from the central square of Cusco, the capital of the *Tawantinsuyu*. These main routes are connected to several other road networks of lower hierarchy which created linkages and cross-connections. 273 component sites in 137 segments encompassing 697.450 kilometres of the Inca trail highlight the Qhapaq Ñan's architectural and engineering achievement along with its associated infrastructure for trade, storage and accommodation as well as sites of religious significance. The road network was the outcome of a political project implemented by the Incas linking towns and centres of production and worship together under an economic, social and cultural programme in the service of the State.

The Qhapaq Ñan, Andean Road System is an extraordinary road network through one of the world's most extreme geographical terrains used over several centuries by caravans, traveller, messengers, armies and whole population groups amounting up to 40,000 people. It was the lifeline of the *Tawantinsuyu*, linking towns and centres of production and worship over long distances. Towns, villages and rural areas were thus integrated into a single road grid. Several local communities who remain traditional guardians and custodians of Qhapaq Ñan segments continue to safeguard associated intangible cultural traditions including languages.

The Qhapaq Ñan by its sheer scale and quality of the road, is a unique achievement of engineering skills in most varied geographical terrains, linking snow-capped mountain ranges of the Andes, at an altitude of more than 6,000 metres high, to the coast, running through hot rainforests, fertile valleys and absolute deserts. It demonstrates mastery in engineering technology used to resolved myriad problems posed by the Andes variable landscape by means of variable road construction technologies, bridges, stairs, ditches and cobblestone pavings.

Criterion (ii): The Qhapaq Ñan exhibits important processes of interchange of goods, communication and cultural traditions within a cultural area of the world which created a vast empire of up to 4,200km in extension at its height in the 15th century. It is based on the integration of prior Andean ancestral knowledge and the specifics of Andean communities and cultures forming a state organizational system that enabled the exchange of social, political and economic values for imperial policy. Several roadside structures provide lasting evidence of valuable resources and goods traded along the network, such as precious metals, *muyu* (spondylus shell), foodstuffs, military supplies, feathers, wood, coca and textiles transported from the areas where they were collected, produced or manufactured, to Inca centres of various types and to the capital itself. Several communities, who remain custodians of components of this vast Inca communication network, are living reminders of the exchange of cultural values and language.

Criterion (iii): The Qhapaq Ñan is an exceptional and unique testimony to the Inca civilization based on the values and principles of reciprocity, redistribution and duality constructed in a singular system of organization called *Tawantinsuyu*. The road network was the life giving support to the Inca Empire integrated into the Andean landscape. As a testimony to the Inca Empire, it illustrates thousands of years of cultural evolution and was an omnipresent symbol of the Empire's strength and extension throughout the Andes. This testimony influences the communities along the Qhapaq Ñan until today, in particular with relation to the social fabric of local communities and the cultural philosophies that give meaning to relationships among people and between people and the land. Most importantly, life is still defined by links among close kin and an ethic of mutual support.

Criterion (iv): The Qhapaq Ñan, Andean Road System is an outstanding example of a type of technological ensemble which despite the most difficult geographical conditions created a continuous and functioning communication and trade system with exceptional technological and engineering skills in rural and remote settings. Several elements illustrate characteristic typologies in terms of walls, roads, steps, roadside ditches, sewage pipes, drains, etc., with construction methods unique to the Qhapaq Ñan while varying according to location and regional context. Many of these elements were standardized by the Inca State,

which allowed for the control of equal conditions along the road network.

Integrity

The series of sites inscribed as the best representation of the Qhapaq Ñan is exhaustive enough and illustrates the variety of typological, functional and communicative elements, which allow for a full understanding of its historic and contemporary role. The number of segments is adequate to communicate the key features of the heritage route, despite the fact that these are fragmented in individual site components, which represent the best preserved segments of the previously continuous road network.

For a number of site components the condition of integrity remains vulnerable and it is recommended that the States Parties develop criteria to define minimum intactness in relation to the different technological and architectural categories identified and the different geographical regions and levels of remoteness. According to these criteria, the condition of integrity should be monitored in the future to ensure that intactness can be guaranteed in the long term and that the site components remain free from threats which may reduce the condition of integrity.

To ensure that the distinct relations between different sites in terms of continuity despite their fragmentation can be well understood by future visitors, it is recommended that appropriate maps or a GIS system be developed which illustrates the functional and social relations between the different site components and highlights their role in the overall Qhapaq Ñan network.

Authenticity

The authenticity of the Qhapaq Ñan component sites is very high in that the characteristic features retain their form and design and the variety of specific well-preserved types of architectural and engineering achievements facilitate communication of the overall form and design of the network. The materials used are mainly stone and earth, with stone type varying from region to region, and repair and maintenance measures where necessary are undertaken in traditional techniques and material. These are predominantly driven by the local populations, who remain knowledgeable in traditional road management techniques and who are the key partners in maintaining the roadbed and associated features.

At sites which have been of specific archaeological or cultural interest professional stabilization and restoration techniques have been applied and implemented with great respect to the original materials and substance. On the road sections, local management systems govern decision-making processes, often with a large degree of community involvement and these have retained highest degrees of authenticity as reuse of the historic materials remains more efficient than the introduction of new materials.

The setting and visual surroundings of most of Qhapaq Ñan's components is very good and in many cases pristine. For several summit ceremonial sites, settings include horizon ranges of 360 degrees for many kilometres in all directions. The Qhapaq Ñan also passes through very beautiful landscapes, the beauty of which depends on fragile view sheds associated which need to be monitored to ensure that any modern developments in the landscape have as minimal visual impact as possible.

Several sites are difficult to access and their remoteness has over centuries preserved them in a very good condition. A majority of Qhapaq Ñan components is located in rural settings which fortunately left them free of noticeable modern intrusions. Associated intangible values and management practices remain very strong, especially in the most remote sections of the road network and contribute to the safeguarding of authentic management mechanisms. The information sources of spirit and feeling as well as atmosphere are very relevant as many of the communities have strong associations to the Qhapaq Ñan and continue to remain guardians of some of the ceremonial structures.

Management and protection requirements

As a transnational serial property the Qhapaq Ñan covers the jurisdiction of six countries at national and local levels, including, in one instance, regulations of seven regional authorities. A number of international joint declarations and Statements of Commitment have been signed by the participating States Parties between 2010 and 2012 which highlight their agreement to protect the segments of the Qhapaq Ñan at the highest possible level. The protection put in place in light of these agreements follow the respective national heritage legislations and provide protection at the highest national level to all property components.

The States Parties have designed two overarching management frameworks, one for the candidature phase of the nomination and a second that will become operational once the inscription is achieved. The preparation phase was guided by a Paris-based international Coordination Committee while the overarching management framework following World Heritage inscription is guided by regional networks among the participating States Parties. The State Party of Peru committed to support the establishment of a technical coordination secretariat where information will be gathered and communicated to the experts in all Qhapaq Ñan states and where frequent meetings among the technical experts will be organized.

Within the national contexts management systems have been developed in cooperation with the local communities and include concerns of perpetuation of the living traditions associated with the Qhapaq Ñan. The majority of these are traditional management systems which have been in existence for centuries and have developed from the local community levels to more formalized agreements with the concerned governmental authorities. The

importance of preserving the actual road trace in areas that are being cultivated by the communities should be highlighted as part of the management agreements.

Several local communities explicitly expressed their interest in tourism activities which they intend to be managed and driven at the community level. Limited presentation and interpretation facilities are at present available along the Qhapaq Ñan and local communities sharing their experiences and stories with visitors are a key basis of interpretation.

Some territories of the Qhapaq Ñan, Andean Road System are seismically active areas and especially the architectural structures seem to be endangered by earthquakes. Adequate risk protection schemes need to be developed to ensure safety of humans as well as cultural resources in the event of natural disasters.

An overall policy framework for the Qhapaq Ñan was created with the Management Strategy document undersigned at high level by the six States Parties on 29 November 2012. In addition to this multinational agreement management plans are intended to be developed at a regional level for each individual section of the road network. The management strategy framework illustrates the initial implementation of key management aspects, in particular the social and participation strategies intended to enable local communities to develop owner- and guardianship of the Qhapaq Ñan and its serial components. Further management and conservation plan components remain under development and should integrate adequate risk preparedness and disaster management as well as visitor management strategies.

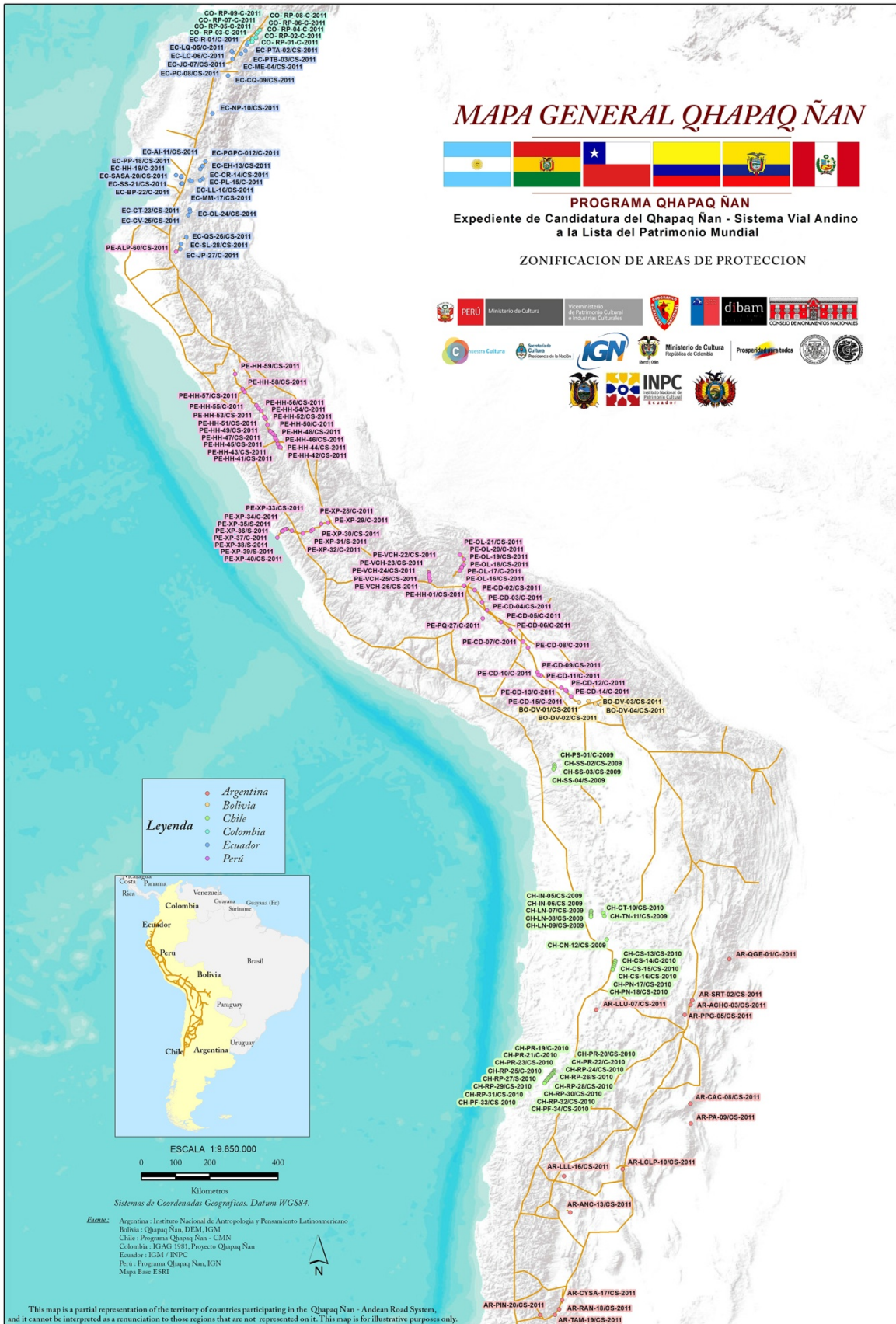
Additional recommendations

ICOMOS further recommends that the States Parties give consideration to the following:

- Finalizing the establishment of the international technical cooperation secretariat to ensure effective communication as well as the functionality of the overarching management framework in the future;
- Establishing a monitoring system including specific indicators for monitoring exercises to ensure the regular documentation of the state of conservation of this extensive and often remote serial property; in this context in particular develop criteria to define minimum intactness in relation to the different technological and architectural categories identified and the different geographical regions and levels of remoteness to allow for adequate monitoring of the condition of integrity to ensure that intactness can be guaranteed in the long term;
- Finalizing Management and Conservation Plans, including risk preparedness and disaster management strategies in earthquake prone regions, for each of the segments and submit the documents to the World Heritage Centre;

- Submitting adequate maps illustrating the functional relations between different site components to complete the documentation of the Qhapaq Ñan to allow for better future management and monitoring under the World Heritage system, and consider making such maps available to visitors for better understanding of the role of individual site components in the overall heritage route;
- Extending the buffer zone of Angualasto (AR-ANC-13/CS-2011) to include the nearby hills and the road structures;
- Establishing a shared buffer zone of the archaeological sites of Molle (PE-XP-38/S-2011) and Huaycán de Cieneguilla (PE-XP-39/S-2011) to preserve the shared landscape features in the wider surroundings;
- Formalizing the buffer zone currently discussed and agreed upon with the community at segment Pancca-Buena Vista-Chuquibambilla (PE-CD-06/CS-2011);
- Connecting the separate segments of Cerro Jircancha – Cerro Torre (PE-HH-52/CS-2011) and Maraycalla – Inca Misana (PE-HH-53/CS-2011), which already share a common buffer zone by extending the property boundaries which are currently defined by management considerations to become one longer segment combining both smaller sections currently designated;
- Reviewing the general concept of buffer zone designation as parallel strips alongside of road segments towards more dynamic buffer zone designations which take into account the features and view sheds of the surrounding landscape;
- Conducting, in the meantime, comprehensive Heritage Impact Assessments (HIA) according to the ICOMOS Guidance provided for cultural World Heritage properties, for any significant development which would be visible from a property component, regardless of whether the development location is formally designated as a buffer zone to preserve the important landscape features around the Qhapaq Ñan road segments;
- Submitting, by 1 February 2016, a report to the World Heritage Centre outlining progress made in the implementation of the abovementioned recommendations for examination by the World Heritage Committee at its 40th session in 2016.

ICOMOS is at the disposal of the States Parties to provide detailed recommendations in relation to conservation and management of specific sites.



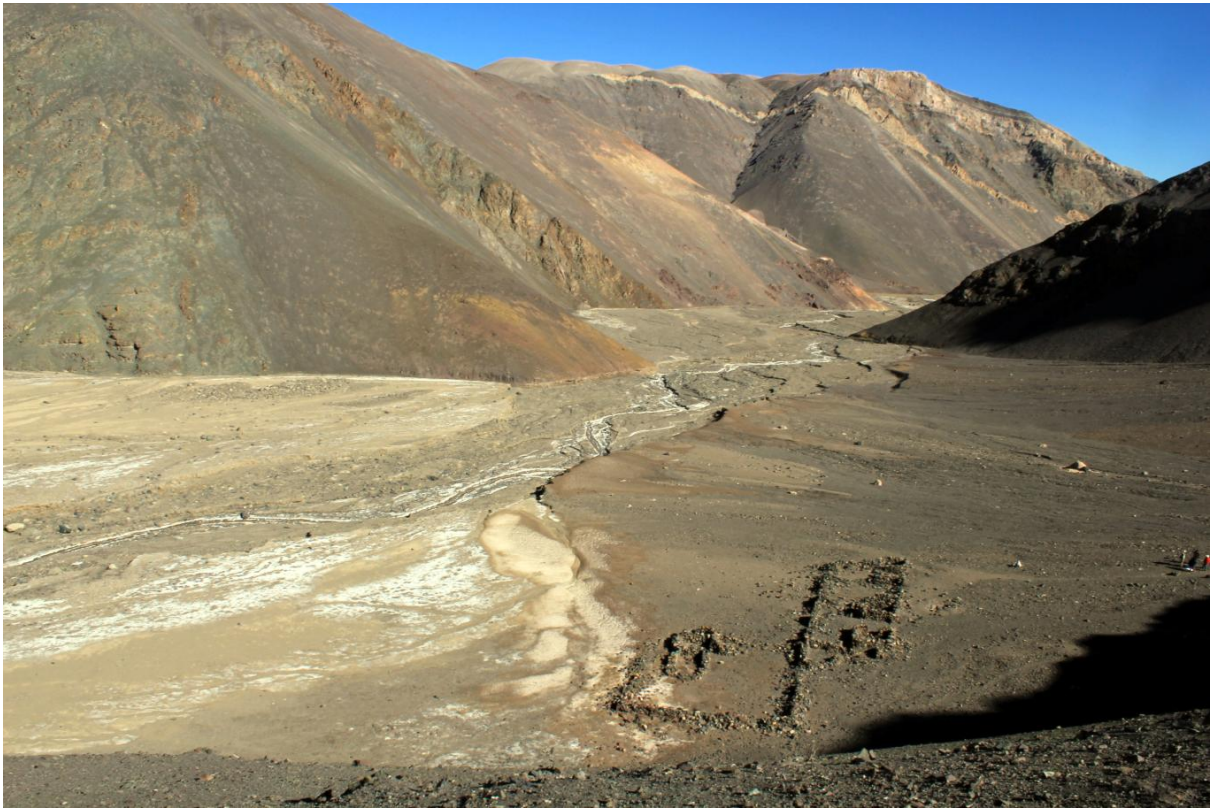
Map showing the location of the nominated properties



Santa Ana - Valle Colorado sub-section (Argentina)



Tiwanacu - Cantapa (Bolivia)



Portal del Inca - Finca Chañaral sub-section (Chile)



Guapuscal Bajo segment (Colombia)



Ingapirca associated archaeological site (Ecuador)



Puente Q'eswachaka (Peru)

Stone Spheres of the Diquís (Costa Rica) No 1453

Official name as proposed by the State Party

Precolumbian chiefdom settlements with stone spheres of the Diquís

Location

Districts of Palmar and Sierpe
Puntarenas Province, Osa County
Costa Rica

Brief description

This serial nomination combines four archaeological sites (Finca 6, Batambal, El Silencio and Grijalba-2) located in the Diquís Delta in southern Costa Rica. They represent four different settlement sites of chiefdom societies in the Precolumbian period (500-1500 CE) and contain artificial mounds, paved areas, burial sites and, most significantly, a collection of distinctive stone spheres. These stone spheres are rare in their perfection of large-sized (up to 2.57m diameter) spherical structures but are also distinct for their number and location in their original placements within residential areas.

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 4 *sites*.

1 Basic data

Included in the Tentative List

26 September 2012

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

1 February 2013

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 15 to 21 September 2013.

Additional information requested and received from the State Party

ICOMOS sent letters to the State Party on 24 September, 21 November and 12 December 2013 requesting additional information with regard to specific aspects. The first two letters focused on specifications regarding the contribution of each component to the Outstanding Universal Value, the justification for criterion (i), the extent of flooding at the Finca 6 site, the anticipated finalization of the management plan, development projects and property ownership as well as the selection criteria for the four component sites among all chiefdom settlement sites with stone spheres in the Diquís Delta. The State Party provided additional information in response to all the questions raised in the letters of 24 September and 21 November on 28 October 2013 and 30 November 2013. The information provided is included under the relevant sections below.

The third letter sent on 12 December 2013 requested additional information on other stone sphere sites, which had not been selected, the schedule of Heritage Impact Assessments for two development projects, the latest draft management plan, the possibility to revise some of the planned visitor structures on the Finca 6 site as well as to revise the buffer zones at three serial components. The State Party sought clarification concerning the request to reconsider visitor facilities at the Finca 6 site by letter of 28 January 2014 in response to which ICOMOS provided further specification concerning its request on 14 February 2014. The State Party replied with additional information on 28 February 2014, which responded to all questions raised. The information provided is included under the relevant sections below.

Date of ICOMOS approval of this report

6 March 2014

2 The property

Description

The four archaeological sites of Finca 6, Batambal, El Silencio and Grijalba-2 together form a property area of close to 25 hectares and are surrounded by four separate buffer zones amounting to almost 142 hectares. The sites are located in the Diquís Delta in southern Costa Rica and represent Precolumbian chiefdom settlements with architectural works such as cobble-walled earthen mounds, pavements and open plazas. The sites share in common the fact that they each contain at least one stone sphere, perfectly spherical structures between 0.7m and 2.57m in diameter. The four sites shall be described separately below:

Finca 6 site

Finca 6 designates a property component of 10 hectares surrounded by banana plantations in an alluvial plain close to a river creek subject to tidal action. Due to the high level of sedimentation at this site, the archaeological structures are covered by up to 1.5m of deposit materials. The site

contains four main archaeological sectors. Sector one corresponds to a plaza with two alignments of stone spheres which are located in their original position and oriented along an east-west axis. The first alignment consists of three spheres over a distance of 77m, the second of two spheres within 11m of each other. The spheres are all between 1.7m and 1.9m in diameter.

Sector two contains two artificial mounds with diameters of 20m and 30m which retain well-preserved walls. Both mounds include trapezoidal ramps oriented towards opposite directions. One of the ramps is decorated with two 1.1m granodiorite stone spheres to both sides. Sector three, also known as Punto 5, corresponds to a looted burial ground, which retains a large collection of ceramic materials. Sector four contains an artificial mound with cobblestone walls and cover. On top of the mound, stone pillars are set as markers and inside excavations revealed childrens graves with a few modest offerings. Carbon-dating of materials at the site suggests its occupation between 750 and 1450 CE.

Batambal Site

Batambal Site covers only 1 hectare near a settlement at the foothills of the Coastal Cordillera and borders a school, pastures and a power plant of the Diquís Hydroelectric Project. Its elevated position provides good views over the Diquís Delta, the Pacific Ocean and surrounding mountain landscape. The site features elevations with boulders, in some cases paved, and different types of archaeological material including a large number of axes and ceramics. The site also contains a set of four stone spheres with diameters between 0.7m and 0.95m. Two of these are split in half.

Two rectangular structures were excavated on site, which are bounded by lines of overlapping boulders. Nearby, yet another structure, a sculpture of 0.5m in size and a 0.75m sandstone monolith of a feline form were discovered. C₁₄ dating investigations conducted revealed a likely occupation of this site between 660-780 and 1320 (+-30) CE.

El Silencio Site

El Silencio site covers 6 hectares in a teak and gmelina tree plantation extending over the alluvial terrace of the Térraba River. It contains the area's largest recorded stone sphere, 2.57m in diameter and weighing about 24 tons. The site also contains finds of what is believed to be tools for the production of the Diquís stone spheres. Radiocarbon dating of this site suggests that it was used between 550 and 650 as well as around 1450 (+-30) CE.

Grijalba-2 Site

Grijalba-2 site covers an area of 8 hectares and is surrounded by small farms with crops as well as small forests on the upper terrace of the Balsar River. The site comprises several mounds, pavements built with boulders, and a single stone sphere of 1.20m diameter which is partially buried. Several mound structures, which

have outer diameters between 12m and 20m and heights between 0.25m and 1.50m, were excavated. The site further contains ceramic and lithic debris as well as several traces of walls up to 1m in height. No carbon-dating has yet been undertaken at this site.

History and development

Based on archaeological finds, the Diquís Delta has been occupied by human habitation since at least 1500 BC but genetic and linguistic studies assume human presence much earlier. The earliest period with evidence of habitation, the Sinancrá Period (1500-300 BC), is likely not to have left traces on the four components sites but evidence of the following Aguas Buenas Period (300 BC to 800 CE) may be present. In this period stone cylinders and sculptures with anthropogenic features were produced. Some stone spheres are believed to have been crafted in this period but a lack of certainty in relation to the precise dating makes this assumption preliminary.

The chiefdom settlements fall in the Chiriqui Period (800-1500 CE) during which a hierarchical society developed in which principal chiefs would control large territories and other chiefs small subordinated chiefdoms. Sites of this period typically have housing and burial mounds of up to 30m in diameter. A system of communication and trade along the Térraba River and its tributaries allowed for the exchange of goods. The four nominated sites certainly fall into this period.

Sites with stone spheres illustrate the human development processes of hierarchical societies. Finca 6, where the access ramp to a habitation mound is decorated by stone spheres, is assumed to be a major, principal centre, while the other sites like Batambal, El Silencio and Grijalba-2 are centres of local chiefdoms. It was also during the Chiriqui Period that the production of stone spheres reached its peak and records testify to the earlier presence of over 100 stone spheres in the Diquís Delta, with clusters of up to 14 spheres at one site. Unfortunately, most of these have fallen victim to looting and only around 45 sites retain stone spheres in their original location.

After the sites had been abandoned following the Spanish Conquest in the 16th century, they remained unattended to and were covered over the centuries by tidal sediments and vegetation. This changed rapidly in the 1930s when banana plantations were introduced to the area and drainage channels built which made archaeological materials visible in the cross sections. Archaeological interest was aroused and a variety of surveys and excavations were undertaken, often in the context of new plantation or development projects, to document what would likely be lost. The large majority of archaeological sites documented over decades no longer exist as most of them have unfortunately become victim to archaeological looting.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis is introduced with the words of four international archaeologists who investigated stone spheres in a larger Mesoamerican or global context and who all agree in highlighting that the stone spheres of the Diquís exceed all others in size, density and perfection. Following this, the comparative analysis is divided into a section comparing the chiefdom settlements with similar sites in Southern and Central America, with a special emphasis on the Olmec Culture in Mexico, then subsequently with stone sphere and chiefdom sites in a global context.

At the regional level, chiefdom sites with comparable features but which were not selected for this serial nomination are named as Guayabo and Las Mercedes in Costa Rica and El Caño in Panamá. However, they do not form isolated settlements of hierarchical significance but are part of much wider settlement patterns. Diquís sites are said to be largely distinguished from chiefdom settlements in Southern America by differing cultural traditions and their material evidence.

In the additional information on other Diquís stone sphere sites provided at the request of ICOMOS, the State Party indicated a further 43 locations in which stone spheres were found and which partly retained chiefdom settlement structures. The additional information also highlighted that either the degree of authenticity or the present state of knowledge with regard to archaeological research and studies undertaken did not allow the definition of any of these 43 other sites as of Outstanding Universal Value with regard to all the requirements established in the World Heritage context.

In the comparison with the Olmec Culture, it is highlighted that the Diquís Stone Spheres may have parallels to the colossal stone heads and stelae produced by the Olmec Culture, with both cultural contexts being based on chiefdom settlements and located in plains with frequent flood events. However, the artistic expression of perfectly rounded spheres differs considerably to monumental heads and should therefore be recognized independently.

In the global comparison other World Heritage Sites have been considered as perhaps the closest in features. The analysis considers the classic Mayan domestic village of the Joya de Cerén Archaeological Site, El Salvador (1993, (iii), (iv)), and the San Agustín Archaeological Park, Colombia (1995, (iii)), containing a group of megalithic sculptures in a spectacular landscape. ICOMOS considers that a comparison with the Cahokia Mounds State Historic Site, USA (1982, (iii), (iv)), recognized as the largest Precolumbian Settlement north of Mexico, could have been added.

ICOMOS considers that the uniqueness of the stone spheres of the Diquís has been demonstrated in an international comparison and that the comparative analysis justifies consideration of Diquís stone sphere sites to the World Heritage List. The additional information provided at the request of ICOMOS provides a justification for the selection of the four components as opposed to other stone sphere sites in the Diquís Delta.

ICOMOS considers that the comparative analysis justifies the selection of the four component sites among the chiefdom settlements with stone spheres of the Diquís.

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 group of four sites with stone spheres expresses the complex social, economic and political systems of the Precolumbian period in a unique fashion, by combining two different periods of occupation.
- The stone spheres of the Diquís are outstanding based on their substantial number found in a small area, their variety of sizes and surface treatments, and their perfect roundness.
- The four selected sites are the best representations of the chiefdom traditions and together illustrate the evolution of organizational and cultural practices in the chiefdom settlements.
- The four sites in the Diquís Delta are rare examples of settlements preserved under thick layers of sediment, preventing them from being looted and making them exceptional because of the presence of stone spheres in their original locations.

ICOMOS considers that the stone spheres of the Diquís are exceptional testimonies of artistic production in the Precolumbian era and merit recognition of Outstanding Universal Value. The fact that their meaning and use remain largely unknown and likewise their production process, although partly understood, cannot be fully explained, contributes to their mystery. Moreover the spatial arrangements of several stone spheres, such as in Finca 6 or Batambal, remain unexplained.

ICOMOS considers the claim that settlement sites in the Diquís Delta are representative of chiefdom traditions and illustrate the evolution of organization in chiefdom settlements is justified. ICOMOS also considers that the sites cannot currently testify to the cultural practices of such hierarchical chiefdom societies, as too little is known about the meaning and function of much of their material evidence. ICOMOS consequently considers that the justification provided is appropriate in highlighting the exceptionality of the material testimony of the stone

spheres and settlement remains integrating these stone spheres, as unique representations of a Precolumbian hierarchical society.

Integrity and authenticity

Integrity

The four property components were selected from 45 settlement sites which retain stone spheres in situ. They contribute specific elements that allow for the understanding of the chiefdom settlement structures in which these spheres were integrated. Finca 6 is the only site retaining stone spheres in linear arrangements according to cardinal directions and is anticipated to provide opportunity for future research and, as a result, better understanding of the settlement arrangements. Batambal is presented as the only chiefdom settlement visible from a long distance which occupies an elevated strategic location. Defence aspects may have been relevant in its settlement layout. El Silencio contains the largest stone sphere ever found in the Diquís Delta, which remains in its original spot, as well as complex paved areas. Finally, Grijalba-2 site is unique for its use of limestone and its distinctive characteristics of a subordinated centre as opposed to the Finca 6 site, which was likely a principal centre.

The boundaries of the four component sites proposed comprise all architectural structures presently known at these sites. However the concentration of ceramics in areas designated as buffer zones can be rather high and it is possible that additional architectural structures may in the future be found in the buffer zones. Non-intrusive surveys may provide data which assists in deciding whether component boundaries may need to be increased in the future. All four sites show to differing degrees signs of the negative impact of past agricultural development and looting of archaeological sites. However, the material which remains preserved in situ is significant enough to express different aspects of Outstanding Universal Value. Since no single site preserves all the different characteristics of the chiefdom settlements, the serial approach selected for this nomination assists in providing a representation of greater completeness.

Three of the component sites are free of immediate risks caused by settlement expansions; only Batambal is located in close proximity to dwellings and potentially negatively impacted by future urban development. However, two large-scale development projects, the Diquís Hydroelectric Dam and the Southern International Airport, are currently being discussed. At the request of ICOMOS the State Party provided further information on these two developments. The Southern International Airport is intended to be constructed in the Diquís Delta and would be located at 3km distance to the site of Finca 6. It will consist of a runway, terminal building, platform and access road system and provide easier visitor access to the region. ICOMOS understands, based on the additional information provided, that the feasibility of

the proposed location is still under study and that therefore no maps of the exact location can be provided. ICOMOS notes that a large international airport may have considerable impact on a World Heritage property in its vicinity and may have the potential to affect its integrity.

The Diquís Hydroelectric Dam Project proposes the creation of a large scale water reservoir for power generation that will have a significant impact on the surroundings of all four serial components. Although the State Party in the additional information provided at the request of ICOMOS assures that none of the four sites will be directly affected, it needs to be noted that the power plant, camps and other facilities are planned to be located in an area near the Batambal site, which may cause significant negative impacts to this component. However, in the additional information provided at the request of ICOMOS, the State Party committed to undertaking Heritage Impact Assessments (HIA's) for both projects, as well as any other future projects which might be considered to have potential for negative impacts on the property. The State Party further committed, documented in letters by both presidential candidates standing for the presidential election on 6 April 2014, that the requirements of the property would be given full consideration and priority if either of the projects are to be implemented.

ICOMOS considers that the integrity of the whole series and its individual components has been justified.

Authenticity

The general state of authenticity seems satisfactory at all four components sites. Previous excavations were limited to test sections and most excavation pits have been reburied following the completion of archaeological research and documentation. Only three cases are documented which may refer to limits of authenticity or previous attempts to reinstate earlier conditions. In Finca 6, sphere 6 was discovered during installation of pipes and was removed to another location on site for the works to be completed. Following these, the sphere was placed back in its original location but at a lower ground level.

In Batambal structure 1 was reconstructed according to documentation of its best preserved sector to illustrate to visitors the layout and design of the structure. This structure is reconstructed without mortar using the historic technique and is seen as a pilot project for future reconstructions. Its condition will be observed throughout the forthcoming years. In Grijalba-2 a pavement section previously affected by looters has been restored. Stones were repositioned in an attempt to imitate the pavement patterns observed in other areas of the site.

One challenge in retaining authenticity of setting is the lack of knowledge on the extent of forest clearance in Precolumbian times which also increases difficulties in judging sight relations between different structures. Finca 6 site also contains a collection of stone spheres

confiscated following previous looting, which are awaiting a decision as to their future location and context. The original location of these spheres often remains unknown. Wherever these spheres will be placed, it would need to be indicated more clearly that the spheres are not presented in their original position.

ICOMOS considers that the authenticity of the whole series has been justified; and that the authenticity of the individual sites that comprise the series has, with minor exceptions, been satisfactorily demonstrated.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity of the whole series and its individual components are met.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i) and (iii).

Criterion (i): *represent a masterpiece of human creative genius;*

This criterion is justified by the State Party on the grounds that the Precolumbian chiefdom settlements produced stone spheres which remain singular because of their perfect spherical shape. These stone spheres were produced in different sizes up to 2.5m in diameter and some weigh over 20 tons. Positioned in open areas, probably plazas or public spaces, they must have been references to the artists' capability and precision, and count among the masterpieces of human creative genius at their time.

ICOMOS considers that the perfect spherical shape of the stone spheres in the Diquís Delta continues to leave researchers speculating about the method and tools of production and lead us to relate the product to artistic genius. While they might be considered masterpieces of artistic creation in this context, and likely had important symbolic meanings for the Precolumbian chiefdom societies, ICOMOS considers that this aspect of mastery does not equally apply to the remaining elements of the chiefdom settlements. Since the stone spheres constitute only one of several aspects in each component site, ICOMOS considers that criterion (i) does not apply to the nomination as a whole.

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 is justified by the State Party on the grounds that the four sites presented illustrate a physical testimony of the complex political, social and productive structures of the Precolumbian hierarchical societies. The chiefdoms which inhabited the Diquís Delta created hierarchical settlements expressing the division of different levels of power centres. The selected group of

sites represents a principle as well as three subordinated chiefdom centres and contains different elements characteristic for the chiefdom settlement structures.

ICOMOS considers that chiefdom settlements of the Diquís Delta represent an exceptional testimony to the Precolumbian hierarchical societies.

ICOMOS considers that this criterion has been justified.

ICOMOS considers that the serial approach is justified in principle and that the selection of sites has been justified.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity have been met and that criterion (iii) has been justified.

4 Factors affecting the property

The key factor with potential to adversely affect the property in the future is development, in particular urban and infrastructure development. Urban development and settlement encroachments could affect the sites of Batambal and Grijalba-2, which either already adjoin settlements or contain settlement structures in their buffer zone. Two major development projects already discussed under the heading of Integrity, the Southern International Airport and the Diquís Hydroelectrical Dam project, in ICOMOS' view are also likely to adversely impact the property components. At the same time the argument presented by the State Party that the dam will reduce the risk of flooding at the Finca 6 site seems valid. However, the larger demographic and environmental impacts of these two projects will not remain without negative effects on the chiefdom settlement sites.

With the construction of the airport the currently moderate visitor pressures are likely to increase but it does not seem that the sites would easily be at risk of excessive visitation. The threat of looting which was significant in past decades seems contained for the four component sites and also vandalism is unlikely.

In relation to natural risk factors, the Finca 6 site is most threatened by the frequent floods in the Diquís Delta plains. In response to this obvious risk, the visitor centre on site was built on elevated pillars. In the additional information the State Party provided at the request of ICOMOS several measures including a hydrological research project with the Department of Engineering of the University of Costa Rica are predicted to define methodologies which may reduce the adverse impacts of floods on the site. The other three components which are located at higher elevations may suffer landslides following torrential rains but this would be considered unlikely, except for the site of Batambal where landslides occurred previously. The region is of moderate seismic activity.

ICOMOS considers that the main threats to the property are urban and infrastructure developments as well as flooding for the Finca 6 Site.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundaries of the four nominated sites delimit the area of archaeological finds made in previous investigations. They are clearly indicated in the cadastral plans and seem to encompass all relevant elements of the four component sites. The components vary in scale, with Finca 6 being the largest at close to 10 hectares followed by Grijalba-2 (8 ha), El Silencio (6 ha) and Batambal (close to 1 ha). The boundaries are partly indicated by fencing, such as in Batambal, or visible due to changes in plantation (at Finca 6) or steep drop offs towards the buffer zones.

The proposed buffer zones surround the property areas completely and, following the submission of revised buffer zones for the component sites Finca 6, Grijalba-2 and El Silencio at ICOMOS' request, provide adequate protection in all directions. The buffer zones include adjacent areas where archaeological remains, usually shards, have been found but do not include any architectural remains. At times the extension of such materials determines comparatively large sections of the buffer zones.

In conclusion, ICOMOS considers that the boundaries and the buffer zones of the four nominated property components are adequate.

Ownership

Two of the four component sites are State owned, Finca 6 and Batambal. The remaining two, Grijalba-2 and El Silencio, are in private ownership but in the process of being acquired by the State. For Grijalba-2 a budget has been allocated by the Ministry of Finance and its owner is willing to sell the 8 hectares property to the State. The process is expected to have been completed by the end of 2013. For the El Silencio site the situation is more complicated. The property owner is not willing to sell the property and an expropriation process is envisaged which however will be slower than a consensual acquisition. The estimated timeframe for this process is 1.5 years. ICOMOS considers that this situation is not fully in the spirit of community consent-based approaches to World Heritage proposals and encourages the State authorities to find a consensual agreement with the property owner. Expropriation should only be considered the last possible option if all other opportunities to consent have failed.

Protection

The four components are protected as archaeological heritage of public interest according to Law No 6703 on National Archaeological Heritage. This constitutes the highest possible protection for an archaeological site at

national level. In addition Presidential Decree 23387-C of 1994 declares Osa County, in which the sites are located, as a county of archaeological interest and Decree 34061-C of 2007 declares the Diquís Delta as a cultural landscape of public interest. These different decrees provide different layers of protection to the sites and also the surrounding landscape, which requires consideration of landscape and archaeological impacts for any proposed future development. Lastly the stone sphere settlements proposed in this nomination received legal protection in addition to the highest national level through Presidential Decree 36825-C which highlights their intended future status as World Heritage Sites.

The legislation attributes exclusive legal authority over the archaeological sites to the State, represented through the National Archaeological Commission and the National Museum. ICOMOS considers that the legal protection of the four component sites is exemplary and complete.

However, ICOMOS also notes that the legal protection of the buffer zones is not yet fully established. The State Party intends to define the buffer zone regulations as part of a new Regulatory Plan for Osa County, which is currently under preparation. Following the revision of the buffer zones at ICOMOS' request, the new buffer zone boundaries were presented to the Osa Municipality on 29 January 2014 and were published for public consultation on 24 February 2014. The formal adoption will follow the consultation process.

ICOMOS considers that the legal protection in place is exemplary and that the protective measures for the property are adequate. ICOMOS also considers that the protective measures established for the buffer zones will be adequate once they have been formally integrated in the Regulatory Plan for Osa County.

Conservation

Research and archaeological excavations of the chiefdom settlements including stone spheres of the Diquís have been frequent since the 1940s and have been undertaken by different teams of various nationalities. Most of the research in the early years can be classified as salvage archaeology and unfortunately documentation of the finds is not always as detailed as would be desired. While several of the archaeological finds in private plantations were registered on the national inventory, the idea of making these sites accessible is very recent and many seem to have been affected by looting or agricultural activities since their first documentation. In the process of preparing the nomination dossier, surveys undertaken registered a total of 101 settlement sites.

The state of conservation of the four sites is mainly good, especially because the large majority of the sites remain unexcavated. As part of an annual inspection plan the condition is regularly controlled and if necessary conservation measures can be initiated.

Active conservation measures were initiated at 11 chiefdom settlement sites including the four selected for this nomination following the documentation of their state of conservation during the survey. The active interventions include the partial removal of vegetation cover, further detailed conservation diagnostics, general maintenance works, consolidation measures, and, in selected cases, tests related to sensitive surface cleaning. A conservation plan which provides the theoretical framework for these works undertaken was provided by the State Party, but it tends to remain very general in several areas. A more specific report by the Department of Protection of Cultural Heritage describes the results of conservation diagnosis for eleven stone spheres in the component sites and proposes priority actions to be undertaken for their preservation. At present studies are being undertaken to identify the best-suited methodologies to be applied for conservation treatments. In addition medium and long-term experiments are being undertaken to understand the exact weathering conditions on site which will determine the choice of conservation methodologies. The State Party should be commended for showing great constraint in not initiating large-scale new excavations before the conservation necessities are addressed.

As discussed under the heading Authenticity, the Department for the Protection of Cultural Heritage undertook two pilot reconstruction attempts at the Batambal and Grijalba-2 sites. While the reconstructions may indeed assist the understanding of the place by visitors, it is important that reconstructions are clearly identified as such and used only in exceptional cases to protect the authenticity of the property.

ICOMOS considers that the state of conservation of the sites is in principle good and that conservation diagnosis and – if necessary – measures, are undertaken with the necessary scrutiny and care. ICOMOS considers that reconstructions of archaeological features should ideally remain the exception.

Management

Management structures and processes, including traditional management processes

The National Museum of Costa Rica is the key management authority for all four site components and coordinates all site management procedures and the preparation of the management plan. An Advisory Committee created by presidential decree advises and supports the National Museum in this process. At the request of ICOMOS the State Party submitted the latest version of the Management Plan, which provides further details on the management structures for each of the component sites.

Only the Finca 6 site is currently open to the public and provides adequate site interpretation services. Four permanent staff, including the site manager and educator and two technical staff, have been appointed at the site. It is envisaged that the other component sites will be

opened to the public in the future and staff structures are to be established accordingly. Basic interpretation shall be provided for the other three component sites by the end of 2014, but the management plan envisages the need to conduct necessary conservation activities before visiting of the sites is to be promoted.

The financial resources made available to the site during the past five years have steadily increased and the management plan projects the financial resources required for its implementation period of 6 years (2012-18), which is estimated at approximately 5 million USD. ICOMOS considers that this amount seems appropriate to implement the management activities envisaged at Finca 6 and should be secured until 2018. Additional resources, which will be necessary for the envisaged activities at the other three sites, are detailed in the latest update of the management plan.

ICOMOS considers it desirable to have a guardian or site manager for each of the properties to ensure their long-term protection and also assist visitors to the site. The Centre for Research and Conservation of Cultural Heritage has been entrusted with the monitoring of the proposed sites. In ICOMOS' view, it is essential to involve the locally-stationed teams in this process and provide training to facilitate monitoring and documentation tasks.

Despite periodic flooding at Finca 6 and moderate seismic activity in the county, risk preparedness does not seem to get adequate attention in the management plan. At the request of ICOMOS, the State Party highlighted the general disaster risk management mechanisms planned and outlined that a specific risk management plan for the Finca 6 site was under preparation. The summary of the plan provided in English shows that it contains initial studies to be undertaken including hydro-geological and drainage studies as well as surveys with ground penetrating radar. On the basis of these, drainage systems which would prevent silting and flooding of the site might be developed. The proposed document will also contain contingency and mitigation plans in the event that major floods occur.

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

A management plan is under preparation for the property and its latest update has been submitted with the additional information requested by ICOMOS. The plan is based on clear vision and mission statements as well as strategic objectives for its 6-year timeframe of implementation. On the basis of a summary of the exact physical features and research data at each site, the management plan highlights future activities necessary for the conservation of all components as well as the preparation of visitor interpretation and presentation facilities. The action plans provided contain clear schedules and responsibilities for the activities envisaged.

A key interest in the management plan is the improvement of the interpretation and presentation of the Finca 6 site to allow for better visitor services. As an initial step, a visitor centre was built outside the property boundaries of Finca 6 in early 2013. Finca 6 also has interpretative panels which allow visitors to gain background information on the architectural structures seen. The visitor concept developed and implemented under the guidance of the management plan foresees the provision of an introductory exhibition, visitor facilities in the visitor centre and a visitor pathway with different elements on site. ICOMOS understands from the additional information received at its request, that the previous plans for the introduction of reconstructed Diquís dwellings have been abandoned. ICOMOS welcomes this as it seemed that the reconstructed elements unnecessarily diverted attention away from the impressive archaeological resources. In ICOMOS's view the archaeological resources need to remain the key attractions of the site whilst other elements should merely facilitate visiting and learning as well as – where necessary – the protection of the historic structures.

At present none of the other sites is open to the public and only occasionally do well-informed visitors find their way. Batambal, El Silencio and Grijalba-2 do not have any visitor facilities or interpretation aides. Presentation and interpretation concepts still need to be developed for these three sites and a schedule as well as budgetary requirements for the preparation of these visitor interpretation and service structures has been provided.

Involvement of the local communities

While community participation was mentioned in the nomination dossier at a general level, no details were provided as to the methodology and partners of such involvement. At the request of ICOMOS the State Party provided additional material illustrating that Committee Consultations were conducted at the Finca 6 site in the context of drafting the management plan and consisted of consultation meetings with community leaders and public information events. ICOMOS considers that further public involvement in the drafting of management strategies for the other sites may have the potential to stimulate volunteer networks contributing to expanded security and visitor services.

ICOMOS considers that the management supervision of the National Museum of Costa Rica and the updated management plan provided outline the relevant elements for an adequate management system. To fully implement all activities envisaged in the management plan, the site management authority might need to be strengthened through the provision and guarantee of adequate financial and personnel resources.

6 Monitoring

The monitoring indicators provided in the nomination dossier address a number of important aspects to be monitored and can be divided into state of conservation

monitoring and quality assurance of management and conservation interventions. In both cases they do not provide references on how the results will be measured or how reference data will be established.

ICOMOS recommends that the monitoring tables provided be augmented to contain additional information on the method of data collection, the quantification of monitoring results as well as the generation of reference values for future monitoring exercises.

In conclusion, ICOMOS considers that the monitoring indicators should be augmented to provide more precise information on methods of data collection.

7 Conclusions

ICOMOS considers that the stone spheres of the Diquís are exceptional testimonies of artistic production in the Precolumbian era which demonstrate Outstanding Universal Value. The comparative analysis successfully demonstrated the global importance of stone sphere sites in the Diquís Delta and has justified the selection of the four components sites. ICOMOS considers that the chiefdom settlements of the Diquís Delta represent an exceptional testimony to the settlement structures of Precolumbian hierarchical societies and justify criterion (iii).

The authenticity of the nominated sites is high, in particular because of their limited previous excavation. However, integrity of the sites seems affected by potential threats arising from two large scale development projects, the Diquís Hydroelectric Dam and the Southern International Airport. ICOMOS considers that Heritage Impact Assessments (HIA's) in accordance with the ICOMOS Guidance on Heritage Impact Assessments for World Cultural Heritage properties need to be undertaken before any approval of these projects is given, and that the State Party's commitment to prioritize the property's needs if the projects are to be implemented is a reassuring sign that this risk has been understood and is being responded to. ICOMOS further recommends that all proposals for development projects should be submitted to the World Heritage Committee for examination, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS considers the boundaries of the site components and the buffer zones are adequate and that the revised buffer zones' integration into the new Regulatory Plan for Osa County needs to be finalized. Preventive and active conservation activities at the property are highly sophisticated and the State Party should be commended for showing great constraint in not initiating new excavations before the conservation necessities are addressed.

The National Museum of Costa Rica provides the overarching guidance to the management at the four serial sites and coordinates the preparation and implementation of the management plan. The visitor concept developed at Finca 6 site foresees the provision of an introductory exhibition, visitor facilities in the visitor centre and a visitor pathway with different elements on site. Visitor concepts on the other three sites are planned to be developed as part of the management plan and will provide for better accessibility of the sites following the implementation of necessary conservation treatments. The State Party is to be commended for its reluctant approaches to new excavations and visitor promotion as long as the required conservation works have not been fully undertaken.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Precolumbian chiefdom settlements with stone spheres of the Diquís, Costa Rica, be inscribed on the World Heritage List on the basis of **criterion (iii)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The serial nomination of four archaeological sites (Finca 6, Batambal, El Silencio and Grijalba-2) located in the Diquís Delta in southern Costa Rica illustrates a collection of unique stone spheres located in chiefdom settlement structures of the Precolumbian period. The four sites represent different settlement structures of chiefdom societies (500-1500 CE) containing artificial mounds, paved areas and burial sites. Special objects of wonder and admiration are the distinctive Diquís stone spheres, which are rare in their perfection of large-sized (up to 2.57m diameter) spherical structures but are also distinct for their number and location in their original positions within residential areas.

Criterion (iii): The Precolumbian Chiefdom Settlements with Stone Spheres of the Diquís illustrate the physical evidence of the complex political, social and productive structures of the Precolumbian hierarchical societies. The chiefdoms which inhabited the Diquís Delta created hierarchical settlements expressing the division of different levels of power centres, presented by the different serial components. Likewise, the exceptional stone spheres, which continue to leave researchers speculating about the method and tools of their production, represent an exceptional testimony to the artistic traditions and craft capabilities of these Precolumbian societies.

Integrity

The four property components contribute specific elements which allow for the understanding of the chiefdom settlement structures. Finca 6 is the only site

retaining stone spheres in linear arrangements, Batambal is the only chiefdom settlement visible from a far distance, El Silencio contains the largest single stone sphere ever found, and Grijalba-2 site is unique for its use of limestone and its distinctive characteristics as a subordinate centre, as opposed to the Finca 6 site, which was likely a principal centre. All four sites show to differing degrees signs of the negative impact of past agricultural development and looting of archaeological sites. However, the material which remains preserved in situ is significant enough to express the different aspects of Outstanding Universal Value.

Batambal site is located in close proximity to dwellings and might be negatively impacted by future urban development. In addition, two large development projects, the Diquís Hydroelectric Dam and the Southern International Airport, are currently being discussed. The State Party has committed to undertaking Heritage Impact Assessments (HIA's) for both projects and given assurances that it will give full consideration and priority to preventing impacts on the Outstanding Universal Value, if either of the projects are to be implemented.

Authenticity

Previous excavations were limited to test sections and most excavation pits have been reburied following the completion of archaeological recording. As a result, the authenticity of the property with regard to design, material, substance, location and workmanship is satisfactory. A challenge for retaining authenticity of setting is the lack of knowledge of the extent of forest clearance during Precolumbian times, which increases the difficulties in judging sight relations between different structures and landscape elements that contribute to the site's original setting.

Finca 6 site also contains a collection of stone spheres confiscated following previous looting, the original locations of which mostly remain unknown. To distinguish those stone spheres which are in their authentic locations from those which have been relocated, it would need to be indicated more clearly that these spheres are no longer presented in their original position.

Management and protection requirements

The four components are protected as archaeological sites of public interest according to Law No 6703 on National Archaeological Heritage. This constitutes the highest possible protection for an archaeological site at national level. In addition, the stone sphere settlements proposed in this nomination received legal protection in addition to the highest national level through Presidential Decree 36825-C, which highlights their intended future status as World Heritage Sites.

The legislation attributes exclusive legal authority over the archaeological sites to the State, represented by the National Archaeological Commission and the National Museum. The legal protection of the four component sites is exemplary and complete. To ensure equally high

legal protection of the buffer zones, their integration in the new Regulatory Plan for Osa County needs to be finalized.

The management of the four site components is overseen and coordinated by the National Museums of Costa Rica. This institution is supported by an Advisory Council for this specific task. The State Party submitted a Management Plan in February 2014, which outlines the vision and strategic objectives for site management for a period of up to 6 years. It is envisaged to complete necessary conservation activities at all four component sites and provide visitor interpretation and presentation as well as facilitate future accessibility to the three sites not yet open to the public, Batambal, Grijalba-2 and El Silencio.

It seems essential for the success of the management plan implementation that the financial and human resources required for the administration and management of all four site components will be available to the National Museums of Costa Rica, to allow for site managers and guardians to be present on site. For the future protection and conservation of the Precolumbian Chiefdom Settlements with Stone Spheres of the Diquís it also seems essential that Heritage Impact Assessments are undertaken for any proposed developments which might have the potential to negatively impact the property.

Additional recommendations

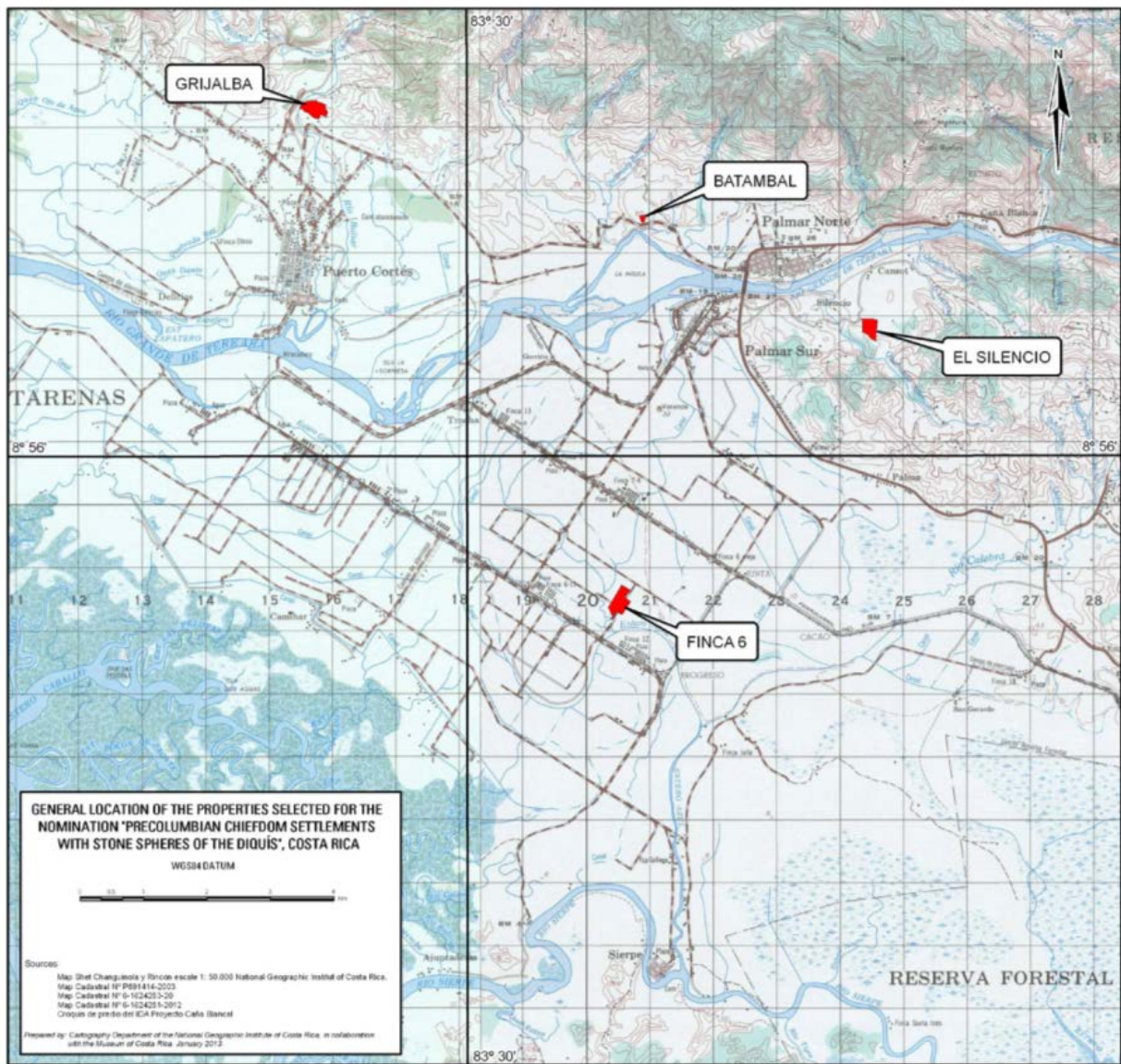
ICOMOS further recommends that the State Party give consideration to the following:

- Conducting detailed Heritage Impact Assessments (HIA's) in accordance with the ICOMOS Guidance on Heritage Impact Assessments for World Cultural Heritage for the Diquís Hydroelectric Dam and the Southern International Airport, to identify their potential negative impacts on the property; and submitting all proposals for development projects to the World Heritage Committee for examination, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*;
- Reaching a consensual agreement with the property owner of El Silencio to ensure the site's long-term protection;
- Completing the development of risk preparedness and disaster management plans including protective measures and emergency plans for Finca 6 during major flood events and completing the formal integration of the revised buffer zones in the Regulatory Plan for Osa County ;
- Ascertaining the required financial and personnel resources outlined in the management plan, including providing for a guardian or site manager for each of the properties to ensure their long-term protection and also assist visitors to the site; ICOMOS considers that

further public involvement may have the potential to attract volunteers who may contribute to expanded security and visitor services;

- Involving the local teams in the process of monitoring and provide training to facilitate both monitoring and documentation tasks;
- Augmenting the monitoring indicators to provide more precise information on methods of data collection.

ICOMOS commends the State Party for its preservation policy not to initiate new excavations or visitor promotion before the current conservation necessities are addressed and recommends to continue this exemplary approach in the future.



Map showing the location of the nominated properties



Stone spheres at Finca 6



Structures at Batambal



Stone sphere at El Silencio



Structure at Grijalba-2

