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**AUSTRALIAN NATIONAL PERIODIC REPORT**

**SECTION II**

**Report on the State of Conservation of Uluru – Kata Tjuṯa  
National Park**

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## **II.1. INTRODUCTION**

### **a. State Party**

Australia

### **b. Name of World Heritage property**

Uluru - Kata Tjuta National Park

### **c. Geographical coordinates to the nearest second**

Uluru - Kata Tjuta National Park is located in Central Australia, in the south-western corner of the Northern Territory, at latitude 25°05' - 25°25' south and longitude 130°40' - 131° east.

### **d. Date of inscription on the World Heritage List**

Uluru - Kata Tjuta National Park was nominated and inscribed on the World Heritage List for natural values in 1987 under natural criteria (ii) and (iii).

Uluru - Kata Tjuta National Park was renominated and inscribed on the World Heritage List as a Cultural Landscape in 1994 under cultural criteria (v) and (vi).

### **e. Organization(s) or entity(ies) responsible for the preparation of the report**

This report was prepared by Parks Australia, in association with the Heritage Management Branch of the Department of the Environment and Heritage.

## **II.2. STATEMENT OF SIGNIFICANCE**

### Criteria

Uluru - Kata Tjuta National Park is one of the few properties inscribed on the World Heritage List for both its natural and cultural values. In 1987 the Park was listed as a natural property and in 1994 Uluru - Kata Tjuta became only the second property in the world to be inscribed on the World Heritage List as a Cultural Landscape.

Natural - Criteria 44(a) ii; iii

- Be outstanding examples representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment; and
- Contains unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty, such as superlative examples of most ecosystems to man, natural features, spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural or cultural elements.

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Cultural - Criteria 24(a) v; vi

- As an outstanding example of a traditional human settlement and land-use which is representative of a culture (or cultures), especially when it has become vulnerable under the impact of irreversible change; and
- Directly and tangibly associated with events or living traditions, or with beliefs of outstanding universal significance.

Justification for Listing

Uluru - Kata Tjuta National Park covers an area of 132,566 hectares and is located in the traditional lands of the Pitjantjatjara and Yankunytjatjara Aboriginal people (locally known as Anangu).

The huge rock formations of Uluru and Kata Tjuta are remarkable geological and landform features set in a contrasting, relatively flat, sand-plain environment. They are a part of an important cultural landscape and have special significance to Anangu. The features of both Uluru and Kata Tjuta are physical evidence of the actions, artefacts and bodies of the ancestral heroes (the *tjukuritija*) who travelled the earth in creation times. The travels of these ancestral heroes are celebrated in Anangu religion and culture today.

The wider landscape of the Park also contains evidence of the travels of Anangu ancestors and represents the outcome of thousands of years of management under traditional practices governed by the *Tjukurpa* (law). Aboriginal people learned how to patch burn the country from the Tjukurpa of *lungkata* (blue-tongued lizard, *Tiliqua multifasciata*). Now, although modern methods are used, the practice of lighting small fires close together during the cool season leaves burnt and unburnt areas in a mosaic-like pattern. This knowledge is now adopted as a major ecological management tool in the Park. Tjukurpa also teaches about the location and care of rockholes and other water sources.

Anthropologists believe that a unique cultural adaptation to the desert environment enabled Anangu and related groups of Aboriginal communities in the Western Desert to develop social groups that, while based on semi-permanent water sources, held reciprocal rights of access over plants and animal resources in the intervening areas.

Uluru is a huge, rounded, red sandstone monolith 9.4 kilometres in circumference rising to a height of over 340 metres above the plain. Rock art in the caves around its base is further evidence of the enduring cultural traditions of Anangu.

About 32 kilometres to the west of Uluru lie the 36 steep-sided domes of Kata Tjuta. The domes cover an area of 3500 hectares with Mount Olga, the highest feature, rising to a height of 500 metres. This area is sacred under Anangu men's law and, as such, detailed knowledge of it is restricted.

The predominantly sandy landscape is dominated by spinifex and low shrubs on sand dunes and sand plains dotted with large desert oaks. Sizeable areas of mulga woodland and other low shrubs also occur on dunes and swales. The alluvial flow areas at the base of the major rock formations support large bloodwoods, acacias and native grasses. Water holes and soaks provide restricted habitats for a number of rare and unique plant

species. Larger stands of mulga and other acacias dominate the harder, wide, sandplain surrounding Uluru and Kata Tjuta.

A number of rare mammals are also found in the Park, including the Hairy-Footed Dunnart (*Sminthopsis hirtipes*), Sandhill Dunnart (*Sminthopsis psammophila*) and the Mulgara (*Dasymercus cristicauda*).

Reptile species are found in numbers unparalleled anywhere else in the world and are well adapted to the arid environment. A number of lizard species are found in the Park, including *Tjakura* (the rare Great Desert Skink, *Egernia kintorei*) and *Ngintaka* (Perentie, *varanus giganteus*) Australia's largest lizard, which can grow to a length of over 2 metres.

The inalienable freehold title to Uluru - Kata Tjuta National Park was handed back to the Anangu (the Uluru- Kata Tjuta Aboriginal Land Trust) in 1985 following a successful land rights claim under the *Aboriginal Land Rights (Northern Territory) Act 1976*. This was a significant event in Australian history and a national political issue. The outcome of the 'handback' was of critical importance to Aboriginal claims and is viewed as a major milestone towards reconciliation. The Uluru- Kata Tjuta Aboriginal Land Trust leased the area back to the Director of National Parks to be jointly managed as a National Park. The Park is jointly managed under direction of a Board of Management with a majority of Anangu traditional owners.

Indicative World Heritage Values Table

The *Environment Protection and Biodiversity Conservation Act 1999* prohibits actions that have "a significant impact on the World Heritage values of a declared World Heritage property" unless the action is approved or in accordance with an accredited management plan. The World Heritage values of a property are the natural heritage and cultural heritage contained in the property, which have the same meaning given by the World Heritage Convention.

The following indicative World Heritage values table includes examples of the World Heritage values for which Uluru - Kata Tjuta National Park was listed for each World Heritage List criterion. These are, in the Commonwealth's view, the statements of the outstanding universal values of each World Heritage property. While these examples are illustrative of the World Heritage values of the property, they do not necessarily constitute a comprehensive list.

<b>Natural criteria against which the property was inscribed on the World Heritage List in 1987 and cultural criteria against which the property was inscribed in 1994.</b>	<b>Examples of natural World Heritage values of Uluru - Kata Tjuta National Park for which the property was inscribed on the World Heritage List in 1987 and cultural World Heritage values for which the property was subsequently inscribed in 1994.</b>
	Uluru - Kata Tjuta National Park includes the monoliths of Uluru and Kata Tjuta, which are exceptional examples of tectonic, geochemical and geomorphic processes. The World Heritage values include: <ul style="list-style-type: none"> <li>• Uluru, one of the largest monoliths in the world which is affected by erosional processes including sheeting of rock parallel to the surface and granular disintegration known as cavernous</li> </ul>

<p>Natural criteria against which the property was inscribed on the World Heritage List in 1987 and cultural criteria against which the property was inscribed in 1994.</p>	<p>Examples of natural World Heritage values of Uluru - Kata Tjuṯa National Park for which the property was inscribed on the World Heritage List in 1987 and cultural World Heritage values for which the property was subsequently inscribed in 1994.</p>
<p>Natural criterion (ii) outstanding examples representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.</p>	<p>weathering;</p> <ul style="list-style-type: none"> <li>• tectonic, geochemical and geomorphic processes associated with the inselbergs of Uluru and Kata Tjuṯa which result in the different composition of these two relatively close outcroppings, their differing extent of block tilting and types of erosion, the spalling of the arkose sediments of Uluru and massive 'off loading' of conglomerate at Kata Tjuṯa;</li> <li>• the desert ecosystems of the property which <ul style="list-style-type: none"> <li>- represent a cross section of the central Australia arid ecosystems;</li> <li>- demonstrate effects of topography, soil formation fire in arid environments;</li> <li>- include a representative sample of the plants and plant associations of central Australia;</li> <li>- provide habitat for a wide variety of plant and animal species, including: <ul style="list-style-type: none"> <li>- species with remarkable adaptations to the arid environment;</li> <li>- species of conservation significance;</li> </ul> </li> <li>- include ecosystems and species that show evidence of having been modified and sustained by the land management practices of the Anangu, including the use of fire.</li> </ul> </li> </ul>
<p>Criterion (iii) contains unique, rare and superlative natural phenomena, formations and features and areas of exceptional natural beauty.</p>	<p>The huge monoliths of Uluru - Kata Tjuṯa National Park, including one of the largest in the world, which are set in a contrasting sand plain environment provide a landscape of exceptional natural beauty and scenic grandeur. The World Heritage values include:</p> <ul style="list-style-type: none"> <li>• the remarkable and unique natural geological and landform features formed by the huge monoliths of Uluru and Kata Tjuṯa set in a contrasting sand plain environment; the immense size and structural integrity of Uluru which is emphasised by its sheer, steep sides rising abruptly from the surrounding plain;</li> <li>• the relative simplicity of the monolith of Uluru and its contrasts with the many domes of Kata Tjuṯa; and</li> <li>• the exceptional natural beauty of the view fields in which the contrasts and the scenic grandeur of the monoliths create a landscape of outstanding beauty of symbolic importance to both Anangu and European cultures.</li> </ul>
<p>Cultural criterion (v) outstanding example of a traditional human settlement or land-use, which is representative of a culture (or</p>	<p>Uluru - Kata Tjuṯa National Park is an outstanding example of the traditional human settlement and land-use known as hunting and gathering. Relatively few contemporary hunting and gathering cultures now exist throughout the world. The World Heritage values include:</p> <ul style="list-style-type: none"> <li>• the continuing cultural landscape of the Anangu <i>Tjukurpa</i> (see note below) that constitutes the landscape of Uluru-Kata Tjuṯa National Park and which: <ul style="list-style-type: none"> <li>- is an outstanding example of a traditional human type of settlement and land-use, namely hunting and gathering, that dominated the entire Australian continent up to modern times;</li> <li>- shows the interactions between humans and their environment;</li> <li>- is in large part the outcome of millennia of management using</li> </ul> </li> </ul>

Natural criteria against which the property was inscribed on the World Heritage List in 1987 and cultural criteria against which the property was inscribed in 1994.	Examples of natural World Heritage values of Uluru - Kata Tjuṯa National Park for which the property was inscribed on the World Heritage List in 1987 and cultural World Heritage values for which the property was subsequently inscribed in 1994.
cultures), especially when it has become vulnerable under the impact of irreversible change.	<p>traditional Anangu methods governed by the <i>Tjukurpa</i>;</p> <ul style="list-style-type: none"> <li>- is one of relatively few places in Australia where landscapes are actively managed by Aboriginal communities on a substantial scale using traditional practices and knowledge that include: <ul style="list-style-type: none"> <li>- particular types of social organisation, ceremonies and rituals which form an adaptation to the fragile and unpredictable ecosystems of the arid landscape;</li> <li>- detailed systems of ecological knowledge that closely parallel, yet differ from the Western scientific classification; and</li> <li>- management techniques to conserve biodiversity such as the use of fire and the creation and maintenance of water sources such as wells and rockholes.</li> </ul> </li> </ul>
<b>Cultural criterion (vi) directly or tangibly associated with events or living traditions, with ideas or with beliefs, with artistic and literary works of outstanding universal significance.</b>	<p>Uluru - Kata Tjuṯa National Park is directly and tangibly associated with events, living traditions, ideas and beliefs of outstanding universal significance. The World Heritage values include:</p> <ul style="list-style-type: none"> <li>• the continuing cultural landscape of Uluru and Kata Tjuṯa National Park which is imbued with the values of creative powers of cultural history through the <i>Tjukurpa</i> and the phenomenon of sacred sites;</li> <li>• the associated powerful religious, artistic and cultural qualities of this cultural landscape; and</li> <li>• the network of ancestral tracks established during the <i>Tjukurpa</i> in which Uluru and Kata Tjuṯa are meeting points.</li> </ul>

### II.3. STATEMENT OF AUTHENTICITY/INTEGRITY

#### Authenticity / Integrity

At the time of original nomination in 1987, the IUCN found that Uluru faced a range of management issues including erosion of Aboriginal culture, feral animals, fire control, and visitor management. These were found to be well addressed in the management plan through actions implemented by trained staff and provision of a substantial operation budget. Much of the landscape affected by inappropriate tourism development was found to be in the process of rehabilitation and facilities were being located outside the Park. Delimitation of aboriginal sacred sites and cave paintings had been done but there was still some visitor trespass. The education program was well developed and was being extended to encourage a greater awareness of the desert landscape among visitors. It was obvious, however, that the rectangular boundaries of the Park were artificial and that other natural features of interest lay outside the area.<sup>1</sup>

<sup>1</sup> IUCN technical evaluation of Uluru – Kata Tjuta National Park World Heritage Area Nomination; 1987; World Conservation Union; p. 11;

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At the time of re-nomination in 1994, some of the policies that had been in place since the transfer of the Park back to the Traditional Owners and lease-back to the Director of National Parks had been directed towards the rehabilitation of the cultural landscape of the National Park with a considerable measure of success. Inappropriate intrusions such as the road skirting Kata Tjuṯa and the first airstrip had been removed and allowed to revert to their former state. The application of controlled burning practices had restored the area from the ravages of catastrophic fires in the period when they were proscribed.<sup>2</sup>

The Australian Government's re-nomination documentation of 1994 stated that generally the Park was in very good condition. Uluru and Kata Tjuṯa were both relatively pristine, with the exception of a safety chain on the steepest part of the climb up Uluru. Climbing at Kata Tjuṯa had been discontinued.

It was noted that some rock shelters containing rock paintings and archaeological deposits accessible to the public were now viewed from raised walkways to control the physical degradation caused by touching and the adhesion of dust, noted in the original World Heritage nomination of the Park.

Roads, car parks and other structures close to sites of cultural and ecological significance had also modified the Park's pristine condition. The access road to Kata Tjuṯa had been relocated away from the most sacred area.

The threat of wildfires, also noted in the original nomination, had been greatly reduced through the reintroduction of a fire management regime derived from traditional Anangu practice.<sup>3</sup>

In relation to the first nomination of the Park, in the 11<sup>th</sup> Session of the World Heritage Committee, the IUCN commented: "The Committee commended the Australian authorities on the manner in which the management of this property gave an appropriate blend of the cultural and natural characteristics of this property." At this meeting the Committee also expressed the view that the site could be expanded to include areas that would give a more complete representation of the arid zone.

### Maintenance of Values

The Anangu have a continued association with their land through traditional practices. This association is supported and protected through the Board of Management, the Plan of Management and other related Park plans. For instance, Anangu have maintained their traditional fire management practices and these practices are now used within the presentation of the Park. This continued association plays an important role in the maintenance and protection of the values of the World Heritage property.

Since nomination, significant road relocations, including the Kata Tjuṯa ring road, have been made to prevent access to sacred sites and protect cultural values. Fire management practices have improved by including traditional Anangu burning practices. This has decreased the threat of wildfires and provided for better protection of species populations such as Tjakura and Mulgara. The management of introduced and

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<sup>2</sup> Evaluation documentation of Uluru – Kata Tjuta National Park World Heritage Area Nomination; 1994; pp. 103-104;

<sup>3</sup> Uluru – Kata Tjuta National Park World Heritage Area; 1994; p.18.

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feral animals, particularly rabbits, has resulted in decreased feral animal populations, protection of vegetation and erosion prevention. Only 34 exotic plant species have been recorded in the Park, representing 6.4% of the Park's total floral species. Uluru and Kata Tjuta remain in good condition geologically, with minor impact from the steel chain at the steepest part of Uluru installed some time ago for the climb.

In 1995 a Cultural Centre was opened in the Park, providing visitors with an introduction to Tjukurpa (law, knowledge, religion and philosophy), Anangu art, lifestyle, history, languages, wildlife and joint management of the Park, to enhance their experience of their visit to the World Heritage area. The Cultural Centre is a dynamic free form structure built from locally made mud bricks. It resembles two ancestral snakes Kuniya and Liru. Inside, large informative displays were designed collaboratively with Anangu, architects, designers and interpreters. The Centre was the winner of the 1996 Royal Institute of Architect's Tracy Award for the best building in the Northern Territory. It has featured in architectural publications internationally, and has enhanced the preservation of the Park's cultural and natural values by promoting better understanding by Park visitors.

In April 1995 the Board of Management and the then Australian Nature Conservation Agency were awarded the UNESCO Picasso Gold Medal for World Heritage management. This recognised Australia's efforts in setting new international standards for World Heritage management by Indigenous people through the Park's joint management arrangements.

#### Boundaries and buffer zones

Uluru- Kata Tjuta National Park is a Biosphere Reserve under the UNESCO Man and the Biosphere Program. Formal zoning, as specified in the Biosphere Reserve Action Plan (ANCA, 1993), has not yet been instituted. The land area reserved as the Uluru-Kata Tjuta National Park has become the basis of the core area. While zonation within the core protected area occurred in 1991, the surrounding areas, defined as buffer and transition zones, have not been officially designated. The Park is bounded by the relatively undeveloped Petermann and Katiti Aboriginal Land Trusts, and the intensively developed Yulara Tourist Resort which is not situated on Aboriginal land.

The Uluru (Ayers Rock – Mount Olga) National Park Plan of Management (1991) was the first management plan to divide the Park into management zones, setting out the conditions under which each zone would be managed. Factors taken into account in defining zones included the distribution of flora, fauna and land systems, sensitivity to soil erosion, potential for various types of recreation and land use, evidence of damage or disturbance by visitor use and significance of cultural sites. Three zones were identified: intensive management zone; intermediate management zone; and minimum management zone.

Intensive management zones provide for intensive recreation and infrastructure development and include areas such as: the climb, sunrise and sunset viewing areas, Mutitjulu Community, Cultural Centre, Park Head Quarters, Entry Station and car parks.



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Intermediate management zones provide for limited activities unlikely to cause extensive change to the environment and include the Olga Gorge, Mala and Muṯitjulu walking tracks.

Minimum management zones give first priority to nature conservation and include walking tracks (Valley of the Winds, Uluru base walk, Liru) and a 2km radius beyond the Uluru ring road.

Anangu, through the Plan of Management, acknowledge the links through Tjukurpa (law) between the Park and adjoining lands in the region. These links have direct implications for the practice and maintenance of Tjukurpa associated with the Park and supports the international obligations the Park has in connection with its 1994 cultural listing under the World Heritage Convention. It also takes into account obligations associated with regional ecological management of the Park under the UNESCO Man and the Biosphere program.

## II.4. MANAGEMENT

### International Obligations and Commitments

Uluru – Kata Tjuṯa National Park is a Biosphere Reserve under the UNESCO Man and the Biosphere Program, joining at least 11 other reserves across Australia and an international network aimed at preserving the world’s major ecosystem types of which Uluru – Kata Tjuṯa represents an arid land ecosystem. Further information on the Man and the Biosphere Program can be accessed at: <http://www.unesco.org/mab/>.

Section I of the State Party report provides further information on international obligations and commitments relevant to Uluru – Kata Tjuṯa National Park.

### National Legislation and Controls

The legislative foundation for the joint management arrangements applying to Uluru – Kata Tjuṯa National Park is found in the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Aboriginal Land Rights (Northern Territory) Act 1976*.

The EPBC Act provides protection for World Heritage properties and provides for their management by requiring the preparation of a Management Plan for each World Heritage area. The Act also underpins the Park’s joint management arrangements, and ensures the maintenance of an Aboriginal majority on the Uluru – Kata Tjuṯa Board of Management.

Further information on the operation of the EPBC Act can be found in Section I of the State Party report and also at <http://www.ea.gov.au/epbc/assessapprov/nes/worldheritage.html>.

Other national legislation relevant to the management of Uluru – Kata Tjuṯa National Park includes:

- *Native Title Act 1993*
- *Aboriginal Land Rights (Northern Territory) Act 1976*
- *Australian Heritage Commission Act 1974*

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- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

### State Legislation and Controls

Northern Territory laws are applicable to the Park and people within the Park provided those laws are not inconsistent with the EPBC Act and Regulations or other Commonwealth laws. They must also not interfere with the performance of functions and the exercise of powers by the Director of National Parks. Northern Territory laws relevant to the Park include those relating to criminal and illegal activities, sacred sites and heritage, traffic and motor vehicles, work health and occupational safety and the provision of services (eg health services).

The Northern Territory statutes that have particular relevance to the management of Uluru – Kata Tjuta National Park include:

- *Heritage Conservation Act 1991*
- *Northern Territory Aboriginal Sacred Sites Act 1989*
- *Territory Parks and Wildlife Conservation Act 1995*

## **Management Arrangements**

### Administrative and Contractual Arrangements

The Uluru – Kata Tjuta Aboriginal Land Trust own the Park as inalienable freehold land. The Land Trust represents the traditional Aboriginal owners and the land has been vested in them since 26 October 1985. The Uluru – Kata Tjuta Board of Management was established in April 1986 with an Anangu majority representing Aboriginal Traditional Owners of land in the Park. As a part of the joint management arrangements, the Land Trust leases the land to the Director of National Parks as a National Park. Five years prior to the Lease expiry on 25 October 2084, the Land Trust and the Director will negotiate for its renewal or extension.

### Joint Management and Traditional Protective Measures

Joint management of the Park has been operating since 1985 when the title of the Park was handed back to Traditional Aboriginal owners, to be held in trust for them. From this time Anangu and Piranpa (non-Aboriginal people) have worked together to manage the Park's natural and cultural values. The joint management arrangements are underpinned by the principles of working together, sharing (ngapartji-ngapartji) and *Tjurpukpa* (the Anangu word for the Law, which encompasses the history, knowledge, religion and morality that forms the basis of Anangu values and how Anangu conduct their lives and look after their country).

Traditional protection of Uluru – Kata Tjuta National Park is provided by the Anangu through the practice of the *Tjukurpa*. The policies and prescriptions contained in the current Plan of Management concerning the management of the Park's cultural values are based upon respect for Tjukurpa. The Plan of Management lists a range of actions that Anangu deem necessary for the maintenance of Tjukurpa, and therefore the protection of cultural values. This list includes:

- Passing on knowledge to young men and women;

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- Teaching how to find water, bush foods and bush medicine;
  - Visiting sacred sites;
  - Remembering the past;
  - Keeping visitors safe – keeping women away from men’s sites and keeping men away from women’s sites;
  - Teaching visitors, Park staff and other Piranpa how to observe and respect *Tjukurpa*;
  - Keeping the country alive, for example through stories, ceremonies and song;
  - Putting the roads and Park facilities in proper places to safeguard sacred places;
  - Cleaning and protecting rock waterholes inside and outside the Park;
  - Looking after country (eg; burning); and
  - The collection of bush food and hunting.

### Management Planning

The EPBC Act requires the preparation of a Plan of Management for Uluru - Kata Tjuta National Park Plan as a World Heritage area and Commonwealth reserve. The current Uluru - Kata Tjuta National Park Plan of Management 2000 is the fourth plan of management for the Park. It is the main policy document for the Park and will be in effect for seven years.

The Uluru – Kata Tjuta Board of Management and the Director of National Parks and Wildlife prepared the current Plan of Management. Anangu, the then Office for Joint Management, the Central Land Council, Parks Australia staff, the Tourism Consultative Committee and consultants all provided assistance in the development of the Plan. The Central Land Council and the Office for Joint Management introduced the model for participatory planning that became central to the method of cooperatively working with Anangu in the development of the Plan. The Board of Management approved the framework and method for the consultation phase. In 1999 the draft Plan was released and interested persons were invited to make representations on the Plan. A steering committee was appointed to consider the representations and to refer them to the Board of Management. The draft Plan was amended following these deliberations and the final Plan was referred to the Minister for the Environment and Heritage in March 2000 for consideration and was then accepted by Parliament.

The Uluru - Kata Tjuta National Park Plan of Management is available at:  
<http://www.ea.gov.au/parks/publications/uluru-pom.html>

### Contact Details

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Park Manager  
Park Headquarters  
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Chairperson  
Uluru – Kata Tjuta National Park Board of Management  
PO Box 119  
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### Staffing, Financial and Training Resources

All Park staff are employed under the Commonwealth Public Service Act 1922. Their general duties are to assist the Director in carrying out his or her functions under the Act. Parks Australia is committed to the principles of equal employment opportunity, follows the guidelines set out in the *Occupational Health and Safety (Commonwealth Employment) Act 1991*, and encourages industrial democracy in the workplace.

Parks Australia is committed to the training and employment of Anangu and encourages flexible working arrangements to enable Anangu to fulfil their cultural obligations. At 30 June 2002, Anangu employment, including staff and temporary contracts, comprised 40% of the Park workforce.

In addition, the Community Traditional Consultancy arrangements allow for the employment of Anangu as both casual consultants and increasingly as permanent contract employees. The Community Contract Scheme employs people on a casual basis on day labour, funded by the Mutitjulu Community, to work within the Park assisting rangers.

Parks Australia provides opportunities for all employees to pursue formal studies in local Aboriginal language and land management through relevant institutions. While Anangu bring significant indigenous knowledge and skills to the Uluru workplace, there is a continuing need for support through capacity building in non-indigenous skills to enhance professional skills and improve employment opportunities within the Park management structure. Professional development plans have been developed for each park officer.

The Commonwealth Government provides funds each financial year for the effective management of the Park and to fulfil the terms and conditions of the Lease and the Plan of Management. In the 2001 – 2002 financial year approximately \$8,080,190 was allocated for operations and capital works within Uluru-Kata Tjuta National Park.

Lease payments are made to the Central Land Council on behalf of Anangu Traditional Owners. The remaining revenue received from Park use fees and other income subsidises the Commonwealth Government's contribution to the Park.

### Scientific and Technical Studies

Research, surveys and monitoring programs that have been carried out within the Park include those for:

- Native fauna and introduced animals;
- Vegetation and control of weeds;
- Hydrogeology and water quality;
- Erosion and rehabilitation;

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- Geology and geography;
  - Fire management;
  - Cultural heritage; and
  - Patterns and trends in visitor use.

Researchers must obtain a permit from the Director of National Parks, via the Park Manager, before carrying out any research work. The process for considering whether to grant a permit and any conditions attached to it involves consultation with Anangu. Consultative committees oversee specific projects.

A bibliography of significant reports on research, surveys and results from monitoring programs is at Appendix 1.

### Visitation

Since the mid-1980s the annual visitation to the Park has more than trebled, increasing by over 250,000 people from 105,970 in 1983-84 to 396 456 in 2000-01 (see table below):

<b>Year</b>	<b>Number of Park Entry Ticket Sales</b>
1983-84	105 970
1984-85	110 160
1985-86	N/A
1986-87	N/A
1987-88	175 495
1988-89	172 652
1989-90	179 448
1990-91	230 112
1991-92	242 893
1992-93	260 037
1993-94	293 595
1994-95	305 484
1995-96	326 834
1996-97	344 422
1997-98	329 125
1998-99	358 349
1999-2000	379 117
2000-2001	396 456

Overall % increase since 1983/84 = 274.1%

Uluru is an important focus for Australia's international tourism marketing. Tourist infrastructure within the region has been built to a high standard and there is a range of visitor accommodation available in the region. Six important visitor activities which take place in the Park are:

- Viewing Uluru at sunset
- Scenic driving
- Visiting the Cultural Centre
- Climbing Uluru

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- Viewing Uluru at sunrise
  - Undertaking the Mutitjulu Walk (at the base of Uluru).

The existing visitor infrastructure in the Park is primarily directed at providing views of, and appropriate access to, the two key attractions of Uluru and Kata Tjuta. A sealed east-west road (Uluru Road) links the Ayers Rock Resort at Yulara with Uluru, and a south-west branch road extends as far as Kata Tjuta. Secondary access is provided by the Docker River Road that branches off the Kata Tjuta road near the western boundary of the Park.

Distant views of Uluru and Kata Tjuta are available at a number of viewing areas developed along both the arterial roads. The most popular of these roadside visitor nodes are the separate bus and car sites for viewing the sunset colours on Uluru. The Cultural Centre, located alongside the Uluru road near the Park Headquarters, is the focus for Park interpretation and education services.

The Park Cultural Centre is a purpose built building designed to enhance visitor's understanding of the Park's World Heritage values, particularly its cultural landscape values. Development of the building was a cooperative effort: Anangu, Park staff and the architects conceived a free-form structure built from locally made mud bricks and resembling the two creation ancestor snakes Kuniya and Liru confronting each other across an ancient field. The Cultural Centre houses displays, cultural activities, Park information and four Anangu enterprises – Ininti Souvenirs and Café, Maruku Arts and Crafts, the Walkatjara Art Centre and Anangu Tours, providing an opportunity to inform the public of the World Heritage values of the Park.

Appreciation of the Park's natural and cultural values improves visitor experiences, and encourages Park visitors to adopt a responsible approach in their visit to the area, including information and reasons not to climb Uluru.

Visitor infrastructure development at Uluru is largely confined to the area bounded by the sealed road ('Ring Road'), which encircles the monolith. This is limited to three formal visitor nodes (Sunrise, Mutitjulu, and Base of Climb) and a network of three linked walking tracks (Mala, Mutitjulu, and Uluru Circuit). The Sunrise Visitor Node has been exclusively developed to provide visitors with views of the sunrise colours on the northern face of Uluru. The other two nodes serve as trailheads for the three base walks, the Uluru Climb, and the Liru Walk, which links Uluru and the Cultural Centre.

Developments at Kata Tjuta are concentrated on the western side of the domes. Sealed branch roads provide access to three separate visitor nodes (Sunset, Walpa [Olga] Gorge, and Valley of the Winds). The Sunset Visitor Node combines picnic sites with a sunset viewing area, while the other two sites serve as trailheads for walking tracks (Walpa [Olga] Gorge and Valley of the Winds) into the western part of the Kata Tjuta complex.

Visitor facilities at Kata Tjuta have been upgraded to cater for increased visitor demand and the carpark has been moved due to cultural sensitivities regarding its location. Improvements to visitors' facilities at Kata Tjuta have included trials of composting toilets and new wiltja (shade shelters). Improvements to cater for disabled access are being planned.

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All visitor facilities and sites in the Park cater for day-use only. Visitor accommodation is available outside the Park at nearby Yulara. It is important that tourism in the Park is ecologically sustainable and does not interfere with Anangu privacy and rights for continuous connection and enjoyment of their lands.

The climbing of the monolith of Uluru by tourists is an activity that conflicts with the way in which Anangu perceive Uluru and climbing Uluru does not respect Anangu cultural values. Anangu regard climbing as inconsistent with their spiritual veneration of the 'site' and wish to discourage visitors from doing so. The climb route follows that of a spiritual Dreaming ancestor and Anangu believe that it is inappropriate for tourists to scale the monolith and to follow this particular route. They consider that to climb is to show disrespect for the spiritual and safety aspects of *Tjukurpa*.

The traditional owners preferred approach to this management issue is to educate visitors about the significance of the place through interpretive programs and to request tourists not to climb Uluru. Anangu choose to leave the decision of whether or not 'to climb' to the tourists.

### Education, Interpretation and Awareness Raising

A large proportion of visitors to the Park arrive in organised groups and receive most of their information from tour guides. The Park recognises the important role of tour operators and provides tour operator workshops with Parks Australia staff and senior Anangu custodians participating as facilitators, guides and teachers. Parks Australia also produced a Tour Operator Workbook to provide accurate information on the values of the Park. Information on the natural and cultural values and general visitor information is also provided on the Internet at: <http://www.ea.gov.au/parks/uluru/index.html>

The Liru Walk is conducted by an Aboriginal owned enterprise, Anangu Tours and gives visitors the opportunity to meet local Anangu and gain information from them directly. The Mala Walk is led by Anangu and Piranpa (non-Aboriginal) rangers around part of the base of Uluru. An expert in the area's natural history also leads seasonal botanical tours.

Interpretive activities at the Park have increased and include briefings for school groups, the media and tour operators. Visitors and tour operators are encouraged to visit the Cultural Centre to view the interpretive messages before they go to other sites in the Park. Interpretive information is also provided in regularly reviewed brochures, sheets and signs.

An Interpretation Plan has been developed to provide a long-term strategic framework for the Park's interpretive activities on a Park-wide and individual site scale. The plan covers all interpretation and communication actions directed at visitors within or on the way to the Park.

Park visitors have many opportunities to learn about Anangu and their relationship to the land. Not all sites that are important under *Tjukurpa* are restricted and access to many parts of the Park has been negotiated and agreed with Nguraritja. The protection of sacred sites enhances the visitor experience, as they begin to understand the country and Anangu culture, and the implied responsibilities of visiting. To assist in increasing awareness, while providing protection to sites and *Tjukurpa*, low barrier fencing and

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signs were installed to ensure visitors can enjoy the Park within the context of culturally appropriate behaviour.

In 2002 a new visitor guide was produced to enhance the availability of Park information in one “package”. The new booklet-style visitor guide emphasises the presentation of the Park’s cultural values, through the eyes of the traditional owners.

#### Identification of gaps and management needs

A significant priority for Parks Australia is the development of appropriate infrastructure and transport systems to allow visitors to experience the values of the Park while maintaining and protecting its values. With the continued increase in visitor numbers, consideration needs to be given to the way in which the potential impacts on cultural and natural values can be addressed and managed. The intensive visitor pressure at a few localities due to visitors seeking and favouring particular views requires regular upgrading.

The current key visitor infrastructure management issues include:

- crowding at peak visitation times at certain sites which impacts upon visitor experiences and environmental protection
- the limited number and variety of recreational opportunities offered in the Park
- inadequate separation of vehicles and pedestrians, which impacts upon visitor safety and the quality of visitor experiences available
- inappropriate visitor behaviour such as photography and unauthorised access, in some cases due to the siting of visitor infrastructure close to culturally sensitive sites; and
- the disruption of natural hydrological processes through poorly planned developments, making areas susceptible to erosion.

The Visitor Infrastructure Master Plan has been developed to provide a long-term vision and strategic approach to site planning and visitor infrastructure development in the Park which optimises the quality of visitor experiences while enhancing the protection of Park values. (refer also Section II.6 - Monitoring)

## **II.5. FACTORS AFFECTING THE PROPERTY**

### Development Pressure

The key development pressures being addressed in Uluru – Kata Tjuṯa National Park are those resulting from continuing growth in visitor numbers. These pressures are being responded through the development and implementation of park visitor infrastructure plans, a visitor transport study and other studies relating to visitor impacts.

The planning measures aim to provide for increasing growth in visitation, but in ways that enhance visitor appreciation of the Park, minimise tourism impacts and maximise benefits to both the Park and traditional owners. (refer to Visitor / Tourism Pressures section).

### Environmental Pressure



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## Hydrology

Groundwater is the only reliable water supply in the region. The Park is associated with two distinct aquifers: the dune plains aquifer (that provides water for the Yulara tourist resort outside the Park) and the southern aquifer (that provides water for the Mutitjulu community inside the Park). Recharge events for the dune plains aquifer are associated within rare major rainfall events. Groundwater in the southern aquifer is directly influenced by run-off from Uluru.

Increased use of the two aquifers by visitors (especially tourists), the Mutitjulu community and Park staff may diminish long-term water availability and water quality in the future. This could negatively impact on the traditional use of the land by its Anangu owner, and negatively impact on the local environment, the tourism industry, and the economic future of the region for both its indigenous owners and other stakeholders.

The risk to these aquifers is being managed through a variety of management responses, including:

- Parks Australia is working closely with Anangu and others to record traditional knowledge relating to regional hydrology and major rainfall events.
- Monitoring of the southern aquifer is carried out at regular intervals to ensure that the water quality meets the standards recommended by relevant health guidelines.
- The Northern Territory Power and Water Authority monitors extraction rates and standing water levels in the borefield.
- A review of the hydrodynamics and current and projected use of the dune plains and southern aquifer is being carried out. The review will assess the nature of recharge and impacts of current rates of extraction, and detail any consequent management response required.
- A review of the current nature of water consumption and wastewater management in the Park and Mutitjulu is planned. The review will investigate suitable water conservation measures and the potential for inadvertent pollution in the Park.
- Care is exercised in sensitive run-off areas to ensure that Park operations do not disturb or disrupt natural surface hydrological processes.

## Introduced animals

Introduced predators and herbivores can threaten native fauna and flora populations. There are six introduced mammal species in the Park: the house mouse (*Mus musculus*), camel (*Camelus dromedarius*), fox (*Vulpes vulpes*), cat (*Felis catus*), dog (*Canis familiaris*) and rabbit (*Oryctolagus cuniculus*). Pest animals can have a detrimental impact on the highly significant fauna of the transitional sandplain habitat, especially the vulnerable Mulgara and Tjakuṛa. Trapping for foxes and cats around the base of Uluru has had limited success. Anangu perceptions of introduced animals sometimes vary from scientific views, which are taken into account when determining responsive management programs. The risk of introduced species is being managed through a variety of management responses, including:

- The large number of rabbits led to the introduction of a rabbit control program in 1989. This has resulted in a great reduction in the rabbit population, noticeable improvement in vegetation recovery, and an associated reduction in predator numbers. Geographic information systems are used to map distribution of warrens. Long-term periodic review of warren distribution and rabbit population is being carried out.
- A Feral Animals Strategy has been developed, consistent with relevant national threat abatement plans, and is being implemented within the Park.

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- Parks Australia liaises closely with Park neighbours and relevant regional and national organisations in developing a strategic approach for the control of introduced animals beyond Park boundaries.
  - Apart from Seeing Eye guide dogs and hearing dogs, visitors are not allowed to bring dogs into the Park. Other invasive fauna such as domestic cats and birds are not permitted in the Park.
  - A workshop on Biodiversity and the Reintroduction of Native Fauna at Uluru-Kata Tjuta National Park was held in September 1999. Parks Australia, in conjunction with Anangu, will develop a Threatened Species Reintroduction Program. Anangu strongly support moves to reintroduce locally extinct animals such as *nganamara* (mallee fowl, *Leipoa ocellata*), *wayuta* (common brushtail possum, *Trichosurus vulpecula*), *mala* (rufous hare-wallaby, *Lagorchestes hirsutus*), *ninu* (bilby, *Macrotis lagotis*), *mitika* (burrowing bettong, *Bettongia lesueur*), *nyulu wintaru* (golden bandicoot, *Isodon auratus*) and *waru* (black-footed rock wallaby, *Petrogale lateralis*).

### **Weeds**

Thirty-four exotic plant species have been recorded within the Park, representing 6.4% of the total Park flora species. The soils in the Park most susceptible to disturbance and subsequent weed establishment are those associated with the water and nutrient rich alluviums of the Gillen land system. Many weeds are brought into the Park on vehicles and the most threatening weed is perennial buffel grass (*Cenchrus ciliaris*), which invades water and nutrient rich drainage lines. Anangu have different perceptions of what constitutes a ‘weed’ and have accepted some weeds as a natural part of the landscape.

The risk of weeds in the Park is being effectively managed through a variety of management responses, including:

- Parks Australia continues to monitor and control weed infestations in the Park, with the participation of Anangu.
- Actions or activities likely to cause a disturbance to habitat or soils are minimised.
- Parks Australia conducts a survey of all amenity plantings in Mutitjulu Community to determine the range of introduced material. In consultation with government organisations, potential ‘sleeper’ weeds are assessed and removed if necessary.
- A planting policy has been developed for the Park to guide amenity planting and rehabilitation works. A seedbank for revegetation using locally collected native seeds and a nursery has been established.
- A study has been completed on Buffel grass and other weeds and their impacts on biodiversity. Methods of control and monitoring were recommendations that can be implemented by Parks staff.
- Other management activities include a protocol for plant and equipment entering the Park and regular patrols of heavily visited sites.
- The detection and control of weeds is carried out within a regional context, with close liaison between the Park, its neighbours, and other interested parties.

### **Fire**

Wildfires within and beyond the Park’s boundaries have the capacity to seriously damage ecosystems. The risk is being effectively managed through a variety of management responses, including:

- The use of traditional Anangu burning practices assists in reducing the risk from large-scale fire events. Fire management in the Park is undertaken in a regional

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context according to the fire management strategy and encompasses traditional Anangu burning practices and contemporary scientific information.

- Vulnerable plant species have been identified and mapped to facilitate protection under the fire management strategy.
- Ongoing fire research and monitoring is carried out in accordance with joint management plans.
- Anangu are assisted by Parks Australia in fire-management practices to protect culturally significant sites.
- Senior Anangu train Parks staff in traditional fire management techniques. Fire crew training is also provided for Parks staff.
- Parks Australia works with regional landowners and other stakeholders, including the Ayers Rock Resort, to encourage and assist with fire management outside the Park.
- The fire management strategy supports habitat protection using aerial photography to plan burning.

### **Erosion**

The soils of the Gillen land system (low-lying drainage plains associated with the base of Uluru) are the most susceptible to erosion in the Park. The Gillen land system is a critical part of the Park and consists of the two large outcrops of Uluru and Kata Tjuta, their narrow gorges, gullies and creeklines, and associated gently sloping fans and alluvium of coarse-textured soils. This land system is based around Uluru and Kata Tjuta where the pressures of tourism are greatest. Previous road planning did not take the natural and cultural values of the Park into account and exacerbated erosion problems. The risk is being effectively managed through a variety of management responses, including:

- Extreme care is taken in the course of operational activities particularly in the Gillen land system. Fine scale soil mapping will be implemented for the production of soil management plans particularly in areas of high visitor use.
- Operational activities within dune and sandplain areas of the Park take account of the susceptibility of these systems to wind erosion.
- Erosion risk and hazard maps will be prepared for the Park.
- Erosion works for Kantju Gorge and Warayuki are being carried out and a monitoring system will be established. Revegetation will be undertaken using local plant species.
- Other eroded areas around the base of Uluru will be surveyed and the necessary control works designed and constructed by appropriate experts. Eroding ponding banks along the rehabilitated old Kata Tjuta road will be restored.
- The future location and design of Park facilities, particularly roads and tracks, will take account of soil characteristics and local surface hydrology.
- The rehabilitated old Kata Tjuta Ring Road and Valley of the Winds track is monitored for erosive processes and, if necessary, control works will be constructed.
- All actively eroded areas in the Park will be mapped in addition to areas already identified at risk or deemed an erosion hazard. A prioritised erosion control works program will be developed and used to guide subsequent works and resource allocations.

### Visitors / Tourism Pressure

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Ever increasing visitor numbers and unscheduled access to key visitor nodes has the potential to impact on the cultural and natural values of the Park. A clear strategic direction for visitor management is needed to ensure that Park values are maintained.

Activities of concern include:

- Climbing of Uluru remains a popular tourist activity but it is the view of Anangu that to climb it is to show disrespect for the spiritual and safety aspects of Tjukurpa (law). Anangu are also very concerned about visitors' safety and each time a visitor is seriously or fatally injured at Uluru, Anangu share in the grieving process.
- Environmental damage to the Park caused by off-road driving, vandalism and illegal camping.
- Unregulated entry to the Park by vehicle traffic from Western Australia. Transport trucks passing through the Park from Western Australia have the potential to increase road accidents and possible spillage of hazardous materials.
- Visitors entering restricted areas in contravention of Tjukurpa values and Park regulations.
- Increasing tourist numbers is contributing to overcrowding in popular areas during peak visitation periods which impacts upon visitor experiences and safety. No restrictions are placed on modes of transport ie; buses or cars.
- Difficulty in controlling air traffic to protect cultural values.
- Increasing visitation could accelerate environmental degradation at unhardened sites (for example, the Uluru sunset viewing areas for bus passengers)
- Ensuring that Anangu are supported in their wish to gain economic benefit from the Park.
- Visitors removing rocks and sand from the Park.
- Increasing cost of maintaining roads and tracks in the Park and the need to ensure that there is appropriate funding to provide the standard of infrastructure and quality of visitor management that are suitable for a World Heritage National Park.
- Existing toilet facilities need upgrading and additional facilities need to be provided to cope with increasing tourist numbers.

These risks are being effectively managed through a variety of management responses, including the Park Plan of Management, Visitor Infrastructure Master Plan and the Interpretation Plan.

- The Visitor Infrastructure Master Plan developed in consultation with Anangu, the tourism industry and other stakeholders, ensures that site plans are developed in an integrated manner.
- Site plans are developed in accordance with existing joint management consultation protocols for the main areas of use. The aims are to optimise visitors' satisfaction, safety and comfort in the Park and to better accommodate the needs of disabled people. Plans take into account:
  - An emphasis on the cultural significance of the area, Anangu viewpoints and alternatives to climbing Uluru;
  - The need to better manage toilet facilities;
  - Alternative road configurations for the Uluru Ring Road;
  - Rationalisation of Uluru viewing areas to enhance visitors' experience and safety;
  - Access for disabled people; and
  - Improved road and car park location, improved shade and seating, increased safety information and improved interpretation and signage.

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- Restrictions on access have been applied to some parts of the Park for scientific research, Aboriginal living areas, archaeological and sacred sites, and areas of outstanding conservation significance.
  - Development proposals within the Park may be required to undergo a social, cultural and environmental impact assessment under relevant legislation and the Plan of Management.
  - Visitor's vehicles are restricted to approved roads and tracks.
  - Rehabilitation of disused roads and tracks will continue with priority being given to those around the base of Uluru and Kata Tjuta.
  - Existing walking tracks will be maintained and where appropriate upgraded unless it is necessary on environmental, cultural or safety grounds to close or rehabilitate them.
  - In 1999-2000 the Park received \$3.1 million in capital funds to assist in the protection of the Parks' natural and cultural values through the establishment of enhanced visitor facilities including tracks, *wiltjas* and toilet facilities.

### Other Pressures

#### **Cultural sites**

Keeping Tjukurpa strong through the maintenance of traditional ceremonial activities is important. Protection of some sites of cultural significance is a continuing concern, with unauthorised entry, vandalism and theft by visitors posing potential threats to cultural sites. Damage to painted surfaces from water flowing over rock and removing pigment, and water depositing salts and minerals is also a problem. Many cultural sites are susceptible to damage from vegetation, mud-building wasps, mud birds, termites and feral animals.

The risk is being effectively managed through a variety of management responses, including:

- Protecting cultural sites is addressed in the Plan of Management, the Master Infrastructure Plan, the Interpretation Plan and Cultural Heritage Action Plan.
- A cultural heritage workshop for Parks Australia staff, Anangu, and other stakeholders was held in September 2000. The workshop was in response to senior Tjukurpa custodians' request that cultural site maintenance be addressed as an urgent priority. The workshop resulted in an Action Plan for Cultural Heritage that is currently being implemented. Cultural sites protection activities will include ongoing documentation, monitoring and maintenance and physical protection measures where necessary.

Other actions to protect cultural sites include:

- Recognising that cultural maintenance is principally the responsibility of Anangu and ensuring adequate resources are provided to facilitate this.
- Visitor access to sensitive cultural sites will be restricted, particularly when requested by Anangu for ceremonial and other reasons. Sites with restricted access are patrolled by Park staff in conjunction with appropriate senior Anangu.
- A prioritised work program for rock art conservation and protection including day-to-day management by a cultural heritage management team, installation of silicon driplines, removal of wasp nests, damaging vegetation and graffiti, and fencing some sites to prevent damage from animals.
- Supporting a project to rehabilitate the Kulpitjara cultural site (outside the Park boundaries). The Kulpitjara site has strong cultural relationships to sites within the

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Park. It is an example of recognising the connection of site outside the Park to the cultural values of the Park.

- Supporting compliance and enforcement training for Anangu, allowing them to enforce park regulations relating to protection of sites.
- Making visitors aware, through interpretive materials, of their responsibilities in relation to access to, and photographing of, sites of significance.
- Installation and upgrading of viewing walking tracks and boardwalks to manage visitors.
- Realignment of the Ring Road around the base of Uluru, as its current alignment is too close to a number of sacred sites.
- Regular monitoring of bushwalking routes by Park staff to check on any notable site disturbances in remote areas.
- Reporting to the Board of Management on the effectiveness of management actions.

### **Traditional Knowledge and Ecological Management**

Anangu have a very detailed knowledge of the flora, fauna, habitats, seasonal changes, landscapes, places and history of the Park. Conservation of Anangu oral history and traditional knowledge is vital to understanding the cultural landscape for future land management. Until recently little of this knowledge was recorded, and even today much of it remains unrecorded. The aging and passing away of people who have important traditional knowledge, and the physical deterioration of cultural heritage materials, exacerbate this situation.

The following management responses have been undertaken by Parks Australia to assist in addressing this issue:

- Through joint management, Anangu cultural and ecological conservation and management practices will be balanced with Western conservation and management practice.
- Parks Australia supports the maintenance of Anangu traditions. For example, Senior Anangu teach younger Anangu and Park staff traditional knowledge and skills associated with land management through the Junior Ranger and Secondary School Programs.
- Supporting Anangu to establish a formal process to appropriately archive and access oral history and traditional knowledge, including the use of contemporary media equipment.
- Parks Australia encourages and assists in the recording of Aboriginal knowledge of flora and fauna, perspectives of the landscape, traditional ways of managing resources, place names, religious stories, background to historical events, as well as personal histories.

Parks Australia recognises that inter-generational transfer of knowledge is central to maintaining the cultural values of the Park. This includes working with Anangu to respond to the pressures, including social and economic issues, impeding the on-going transmission and use of traditional knowledge. . A need has been identified to expand and enhance current programs encouraging more action learning amongst young Anangu people.

A review of arrangements to protect indigenous cultural and intellectual property rights has commenced. Guidelines have been reviewed to control filming, photography and sound recording for commercial and/or public viewing.

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Park staff are encouraged to undertake Pititjantjara language lessons.

## **II.6. MONITORING**

### Current Monitoring Program

The natural and cultural values for which Uluru-Kata Tjuta National Park has been inscribed on the World Heritage List relate to landscape and scenic qualities, fauna, vegetation, geology and geomorphology, human history and Anangu living with the land.

The results of research and surveys in Uluru-Kata Tjuta National Park provide baseline information about the status of the Park's natural and cultural resources and visitors' use of the Park, against which the protection of its World Heritage values can be gauged. Monitoring reveals whether and how conditions have changed in relation to the baseline information and is used in assessing the effectiveness of management programs and management decisions.

Researchers must obtain a permit from the Director of National Parks, via the Park Manager, before doing any research work within the Park. Monitoring partners within the region include the Mutitjulu community and the Threatened Species Network.

The research, surveys and monitoring programs have focused on wildlife, vegetation, water quality and quantity, fire, the control of weeds and introduced animal populations, cultural heritage (with an emphasis on rock art and other archaeological sites) and patterns and trends in visitor use. These programs are helping to develop effective systems for storing and retrieving baseline information about the Park.

A process for the development of key indicators for the maintenance of World Heritage values is currently being developed as part of an over-arching Park performance management framework. This framework will not only be used to develop indicators for measuring protection of World Heritage values but also to assist in State of the Environment reporting and day-to-day park management. Development of key indicators for World Heritage values is a process requiring close consultation with the Board of Management and stakeholders.

#### **Monitoring fauna and flora values**

Flora, fauna and habitats are monitored over the long term to contribute to a complete understanding of the factors influencing the abundance and distribution of fauna. Flora and fauna monitoring also provides useful information for regional conservation programs, local Aboriginal enterprises, and the tourism industry.

Monitoring programs that incorporate traditional Aboriginal tracking techniques are used to assist with monitoring of Tjakura and Mulgara. The Mulgara is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999*. Other animals of conservation significance include the marsupial mole and the woma python.

Vertebrate and invertebrate monitoring is carried out at eight permanent sites representing the range of habitats in the Park. Results of material collected from pitfall traps have yielded 344 invertebrate morphospecies.

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Other monitoring that has been undertaken includes:

- Rare bird survey 1991
- Survey of bats 1993
- Vertebrate faunal monitoring programs 1994, 1995, 1997
- Invertebrate faunal monitoring 1994, 1995, 1996, 1997
- Distribution and abundance of relict Burrowing Bettong warrens
- Tjakura
- Review of Palaeodrainage model

### **Monitoring Visitor Impact**

Monitoring visitor impact involves the regular and systematic collection of data regarding visitors to gain information about Park use. In consultation with the tourism industry and the Scientific Consultative Committee, Parks Australia is also developing a comprehensive visitor monitoring strategy. This strategy will develop indicators and methodologies to monitor the impact of visitation upon the natural and cultural values of the Park and assist in Park management.

Baseline data already available includes ticket numbers, people counters, tour operators' information and Ayers Rock Resort statistics.

### **Cultural Values Monitoring**

#### Results of Current Monitoring Program and of Key Indicator Measurement

The Monitoring Matrix (below) outlines the current monitoring program in place for the Park. The program has evolved since the Park was first inscribed in the World Heritage List. The program was originally set up to monitor flora and fauna changes and effects from fire management.

The current program is more sophisticated, examining the full range of natural and cultural values across the Park and identifying significant management issues. The monitoring program currently operating in the Park has not been formally documented as it relates to World Heritage values. A framework for the monitoring of such values – natural and cultural – is being developed.

The more significant trends identified for natural values relate to the impact of transport and visitor infrastructure. Further information will be collected from monitoring activities currently underway or being developed.

#### World Heritage Values Monitoring – Monitoring Matrix

The following table is a summary of recently completed and current research and monitoring projects being undertaken in Uluru – Kata Tjuṯa National Park to monitoring the maintenance of the World Heritage values of the Park. (Refer to Section II.2 Statement of Significance for a more comprehensive description of World Heritage values (Indicative World Heritage Values Table) and Section II.5 Factors Affecting the Property for a description of pressures.)



World Heritage Value	World Heritage criteria	Pressures (Refer Factors affecting the Property)	Title and Purpose of Project
Diversity of animal species, including endemics or endangered or species restricted in distribution	Natural criterion (ii)	<ul style="list-style-type: none"> <li>• Uncontrolled wildfire events</li> <li>• Feral and exotic animals</li> <li>• Weed spread</li> <li>• Exotic diseases</li> <li>• Tourism pressures</li> </ul>	<p><b>Fauna monitoring and survey</b> Documentation of fauna monitoring based on surveys of all fauna every 3 years, and of endangered (listed) and locally extinct fauna every year. This includes specific programs for Mulgara and Tjakura.</p> <p><b>Species recovery plans</b> These are in place for all listed fauna. A species re-introduction program is also being developed, considering 15 locally extinct species.</p> <p><b>Invasive Fauna Strategy</b> Monitoring of ferals and preventive management actions (camel, dog, rabbit, fox, cat).</p> <p><b>Traditional skills</b> Utilisation of traditional custodians in monitoring and management of fauna. This program promotes the enhanced integration of traditional skills into Park management activities.</p>
Diversity of plant species, including endemics, or endangered species, and species restricted in distribution	Natural criterion (ii)	<ul style="list-style-type: none"> <li>• Uncontrolled wildfire events</li> <li>• Feral and exotic animals</li> <li>• Weed spread</li> <li>• Tourism pressures:               <ul style="list-style-type: none"> <li>- inappropriately designed visitor infrastructure (roads, tracks) resulting in impacts on natural watershed and aquifer dynamics, soil erosion and spread of weed seeds;</li> <li>- increased visitor numbers increasing risk of weed seed introduction.</li> </ul> </li> </ul>	<p><b>Fire management</b> Prescriptive burns around key sites of endangered or vulnerable flora as part of general fire management across the Park.</p> <p><b>Traditional skills</b> Utilisation of traditional custodians in flora monitoring and management and integration of traditional skills into Park management.</p> <p><b>Invasive Flora Strategy</b> Mapping of weeds and implementation of management strategies. Use of volunteer groups to assist in eradication action.</p> <p><b>Flora monitoring and GIS</b> Development of a holistic flora map for the Park, utilising GIS to integrate scientific analysis with traditional knowledge. The project will also allow information from fire site monitoring and fauna surveys to be fed in. This will enable the identification of relationships between natural values and impacts (fire, visitors) and of the appropriate management response.</p> <p><b>Transport and visitor infrastructure study</b></p>

World Heritage Value	World Heritage criteria	Pressures (Refer Factors affecting the Property)	Title and Purpose of Project
			A review of transport and infrastructure design across the Park. Planning and implementation of infrastructure, which is non-interruptive to environmental flows (water shed, aquifers). Areas of walking tracks have already been modified to be above ground. Issues relating to the ring road around Uluru present a particular challenge in this project.
On-going geological processes	Natural criterion (ii)		<b>Geo monitoring</b> Rock movements, rock slides, weathering and erosion are measured on an as needs basis. Information about potentially moving rock around Uluru is collected. No management response has been required to date.
Integrity of desert ecosystems, habitat types, and related on-going evolutionary processes	Natural criterion (ii)	<ul style="list-style-type: none"> <li>• Uncontrolled wildfire events</li> <li>• Feral and exotic animals</li> <li>• Weed spread</li> <li>• Tourism pressures – increased visitor infrastructure and numbers</li> <li>• Increasing demands on groundwater aquifers affecting sustainability of water supply and environmental flows. Contamination of ground water aquifers. Damage to habitat values as a consequence of soil erosion</li> <li>• pressures from concentration of resource use resulting from the change from nomadic to sedentary human habitation in the region</li> </ul>	<p><b>Fire management</b> Prescriptive burns around key sites of endangered or vulnerable flora as part of general fire management across the Park.</p> <p><b>Traditional skills</b> Utilisation of traditional custodians in habitat management and integration of traditional skills into Park management.</p> <p><b>Hydrogeology (aquifer) study</b> A review to assess existing understandings of, and future research needs and action regarding: aquifer recharge and related issues, the impacts of current rates of extraction, possible threats to water quality and thus Park biology.</p> <p><b>Waste management</b> Implementation of a best practice waste management system for the area. The aim of the project is to avoid pollution of the aquifer and damage to the water quality of desert ecosystems.</p> <p><b>Firewood Strategy</b> A project for the sustainable collection of firewood for Mutitjulu community residents. Aims to protect habitat values in the vulnerable dune systems through minimum impact firewood management.</p>
On-going management of landscapes by Aboriginal people through use of fire	Cultural criterion (v); Natural criterion (ii)	<ul style="list-style-type: none"> <li>• factors inhibiting Anangu spending time on country and passing on of</li> </ul>	<p><b>Fire management activities undertaken by Aboriginal people</b> On-going consultation with Traditional Owners regarding fire regimes and</p>

World Heritage Value	World Heritage criteria	Pressures (Refer Factors affecting the Property)	Title and Purpose of Project
		<p>knowledge of fire management practices</p> <ul style="list-style-type: none"> <li>• social issues diminishing traditional cultural values, the maintenance of traditional beliefs and indigenous knowledge</li> </ul>	<p>involvement of Aboriginal people in burning programs; assistance in re-establishment of fire management programs to be conducted by Aboriginal people.</p> <p>Implementation of fire management strategies that integrate traditional culture in park fire management practice.</p> <p>Traditional owners leading fire management operations in Park.</p>
<p>Continuance of a cultural landscape, reflecting on-going interrelationships between people and the natural environment around traditional Aboriginal land as evidenced in:</p> <ul style="list-style-type: none"> <li>• ongoing hunting and gathering</li> <li>• continuation of <i>Tjukurpa</i> and ceremonial/ artistic life</li> <li>• engagement/ leadership in regional and national ceremonial life</li> <li>• ongoing educational activities concerning cultural interaction with landscape</li> </ul>	<p>Cultural criteria (v), (vi); Natural criterion (ii)</p>	<ul style="list-style-type: none"> <li>• factors inhibiting spending time on country and passing on of knowledge</li> <li>• social pressures contributing to the breakdown of: hunter gathering traditions; the maintenance of relationships to country; ceremonial life and the traditional educational role of Uluru - Kata Tjuṯa.</li> <li>• Local capacity to deal with externally driven issues producing pressures (health, housing, economic and employment – including gender equity issues)</li> <li>• Increasing visitor numbers and pressure for expansion of tourism infrastructure</li> <li>• limited resources to maximize involvement of Anangu in maintaining the Park’s cultural values.</li> </ul>	<p><b>Joint Management</b> Emphasis of <i>Tjukurpa</i> as a key element and in the implementation of joint management arrangements for the Park.</p> <p><b>Logistical support</b> Provision of transport and other assistance for on country Anangu activities and ceremonies. Includes providing for Anangu staff to attend and participate in ceremony as part of their park management work.</p> <p><b>Educational support</b> Provision of assistance for intergenerational knowledge transfer, such as through the regional “Ara Irititja” (traditional stories) program led and managed by indigenous rangers under the guidance of senior custodians.</p> <p><b>Artsite monitoring</b> Development of rock art database and protection program.</p> <p>Parks Australia support of Anangu and the Muṯitjulu community in managing And responding to community development pressures.</p>

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## II.7. CONCLUSIONS AND RECOMMENDED ACTION

### a. Main conclusions regarding the state of the World Heritage values of the property (see items II.2. and II.3. above)

Programs are in place to maintain and protect the cultural and natural heritage values for which Uluru – Kata Tjuta National Park was included on the World Heritage List. The rock art in the Park is being protected and traditional protection of the Park continues through the practice of *Tjukurpa*. Some 400,000 people visit the Park each year. To assist them in their understanding and appreciation of the values of the Park an award winning cultural centre has been built including a range of interpretative and information materials. Reflecting the high standard of management arrangements in the Park, Uluru – Kata Tjuta National Park was awarded the UNESCO Picasso Gold Medal for World Heritage Management in 1995.

### b. Main conclusions regarding the management and factors affecting the property (see Items II.4 and II.5. above)

The Uluru – Kata Tjuta Aboriginal Land Trust own the Park as inalienable freehold land. The management regime for the Park is supported by the Commonwealth environment and heritage legislative framework which establishes the joint management arrangements for the Park between the Director of National Parks and the Uluru – Kata Tjuta Board of Management.

Traditional protection of Uluru – Kata Tjuta National Park is provided by the Anangu through the practice of the *Tjukurpa*. The policies and prescriptions contained in the current Plan of Management concerning the management of the Park's cultural values are based upon respect for *Tjukurpa*.

Substantial research has been undertaken within the Park, focussing on a range of issues. As a part of the research and Park management practices, factors that could potentially affect the Park have been identified and as a consequence a range of management responses have been developed. These identified factors include visitor and tourism pressures on cultural sites, the passing on of traditional knowledge and ecological management, hydrology, introduced animals, weeds, fire management and erosion within the Park. Due to the development and implementation of management responses, the Park continues to be well managed, with all values of the property being maintained.

### c. Proposed future action/actions

Improved monitoring of cultural values represents a future need in the management of the Park. Work is in progress to develop, with Anangu, a clearer framework for monitoring of cultural values and to identify appropriate joint management responses – acknowledging that many of the pressures and issues involved are not entirely within the Park and will require coordinated, cross-jurisdictional responses.

Implementation of the Parks Visitor Infrastructure Masterplan that aims to redress currently identified impacts arising from existing infrastructure and the staged development of new infrastructure that aims to enhance the presentation of the Park,

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appropriately manage increasing visitor numbers and better protect the values of the Park.

Enhanced presentation of the World Heritage values of the Park through development of new visitor infrastructure based on presentation of World Heritage values (especially cultural values) rather than ease of access or 'scenic values', through on-going revision of Park educational materials, improved tour operator training and improvements to on-site interpretation of the Park.

Review and audit of the implementation of the current Plan of Management.

**d. Responsible implementing agency/agencies**

The Director of National Parks, together with Parks Australia and the Board of Management will be responsible for implementing future actions and leading the Plan of Management review and audit process.

**e. Timeframe for implementation**

Over the life of the current Plan of Management.

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