



Elsey National Park

Plan of Management May 2012



PARKS AND WILDLIFE COMMISSION OF THE NORTHERN TERRITORY

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Elsey National Park Plan of Management Parks and Wildlife Division of the Northern Territory, Department of Natural Resources, Environment, The Arts and Sport PO Box 344, KATHERINE, NT, 0851

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Executive Summary

Elsey National Park (the Park) is located in the East Central Barkly Region, close to the town of Mataranka. With around 200,000 people entering the Park each year, this is one of the Territory's most visited Parks. The 139 km² Park contains crystal-clear spring fed waterholes, long stretches of river, scenic walking tracks and historic sites, making it ideal for those keen to relax or explore the Park through land- and water-based activities. The Park protects permanent springs, waterholes and associated riverine vegetation, along with a number of vulnerable species. The Mataranka Thermal Pool is recognised within the Northern Territory (NT) as a Site of Conservation Significance, making it a particularly important place to protect into the future. There are a number of registered sacred sites also contained within the Park which are of significance to the local Indigenous people. Traditional Owner knowledge is recognised and incorporated into management of the Park.

Main priorities of the Parks management are to:

- Provide for a high-quality recreational experience based on the spring fed waterholes and the river through the provision of improved facilities, as resources become available:
- Maintain the springs, waterholes and riverine vegetation communities in good condition;
- Protect and interpret the natural, cultural and historical values;
- Engage with the tourism industry, Indigenous groups, the local community and neighbours.

Performance measures for these priorities include visitor satisfaction and safety, weed, feral and fire management programs undertaken according to annual action plans and no adverse impacts to sites of cultural and historical significance.

It is recognised that visitor numbers are likely to increase within the Park in future, in line with universal population growth. It is also acknowledged that the Park's main attraction is the opportunity to swim and relax in a picturesque natural setting, therefore future development surrounding the springs will be consistent with the Park's character and its standing as a high-visitation Park. A Mataranka Thermal Pool site concept plan is proposed within this Plan of Management (the Plan) so that future development is in keeping with these goals. Opening of a new visitor swimming site is considered so that pressure on Bitter Springs and the Thermal Pool is relieved. The Plan proposes to review all Park visitor information to ensure its accuracy and to update this information so as to promote key safety messages and to include further Indigenous cultural information, with the approval of the Park's Traditional Owners.

The Plan recognises that the greatest threats to the Park's biodiversity values are invasive plant species and feral animals degrading habitat associated with the springs and river system. Further concerns for the Park are increases in surrounding land development placing greater pressure on groundwater aquifer extraction leading to a lowering of the water table, impacting spring flows and water quality. These threats need to be managed if the Park is to maintain its' significant natural values which are ultimately the major drawcard for visitors.

The Plan acknowledges the Mangarrayi and Yangman Indigenous people as the Traditional Owners of the Park and recognises that cultural knowledge for the area belongs to these Traditional Owners. Identifying and protecting cultural, archaeological and historical sites within the Park is a priority.

Finally, the Plan proposes continued engagement with the tourism industry, local Indigenous groups, the community and neighbours. It is important for the Parks and Wildlife Division (Parks and Wildlife) of the Department of Natural Resources, Environment the Arts and Sport (the Department) to maintain and support productive working relationships with key stakeholders in the Park.



Plate 1: Early morning on the Roper River
Photo courtesy Tourism NT

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1. Introduction

Elsey National Park is located near Mataranka, 103 kilometres south of Katherine (Map 1). The Park covers an area of 13 924 hectares in the wet/dry tropics of northern Australia. The main features of the Park are its picturesque springs and waterholes, the headwaters of the Roper River and associated riverine habitat, including near-pristine stands of *Livistona* fan palm. The Roper River divides the Park into two bioregions: Gulf Fall and Uplands to the north of the river, and Sturt Plateau to the south. The Roper River flows all year and is sustained in the Dry season by spring waters. The river flows out from the Park and empties in the Gulf of Carpentaria.

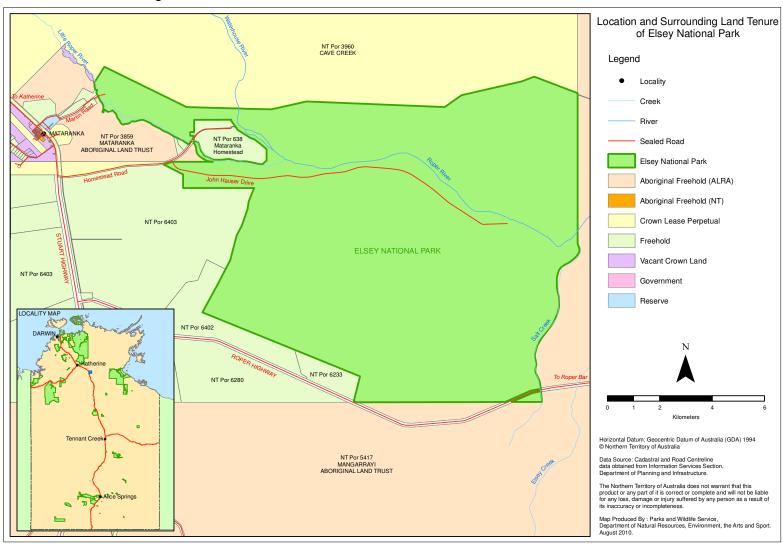
Access to the Park is by sealed road from the Stuart Highway. Mangarrayi and Mataranka Aboriginal Land Trusts, Cave Creek Station, and a number of private properties border the Park. The Roper Highway forms the southern border of the Park.

History of the Park

Augustus Charles Gregory passed through the Elsey area in 1856. His surgeon-naturalist Joseph Ravenscroft Elsey accompanied Gregory on the 'North Australia Expedition'. Gregory named the creeks flowing into the Roper after Elsey from which the national park was named (Forrest 1990). Pastoral occupation of the area began in the 1880's and continues to this day in areas around Mataranka and Elsey National Park. In 1942 the Army established itself in Mataranka with extensive workshops and depots and as many as four hundred Indigenous people were employed in and around these facilities. The Thermal Pool became popular with troops stationed in the area and by 1946 a soldier was granted a sub-lease over the Mataranka homestead area and developed it as a tourist facility.

In 1962 the area surrounding the Mataranka Thermal Pool was excised from Mataranka Station and donated to the Territory Government. This area, known as NT Portion 907, was declared a Reserve in 1967 under Section 103 of the Crown Lands Act and placed under the control of the NT Reserves Board. In June 1978 it was declared under Section 12 of the Territory Parks and Wildlife Conservation Act. Another section of Mataranka Station, known as NT Portion 3069 which contains the majority of what is now Elsey National Park, was granted Crown Lease in Perpetuity in 1987 and by 1990 approval was given under Section 17(5) of the Territory Parks and Wildlife Conservation Act to operate as a Park while a plan of management was written. On November 7, 2002, NT Portions 3069 and 907 were redeclared under sections 12(1)(a), 12(1)(aa) and 15(5) of the Territory Parks and Wildlife Conservation Act to ensure management plans and Bylaws maintained full effect. NT Portion 4480, containing Bitter Springs and a section of land on the south side of the Roper River, was granted Crown Lease in Perpetuity title in July 1995. In November 2010, it was declared under section 12(1)(a) of the Territory Parks and Wildlife Conservation Act. All three portions of the Park are currently subject to Native Title claims.

Map 1. Location and Surrounding Land Tenure



1.1 Purpose, Key Values and Objectives

1.1.1 Purpose of the Park

Elsey National Park will be managed to retain its natural character and maintain its heritage and resources. The Park will continue to offer a range of visitor sites, providing opportunities for visitors to enjoy the diverse range of recreational activities and nature-based experiences available while protecting the natural, cultural and historical values of the Park. The protection of key natural values including the springs, waterholes, riverine areas and threatened species will be a priority. Park management will continue to work closely with key stakeholders, neighbours and the Mataranka community to maintain good working relationships. Mangarrayi and Yangman Indigenous people speak for this country and their knowledge will continue to be integrated into the management of the Park.

1.1.2 Visitor Values

Situated on a main tourist route, the Park is one of the Territory's most popular. For most visitors, the attraction lies in the Park's easily-accessible spring fed waterholes which provide the first opportunity for swimming in a natural setting as visitors drive up from Alice Springs. The crystal clear waters shaded by native *Livistona* fan palms provide welcome relief from the heat.

Multiple picnic sites and a serviced bush-style campground act as a base to further explore the Park, which offers excellent fishing, boating and canoeing opportunities, a range of short and longer walks, and the opportunity to view wildlife, including the rare Red goshawk.

1.1.3 Natural Values

The Park's main conservation assets are its springs and waterholes, the Roper River, and associated riverine environment. Mataranka Thermal Pool is listed in the Directory of Important Wetlands in Australia as a nationally-significant wetland. The numerous springs on the Park feed the Waterhouse and Roper Rivers and help to sustain the surrounding riverine environment. The fringing vegetation community of *Livistona* fan palm (*Livistona mariae* ssp. *rigida*) is believed to be the largest stand of this species anywhere.

A large breeding colony of Little Red flying fox lives in the Park. Up to 500,000 flying foxes congregate on the Park, making the colony one of the largest in the NT. Significant species recorded on the Park include the nationally vulnerable Freshwater sawfish and Red goshawk.

Limestone underlies much of the Park, including the Roper River. The river flows over scenic cascades and waterfalls known as tufa, an occurrence which is commonly found in mineral-rich waters. Calcium carbonate precipitates from spring waters onto rock bars, forming picturesque dams and cascades.

1.1.4 Cultural Values

Elsey National Park forms part of the traditional lands of the Mangarrayi and Yangman Indigenous people. Twenty-two sacred sites are registered or recorded on the Park, along with a number of unrecorded Indigenous archaeological sites in the vicinity of the Roper River. Although the Park is not under formal joint management arrangements,

Rangers involve Traditional Owners in important management decisions where cultural interests occur.

1.1.5 Historical Values

The area around Mataranka was a focal point for early European settlement in the NT. On the Park, the remains of a 1914 sheep dip, World War II Army Camp and the 12 Mile Yards (constructed in 1969) provide a tangible connection to the Park's past.

1.1.6 Objectives of the Plan

This is the second Plan of Management prepared for Elsey National Park. It has been written to provide direction to the on-Park managers in operational planning and day-to-day programs. It provides for the ongoing conservation of the Park's significant natural, cultural and historical values and continued public use and enjoyment. The Plan is also a public document through which the public may learn about the Park, its values and management.

This Plan sets Management Actions / Directions and Performance Measures against which Parks and Wildlife and the general public may measure progress. The Plan presents both general and specific Management Actions / Directions and Performance Measures with respect to the Park's purpose and current management issues. It also outlines measures that will ensure future development of the Park is appropriate. The main strategies of the Plan are to:

- Maintain visitor facilities which provide visitors with the opportunity to enjoy a wide range of recreational activities within the Park including swimming, picnicking, short and longer walks, canoeing, boating, fishing and wildlife watching;
- Ensure future developments plan for increasing visitor numbers so as to prevent over-crowding at primary visitor sites;
- Manage natural resources to reduce the impacts of fire, weeds and feral animals on the Park; and
- Maintain strong working relationships with the Traditional Owners and stakeholders of the Park.

Achieving the Management Actions / Directions outlined in this Plan will enable Parks and Wildlife to demonstrate its commitment to the *Territory 2030 Strategic Plan 2009*. The management of the Park's biodiversity and the reduction in weeds and other invasive species such as feral animals directly links with the Territory 2030 Objective 1: Custodians of our natural heritage (DCM 2009[b]).

This Plan has been prepared in accordance with Sections 18 and 19 of the *Territory Parks and Wildlife Conservation Act* (the Act) and will be laid before the Legislative Assembly pursuant to section 19. When this Plan comes into effect, it will replace the 1995 Plan of Management and will remain in force until revoked by a new plan prepared in accordance with the Act. There will be a review after five years to evaluate the effectiveness of this Plan in achieving its management objectives.

1.2 Zoning

Elsey National Park is managed for multiple purposes, including visitor enjoyment, nature conservation, and the protection of cultural and historical values. Areas of the Park will be managed differently, usually with greater emphasis on one of these purposes. A zoning scheme is a general summary of the purpose and focus of management for all

areas of the Park based on the specific values of those areas and their level of visitor access and facility development. It is not intended to be a basis for regulation of access or development and may be changed during the term of this Plan to provide for improved protection of values and / or enhancement of visitor opportunities.1

Two management zones are identified for Elsey National Park:

- Visitor Zone areas that provide for concentrated tourism experiences, with a high level of facilities and activities. It is acknowledged that most of the key visitor destinations within this zone are sacred sites or are in the vicinity of sacred sites.
- Conservation Zone areas that provide for the conservation of the Park's natural and cultural values. Visitor access is low to medium and areas without formed vehicle or walking tracks may require a permit for access.

Aims

Protect the Park's values while providing for public use.

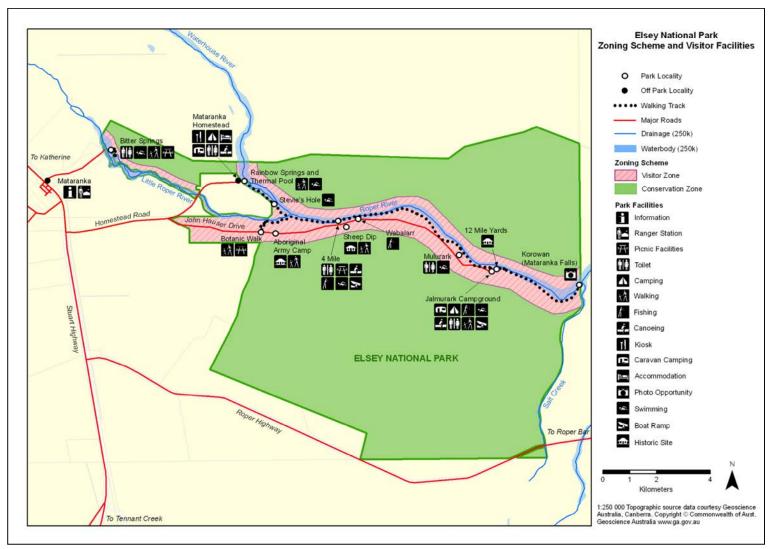
Management Actions

- 1. Conform to the zoning scheme in managing the Park (Map 2). Development in any zone is subject to normal approval processes to ensure appropriate protection of natural and cultural values. Special activities are always subject to normal by-laws and permits. (*Ongoing*)
- 2. Regardless of the designated zone all management and development will have regard to maintaining the Park's natural character, its conservation values and visitor experiences. (Ongoing)
- 3. Any new development will be subject to approval through standard environmental and heritage protection processes and related Parks and Wildlife policies. (*Ongoing*)

Table 1. Zoning scheme for Elsey National Park.

	Visitor Zone	Conservation Zone		
Purpose	Provide for high standard visitor access and nature-based activities.	Protection for the Park's natural and cultural values and controlled visitor access.		
Management Focus	Visitor safety, education and enjoyment whilst protecting Park values, especially riverine habitats.	Protection of significant natural and cultural values; scientific research.		
Visitor Access	Access to the Park on designated roads and walking tracks.	No formal access.		
Visitor Activities	Nature-based activities including swimming, canoeing, fishing, walking, bird watching, photography, picnicking and camping.	Restricted for management purposes and scientific research, survey and monitoring. Off-track walking by permit only.		
Facilities / Development	High standard of facilities and infrastructure, including sealed roads, marked walking tracks, orientation and interpretive signage, boat ramps and formalised day use and camping areas.	Facilities necessary to ensure protection of Park values (e.g. management tracks for fire control). New development may occur subject to public comment, appropriate environmental, cultural and heritage clearances and consideration of any native title implications.		

Map 2. Park Zones and Facilities.



2. Managing For Visitors

Primarily known as a picturesque and shady place for a cooling swim, people have enjoyed swimming in the spring fed waterholes of Elsey National Park since at least World War II when Mataranka was home to units of the Australian Army and Air Force. Today, the Park provides a much broader visitor experience, rich in nature, culture and history. The easily-accessible features of the Park are one of its key attractions and it has significant appeal for the domestic self-drive traveller.

A four hour drive from Darwin, and one hour from Katherine, Elsey National Park is a destination for visitors seeking insight into the Territory's natural and cultural environments and rich heritage. The Park and surrounds are entrenched in Australian folklore as Never Never country due to the famous Australian book 'We of the Never Never', by Jeanie Gunn. Discovering more about this piece of history continues to hold an attraction for many visitors to the Park, and although located outside Park boundaries, the replica Gunn family's Elsey Homestead and NT Heritage-listed Elsey Memorial Cemetery complement the spring fed waterholes as tourist attractions and enhance the visitor experience. Zoning for Visitor and Conservation areas can be viewed in Map 2.

Vision for Visitor Experiences

Over the life of this Plan the Park will continue to offer a range of high-quality nature based visitor experiences. New developments are also proposed for the Park which will enhance the visitor experience and promote Elsey National Park as one of the Territory's iconic Parks. Key proposals include:

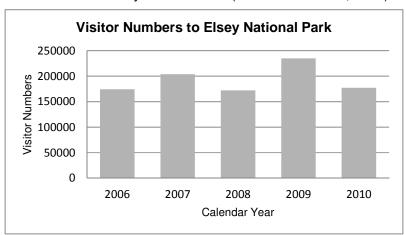
- A site concept plan for the Mataranka Thermal Pool;
- Development of a new swimming area to ease pressure on Bitter Springs and the Thermal Pool;
- Development of a walking track to link Bitter Springs to the Thermal Pool;
- Development of a viewing / swimming pontoon over the Waterhouse River at the Thermal Pool; and
- A new kiosk for Jalmurark Campground.

2.1 Visitor Trends

Elsey National Park annual figures have fluctuated over the past five years with 177,000 people visiting in 2010 (see Graph 1). The most recent visitor satisfaction surveys undertaken for the Park were in 2006 and results reveal the majority of visitors were from interstate (82%), 11% were from overseas, while just 7% were Territorians (Tourism NT, 2006). 55% of respondents were travelling as an adult couple, while 21% were travelling with friends or relatives. 15% of visitors were in a family group while 8% were travelling solo. The majority of people visiting the Park were aged between 50 and 69 years of age (48%) or 40 to 49 years (15%). Those aged 70+ years or 30 to 39 years were the next largest groups at 8% each.

There are generally two types of visitors to the Park; those making a brief visit of less than two hours to just the Thermal Pool or Bitter Springs (25%), or camping overnight in the Park (52%) to enjoy walking, fishing, boating and canoeing along the Roper River. In 2006 the most popular activities among survey respondents were swimming (80%) followed by bushwalking (53%), photography (48%), camping (35%), wildlife viewing (28%) and visiting historic sites (27%). The Mataranka Thermal Pool was the most

popular site in the Park in 2006 (88% of survey respondents or 116,000 people over the year) while Bitter Springs was the next most popular spot (46% of survey respondents or 51,000 people over the year). Stevie's Hole, 12 Mile Yards and Jalmurark Campground were also reasonably popular. More recent figures suggest that numbers for Bitter Springs and the Thermal Pool are changing. Visitor numbers to Bitter Springs in 2009 had increased three-fold from 2006, while Thermal Pool figures had dropped by over 20%.



Graph 1: Visitor numbers to Elsey National Park (Parks and Wildlife, 2011)

2.2 Visitor Issues and Opportunities

A tourism industry survey undertaken in March 2011 was an opportunity for tourism groups to put forward issues, thoughts and ideas for the future of tourism within the Park. Issues and opportunities submitted for Elsey National Park include:

Table 2: Issues - Tourism Industry Survey

Issues	Directions		
Better information signs on what is available within the Park, including walking tracks, distances to sites etc and inclusion of orientation maps on more Park signs.	Will be addressed as existing visitor sites, including information signs, are progressively upgraded over time.		
Inform people about taking rubbish out of the Park with them.	Currently addressed through Park Ranger talks, Park signs and factsheets. Upgraded signs and factsheets will continue to incorporate this message.		
Balancing tourism with protection of the natural environment within the Park.	Addressed in this Plan in 1.1 Purpose, Key Values and Objectives.		
Overcrowding at the Thermal Pool and Bitter Springs during the visitor season.	Addressed in this Plan in Management Action 9.		
Access to the Thermal Pool over the Wet season (Little Roper River floods over the road).	Homestead Road is outside of Park boundaries and is the responsibility of the Department of Construction and Infrastructure.		

Table 3: Opportunities – Tourism Industry Survey

Opportunities	Directions
Improved awareness and marketing of the Park. It is not just about the Thermal Pool, there is also great camping, walking, canoeing, old historical sites, birding (Red Goshawk) etc.	Requires collaboration between Parks, Tourism NT and local business. This Plan supports productive working relationships and engagement with stakeholders, and Parks will readily participate in discussions on improved awareness and marketing of the Park.
More river experiences available, including canoeing adventures and boat trips, fishing tours and boat hire.	Requires interest from local business. Parks permit system allows for interested business to apply for a concession permit. See 6.2.4 'Permitting Special Activities' for further details.
Change rooms should be provided at the Thermal Pool.	To be addressed in the Mataranka Thermal Pool site concept plan.
More viewing platforms overlooking the river (Thermal Pool).	To be addressed in the Mataranka Thermal Pool site concept plan; a viewing / swimming pontoon will be constructed early in the life of this Plan.
More carparking closer to the Thermal Pool for those unable to walk far.	Additional carparking will have to be situated on privately owned land, requiring collaboration between Parks and the stakeholder. This will be addressed in the Mataranka Thermal Pool site concept plan.
Further good quality campsites and a restaurant at the campground – face-lift to existing facilities to bring it up to standard.	Jalmurark Campground is designated as a bush- camping experience. Relatively small numbers of camping sites within the Park will be maintained and the policy of no generators will continue. The township of Mataranka provides multiple commercial camping and motel style accommodation options along with food outlets, in close proximity to the Park.
Indigenous Cultural Centre.	Unlikely to be achieved within the next ten years, however not to be ruled out for the future. Potentially a great idea for within Mataranka Township.

2.3 Managing Visitor Activities and Facilities

The table in this section provides a summary of every visitor site in the Park, categorised by their level of use. The table shows there are sites in all three categories from low to moderate to high levels of use. The range of activities and facilities available provides opportunities for different types of visitors to experience and enjoy the Park.

Ongoing improvements to some sites are required to accommodate current visitor levels, along with likely increases in visitation. Development of a new swimming site will be considered as part of a Mataranka Thermal Pool site concept plan to assist in managing over-crowding at the Thermal Pool and Bitter Springs.

With any new developments or upgrades to existing facilities, energy efficient, ecofriendly technology, such as solar power and hybrid toilet systems, will be incorporated.



Plate 2: Facilities' at Bitter Springs day use area

Table 4. Visitor sites classified by level of use

Sites	Swimming	Picnicking	Toilets	Fishing	Boat Ramp	Camping	Historic Site	Walking Tracks (S, M, L, RW)
High Use								
Thermal Pool	✓	✓ (Mataranka Homestead)	√ (Mataranka Homestead)	√ (Waterhouse River only)	√ (Mataranka Homestead)	√ (Mataranka Homestead)	✓	S, linked to RW
Bitter Springs	√	*	√			√ (Mataranka Cabins & Camping)	*	S
12 Mile Yards and Jalmurark Campground	√	~	✓ (& showers)	✓	✓	✓	√	S, L, part of RW
Moderate Use								
Stevie's Hole	~		✓					M, part of RW
Botanic Walk		✓		✓				M, linked to RW
4 Mile	✓	√	✓	✓	✓			S, L, part of RW
Korowan (Mataranka Falls)		√		✓		√		L, part of RW
Mulurark	✓	✓	✓	✓				S, L, part of RW
Low Use								
Aboriginal Army Camp							✓	S
Sheep Dip							✓	S
Wabalarr	✓	✓		✓				S, L, part of RW

S, M, L, RW – Short, Medium, Long, and linked to or part of the Riverside Walk

2.4 The Springs Experience

Most visitors come to the Park to experience the tropical oases of the Mataranka Thermal Pool and Bitter Springs, which are well-known tourist destinations in the Katherine Region. Thermal waters, bubbling springs and shady palm forests contrast with the surrounding region's open grasslands and sparse woodland, making this a refreshing stop for many travellers. The spring fed waterholes comprise one of the few, easily accessible places to swim in the region without the threat of Estuarine crocodiles.

The shady, humid environment around the Thermal Pool provides a perfect roost for a large colony of flying foxes. Depending on the time of year, up to 500,000 flying foxes may be present in the colony, making it one of the largest in the region. Both a wildlife spectacle and a management issue, Park Rangers manage conflicting attitudes through public education (see Natural Values, section 3.4.1, for further details).

2.4.1 Mataranka Thermal Pool and Rainbow Spring

The Thermal Pool and its associated springs are a primary motivating factor and destination for people to visit the Park. Rainbow Spring constantly bubbles up water from underground, feeding the Thermal Pool, before flowing into the nearby Waterhouse River.



Plate 3: Visitors enjoying a swim in the crystal clear waters of Mataranka Thermal Pool
Photo courtesy Tourism NT

A short loop-walk (500 metres return) from the Park entrance provides visitors with access to the Thermal Pool, and views of Rainbow Spring and the Waterhouse River. Access to the start of the loop-walk is through the privately owned Mataranka Homestead resort, with day-use visitors required to park their vehicles on the far side of the Homestead resort prior to walking through to the Park entrance. The Thermal Pool's close proximity to the Homestead causes many visitors and tour operators to assume the Homestead is part of Elsey National Park. Visitor confusion over land responsibility results in Parks and Wildlife frequently receiving negative feedback from visitors about issues on Homestead land. Also, a toilet is provided for Homestead visitors on Homestead land, which is used by Park visitor's but is no longer owned or maintained by Parks and Wildlife. This presents ongoing concerns for visitors to the site. A site concept plan is needed for the entire Thermal Pool area, including the construction of toilets and changing facilities within the Park. As part of this concept plan the Park boundary needs to be clarified so as to enhance the sense of arrival when visitors enter the Park to visit the Thermal Pool.

The Thermal Pool can become very crowded during peak season with congestion

causing erosion of creek banks and occasionally diminishing the experience for visitors. This issue will also be addressed in the concept plan with a potential new swimming site to be considered.

The Thermal Pool is one of the main birthing colony sites for Little Red flying foxes in the Roper catchment (see section 3.4.1 'Little Red flying fox' for further details). This significant natural phenomenon creates friction for park managers, as the colony is often viewed negatively from a visitor perspective; but at the same time, it also generates great interest amongst visitors to the Park. A section of the Thermal Pool loop-walk, located alongside the Waterhouse River, has evolved as a popular spot for early evening visitors when Freshwater crocodiles can often be seen lying in wait for flying foxes, swooping down to the river for a drink. This section of the loop-walk does not currently present the most suitable opportunity for viewing of the river and installation of a viewing / swimming pontoon has been identified to enable better visitor access.

Many visitors to the Park have been drawn to the area by the famous book 'We of the Never Never'. Although historic buildings and sites associated with the book are not located within the Park, there are avenues to provide greater interpretation regarding the history of the area, particularly at the Thermal Pool which is located alongside the replica Elsey Homestead.

2.4.2 Bitter Springs



Plate 4: Bitter Springs is becoming increasingly popular with visitors

Opened in 1999 to reduce crowding pressures on the Thermal Pool and provide alternate swimming access during peak Little Red flying fox migration periods, Bitter Springs visitor numbers show that it has become the most highly-visited site on the Park. Less developed than the Thermal Pool, Bitter Springs provides the opportunity for swimming in a more natural setting. The Bitter Springs Loop Walk (500 metres return) is an easy circuit around the springs, complete with viewing platforms and interpretive panels. Toilet and picnic facilities are provided at this site.

During peak season, this area receives significant visitor numbers and can become over-crowded. Toilet facilities designed to cope with lower visitor numbers now require upgrading. Pressure placed on the Bitter Springs waterhole by its increasing popularity with visitors requires close monitoring and management of the waterhole edges and surrounds to avoid degradation. Visitor safety improvements have included the construction of additional entry and exit points to the springs. Further entry and exit points along with an expansion of the carpark will be considered during the life of this

Plan if visitor numbers continue to increase. Funding is required to relocate some existing infrastructure above the flood zone to protect assets from annual flooding and to prevent ongoing associated maintenance costs.

2.4.3 Stevie's Hole

This natural secluded waterhole is accessible only by a marked walking track which diverts from the main Thermal Pool / Rainbow Spring Loop Walk (1.2 kilometres return). Swimming is permitted at this site, however fishing is not allowed. Some visitor's experience difficulties with entering and exiting the water when water flows are at higher levels due to the strength of water currents. Installation of an additional entry / exit point further downstream will be considered during the life of this Plan.

2.5 The Roper River Experience

The Little Roper and Waterhouse Rivers converge downstream of the Thermal Pool to form one of the NT's most famous rivers, the Roper. From spring-fed headwaters to its merging with the ocean in the Gulf of Carpentaria, the Roper is a valuable resource for visitors, land holders and Indigenous people alike. It is renowned, especially in the lower reaches, for excellent Barramundi fishing. Within the Park boundary, the Roper and its banks are a focal point for visitor activity, including fishing, boating, canoeing, swimming, walking, bird-watching, picnicking and camping.

Estuarine crocodiles have never been recorded within Elsey National Park, however they do inhabit the Roper River in the neighbouring Elsey Station. With recreational use of the river a highlight for many visitors to the Park, it is essential that regular crocodile management actions are undertaken in accordance with the 'Estuarine (Saltwater) Crocodile Management for Visitor Safety – Elsey National Park' document.

2.5.1 12 Mile Yards and Jalmurark Campground



Plate 5: The old cattle yards at 12 Mile

The Park's campground on the banks of the Roper River is a popular place to stay for a few nights during the Dry season. Un-powered caravan and tent camping sites are provided in a natural woodland setting. Toilets, hot showers, gas barbeques, fireplaces and firewood are also provided. Generators are not permitted. A concession operator maintains the campground on behalf of Parks and Wildlife and collects camping fees from visitors in the evening or early morning. A new kiosk is planned for Jalmurark Campground to better service the campground, concession operation, and provide for

visitor needs.

A ramp provides access to the Roper River for boats (limited to 15 horsepower) and canoes and swimming pontoons are in place during the Dry season, just downstream from the boat ramp. Fishing and swimming are permitted in the river, and visitors can experience beautiful stretches of the waterway by walking or canoeing to Korowan (Mataranka Falls), four kilometres downstream. Canoes must be portaged between 12 Mile and Korowan to protect tufa formations from damage. Interpretive panels provide information about the historic 12 Mile Yards – a mustering point from the Park's earlier life as a cattle station.

2.5.2 Walking Tracks

The Riverside Walk (21 kilometres one-way) is a delightful bushwalk alongside the vibrant Waterhouse and Roper Rivers under a canopy of dappled sunlight. This unformed walking track follows the banks of the rivers from the Thermal Pool to Korowan (Mataranka Falls). The walk allows visitors to experience the riverine environment at their own pace and connects various Park visitor sites. The track as a whole, or in its separate sections (Thermal Pool to Stevie's Hole, Jalmurark Campground to Korowan etc), helps to disperse visitors from the spring fed waterholes and provides an additional experience for Park visitors to enjoy. The walking track also provides access to colonies of Little Red and Black flying foxes which are frequently camped along various sections of the river. As the track is close to the river, it is often eroded during the Wet season, thus requiring considerable effort to repair. In 2011 a consultant is undertaking a review of all walking tracks within the Park. This will address some of the issues associated with a dynamic river and changing watercourse.

The Botanic Walk (1.5 kilometres return) is a low-key loop-walk located off John Hauser Drive. The walk introduces visitors to the Park's riverine and rainforest flora. Picnic facilities are located here, and interpretive information is provided about the Park and its values. Visitors are able to access the Riverside Walk approximately halfway along the Botanic loop-walk.

A new walking track is proposed from Bitter Springs to the Thermal Pool to provide access to the proposed Sergeant's Waterhole swimming area. As an additional walking opportunity, this walking track will help alleviate some of the congestion currently experienced at the Thermal Pool and Bitter Springs during the peak season.

2.5.3 Day-Use Areas

Several day-use areas near the Roper River provide access to the River to go fishing, launch canoes or boats, or have a picnic. The Four Mile picnic area has toilet and picnic facilities and a boat ramp. Shade at Four Mile is scarce due to trees being swept away in floods. Attempts to establish new trees at the site have not yet been successful.

Wabalarr and Mulurark offer quiet places to relax, enjoy a picnic and some fishing from the riverbank during peak season when other sites are highly visited. There are toilet facilities at Mulurark and picnic tables at both locations. Fishing deep waterholes from the riverbank at these two sites allows Park visitors without boats to potentially catch Barramundi and other fish.

2.5.4 Korowan (Mataranka Falls)

Korowan is a beautiful set of river cascades, created by tufa formations in the Roper River. Tufa is a common occurrence in mineral-rich waters with calcium carbonate precipitated from spring waters onto rock bars, forming solid rock dam walls and cascades. Korowan is accessible by canoe, or may be seen from the riverbank by

bushwalkers along the Riverside Walk. The tufa has sustained some minor damage caused by visitors dragging canoes over the formations. A canoe portage point is to be installed to prevent future damage. At the end of the walking track above Korowan is a small area with picnic tables and wood-fired barbeques, and visitors can camp here overnight. Camping numbers are not limited, however if the site increases in popularity then a limit may be imposed to protect the site and the bushcamping experience.



Plate 6: Korowan viewed from the air

2.6 Aboriginal Army Camp and Sheep Dip

These two sites provide reminders of the area's military and pastoral history. At the Aboriginal Army Camp there is a 500 metre loop-walk around remnants of one of many army camps that were once located around Mataranka. These camps were set up in 1942 and were a base for up to four hundred Indigenous people who were employed in the area during the Second World War. Old tins, cooking equipment, tools and parts of vintage vehicles can be seen, along with a number of cement slabs which once formed flooring for the camps tent infrastructure. Visitors can also undertake the 250 metre Sheep Dip loop-walk which is centred on old yards and a sheep dip which were in use when sheep farming was unsuccessfully trialled in the region. Interpretive panels provide basic information about the army camp and sheep dip in their original setting. The interpretive displays have become dated and provide inadequate information about the sites. Both sites have been identified for future interpretation upgrades.

2.7 Visitor Safety

Most visitors enjoy a trip to Elsey National Park without incident. Potential safety issues include risks such as heat stroke, walking injuries, getting lost while walking, encounters with dangerous wildlife such as buffalo, pigs and donkeys, wildfires, floods or other accidents relating to motor vehicles or boats. Key safety and pre-visit messages in relation to climate and track conditions will be conveyed through Park literature and interpretive signage.

Parks and Wildlife has an overarching Visitor Incident system that provides a basis on which to respond to emergencies. Parks and Wildlife also undertakes annual risk management assessments and specific risk mitigation activities are captured within operational plans. All incidents are reported centrally and the Department as a whole has a range of OH&S and hazard reduction guidelines to which the Park adheres. The

effective implementation of this system requires sufficient resources and trained, competent staff.

Rangers regularly conduct risk assessments as part of their day-to-day duties to keep the Park environment as safe as realistically possible. Identified risks are attended to on a priority basis, or in the case of complex issues, programs are developed to formally monitor potential high-level risks. Risk reduction measures also include visitor education.

There has never been a confirmed record of an Estuarine crocodile within the Park's waterways; however the potential exists for these animals to move inside the Park, especially during the Wet season. The Park's waterways are closed for water-based activities during the Wet season and possibly at other times of the year as well. Visitors must take heed of signs and act accordingly. The presence of Estuarine crocodiles is actively monitored in accordance with the 'Estuarine (Saltwater) Crocodile Management for Visitor Safety – Elsey National Park', a document which is available to the public via the internet. The document is reviewed regularly, or as required and public education is undertaken in accordance with the 'Be Crocwise' program. The risks associated with Estuarine crocodiles are increasing in the NT due to changes in both crocodile and human populations. Crocodile risk within the Park will need to be reviewed during the life of this Plan. If a change to water-based activity access is deemed necessary to protect visitors, the tourism industry and other stakeholders will be consulted prior to any restrictions being enforced.

Naegleria fowleri is a native water-borne pathogen that can cause infections, resulting in a rare form of potentially-fatal meningitis. While the chance of becoming infected is very low, Park staff test the water in spring fed waterholes during periods when pathogen numbers may be higher than normal, as required by the Parks and Wildlife Management of Microbial Water Quality in Recreational Water Bodies Policy.

2.8 Visitor Access

There are three entries into the Park. The first entry is via Martins Road off the Stuart Highway, on the northern edge of Mataranka Township. Bitter Springs is located approximately 3km from the Highway at the far end of Martins Road.

The second entry to the Park is via Homestead Road, off the Stuart Highway. Mataranka Thermal Pool and the start of the Riverside Walk are located approximately 7km from the Highway at the far end of Homestead Road, or an 8km drive south-east from Mataranka Township.

The third entry to the Park is located off Homestead Road, along John Hauser Drive, approximately 4km from the Stuart Highway. All three entry points to the Park are located along sealed roads.

Elsey National Park is closed for periods over the Wet season, mainly due to inaccessibility caused by flooding. Where possible, the Mataranka Thermal Pool and Bitter Springs are opened throughout the Wet season. John Hauser Drive is closed when the Roper River floods as many sections of the Drive become impassable. Parks and Wildlife advise the public of closure (and subsequent re-openings) to access along John Hauser Drive and specific site closures via media releases and the Departments 'Park Access' webpage, www.nt.gov.au/nreta/parks/accesskatherine. Closure of Martins and Homestead Roads is carried out by the Department of Construction and Infrastructure.

2.9 Information and Interpretation

Information and interpretation helps visitors enjoy the Park as well as more deeply

understand and respect the values of the Park. Providing accurate up-to-date information, high-quality interpretive signage in keeping with the high visitor profile of the Park, well designed and maintained facilities and a range of safe and appropriate activities for visitors to enjoy, are management priorities.

The Park currently provides three forms of interpretation; Park factsheets, interpretive signage throughout the Park and Ranger talks. Park factsheets are downloadable from the web and are available at the Parks orientation shelter in Mataranka. Interpretive signage includes historical information at 12 Mile Yards, Aboriginal Army Camp and the Sheep Dip, natural information along the Botanic and Thermal Pool Walks and cultural information at Bitter Springs. From May to August, Elsey National Park Rangers present the Territory Parks Alive Program with a campfire talk for visitors at Jalmurark Campground. This interactive experience provides an excellent opportunity for Rangers to convey important Park messages to visitors in a relaxed setting, and allows for visitors to ask Rangers questions about the Park and its values. Opportunities exist for Indigenous involvement in developing content and delivery of interpretation in the Park. The Aboriginal Area Protection Authority (AAPA) is also in a position to assist with the consultative and development process of Park signage. Parks and Wildlife will encourage participation as appropriate.

There are currently two orientation shelters provided for the Park, including the information area at the Parks and Wildlife compound on the Stuart Highway and the information bay on Homestead Road near the Park turn-off along John Hauser Drive.



Plate 7: Maintaining signs in the Park is a management priority

2.10 Visitor Monitoring

Monitoring visitor use and expectations assists visitor management and development planning. Data on visitor numbers is collected by calibrated traffic counters. Visitor surveys are also periodically conducted, in accordance with Tourism Visitor Services guidelines, to provide an understanding of visitor use and expectations, and changes in use over time. Previous visitor surveys carried out by Parks and Wildlife, including the last survey undertaken in 2006, indicate that most visitors are satisfied with the facilities and level of service provided.

Traffic counters become faulty from time to time, resulting in visitor figures which are not always entirely accurate. Elsey Park Rangers endeavour to rectify issues as soon as possible and frequently conduct traffic counter checks. The Tourism Visitor Services branch of Parks and Wildlife are undertaking a review of visitor monitoring for all Parks

from 2011, the results of which will help address inaccurate visitor numbers for high profile Parks.

Visitors to the Park value ease of access to key visitor nodes, but dislike over-crowding. Forward planning, including engaging with Tourism NT to gain insight into forecasts for future visitor numbers, is crucial in assisting Park managers to maintain the balance between providing access and maintaining the quality of experience and visitor safety.

2.11 Waste Management

The management of rubbish and waste in the Park is of some concern. Rubbish bins are provided at a number of visitor sites and the rubbish collected from these bins is disposed of in a land fill dump within Mataranka Town.

A *Northern Territory Waste Strategy* is being developed from 2011 by the Department. The issue of waste disposal in Parks and Reserves in the NT will be specifically addressed through the development of a *Waste Management Policy* which is identified for preparation by Parks and Wildlife. This policy will be linked to any wider strategy for the NT.

Aims

- Visitors highly satisfied with their experience of the Park.
- An excellent visitor safety record.

Management Actions

- 4. Access Tracks and roads will be maintained for high quality visitor access and safety. Visitors will be encouraged to keep to vehicle and walking tracks to minimise damage to sensitive riverine habitats. Access to the Park, or areas within the Park, may be restricted for environmental, cultural or safety reasons. (High)
- 5. **Camping** Generators will not be permitted. The use of firewood within the Park will be reviewed periodically, and alternative options will be investigated if necessary. (*High*)
- 6. **Boating** Motorised vessels may have a maximum power output of 15 horsepower. (*High*)
- 7. **Fishing** NT possession limits apply within the Park. Fishing will be prohibited at Bitter Springs, Mataranka Thermal Pool and Stevie's Hole for visitor safety. (*High*)
- 8. **Canoeing** Install a portage point at the rock bar between 12 Mile and Korowan to protect the tufa from canoe damage. (*Low*)
- 9. **Visitor facility planning and future development** Visitor access, activities and facilities within the Park will be managed and developed according to the zoning scheme (Map 2). Future development will be consistent with the Park's character and its standing as a high-visitation Park:
- Energy efficient, eco-friendly technology, such as solar power and hybrid toilet systems, will be incorporated into new developments or upgrades where possible. (*High*)
- Toilet facilities at Bitter Springs to be relocated above the flood zone and upgraded to accommodate the increases in visitor numbers. (*High*)
- A 3.5km cement stabilised walking track from the Roper Junction to 4 Mile and a 4km cement stabilised walking track section between Wabalarr and Mulurark visitor sites are to be constructed. The staff access track to Korowan day use area is to be upgraded including sections to be relocated to higher ground. (*High*)
- Depending on the outcomes of a walking track review, which was not available at the time of this Plans preparation, further sections of the Riverside Walk which are prone to flooding will be hardened or relocated as funding becomes available. (Moderate)

- Water entry and exit points will be established at Stevie's Hole swimming area to improve visitor safety when entering the water. (*Moderate*)
- Additional or expanded water entry / exit points will be considered for Bitter Springs swim
 access points along with expansion of the carparking area if visitor numbers continue to
 increase. (Low)
- A new kiosk for Jalmurark Campground will be established later in the life of this Plan to better provide for visitor and concessionaire needs. (Low)
- Options to provide shade at Four Mile will be investigated. Any built structures must be designed to withstand flooding. (Low)
- 10. **Mataranka Thermal Pool site concept plan** A site concept plan for the Thermal Pool is to be created and implemented. It will clarify the boundary and enhance the sense of arrival when visitors are entering the Park at the Thermal Pool visitor site. Development of the following directions will be incorporated within the site concept plan:
- A Waterhouse River viewing / swimming pontoon leading from the loop-walk boardwalk is to be constructed at the Thermal Pool. (*High*)
- A waterborne toilet block and associated infrastructure, including changing facilities, is to be constructed at the Thermal Pool as per construction division specifications. (*High*)
- Additional sprinkler towers will be installed within the vicinity of the Homestead resort to assist with cleaning of Park infrastructure. (High)
- A walking track from Bitter Springs to the Thermal Pool will be considered, to provide visitors
 with an additional walking opportunity in the Park, and to reduce visitation pressure on Bitter
 Springs and the Thermal Pool. (Moderate)
- Sergeant's Waterhole will be considered as a potential new site for swimming, to relieve visitation pressure on other sites within the Park. (*Moderate*)
- 11. Visitor safety to ensure a safe Park visit, the following actions will be undertaken:
- Annually review and update the Flood Response Plan for the Park and comment on the Parks and Wildlife Emergency Response Policy & Procedures when reviewed. All staff must be familiar with the procedures and trained and prepared to implement them at all times. All incidents and accidents are to be reported to the Executive Director of Parks and Wildlife. (High)
- Undertake crocodile management in accordance with the Estuarine (Saltwater) Crocodile Management for Visitor Safety – Elsey National Park Plan. (High)
- Review the risks associated with Estuarine crocodiles during the life of this Plan of Management. If risks become unmanageable and water-based activity restrictions are deemed necessary, consult with the tourism industry and other stakeholders prior to any restrictions being enforced. (High)
- Safety and awareness signs concerning the possible presence of Estuarine crocodiles in Park waterways will be prominent and clear, and public education regarding crocodiles will be in accordance with the 'Be Crocwise' program. (*High*)
- Monitor water quality at Mataranka Thermal Pool during periods of extreme low flow, for the
 presence of pathogens such as Naegleria fowleri. Waterholes will be closed to swimming
 until pathogens have decreased to a safe level, as per the Management of Microbial Water
 Quality in Recreational Water Bodies Policy. (Ongoing)
- Continue to assess the risks from the Park's facilities and visitor management practices. Any identified risks will be rectified on a priority basis. (*Ongoing*)

12. Information and interpretation

- Regularly review all available visitor information and update subject to resources. (Ongoing)
- Information about important aspects of the Park, including flying fox management, will continue to be provided to the public. Traditional Owners will be encouraged to participate in

interpretive programs, to communicate cultural information to the public. (Ongoing)

- The Park's Traditional Owners will be invited to impart appropriate cultural information about the Park so that local Indigenous knowledge and wisdom may be better represented through Park information and interpretation. Involvement in the delivery of interpretation by Traditional Owners will be encouraged where appropriate (*Ongoing*)
- Key safety and pre-visit messages in relation to climate and track conditions will be conveyed through Park literature, online and interpretive signage. (High)
- Parks and Wildlife will work with the tourism industry to continue to ensure that tourist information is accurate and appropriate. (*High*)
- High quality interpretation available in keeping with the high visitor profile of the Park. (High)
- 13. **Visitor monitoring** Following the review of the Parks and Wildlife *Visitor Monitoring Strategy*, implement the visitor monitoring program for the Park. (*Moderate*)
- 14. **Waste management** Implement the *Waste Management Policy*, in accordance with the *Northern Territory Waste Strategy*, once it has been prepared. (*Moderate*)

Performance Measures

- There are no preventable cases of injury or death as a result of visiting the Park.
- Visitor satisfaction with the Park and its facilities is at least 90%.

3. Natural Values

Elsey National Park lies on the borders of two bioregions – Gulf Fall and Uplands to the north of the Roper River and Sturt Plateau to the south. Most of the Park is broadly typical of the surrounding region, comprising open savannah woodland with a grassy understorey. Lining the Park's watercourses however is a band of lush riverine vegetation that contains *Livistona* and *Pandanus* species, forming habitat for wildlife and a focus for visitor activity in the Park.

The Park's values are mainly regionally significant in the context of the NT reserve system. The Park's relatively small size and surrounding land use mean that it cannot, and in isolation, sustain the full range of ecosystem functions required by most species. Opportunities to enhance the Park's conservation viability by expanding the Park, or entering into conservation agreements with surrounding land holders, should be pursued.



Plate 8: Fan palms grow beside the Park's rivers

3.1 Aquatic Ecosystems

The Park's springs, waterholes, rivers, karst and riverine environments are the focal point of the Park. The Mataranka Thermal Pool is a Site of Conservation Significance and is listed on the Directory of Important Wetlands of Australia. Sites of Conservation Significance are those areas containing special biodiversity values that require additional protection. The Department has identified 67 of the most important sites for biodiversity conservation in the NT. The recognition of these sites imposes no additional regulatory or legislative requirements over the land, over and above any particular existing requirements of the area. This Plan acknowledges the classifications of Harrison *et al* (2009) in their assessment of sites of conservation significance. The Thermal Pool and its associated springs are one of only two sets of major thermal springs conserved within the NT. The springs, waterholes and rivers contrast markedly with the otherwise dry environment, especially during the late Dry season when surface water is generally scarce.

The spring fed waterholes are associated with limestone aquifers of the Daly River Group and the Georgina Basin. These aquifers carry water from up to 500 kilometres away, which bubbles up from 30 to 100 metres below the surface to emerge at a constant 32 degrees Celsius. The springs drain into the Park's river systems. In addition to the two

best-known springs – Rainbow and Bitter – the Park is also home to two other major springs and numerous smaller springs and seepages which are often indicated by the presence of *Livistona* fan palms. Groundwater discharge was extensive in the past and there are a number of tufa formations within the Park providing evidence of this. The most spectacular tufas on the Park are at Korowan (Mataranka Falls), where they reach about 1.5 metres in height.

3.1.1 Ground Water Draw Down

The visitor experience of the springs and waterholes depends on continuous, steady flows from the springs. Increasing development of land surrounding the Park and subsequent increase in the number of bores and amount of water being extracted in the Mataranka area could have an impact on spring flow rates, decreasing water levels in the waterholes. Vegetation communities dependent on a reliable supply of quality groundwater will also be affected. Surrounding land uses which require extraction of water or introduce pesticides and other pollutants into the catchment may over time have unfavourable impacts and reduce the available spring dependent habitat within the Park.

Water extraction within the *Mataranka Water Allocation Plan* area is metered and monthly extraction amounts are reported to the Water Management Branch of the Department. This information is advising the Water Management Branch and the Mataranka Water Advisory Committee as to how water entitlements, including allocation and usage, are to be allocated in the local area into the future. Parks and Wildlife is represented on the Mataranka Water Advisory Committee along with other locals who hold an interest in the way water is allocated and managed in the area. The committee is providing advice and recommendations to the Territory Government. The *Mataranka Water Allocation Plan* is almost complete and will address long-term management of local aquifers and the protection of the Park's springs and dependent habitats. CSIRO are currently undertaking a study on Indigenous water knowledge and water planning.

3.2 Riverine Habitat



Plate 9: The Park's rivers support an abundance of wildlife

While the Park's savannah woodland is typical of the surrounding region, the riverine communities that line the Park's springs, waterholes and rivers are structurally and floristically diverse, creating a rich environment for both wildlife and visitors. While riverine communities occupy only a small proportion of the landscape, they frequently have a much higher species richness and abundance of animal life than adjacent habitats. These forests contain the largest known population of *Livistona mariae* spp.

rigida, a Livistona fan palm species distributed throughout north-western Queensland and the Top End of the NT. Other dominant riverine plants include *Pandanus aquaticus*, *Terminalia erythrocarpa*, *Melaleuca* spp., *Acacia ampliceps*, *Eucalyptus camaldulensis* and *Ficus platypoda*.

Riverine areas are a refuge for many small birds which are common prey for the Red goshawk (*Erythrotriorchis radiatus*), an important threatened species (see below). The rich riverine environment attracts introduced plant and animal species due to favourable conditions and plentiful food and water. A strategic approach is required for managing introduced pests, including catchment-scale management and cooperation with surrounding landholders.

More than 20 species of waterbird have been identified for the Park. The constant flow of water from the springs allows many bird species to live permanently in the Park. A section of the Roper River, about seven kilometres downstream of Mataranka Homestead, divides limestone and sandstone formations, along a river channel fault line. Numerous rock bars are present in this area, creating cascades into rock pools. Fish, aquatic life and birds live here in abundance.

3.3 Woodland and Shrubland

Open woodland typical of the surrounding region constitutes the majority of vegetation in the Park. The woodland is typified by a grassy understorey with an overstorey of widely-spaced trees, and sometimes a midstorey of smaller trees and shrubs. Common woodland trees include *Eucalyptus aspera*, *E. tectifica*, *E. terminalis*, *Bauhinia cunninghamii*, *Corymbia setosa*, *Erythrophleum chlorostachys*, *Terminalia platyptera*, *T. canescens*, *T. arostrata*, *Melaleuca citrolens* and more rarely *Gyrocarpus americanus* and *Brachychiton diversifolius*.

The Park's shrubland occurs on an extensive plain south of the Roper River, known as the Jungle Paddock. The shrubland canopy is dominated by *Acacia ampliceps* and occasionally *Melaleuca acacioides, M. cajaputi* and *Myoporum acuminatum*. The understorey consists of the sedge *Leptocarpus spathaceus* with *Pandanus spiralis* present in drainage depressions.

3.4 Fauna and Flora

A total of 261 native fauna species have been recorded from the Park to date, comprising 155 birds, 32 mammals, 51 reptiles, 15 frogs and 16 fish species. Three threatened species have been recorded for the Park: the Red goshawk (*Erythrotriorchis radiatus*), the Freshwater sawfish (*Pristis microdon*) and the Australian bustard (*Ardeotis australis*).

The Red goshawk is classified as vulnerable, both nationally and in the Territory. As it is sparsely-distributed across most of its range, its reliable occurrence in the Park and the Mataranka region draws dedicated birdwatchers to the area. Ninety-five percent of the Red goshawk's diet is small birds, with important hunting habitat being open wetlands and riverine forests. It is likely that its relatively common occurrence in the area is due to a rich variety of small-medium sized birds which favour the vegetation communities along the Waterhouse and Roper Rivers and their tributaries.

In 2009, an aquatic survey in the Park recorded the presence of the Freshwater sawfish for the first time. This species is classified as vulnerable, both nationally and within the Territory. As little is known of this species, its presence in the Park's rivers may warrant scientific study and any sightings should be recorded.

The Australian bustard is of conservation significance and is listed as vulnerable in the

NT. It has limited habitat within the Park. Bustards have a large home range, and the species presence within the Park is probably restricted to birds foraging for food.

A total of 371 native flora species have been recorded for the Park. While no threatened flora species have been identified to date, the Park is home to several regionally-restricted species, most significantly the *Livistona* fan palm (*Livistona mariae* ssp. *rigida*).

3.4.1 Little Red Flying Fox

Flying foxes play a vital role in maintaining Australia's biodiversity, spreading seeds and pollinating plants as they search for food, with some plants seeds only dispersed by flying foxes. They are also important in the nutrient cycle, providing large amounts of fertiliser to the system and creating gaps in the tree canopy which allows other plants to compete more effectively. The Park contains significant habitat for Little Red and Black flying foxes, providing a place to roost and breed. Little Red flying foxes form very large colonies within the Park with up to 500,000 individuals camped at any one time. An important breeding colony for the species is located at the Mataranka Thermal Pool with vast numbers of Little Red flying foxes camped in the *Livistona* fan palms during the breeding season.



Plate 10: A Little Red flying fox roosting in the tree canopy

Flying fox colonies move according to variations in climate and the flowering and fruiting patterns of their preferred food plants. Flying fox population size and distribution has changed a great deal since European settlement. Land clearing for forestry, mining and agriculture has lead to a loss of natural habitat and loss of regular food supply. As Little Red flying fox populations decline, breeding colonies are becoming increasingly important.

The high concentration of flying foxes within the Park, particularly around the Thermal Pool, leads to tree damage and a reduced level of visitor amenity presentation. The noise, odour and excrement of the flying foxes can negatively impact visitor experiences. Parks and Wildlife has attempted on numerous occasions to move roosting animals away from the Thermal Pool. In all instances this has been unsuccessful. Local community members have attended meetings to discuss the issue and determine positive strategies for promoting the species to visitors in the area. Park Rangers now educate the public about the important role of flying foxes through their Territory Parks Alive campfire talks. Interpretative signage has been placed along the walkway to the Thermal Pool and factsheets about Little Red flying foxes are made available at businesses within Mataranka. A canopy has been erected over the worst affected area of the walkway into the Thermal Pool and a Park concession, along with Ranger staff, regularly clean visitor

areas affected by flying fox excrement. A sprinkler system is erected high up amongst the *Livistona* fan palms and is used to prevent excrement build up on surrounding flora and infrastructure.

3.5 Threats

Weeds, feral animals and fire are key threats to the Park's values and must be properly managed. They have the ability to change ecosystems, and therefore habitats, food supply and breeding sites for the plants and animals that live there. The Park is in a good position to ensure that weeds, in particular, are properly controlled, as it is located near the top of the Roper River catchment. Cooperation with neighbouring landholders and catchment organisations, such as Roper River Landcare Group, help ensure threats are managed on a catchment scale.

3.5.1 Weeds



Plate 11: Bellyache bush forms dense thickets beside wateways, excluding native plants

Some key weed and invasive plant species pose a significant threat to the values of the Park, competing with native species, modifying habitat, altering of stream flows and increasing fire intensity. Visitor values are similarly affected where access is restricted and scenic views are impeded. Many weed and invasive plant species favour the wetter riverine areas of the Park and the disturbed environments near visitor nodes and walking tracks.

Weed management priorities in the Park are assigned according to legislative requirements under the *Weed Management Act*, associated statutory Weed Management Plans and regional priorities under the *Katherine Regional Weed Management Strategy and Action Plan 2011 – 2015*. To date, 28 species of weeds have been recorded for the Park. The most significant weed species, in priority order, are:

- 1. Jatropha gossypiifolia (Bellyache bush)
- 2. Martynia annua (Devil's Claw)
- 3. Parkinsonia aculeata (Parkinsonia)
- 4. Xanthium occidentale (Noogoora burr)

Bellyache Bush and Devil's Claw are Class A/C declared weeds under the *Weed Management Act* in this area. Under legislation, they must be eradicated.

Parkinsonia and Noogoora burr constitute lesser threats and are listed as Class B/C under the *Weed Management Act* and must be controlled.

Other invasive plant species not currently declared, including Neem trees *Azadirachta indica*, African mahogany trees *Khaya senegalensis* and Yellow oleander *Cascabela thevetia*, are an emerging threat within the Park. Large numbers of seedlings and juvenile trees and shrubs have been located within the Park in recent years.

The four declared weed species and three invasive plant species must be the focus of control activities on the Park as they have the greatest ability to threaten the Park's natural values. Weed and invasive plant eradication and control will primarily focus on the sensitive riverine areas and visitor nodes where weeds and invasive plants are most prevalent. Rangers record weed and invasive plant control effort, spread or containment of weed and invasive plant distribution, and the introduction of new weed and invasive plant species on a GIS database.

Effective weed and invasive plant control requires a catchment management approach and cooperation with neighbouring landholders. Elsey National Park Rangers work with the Roper River Landcare Group – a community organisation that primarily focuses on weed management in the Roper River Catchment.

3.5.2 Feral Animals

Feral animals negatively impact on the natural values of the Park. They introduce and disperse weeds, disturb soils and trample and consume native vegetation, particularly in riverine areas. Feral animal species recorded in the Park include cattle, donkeys, pigs, cats and buffalo. Although present within the Park, Cane toad reproduction does not favour the high lime content of local spring waters. The main threats to the Park's values, in priority order, are:

- 1. Cattle
- 2. Pig
- 3. Donkey
- 4. Buffalo

The Park is fully fenced but damage to fences during the Wet season admits animals which then must be mustered out, and fences repaired. The exclusion and removal of these large grazing animals from the riverine areas is one of the most beneficial conservation actions that can be taken on this Park. Working with neighbouring landholders and regional bodies is an important ongoing part of this program.

3.5.3 Managing Fire

The Australian landscape, its people and fire have a relationship that dates back tens of thousands of years. Fire was first used to shape the environment through the hands of Indigenous people, and more recently, park managers and land owners. The pattern of fire use and management has changed over the years, to the detriment of some habitats.

Fire-sensitive habitats on the Park include *Pandanus* and *Livistona* fan palm forests that are prevalent throughout the wetter areas of the Park. Whilst these habitats are generally quite resilient, hot late Dry season fires have the potential to damage these areas.

Rangers burn areas to protect the Park and property from wildfire and encourage a mosaic of burnt and unburnt areas that promote flora and fauna diversity. Prescribed burns are carried out during the late Wet to early Dry seasons, when low-intensity fires are used to burn off some of the vegetative fuel that has accumulated during the Wet season. Burning during this time of year helps to prevent intensity and spread of wildfires

later in the year, protecting people, infrastructure and wildlife.

The Park's *Fire Management Strategy* guides Rangers in strategic management practices. From this strategy, Rangers produce annual action plans which describe the operational goals for fire management in a given year. Rangers also represent Parks and Wildlife on the Bushfires NT Regional Committee for the Savannah Region.

Cooperation with neighbouring landholders is vital to the conservation of the Park's biodiversity and visitor safety. Maintaining firebreaks, prescribed burning for fuel reduction coupled with patchy and strategic ecological burns are the most important components to strategic fire management. The five year *Fire Management Strategy* for the Park should incorporate Indigenous ecological knowledge as it becomes available and favour early Wet season burns to reduce greenhouse gas emissions.

The Territory Government has prepared the *NT Climate Change Policy* which is a comprehensive action plan to combat climate change. Savanna burning or bushfires is the single largest source of greenhouse gas emissions and some years it has contributed up to 50% of emissions. Frequent fire events in the Park add to greenhouse emissions and impact on the biodiversity of the Park. The Territory Government through the *NT Climate Change Policy* have committed to reducing wildfires in the Park (DCM 2009[a]).



Plate 12: Early Dry season burns are an effective land management tool

3.6 Biological Survey and Monitoring

Accurate and comprehensive information is required to make sound management decisions. Most surveying and monitoring are carried out as internal projects by Parks and Wildlife. External projects are encouraged particularly when the resulting knowledge may contribute to improved management and any impact on the Park's values is minimal. Activities associated with biological surveys and monitoring including interfering with wildlife and taking, interfering or keeping protected wildlife requires a permit issued under the *Territory Parks and Wildlife Conservation Act* or the *By-laws*. While most of the Park's wildlife is relatively well known, aquatic animals, invertebrates and some plant families require initial or follow up biological surveys to accurately identify new species and the health of new and existing populations.

Aim

• Maintain the Park's natural values and features, with an emphasis on aquatic and riverine habitats, in good condition.

- Prevent the degradation of significant habitats from the impacts of weeds, feral animals and fire.
- Protect riverine habitat from damage in areas of greater visitor activity.

Management Actions

- 15. **Landscape** the natural character of the Park will be protected. Any development will be carefully sited and designed to be in harmony with the natural environment, so as not to detract from the Park's landscape and scenic values. (*Ongoing*)
- 16. **Thermal springs** Spring flow rates will be maintained and monitored through the *Mataranka Water Allocation Plan* and the Departments Water Management Branch. The Park will continue to be represented on the Mataranka Water Advisory Committee. (*High*)
- 17. **Significant plant and animal species and communities** plant and animal species and communities of high conservation value may be subject to low-key monitoring and dedicated protection from threats. Such actions will include the following:
- Continue to educate the public about the important ecological role of the Little Red flying fox. (*High*)
- Protect riverine communities from hot, late Dry season wildfires, and periodically assess the condition, including status, of species such as *Livistona mariae* ssp. *rigida*. (*Moderate*)
- Record observations of Freshwater sawfish and Red goshawk into the NTG Fauna Database. (Low)
- 18. **Weed management** Management of weeds will continue to take a strategic, catchment-scale approach by implementing a long term (5-10 year) *Weed Management Strategy* and annually-reviewed action plans. Park operations must comply with the *Weed Management Act* including all associated statutory management plans.

Weed management actions will be implemented through a succinct, targeted weed program, developed in conjunction with, and based on the modified standards of the Departments Weed Management Branch. Actions will focus on practical weed control methods and practices to minimise the number of weeds being brought into the Park, and effective survey and monitoring techniques.

GIS technology will continue to be used to map weed coverage of priority species and record control measures.

Weed management will concentrate in priority order on the following:

- Eradicating Bellyache bush and Devil's Claw as per the statutory Management Plan(s) or advice from the Weed Management Branch. (High)
- Controlling Parkinsonia and Noogoora burr as per advice from the Weed Management Branch. (Moderate)
- Blanket colonising species such as Neem and African mahogany trees to be controlled within the riverine corridor. (Moderate)
- Any new weed incursions will be assessed against legislative and statutory requirements, regional priorities and the current Park priority list before any action is taken, or changes made to the current priorities. (Ongoing)
- 19. **Feral animal control** Management actions will be implemented through a succinct, targeted program, based on standards developed by the Departments Conservation and Wildlife Management Branch and the Biodiversity Conservation Division. The program will focus on practical, cost-effective control methods and effective monitoring. Feral animal management will concentrate in priority order on the following:
- Maintain the boundary fences to a high, stock-proof standard. (Moderate)
- Continue to monitor the Park for cattle and work closely with neighbours to keep cattle out of the Park and their timely removal. (Moderate)

- Remove cattle, pig, donkey and buffalo from riverine areas as soon as possible. (Moderate)
- 20. **Fire management** Manage fire strategically by implementing a long-term (5-10 year) *Fire Management Strategy* and annually-reviewed action plans, developed in conjunction with Bushfires NT. Particular attention will be paid to:
- Protecting people, personal property and infrastructure from fire. (High)
- Protecting the riverine corridor and forests from hot wildfires through active management in the early Dry season. (*Moderate*)
- Reducing fuel and/or maintaining firebreaks on boundary areas to prevent wildfires from entering or exiting the Park. (*Moderate*)
- Protecting vulnerable historical and cultural sites from fire damage. (Moderate)
- Restricting campfires to designated fireplaces in Jalmurark Campground and picnic areas.
 (Moderate)
- Involving the Park's neighbours and considering their interests. (Moderate)
- Maintaining data that will inform sound fire management decision-making and help in understanding fire-habitat relationships. (*Moderate*)
- Continuing to participate in the Bushfires NT Regional Management Committee (Savannah Region) to facilitate a regional approach to fire management. (*Moderate*)
- Training requirements and competency standards for Parks and Wildlife staff and volunteers.
 (Moderate)
- 21. **Biological research and monitoring** Programs will be designed and approved in accordance with the Parks and Wildlife research plan. Research by external agencies will be encouraged. (*Ongoing*)

Performance Measures

- No new significant damage is sustained to tufa formations as a result of visitor activities.
- Riverine forest communities will be wildfire-free.
- No more than 25% of the Park is burnt in any one year.
- A Weed Management Strategy for Devil's Claw and Bellyache bush will be developed by 2012 and implemented.
- Coverage of Class B/C weeds and invasive plant species in riverine areas will not increase over the life of this Plan.
- Reduction in number of cattle, pig, donkey and buffalo observed on Park per control effort with a target density for herbivores of 0.25 animals per square kilometre or less.

4. Cultural Values

The Mangarrayi and Yangman Indigenous people have a long association and deep connection to their traditional lands which includes Elsey National Park. Each year during the Dry season, a group of Traditional Owners walk from Mataranka to Jilkminggan along the Roper River, maintaining their connection to country. Nothing in the *Territory Parks and Wildlife Conservation Act* limits the right of Indigenous people who have traditionally used an area of land or water from continuing to use that area in accordance with Indigenous tradition for hunting, food gathering and for ceremonial and religious purposes. Traditional Owners and their families regularly visit the Park to fish and to hunt flying foxes. Current impacts of traditional hunting and gathering on the Park's natural values or visitor safety are very low.

Twelve Indigenous sacred sites have been registered and ten recorded in the Park by the AAPA. The management of Indigenous sites will be guided by the AAPA and the Northern Territory Aboriginal Sacred Sites Act. Further, the Northern Territory Aboriginal Sacred Sites Act provides protection for sacred sites by requiring a person who proposes to use or conduct work on land to apply for an Authority Certificate. An Authority Certificate will only be issued if the use or work on the land can proceed without there being a substantive risk of damage or interference with a sacred site or in the vicinity of the land or if an agreement is reached between the applicant and the custodians of the sacred site. Subject to the terms of the Northern Territory Aboriginal Sacred Sites Act, this protection enables the custodians of the sacred site to say who can enter the site and what can happen in or on the site.

Parks and Wildlife acknowledge that cultural knowledge belongs to the Traditional Owners and will not use or permit to be used such knowledge without prior consent of the Traditional Owners. Wherever possible, Parks and Wildlife will assist the Traditional Owners assert their intellectual property rights consistent with Parks and Wildlife policy.

The Park contains a number of unrecorded archaeological sites consisting of shell middens and stone-working sites along the banks of the Roper River. The sites are most likely of moderate conservation value, being a relatively common feature of Indigenous occupation. The *Heritage Conservation Act* provides protection for archaeological places and objects in the Territory. Under the *Heritage Conservation Act*, consent of the Minister is required before work is carried out on or in relation to an archaeological place and object.

Aims

• Indigenous cultural and archaeological sites identified and protected.

Management Actions

- 22. **Traditional use** Rights in relation to hunting and gathering of animals, plants and natural materials from the Park for traditional purposes will extend only to Traditional Owners and 'Aboriginals who have traditionally used (the) area...in accordance with Aboriginal tradition for hunting, food gathering (otherwise than for the purpose of sale)...'. Parks and Wildlife will review harvesting practices with Traditional Owners if hunting or gathering activities are perceived to negatively impact on the Park's natural values or visitor experience. (*Ongoing*)
- 23. **Sacred sites** Management and protection of sacred sites will be planned by the AAPA through the expressed wishes of the Traditional Owners. Authority Certificates will be sought for any works proposed on the Park that are triggered by the *Northern Territory Aboriginal Sacred Sites Act.* (*Ongoing*)

- 24. **Indigenous cultural and intellectual property** the Departments *Indigenous Cultural and Intellectual Property Policy* aims to protect Indigenous cultural knowledge and the intellectual property rights of Indigenous persons and communities. To the fullest extent possible, any cultural information obtained from the Traditional Owners of the Park will be recorded, stored and used consistently with their directions. (*Ongoing*)
- 25. **Archaeological sites** Proposals for work affecting archaeological sites or objects will be consistent with the requirements of the *Heritage Conservation Act*. Expert advice will be sought from the relevant Territory Government authority. Sacred clearance processes will also apply to works that may impact archaeological sites. (*Ongoing*)
- 26. **Cultural interpretation and information** Parks and Wildlife will work with the Traditional Owners to gather information for the interpretation of sites within the Park, where appropriate. (*Ongoing*)
- 27. **Indigenous Ecological Knowledge** Indigenous Ecological Knowledge and skills will be integrated into Park management programs where possible and recorded appropriately. (*Ongoing*)
- 28. **Indigenous cultural intellectual property** the intellectual property rights of Traditional Owners will be protected through the Departments *Indigenous Cultural and Intellectual Property Policy*. The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners. (*Ongoing*)

Performance Measures

No significant adverse impacts to sites of cultural significance.

5. Heritage Values

Elsey National Park is located in an area rich with European heritage. Before becoming a protected area, parts of the Park were used as a pastoral research station, World War II Army Camp, cattle station and private recreation area.

The Park has a small number of unregistered historic sites that are locally significant. The 12 Mile Yards (constructed 1969) are a reminder of the Park's pastoral past, being used to hold cattle that were mustered up a narrow corridor beside the Roper River. Weeds are controlled around the steel constructed yards, but they are otherwise left untouched as an example of pastoral development in the region.

The foundations of a sheep dip, constructed around 1914, and the remains of a World War II Army Camp are interesting features of the Park for a small number of visitors. These sites are not maintained except for weed and vegetation management.

None of the Park's heritage sites have been formally assessed for their historical significance or heritage value. Encroachment by native vegetation and weeds, fire damage, and human disturbance are the main threats to the Park's historic sites.

Aim

The Park's heritage sites formally documented and protected.

Management Actions

29. **Heritage sites** – Develop a *Cultural Heritage Management Plan* including a database for the Park, documenting all known cultural heritage sites and their management. Consult with specialist groups such as AAPA on best practice information recording and management procedures. As part of the Cultural Plan, the Park's historical sites will be properly documented and expertly assessed by the Departments Heritage Branch for their significance

and heritage value. Proposals for work affecting heritage sites or objects will be consistent with the requirements of the *Heritage Conservation Act.* (*Moderate*)

Performance Measures

No significant adverse impacts to sites of historical significance.



Plate 13: Old Mataranka Sheep Dip

6. Park Administration

6.1 Planning and Decision-Making

Good planning and decision-making depends on having the best available information. While having good, comprehensive knowledge is desirable, this information is sometimes lacking, and Park managers must still make decisions about management programs even if information is scarce. Adaptive management allows Park managers to evaluate the effectiveness of past management decisions, reviewing and adapting those management practices to improve future outcomes and update programs and strategies as new information becomes available. The success of this Plan will be monitored through the achievement of the Plan's aims, completion of the Management Actions / Directions and achievement against the Performance Measures.

6.1.1 Relations with Community and Neighbours

National Parks and Reserves are community assets and as such, some management decisions concerning Elsey National Park require stakeholder engagement. As part of the Mataranka community (population 327 - Sunrise Health November 2009), Elsey Rangers promote the Park and regularly engage with community members. Key stakeholders include the Mataranka community, Traditional Owners, neighbouring landholders, tourism businesses, community groups such as Roper River Landcare, tourism bodies, and the general public. These stakeholders will be consulted on important management decisions and operational planning matters, such as:

- Catchment issues including weed, fire and feral animal management and flora and fauna conservation – in these instances, neighbours will be contacted directly by Parks and Wildlife staff, or consulted through established community bodies such as the Roper River Landcare Group, Mataranka Water Advisory Committee, Bushfires NT Regional Committee, and Katherine Weeds Advisory Committee;
- Visitor management tourism businesses, such the owners of Mataranka Homestead, will be engaged prior to any alteration of existing visitor management services or facilities. This includes consultation on projects such as the development of the Mataranka Thermal Pool site concept plan.
- The management of important Indigenous sites, including sacred sites. Traditional Owners will be consulted, with Northern Land Council and AAPA assistance as necessary, if any Park management activity is likely to affect an Indigenous site; and
- Major developments within the Park. All relevant stakeholders will be consulted about any major development on the Park.

Volunteers to the Park are beneficial, particularly when post-Wet season maintenance takes place. Groups such as Conservation Volunteers have been involved in activities on Park in recent years. Members of Mataranka community have suggested that the Park establish an organised volunteer program to assist Rangers with maintaining walking tracks and facilities, and management of weeds. Since mid-2010, Parks and Wildlife have been advertising regular land management activity days, including a free bbq lunch, on local community notice-boards, in the local newsletter and by word-of-mouth. To-date there has been no attendance at these activity days, however Park Rangers will continue to make opportunities available and encourage volunteers to help out when suitable work is available. The establishment of a 'Friends of Elsey National Park' would be a

community driven group. Any interest by the community in establishing such a group would have strong support from Parks and Wildlife.

6.2 Business Operations

6.2.1 Work and Business Opportunities

The Park is staffed by Rangers based at the Mataranka Parks and Wildlife office. The Mataranka office provides an important point of contact for visitors and the general public, as well as accommodating other regional management staff.

Park management provides opportunities to engage the local community. Contract services and business opportunities in the Park include: cleaning Park facilities, general repairs and maintaining infrastructure, maintaining walking tracks, fencing, construction and weed control. The Territory Government's *Territory 2030 Strategic Plan* promotes Indigenous employment in land management. It is hoped that participants of the new Jilkminggan Ranger group will be able to successfully tender for management contracts within the Park. Indigenous people will continue to be encouraged to seek employment through the Parks and Wildlife traineeship or apprenticeship program. Traditional Owners may also be employed as cultural consultants and guides on a casual basis for specific projects.

6.2.2 Effective Resource Management

Parks and Wildlife are responsible for the daily management of the Park and finance and resource the Park's recurrent management programs including administrative, staffing, infrastructure and services. The Park is managed by staff based in the Mataranka Parks and Wildlife office.

The majority of funding to manage or develop the Park is provided by the Territory Government, allocated as a share of funds to manage this and all other parks and reserves within the Territory Government parks estate. Capital works and funded works programs are subject to territory-wide Territory Government priorities. The Park managers need to ensure effective allocation of funding across Park management and infrastructure requirements. Park and agency-wide priorities, performance indicators, monitoring, evaluation and reporting need to be integrated into a management cycle.

Management Effectiveness Framework

The Management Effectiveness Framework has been developed to evaluate all of the NT's protected areas and rate them according to their contribution to biodiversity protection, recreation and tourism and cultural site conservation. This framework provides a basis for allocating resources to prioritise across the Territory and provides guidance for park operational planning and park personnel work plans.

The Management Effectiveness Framework ranks all Parks across the NT Park estate from Class 1 to Class 4 with Class 1 being the highest ranking. Elsey National Park has been ranked as a Class 2 Park for biodiversity value and a Class 2 Park for recreational value.

Class 2 Parks for biodiversity value requires management of the Park to maintain specific, significant conservation values and as a moderate priority to manage threats at the park scale. Class 2 Parks for recreational value requires a moderate level of development at a small range of locations with the provision of high quality facilities of superior design standard.

6.2.3 Mining

Mining and extractive activities may have significant adverse impacts on the natural and cultural values of the Park. Mining companies may apply to the Territory Government for permission to explore for minerals within Elsey National Park. In order to protect the Park's values a Reservation from Occupation (RO 1317) has been granted over a large portion of the Park.

A granted exploration licence currently exists outside the area protected by RO 1317. The desirable extent of the current Reservation from Occupation will be reviewed once the current exploration licence expires.

Mining is permitted within the Park in accordance with the *Territory Parks and Wildlife Conservation Act*, the *Mining Act* and the administrative arrangements between the Department of Resources and Parks and Wildlife.

6.2.4 Permitting Special Activities

Permission is required for special activities or access in the Territory's National Parks. Permits are required under the *Territory Parks and Wildlife Conservation By-laws* for activities associated with research and monitoring, public gatherings, special access, commercial tours, commercial photography and aircraft activities in the Park. These permits state conditions by which permit holders must abide to ensure that their activities do not negatively affect the values of the Park. Some permits may require supervision.

Concession permits are issued to businesses that provide appropriate services for the Park. In recent years, concessions have been held for canoe hire, campground maintenance and the cleaning of Park facilities. Rangers monitor concessionaires to ensure they are working within the conditions of their permit, are providing high quality visitor services and are following relevant policy requirements. All concessionary operations are required to operate in accordance with the Act, the *By-laws* and where relevant, the Parks and Wildlife *Commercial Operations Policy*.

6.2.5 Development Proposals

Proposals to develop commercial accommodation or other commercial infrastructure within or adjacent to the Park may arise during the life of this Plan. Such developments may present significant opportunities for business partnerships with Traditional Owners and result in benefits for visitors, local economies and expanded Park services.

Parks and Wildlife are currently preparing a Commercial Tourism Development Policy. This policy will provide a clear over-arching process to facilitate the development of privately developed and operated tourism infrastructure in NT Parks. Any major proposals or new works will be required to comply with this policy and be assessed commensurate with the scale of potential impact consistent with the Environment Assessment Act, Heritage Conservation Act, Planning Act, Environment Protection and Biodiversity Conservation Act and Northern Territory Aboriginal Sacred Sites Act.

Aims

- A supportive local community and productive relations with others who have an interest in the Park's management.
- A well-managed Park, achieved with adequate and efficiently-used resources.

Management Actions

30. Community involvement - Community involvement initiatives that assist in achieving this

Plan's aims will be actively supported.

- Park stakeholders and neighbours will be encouraged to work with Parks and Wildlife in matters of mutual interest, planning strategically for fire management, biodiversity conservation and weed and feral animal control. Traditional Owners will be encouraged to become involved in Park management planning and activities, especially in relation to cultural matters. (Ongoing)
- Park staff, with the support of the Departments Education for Sustainability Unit and the Mataranka community, will seek to establish a volunteer program for the Park. Volunteer activities will focus on maintenance of walking track and facilities, management of weeds, and other agreed programs. (Ongoing)

31. Work and business opportunities

- Parks and Wildlife will continue to offer contracts and concession opportunities as required, for the management and maintenance of Park assets. Traditional Owners will be encouraged to take up commercial tourism opportunities including campfire talks, campground maintenance, cultural tours or other viable enterprises. (Ongoing)
- All commercial operations within the Park are required to operate under a concession lease
 or license agreement in accordance with the Act, the By-laws and where relevant the Parks
 and Wildlife Commercial Operations Policy. (Ongoing)
- Parks and Wildlife will continue to support local Indigenous employment consistent with Territory Government policy and the Parks and Wildlife strategies. Parks and Wildlife will continue to provide flexible, casual employment opportunities to local Indigenous people as resources allow. (Ongoing)

32. Development proposals

• The potential impacts of any proposed activity or development will be considered in line with the Commercial Tourism Development Policy and assessed commensurate with the scale of potential impact, consistent with the Environment Assessment Act, Heritage Conservation Act, Planning Act, Environment Protection and Biodiversity Conservation Act 1999 (Cth), Northern Territory Aboriginal Sacred Sites Act and other legislation as appropriate. (Ongoing)

7. Appendices

7.1 Appendix 1: References

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7.2 Appendix 2: Priority Management Actions

The management actions from this management plan have been collated and grouped together as programs that are assigned priorities to assist park management.

ONGOING: Already established but essential to be continued.

HIGH: Imperative to achieve the Plan's stated objectives.

MEDIUM: Very important to achieve the Plan's stated objectives but subject

to the availability of resources.

LOW: May be undertaken only if other guidelines are met and the

necessary resources are available.

Denotes an opportunity for which external funding could be sought.

Management Actions	Page Number	Priority
1.2 Zoning		
Conform to the zoning scheme in managing the Park (Map 2). Development in any zone is subject to normal approval processes to ensure appropriate protection of natural and cultural values. Special activities are always subject to normal by-laws and permits.	5	Ongoing
Regardless of the designated zone all management and development will have regard to maintaining the Park's natural character, its conservation values and visitor experiences.	5	Ongoing
Any new development will be subject to approval through standard environmental and heritage protection processes and related Parks and Wildlife policies.	5	Ongoing
2. Managing for Visitors – Access & Activities		
Access – Tracks and roads will be maintained for high quality visitor access and safety. Visitors will be encouraged to keep to vehicle and walking tracks to minimise damage to sensitive riverine habitats. Access to the Park, or areas within the Park, may be restricted for environmental, cultural or safety reasons.	18	High
Camping – Generators will not be permitted. The use of firewood within the Park will be reviewed periodically, and alternative options will be investigated if necessary.	18	High
Boating – Motorised vessels may have a maximum power output of 15 horsepower.	18	High
Fishing – NT possession limits apply within the Park. Fishing will be prohibited at Bitter Springs, Mataranka Thermal Pool and Stevie's Hole for visitor safety.	18	High
Canoeing – Install a portage point at the rock bar between 12 Mile and Korowan to protect the tufa from canoe damage.	18	Low
2. Managing for Visitors – Facility Planning and Development		
Energy efficient, eco-friendly technology, such as solar power and hybrid toilet systems, will be incorporated into new developments or upgrades where possible.	18	High
Toilet facilities at Bitter Springs to be relocated above the flood zone and upgraded to accommodate the increases in visitor numbers.	18	High
A 3.5km cement stabilised walking track from the Roper Junction to 4 Mile and a	18	High

4km cement stabilised walking track section between Wabalarr and Mulurark visitor sites are to be constructed. The staff access track to Korowan day use area is to be upgraded including sections to be relocated to higher ground.		
Depending on the outcomes of a walking track review, which was not available at the time of this Plans preparation, further sections of the Riverside Walk which are prone to flooding will be hardened or relocated as funding becomes available.	19	Moderate
Water entry and exit points will be established at Stevie's Hole swimming area to improve visitor safety when entering the water.	19	Moderate
Additional or expanded water entry / exit points will be considered for Bitter Springs swim access points along with expansion of the carparking area if visitor numbers continue to increase.	19	Low
A new kiosk for Jalmurark Campground will be established later in the life of this Plan to better provide for visitor and concessionaire needs.	19	Low
Options to provide shade at Four Mile will be investigated. Any built structures must be designed to withstand flooding.	19	Low
2. Managing for Visitors – Mataranka Thermal Pool site concept plan		
A Waterhouse River viewing / swimming pontoon leading from the loop-walk boardwalk is to be constructed at the Thermal Pool.	19	High
A waterborne toilet block and associated infrastructure, including changing facilities, is to be constructed at the Thermal Pool as per construction division specifications.	19	High
Additional sprinkler towers will be installed within the vicinity of the Homestead resort to assist with cleaning of Park infrastructure.	19	High
A walking track from Bitter Springs to the Thermal Pool will be considered, to provide visitors with an additional walking opportunity in the Park, and to reduce visitation pressure on Bitter Springs and the Thermal Pool.	19	Moderate
Sergeant's Waterhole will be considered as a potential new site for swimming, to relieve visitation pressure on other sites within the Park.	19	Moderate
2.7 Visitor Safety		
Annually review and update the <i>Flood Response Plan</i> for the Park and comment on the Parks and Wildlife <i>Emergency Response Policy & Procedures</i> when reviewed. All staff must be familiar with the procedures and trained and prepared to implement them at all times. All incidents and accidents are to be reported to the Executive Director of Parks and Wildlife.	19	High
Undertake crocodile management in accordance with the Estuarine (Saltwater) Crocodile Management for Visitor Safety – Elsey National Park Plan.	19	High
Review the risks associated with Estuarine crocodiles during the life of this Plan of Management. If risks become unmanageable and water-based activity restrictions are deemed necessary, consult with the tourism industry and other stakeholders prior to any restrictions being enforced	19	High
Safety and awareness signs concerning the possible presence of Estuarine crocodiles in Park waterways will be prominent and clear, and public education regarding crocodiles will be in accordance with the 'Be Crocwise' program.	19	High
Monitor water quality at Mataranka Thermal Pool during periods of extreme low flow, for the presence of pathogens such as <i>Naegleria fowleri</i> . Waterholes will be closed to swimming until pathogens have decreased to a safe level, as per the <i>Management of Microbial Water Quality in Recreational Water Bodies Policy</i> .	19	Ongoing
Continue to assess the risks from the Park's facilities and visitor management practices. Any identified risks will be rectified on a priority basis.	19	Ongoing

2.8 Information and Interpretation		
Regularly review all available visitor information and update subject to resources.	19	Ongoing
Information about important aspects of the Park, including flying fox management, will continue to be provided to the public. Traditional Owners will be encouraged to participate in interpretive programs, to communicate cultural information to the public.	19	Ongoing
The Park's Traditional Owners will be invited to impart appropriate cultural information about the Park so that local Indigenous knowledge and wisdom may be better represented through Park information and interpretation. Involvement in the delivery of interpretation by Traditional Owners will be encouraged where appropriate.	20	Ongoing
Key safety and pre-visit messages in relation to climate and track conditions will be conveyed through Park literature, online and interpretive signage.	20	High
Parks and Wildlife will work with the tourism industry to continue to ensure that tourist information is accurate and appropriate.	20	High
High quality interpretation available in keeping with the high visitor profile of the Park.	20	High
2.9 Visitor Monitoring		
Following the review of the Parks and Wildlife <i>Visitor Monitoring Strategy</i> , implement the visitor monitoring program for the Park.	20	Moderate
2.10 Waste Management		
Implement the Waste Management Policy, in accordance with the Northern Territory Waste Strategy, once it has been prepared.	20	Moderate
3. Natural Values - Features		
Landscape – the natural character of the Park will be protected. Any development will be carefully sited and designed to be in harmony with the natural environment, so as not to detract from the Park's landscape and scenic values.	28	Ongoing
Thermal Springs – Spring flow rates will be maintained and monitored through the <i>Mataranka Water Allocation Plan</i> and the Departments Water Management Branch. The Park will continue to be represented on the Mataranka Water Advisory Committee.	28	High
3. Natural Values - Significant Plant & Animal Species & Communities		
Continue to educate the public about the important ecological role of the Little Red flying fox.	28	High
Protect riverine communities from hot, late Dry season wildfires, and periodically assess the condition, including status, of species such as <i>Livistona mariae</i> ssp. <i>rigida</i> .	28	Moderate
Record observations of Freshwater sawfish and Red goshawk into the NTG Fauna Database.	28	Low
3.5 Threats		
Weed Management		
Eradicating Bellyache bush and Devil's Claw as per the statutory Management Plan(s) or advice from the Weed Management Branch.	28	High
Controlling Parkinsonia and Noogoora burr as per advice from the Weed Management Branch.	28	Moderate
Blanket colonising species such as Neem and African mahogany trees to be	28	Moderate

controlled within the riverine corridor.		
Any new weed incursions will be assessed against legislative and statutory requirements, regional priorities and the current Park priority list before any action is taken, or changes made to the current priorities.	28	Ongoing
Feral Animal Control		
Maintain the boundary fences to a high, stock-proof standard.	28	Moderate
Continue to monitor the Park for cattle and work closely with neighbours to keep cattle out of the Park and their timely removal.	28	Moderate
Remove cattle, pig, donkey and buffalo from riverine areas as soon as possible.	29	Moderate
Fire Management		
Protecting people, personal property and infrastructure from fire.	29	High
Protecting the riverine corridor and forests from hot wildfires through active management in the early Dry season.	29	Moderate
Reducing fuel and/or maintaining firebreaks on boundary areas to prevent wildfires from entering or exiting the Park.	29	Moderate
Protecting vulnerable historical and cultural sites from fire damage.	29	Moderate
Restricting campfires to designated fireplaces in Jalmurark Campground and picnic areas.	29	Moderate
Involving the Park's neighbours and considering their interests.	29	Moderate
Maintaining data that will inform sound fire management decision-making and help in understanding fire-habitat relationships.	29	Moderate
Continuing to participate in the Bushfires NT Regional Management Committee (Savannah Region) to facilitate a regional approach to fire management.	29	Moderate
Training requirements and competency standards for Parks and Wildlife staff and volunteers.	29	Moderate
3.6 Biological Research and Monitoring		
Programs will be designed and approved in accordance with the Parks and Wildlife research plan. Research by external agencies will be encouraged.	29	Ongoing
4. Cultural Values		
Traditional use – Rights in relation to hunting and gathering of animals, plants and natural materials from the Park for traditional purposes will extend only to Traditional Owners and 'Aboriginals who have traditionally used (the) areain accordance with Aboriginal tradition for hunting, food gathering (otherwise than for the purpose of sale)' Parks and Wildlife will review harvesting practices with Traditional Owners if hunting or gathering activities are perceived to negatively impact on the Park's natural values or visitor experience.	30	Ongoing
Sacred sites – Management and protection of sacred sites will be planned by the AAPA through the expressed wishes of the Traditional Owners. Authority Certificates will be sought for any works proposed on the Park that are triggered by the Northern Territory Aboriginal Sacred Sites Act.	30	Ongoing
Indigenous cultural and intellectual property – the Departments <i>Indigenous Cultural</i> and <i>Intellectual Property Policy</i> aims to protect Indigenous cultural knowledge and the intellectual property rights of Indigenous persons and communities. To the fullest extent possible, any cultural information obtained from the Traditional Owners of the Park will be recorded, stored and used consistently with their directions.	31	Ongoing

Archaeological sites – Proposals for work affecting archaeological sites or objects will be consistent with the requirements of the <i>Heritage Conservation Act</i> . Expert advice will be sought from the relevant Territory Government authority. Sacred clearance processes will also apply to works that may impact archaeological sites.	31	Ongoing
Cultural interpretation and information – Parks and Wildlife will work with the Traditional Owners to gather information for the interpretation of sites within the Park, where appropriate.	31	Ongoing
Indigenous ecological knowledge – Indigenous Ecological Knowledge and skills will be integrated into Park management programs where possible and recorded appropriately.	31	Ongoing
Indigenous cultural intellectual property – the intellectual property rights of Traditional Owners will be protected through the Departmental <i>Indigenous Cultural</i> and <i>Intellectual Property Policy</i> . The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners.	31	Ongoing
5. Heritage Values		
Develop a <i>Cultural Heritage Management Plan</i> including a database for the Park, documenting all known cultural heritage sites and their management. As part of this Plan, the Park's historical sites will be properly documented and expertly assessed by the Departments Heritage Branch for their significance and heritage value. Proposals for work affecting heritage sites or objects will be consistent with the requirements of the <i>Heritage Conservation Act</i> .	31	Moderate
6.1 Planning and Decision-Making		
Community involvement – Park stakeholders and neighbours will be encouraged to work with Parks and Wildlife in matters of mutual interest, planning strategically for fire management, biodiversity conservation and weed and feral animal control. Traditional Owners will be encouraged to become involved in Park management planning and activities, especially in relation to cultural matters.	35	Ongoing
Park staff, with the support of the Departments Education for Sustainability Unit and the Mataranka community, will seek to establish a volunteer program for the Park. Volunteer activities will focus on maintenance of walking track and facilities, management of weeds, and other agreed programs.	36	Ongoing
6.2 Business Operations		
Work and business opportunities — Parks and Wildlife will continue to offer contracts and concession opportunities as required, for the management and maintenance of Park assets. Traditional Owners will be encouraged to take up commercial tourism opportunities including campfire talks, campground maintenance, cultural tours or other viable enterprises.	36	Ongoing
All commercial operations within the Park are required to operate under a concession lease or license agreement in accordance with the Act, the <i>By-laws</i> and where relevant the Parks and Wildlife <i>Commercial Operations Policy</i> .	36	Ongoing
Parks and Wildlife will continue to support local Indigenous employment consistent with Territory Government policy and Parks and Wildlife strategies. Parks and Wildlife will continue to provide flexible, casual employment opportunities to local Indigenous people as resources allow.	36	Ongoing
Development proposals – The potential impacts of any proposed activity or development will be considered in line with the <i>Commercial Tourism Development Policy</i> and assessed commensurate with the scale of potential impact, consistent with the <i>Environment Assessment Act, Heritage Conservation Act, Planning Act</i> and <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> and other legislation as appropriate.	36	Ongoing