

## Mataranka thermal pools

### Location and Description

The Mataranka thermal pools are a lush oasis located 110 km south-east of Katherine, in the transition zone between the tropical and drier savanna regions of northern Australia. Significant perennial springs in the upper reaches of the Roper River feed the permanent dry season flow in the river. The Mataranka pools are the best known of the springs, with large volumes of warm water rising from groundwater reserves and held in pools fringed by paperbark and palm forest. The thermal pools contrast starkly with the surrounding dry landscape and provide a permanent source of water in a seasonally dry environment.

### Tenure and Land Use

The majority of this site is Crown leasehold land (Elsley National Park and Cave Creek Station) and other smaller portions are freehold land, some of which are part of the Mangarrayi Aboriginal Land Trust. Approximately 66% of this site is managed as a conservation reserve where the main land uses are recreation, tourism and conservation, and other uses within the site include Indigenous and pastoral activities.

### Significance Rating

National Significance

### Ecological Values

The Roper River represents the southern boundary for a large number of species, marking this area as an important boundary between different biogeographic and climatic regions.

### Management Issues

The thermal pools and parts of the upper Roper River are heavily used by tourists in the dry season. Provision and maintenance of appropriate infrastructure to minimise the impacts of tourists is an important management issue in the area. Other important impacts include those by weeds and feral animals, particularly donkey, on wetland and riparian areas.

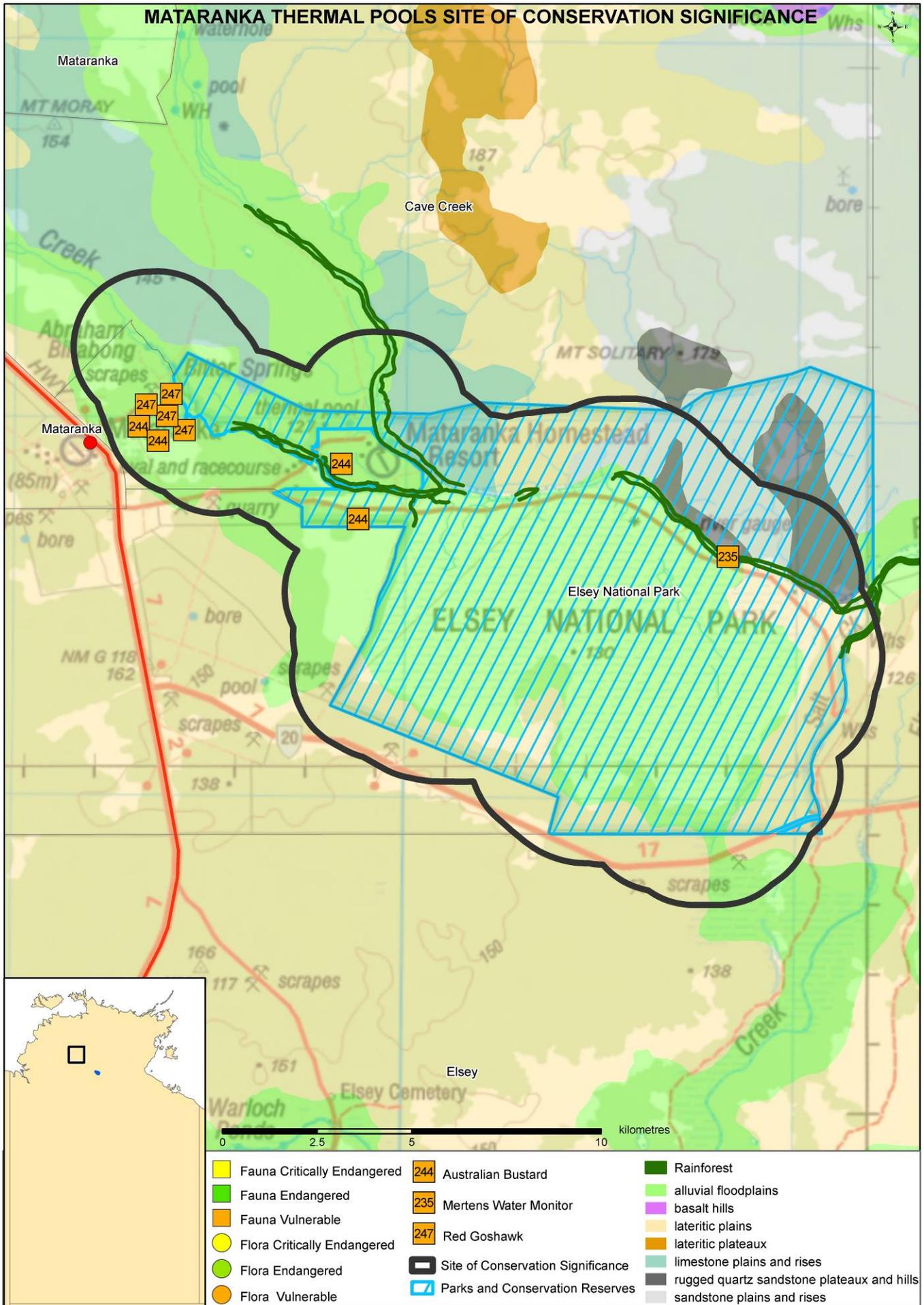
### Condition

The Mataranka thermal pools are surrounded by infrastructure to control access by tourists, but are in a generally good condition. Some of the wetland and riparian areas are degraded by feral animals and weeds. Riparian areas are subject to considerable natural disturbance from periodic wet-season floods.



### Current Conservation Initiatives

A natural resource management plan for the Roper River Catchment was developed in 2004 and identifies management responses to a range of priority issues. A new plan of management is currently in preparation for Elsey National Park.



MATARANKA THERMAL POOL - SITE OF CONSERVATION SIGNIFICANCE

<b>LOCATION</b>	<b>SOCS Number</b>	31 (NT Parks and Conservation Masterplan Map Number 26)
	<b>Latitude/Longitude</b>	14° 57' South, 133° 10' East (at centre)
	<b>Bioregion</b>	Sturt Plateau (69%), Gulf Fall and Uplands (31%)
	<b>Description</b>	This site includes parts of the headwaters of the Roper River (to the junction with Salt Creek), the numerous thermal spring-fed pools and connecting channels (Roper Creek and the Waterhouse River), and the calcrete plain in the southern part of the site. The site is bounded by the Stuart Highway on the west and the Roper Highway on the south; it covers an area of about 190 km <sup>2</sup> and is dominated by alluvial floodplains (116 km <sup>2</sup> ).
<b>THREATENED SPECIES</b>	<b>Significance Rating</b>	<b>Regional Significance</b>
	<b>Threatened plants and animals</b> (Listings at National/NT level <b>CR</b> - Critically Endangered, <b>EN</b> - Endangered, <b>VU</b> - Vulnerable, <b>NT</b> - Near Threatened, <b>LC</b> - Least Concern, <b>DD</b> - Data Deficient)	Three threatened species are reported from this site. <b>Vertebrates</b> <ul style="list-style-type: none"> <li>▪ Australian Bustard <i>Ardeotis australis</i> (-/VU)</li> <li>▪ Red Goshawk <i>Erythrotriorchis radiatus</i> (VU/VU)</li> <li>▪ Merten's Water Monitor <i>Varanus mertensi</i> (-/VU)</li> </ul> The site is a well-known locality for nesting Red Goshawk that is regularly visited by bird-watchers.
<b>ENDEMIC SPECIES</b>	<b>Significance Rating</b>	<b>Not Significant</b>
	<b>Notes</b>	<b>Endemic to the NT:</b> Ten plant species and one bird (Hooded Parrot) recorded in this site are endemic to the NT.
<b>WILDLIFE AGGREGATIONS</b>	<b>Significance Rating</b>	<b>Regional Significance</b>
	<b>Marine turtles</b>	
	<b>Seabirds</b>	
	<b>Waterbirds</b>	The thermal springs and associated river system provides important habitat for local populations of waterbirds and transient waterbirds and shorebirds, but there are no major aggregations or breeding colonies reported for the site.
	<b>Shorebirds</b>	
	<b>Other aggregations</b>	A large population of Little Red Flying-fox ( <i>Pteropus scapulatus</i> ) roosts and breeds in vegetation around the Mataranka thermal springs each year. In April 1995 the population was estimated to exceed 200 000 individuals (Vardon <i>et al.</i> 1997).
<b>WETLANDS</b>	<b>Significance Rating</b>	<b>National Significance</b>
	<b>Ramsar criteria met</b>	Not assessed
	<b>DIWA criteria met</b>	This site is listed as a wetland of national significance in the Directory of Important Wetlands in Australia (DIWA: NT003 Mataranka Thermal Pools). The site meets criteria 1, 6, comprises an area of less than 100 ha, and includes DIWA wetland type B17.
	<b>Notes</b>	The Mataranka thermal pools are good examples of tropical springs and associated permanent pools, and the system is one of the best known in the NT (DIWA). The pools are maintained by permanent thermal springs and drain into Roper Creek and the Waterhouse River.
	<b>Rivers</b>	The Mataranka thermal pools feed the Waterhouse River and Roper Creek, the two main tributaries of the Roper River. The Roper River is one of the largest NT rivers and is an important permanent water source for the south western Gulf of Carpentaria.
<b>FLORA</b>	<b>Significance Rating</b>	<b>Not significant</b>
	<b>Notes</b>	<b>Rainforest:</b> Approximately 138 ha of rainforest occur in riparian areas in this site (Russell-Smith 1991).

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OTHER ENVIRONMENTAL VALUES		<p>The Mataranka Thermal Pools and a section of the Roper River (Roper River and Sections of the Banks) are listed on the Register of the National Estate for their natural values (Australian Heritage Council). 13 species recorded from this site are listed under international conventions or bilateral agreements protecting migratory animals.</p> <p>The Roper River represents the southern boundary for a large number of species, marking this area as an important boundary between different biogeographic and climatic regions (Griffiths 1997).</p>
MANAGEMENT ISSUES		<p><b>Fire:</b> In the period 1993-2004, 78% of the site was burnt in fewer than three years, and 2% was burnt in more than six years.</p> <p><b>Feral animals:</b> Donkeys are abundant in Eley National Park and there is evidence of disturbance from them in a range of habitats (Griffiths 1997). Black Rat and House Mouse are recorded from native bushland in the Park and this is of concern because of the distance from extensive human settlement (Griffiths 1997).</p> <p><b>Weeds:</b> One Weed of National Significance (<i>Parkinsonia aculeate</i>), eight declared Category A and B weeds (<i>Acanthospermum hispidum</i>, <i>Calotropis procera</i>, <i>Cenchrus echinatus</i>, <i>Jatropha gossypifolia</i>, <i>Martynia annua</i>, <i>Senna occidentalis</i>, <i>Sida acuta</i>, <i>Sida cordifolia</i>), and one undeclared but problematic environmental weed (<i>Clitoria ternatea</i>; high priority weed: Smith 2001) are recorded from this site. Numerous weed species are present in Eley National Park, especially in better watered areas where disturbance by donkeys encourages their spread (CCNT 1995). Other weeds of concern present in the site include devil's claw <i>Martynia annua</i> and rubber bush <i>Calotropis procera</i> (Griffiths 1997).</p> <p><b>Other:</b> Visitor numbers to the thermal pools have increased substantially in recent years and excessive use could damage fringing vegetation.</p> <p>Vardon <i>et al.</i> (1997) notes damage to vegetation around the thermal springs caused by a large colony of Little Red Flying Fox, and their conflict with human use of the area. Non-destructive techniques have been used unsuccessfully to try and move the animals (Vardon <i>et al.</i> 1997).</p>
MANAGEMENT INFORMATION	<b>NRM groups</b>	No information located.
	<b>Protected areas</b>	Eley National Park (125 km <sup>2</sup> / 66% of site).
	<b>Current management plans</b>	<p><b>Site-specific plans:</b> Eley National Park Plan of Management (CCNT 1995), Roper River Catchment Natural Resource Management Plan (Kraatz 2004).</p> <p><b>National recovery plans for threatened species:</b> Red Goshawk (Baker-Gabb in prep.).</p> <p><b>Other management plans:</b> Australian Weeds Strategy (NRMMC 2007); FIREPLAN: Fire management for the savanna community (Russell-Smith <i>et al.</i> in prep.).</p>
	<b>Monitoring programs and research projects</b>	<p>Rangers in Eley NP monitor traps for crocodiles in the Roper River section of the site.</p> <p>Fire in the tropical savannas is mapped continuously under the North Australia Fire Information Project <a href="http://www.firenorth.org.au/nafi/app/init.jsp">http://www.firenorth.org.au/nafi/app/init.jsp</a></p>
	<b>Management recommendations</b>	<p>Prepare Plan of Management for Eley National Park including the Mataranka thermal pools in conjunction with stakeholders (NRETA 2005).</p> <p>Continue efforts to control donkey populations and noxious weeds and manage and monitor fire regimes in the Park (Griffiths 1997).</p> <p>Undertake sampling of fish and turtle species in the Roper and Waterhouse Rivers and Little Roper Creek (Griffiths 1997).</p>
KEY REFERENCES	<b>Papers and reports</b>	<p>DIWA (A Directory of Important Wetlands in Australia). <i>Australian Wetlands Database</i>. Department of Environment, Water, Heritage &amp; the Arts, Canberra ACT (accessed May 2008).</p> <p>Griffiths, A.D. (1997). <i>Biological Survey of Eley National Park</i>. Technical Report No. 63. Parks and Wildlife Commission NT, Palmerston.</p>
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