

Newhaven Lakes

Location and Description

The Newhaven Lakes are located about 350 km north-west of Alice Springs and encompass Lake Bennett and numerous surrounding smaller salt lakes, freshwater lakes and seasonal swamps. The salt lakes hold water for a considerable time after rains. The small claypans, freshwater lakes and intermittent swamps hold water only temporarily but are important for biodiversity. Sandplains, open saltbush flats, and semi-saline spinifex plains adjoining the lakes provide key habitat for threatened species and are also included in the Site.

Tenure and Land Use

The Newhaven Lakes are largely pastoral leasehold land within one pastoral lease (Newhaven Station), although this is now managed as a conservation reserve by the Australian Wildlife Conservancy. The remaining portions of the Site are Aboriginal freehold land held by two land trusts (Ngalurr tj u and Yunkanjini Aboriginal Land Trusts), where Indigenous use is the main land use. Nyirripi Community (population 251) is 18 km west of the Site.

Significance Rating

National significance

Ecological Values

Newhaven Lakes include several different wetland types, which support a variety of wetland plants and birds. Five threatened species are recorded from the Site, including the elusive Night Parrot. Sandplain habitats adjoining the lakes are considered highly important for the conservation of the threatened Great Desert Skink and Brush-tailed Mulgara.

Management Issues

Fire is a major management issue, affecting vegetation communities and threatened species within the Site. Feral camels are having a localised impact on permanent and semi-permanent water holes and lakes. Plant species that are preferentially grazed by camel, such as the bean tree *Erythrina vespertilio*, *Acacia sesseliceps* and native plum *Santalum lanceolatum*, are particularly threatened within the Site. Relatively few weeds and invasive plants are reported from the Site, but buffel grass is well established along most tracks and within the vicinity of old bores. Couch grass is well established around old bores and its eradication is a management priority as it has the potential to spread to the lake systems.



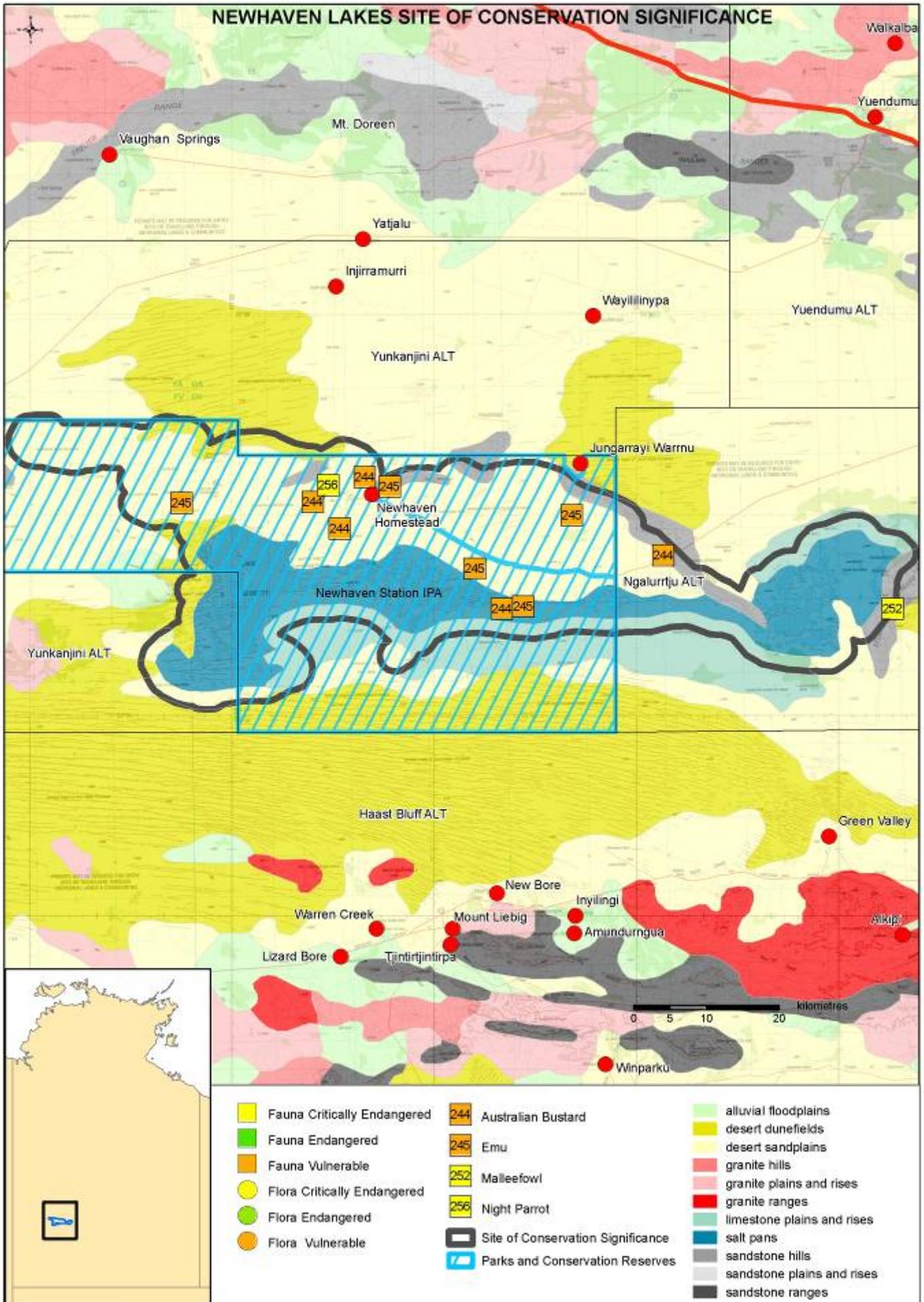
Condition

The Newhaven Lakes have a history of light grazing pressure. However, large areas of the Site have been affected by large summer wildfires which have drastically reduced fire sensitive vegetation communities.

Current Conservation Initiatives

The Australian Wildlife Conservancy manage Newhaven Wildlife Sanctuary for conservation, and have an active management program which includes surveying and monitoring biodiversity, restoring appropriate fire regimes, closure of most bores and managing feral animals and weeds. Ngalurr tj u and Yunkanjini Aboriginal Land Trust portions of the Site are within the proposed Southern Tanami Indigenous Protected Area. A collaborative fire management pilot project was conducted between the Australian Wildlife Conservancy, Traditional land holders and Warlpiri Rangers as part of the Indigenous Protected Area development process during 2008.

NEWHAVEN LAKES - SITE OF CONSERVATION SIGNIFICANCE



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LOCATION	SOCS Number	53 (NT Parks and Conservation Masterplan Map Number 81)
	Latitude/Longitude	22 ° 48' South, 131 ° 15' East (at centre)
	Bioregion	Great Sandy Desert
	Description	<p>This site includes Lake Bennett and numerous surrounding smaller lakes to the east of it. It also includes adjoining vegetation communities that are known to support populations of the threatened vertebrates (Latz <i>et al.</i> 2003).</p> <p>The boundary of the site is delineated based on wetland mapping in Duguid <i>et al.</i> (2005), and is extended to incorporate adjoining vegetation communities that support threatened species; plus a 2 km buffer added. The site encompasses an area of 2276 km².</p> <p>Major vegetation communities within the site include: open saltbush flats and semi-saline spinifex plains north of the lakes area; hard spinifex <i>Triodia basedowii</i> hummock grassland with acacia tall sparse-shrubland overstorey; and samphire <i>Harlosarcia</i> low open-shrubland fringing bare salt pans (White <i>et al.</i> 2000).</p> <p>Lake Lewis, about 30 km east of the site, is also identified as a site of high conservation significance in the NT.</p>
THREATENED SPECIES	Significance Rating	National Significance
	Threatened plants and animals (Listings at National/NT level CR - Critically Endangered, EN - Endangered, VU - Vulnerable, NT - Near Threatened, LC - Least Concern, DD - Data Deficient)	Five threatened species are recorded from this site. Vertebrates <ul style="list-style-type: none"> ▪ Australian Bustard <i>Ardeotis australis</i> (-/VU) ▪ Emu <i>Dromaius novaehollandiae</i> (-/VU) ▪ Night Parrot <i>Pezoporus occidentalis</i> (EN/CR) ▪ Brush-tailed Mulgara <i>Dasyercus blythii</i> (VU/VU) ▪ Great Desert Skink <i>Egernia kintorei</i> (VU/VU)
ENDEMIC SPECIES	Significance Rating	Not Significant
	Notes	Endemic to the NT: One plant species recorded from this site is an NT endemic (<i>Austrobryonia centralis</i>).
WILDLIFE AGGREGATIONS	Significance Rating	Not Significant
	Marine turtles	Not applicable
	Seabirds	None known
	Waterbirds	Large aggregations of waterbirds are not known from this site but 24 species are known to occur.
	Shorebirds	Five shorebird species are recorded from this site.
	Other aggregations	None known
WETLANDS	Significance Rating	National Significance (possible International)
	Ramsar criteria met	The Newhaven Lakes are not presently listed as a Ramsar site, however Duguid <i>et al.</i> (2005) assessed the lakes against criteria for listing as a wetland of international importance and concluded that they may meet Criterion 1. It is understood that other organisations may have also assessed the site against Ramsar criteria but further information on this is not currently available.
	DIWA criteria met	The Newhaven Lakes are not listed in the Directory of Important Wetlands in Australia (DIWA), however Duguid <i>et al.</i> (2005) assessed the lakes against DIWA criteria and found that the site meets Criterion 1.
	Notes	The site includes a range of wetland types including large salt lakes (Lake Bennett), saline gypseous swamps, claypans and freshwater lakes and swamps, none of which support permanent water. The variety of wetland types and periods of inundation make this site important to a range of wetland plants and birds (Duguid 2005). The Newhaven Lakes are considered to be part of a larger wetland system that extends to the south-west and east of the Siddeley Range and includes Lake Lewis (Duguid 2005).
	Rivers	No information located
FLORA	Significance Rating	Not Significant
	Notes	Restricted range species: Three species reported from the site have restricted ranges within the NT (<i>Swainsona cyclocarpa</i> , <i>Daviesia eremaea</i> and <i>Tecticornia indica</i> subsp. <i>bidens</i>). Relictual species: None known

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OTHER ENVIRONMENTAL VALUES		<p>Part of the site is within the proposed Southern Tanami Indigenous Protected Area.</p> <p>The Newhaven Lakes are listed as being of national significance for biodiversity conservation in Duguid <i>et al.</i> (2005).</p> <p>Lake Bennett is identified as a Site of Botanical Significance in White <i>et al.</i> (2000).</p> <p>Six migratory species recorded from this site are listed under international conventions or bilateral agreements protecting migratory animals.</p>
	MANAGEMENT ISSUES	
MANAGEMENT INFORMATION		NRM groups
	Protected areas	Newhaven Wildlife Sanctuary (1534 km ² / 67% of the site). Other parts of the site are within the proposed Southern Tanami Indigenous Protected Area.
	Current management plans	<p>Site-specific plans: Fire Management Strategy for Newhaven Reserve (Paltridge and Latz 2006); Birds Australia Newhaven Reserve Management Plan (Birds Australia 2003).</p> <p>National recovery plans for threatened species: Great Desert Skink/Tjakura (McAlpin 2001); Brush-tailed Mulgara and Crest-tailed Mulgara (SA Department of Environment and Heritage in prep.).</p> <p>Other management plans: Australian Weeds Strategy (NRMCC 2007); Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits (Biodiversity Group Environment Australia 1999); Threat Abatement Plan for Predation by Feral Cats (Biodiversity Group Environment Australia 1999); Threat Abatement Plan for Predation by the European Red Fox (Biodiversity Group Environment Australia 1999).</p>
	Monitoring programs and research projects	<p>A detailed vegetation survey of Newhaven Reserve has been conducted (Latz <i>et al.</i> 2003).</p> <p>The Australian Wildlife Conservancy is conducting a comprehensive biodiversity assessment of Newhaven Wildlife Sanctuary, which includes the establishment of permanent survey sites across the property within the 11 broad habitats. These sites are surveyed annually. 100 permanent tracking plots are surveyed annually to monitor and record threatened species distribution and feral animal activity (D. Moore and J. Schofield, Australian Wildlife Conservancy, pers. comm.).</p> <p>Fire history at Newhaven Station has been recorded and mapped by Desert Wildlife Services and the Northern Territory Bushfires Council. The Australian Wildlife Conservancy will continue recording and mapping fires within the Sanctuary. Active on-ground fire management is ongoing and reviewed annually by a fire committee (D. Moore and J. Schofield, Australian Wildlife Conservancy, pers. comm.).</p> <p>A collaborative fire management pilot project was conducted during 2008 as part of the Southern Tanami Indigenous Protected Area development process between the Australian Wildlife Conservancy, Traditional land holders and Warlpiri Rangers (J. Young, CLC, pers. comm.).</p> <p>The impacts of feral camel on vegetation are being intensively monitored at two sites within Newhaven Wildlife Sanctuary by the Australian Wildlife Conservancy (D. Moore and J. Schofield, Australian Wildlife Conservancy, pers. comm.).</p> <p>Cooperative management arrangements including fauna surveys and fire management at Newhaven Wildlife Sanctuary actively involve Traditional Owners and Indigenous Rangers (D. Moore and J. Schofield, Australian Wildlife Conservancy, pers. comm.).</p> <p>There are nine Tier 1 rangeland monitoring points within this site (Karfs and Bastin 2001).</p>
	Management recommendations	<p>Establish cooperative conservation management activities on Newhaven with landholders and other stakeholders (NRETA 2005).</p> <p>Manage fire through patch burning and fire breaks to create a mosaic of fire affected vegetation and preserve long-unburnt spinifex (Paltridge and Latz 2006).</p> <p>Continue to develop relationships with Traditional Owners, ranger groups and Aboriginal neighbours and incorporate traditional fire management practices into the new fire regime (Paltridge and Latz 2006).</p>

KEY REFERENCES	Papers and reports	Latz, P. K., Paltridge, R. and Holmes, J. (2003). <i>Vegetation Survey of Newhaven Reserve</i> . A report for Birds Australia. Desert Wildlife Services, Alice Springs NT. Paltridge, R. and Latz, P. K. (2006). <i>Fire Management Strategy for Newhaven Reserve 2006-2011</i> . A report for Birds Australia. Desert Wildlife Services, Alice Springs NT. http://www.birdsaustralia.com.au/our-projects/newhaven-fire-management-plan.html
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The threatened Brush-tailed Mulgara *Dasycercus blythii* is found at the Newhaven Lakes site (Photo: Gerhard Koertner)



The threatened Great Desert Skink *Egernia kintorei* is found at the Newhaven Lakes site (Photo: Steve McAlpin)