

NARRANDERA NATURE RESERVE

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment and Climate Change

July 2008

This plan of management was adopted by the Minister for Climate Change and the Environment on 21st July 2008.

For additional information or enquiries on Narrandera Nature Reserve or this plan, contact the Parks and Wildlife Western Rivers Region, Griffith Area office at 200 Yambil Street Griffith, or by phone on (02) 6966 8100.

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FOREWORD

Narrandera Nature Reserve covers 71 hectares near the town of Narrandera in the Riverina. The nature reserve adjoins the Murrumbidgee River and is one of the few areas that has been reserved for the conservation of river red gum communities.

In 1972 koalas were released into Narrandera Nature Reserve, with another release in 1974. Since then, the number of koalas in the community has increased to around 35-51 and there are now sufficient numbers to ensure the health and viability of the colony.

The river red gums provide food and habitat trees for koalas, and hollows for breeding birds such as parrots and treecreepers and mammals such as possums. Thirty-nine species of birds and 7 mammal species have been recorded in the reserve.

Narrandera Nature Reserve is a small area with no visitor facilities. The reserve attracts people interested in seeing koalas as well as bird-watchers and naturalists.

The New South Wales *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each nature reserve. A plan of management is a legal document that outlines how an area will be managed in the years ahead.

A draft plan of management for Narrandera Nature Reserve was placed on public exhibition from 30th June until 9th October 2006. The submissions received were carefully considered before adopting this plan.

This plan contains a number of actions to achieve “Better environmental outcomes for native vegetation, biodiversity, land, rivers, and coastal waterways” (Priority E4 in the State Plan) including protection of the koala population, control of weeds, fencing to restrict stock incursions, and fire management strategies aimed at protecting the fire-sensitive riverine vegetation. It also encourages “Increased participation and integration in community activities” (Priority R4) through continued support of the volunteers who undertake koala counts in the reserve.

This plan of management establishes the scheme of operations for Narrandera Nature Reserve. In accordance with section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

Verity Firth
Minister for Climate Change and the Environment

CONTENTS

1. NATURE RESERVES IN NEW SOUTH WALES	1
1.1 Legislative and Policy Framework	1
1.2 Management Objectives	1
2. NARRANDERA NATURE RESERVE	2
2.1 Location, Gazettal and Regional Setting	2
2.2 Natural Heritage	2
Landform, Geology and Soils	
Native Plants	
Native Animals	
2.3 Cultural Heritage	3
Aboriginal Heritage	
Historic Heritage	
2.4 Use of the Area	4
2.5 References	4
2.6 Reserve Map	5
3. MANAGEMENT ISSUES AND STRATEGIES	6

1. NATURE RESERVES IN NEW SOUTH WALES

1.1 LEGISLATIVE AND POLICY FRAMEWORK

Narrandera Nature Reserve is managed under a legislative and policy framework that is the *National Parks and Wildlife Act 1974* (NPW Act), the National Parks and Wildlife Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). Section 72AA of the NPW Act lists the matters to be considered in the preparation of a plan of management. The policies arise from the legislative background and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic heritage conservation, recreation, commercial use, research and communication.

Other legislation, international agreements and charters may also apply to management of the area. In particular, the *Environmental Planning and Assessment Act 1979* requires the assessment and mitigation of the environmental impacts of any works proposed in this plan.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, no operations may be undertaken within Narrandera Nature Reserve except in accordance with the plan. This plan will also apply to any future additions to Narrandera Nature Reserve. Where management strategies or works are proposed for the nature reserve or any additions that are not consistent with the plan, an amendment to the plan will be required.

1.2 MANAGEMENT OBJECTIVES

Nature reserves are reserved under the Act to protect and conserve areas containing outstanding, unique or representative ecosystems, species, communities or natural phenomena.

Under the Act, nature reserves are managed to:

- conserve biodiversity, maintain ecosystem functions, and protect geological and geomorphological features and natural phenomena;
- conserve places, objects, features and landscapes of cultural value;
- promote public appreciation, enjoyment and understanding of the reserve's natural and cultural values; and
- provide for appropriate research and monitoring.

Nature reserves differ from national parks in that they do not have as a management principle the provision of opportunities for visitor use.

2. NARRANDERA NATURE RESERVE

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Narrandera Nature Reserve is located in the Riverina near the town of Narrandera. The reserve covers an area of 71 hectares and is located adjacent the Murrumbidgee River. Two large bends in the Murrumbidgee River form the two peninsulas, which constitute most of the reserve. A one kilometre long fence encloses these peninsulas. Immediately to the north of the nature reserve is the Narrandera Common, which is 527 hectares of River Red Gum forest, though this differs from the nature reserve in that grazing by horses and cattle is permitted. The actual gazetted area does not match the reserve boundary as it exists. Part of this is due to the changing shape of the Murrumbidgee River, although a small area of Narrandera Common has been included within the northern boundary fence and smaller parcels have been excluded from the nature reserve at both ends of this fence.

Narrandera Nature Reserve was gazetted on the 8th September 1965. It was later established as “a regeneration centre for the purposes of reintroduction of the Koala” (NPWS Memo 1979). According to K.L. Kiesling (1987) Koalas “used to occur along the Murrumbidgee River, but became extinct during the early part of this century [1900s].”

2.2 NATURAL HERITAGE

Landform, Geology and Soils

Narrandera Nature Reserve is situated on the banks of the Murrumbidgee River. The terrain is flat and composed of alluvial flood plain deposits. The reserve is located less than five kilometres from the Narrandera township, between the Murrumbidgee River to the south and Narrandera Common to the north. The Narrandera Range to the north is hilly country comprised of Upper Devonian conglomerates and sandstones of the Cocoparra Group.

The reserve is located in the NSW South Western Slopes Bioregion.

Native Plants

Narrandera Nature Reserve is one of the few areas that have been set aside for conservation of River Red Gum communities. The river red gum community of Narrandera Nature Reserve includes River Red Gum (*Eucalyptus camaldulensis*), Yellow Box (*E. melliodora*) and River Cooba (*Acacia stenophylla*). A number of medium sized trees such as River Oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) and White Cypress Pine (*Callitris glaucophylla*) also occur within the reserve. The understorey consists of a number of introduced and native shrub and grass species.

The River Red Gum community found in Narrandera Nature Reserve is representative of other River Red Gum communities found within the Riverina. However, few occurrences of these communities have been set aside for conservation purposes. The majority of river red gum forests are logged for timber and firewood rather than being managed primarily for conservation purposes.

Native Animals

The native animals recorded in the reserve include thirty-nine species of birds and seven species of mammal (DEC 2005). Common bird species include the Eastern Rosella (*Platycercus adscitus eximius*), Sulphur-crested Cockatoo (*Cacatua galerita*), Laughing Kookaburra (*Dacelo novaeguineae*), Sacred Kingfisher (*Todiramphus sanctus*) and Grey Shrike-thrush (*Colluricincla harmonica*). The Eastern Grey Kangaroo (*Macropus giganteus*) is commonly seen in the reserve and the Common Brushtail (*Trichosurus vulpecula*) and Common Ringtail (*Pseudocheirus peregrinus*) Possums have also been recorded.

Vulnerable species recorded in the reserve (listed under the *Threatened Species Conservation Act 1995*) include the Superb Parrot (*Polytelis swainsonii*), Black-chinned Honeyeater (south eastern subspecies) (*Melithreptus gularis gularis*) and Koala (*Phascolarctos cinereus*).

The first Koalas released into Narrandera Nature Reserve, in 1972, were four individuals from Queensland (five additional koalas from Queensland were released sometime later). Another release was conducted in 1974, with ten koalas being released. These koalas were translocated from French's Island, Victoria (John Sullivan, 1998). According to a plaque in the reserve "Koalas were released...to re-establish a natural colony."

Since the koalas were introduced their numbers have increased and there are now sufficient numbers to ensure the health and viability of the colony. Numbers sighted during annual koala counts of the nature reserve and adjoining Narrandera Common range from 35 to 51 (numbers often depend on the number of people involved in the count, generally the more people the more koalas sighted). Koalas have been sighted on both sides of the Murrumbidgee River (John Sullivan pers. comm.). Sightings within the Atlas of NSW Wildlife show koalas occurring as far west as Yanco Weir.

River Red Gums provide food and habitat trees for Koalas, and hollows for breeding birds such as parrots and treecreepers and mammals such as possums.

2.3 CULTURAL HERITAGE

Aboriginal Heritage

Narrandera Nature Reserve lies within the area occupied by the Wiradjuri people and is within the boundaries of the Narrandera Local Aboriginal Land Council. The Murrumbidgee River was a traditional resource for Aboriginal people who used the aquatic wetlands for food and timber for shelter (Kabaila, 1998). Narrandera Township has a strong link with the Wiradjuri people. Narrandera Sandhills and Hill 60 households, were home for Aboriginal people in the 1930s (Kabaila, 1998).

Little is currently known about the Aboriginal significance of the reserve and further study is required.

Historic Heritage

Exploration of the region by Europeans began with Oxley in 1817 and Sturt in 1829. By the 1850's squatters had taken up land along the Murrumbidgee and Murray Rivers. At Narrandera, cattle runs were set up from the 1830's and by the 1840's sheep had taken over these runs (NPWS, 2002a).

Prior to gazettal, the area that is now the nature reserve was used for grazing. A number of eucalypt trees were ringbarked or completely removed to thin the timber. Grazing still occurs in the adjoining Narrandera Common.

The nature reserve was initially enclosed by an electric fence to keep the translocated koalas within the protected area. However, three major floods destroyed the fencing so over time it has been replaced with a standard stock-proof fence. Power to the electric fence was supplied by powerlines spanning the Murrumbidgee River, and the pole currently still stands in the reserve.

There are currently two main trails within the reserve, maintained in case of fire, that are accessed via a locked gate near the western end of the northern boundary fence. Adjacent to this is a pedestrian gate, allowing walkers to enter the reserve without climbing the fence.

2.4 USE OF THE AREA

Narrandera Nature Reserve is a small area with no visitor facilities. The reserve attracts people interested in seeing Koalas in their natural state. It also attracts bird-watchers, naturalists and locals who enjoy experiencing the natural environment. The Narrandera Tourist Information Centre coordinates Koala spotting tours led by local guides into the common and nature reserve.

Since 1988, weather permitting, an annual Koala head count has been undertaken in the nature reserve and adjoining Narrandera Common. The local Narrandera Koala Regeneration Centre Supervisory Committee and the Department of Environment and Climate Change organise the annual event with local community groups, such as Rotary and the Murrumbidgee Field Naturalists, assisting on the day. This event attracts a large number of locals and visitors. While the surveys can not provide absolute numbers of Koalas present, they do give an indication that they are plentiful in both the nature reserve and common.

2.5 REFERENCES

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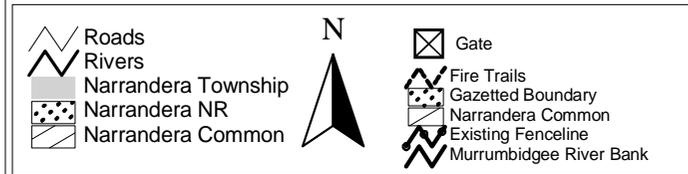
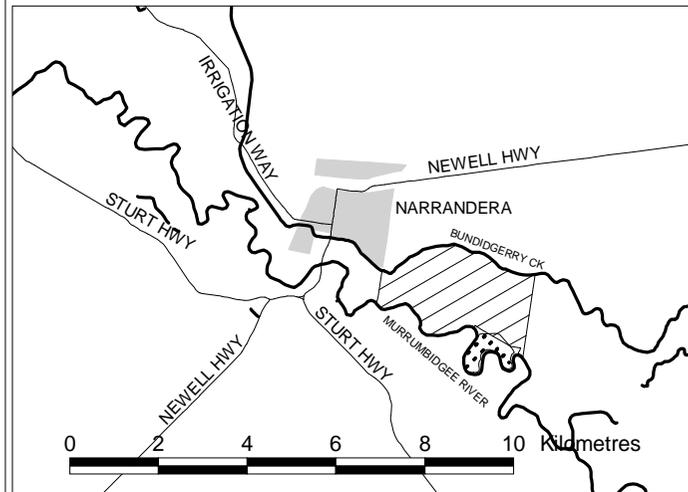
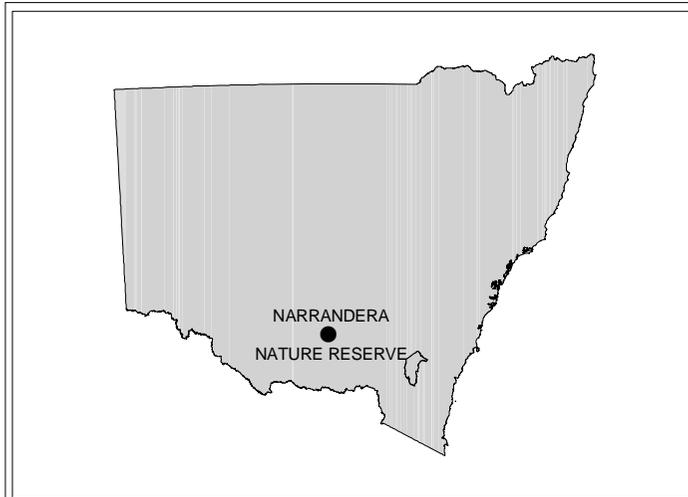
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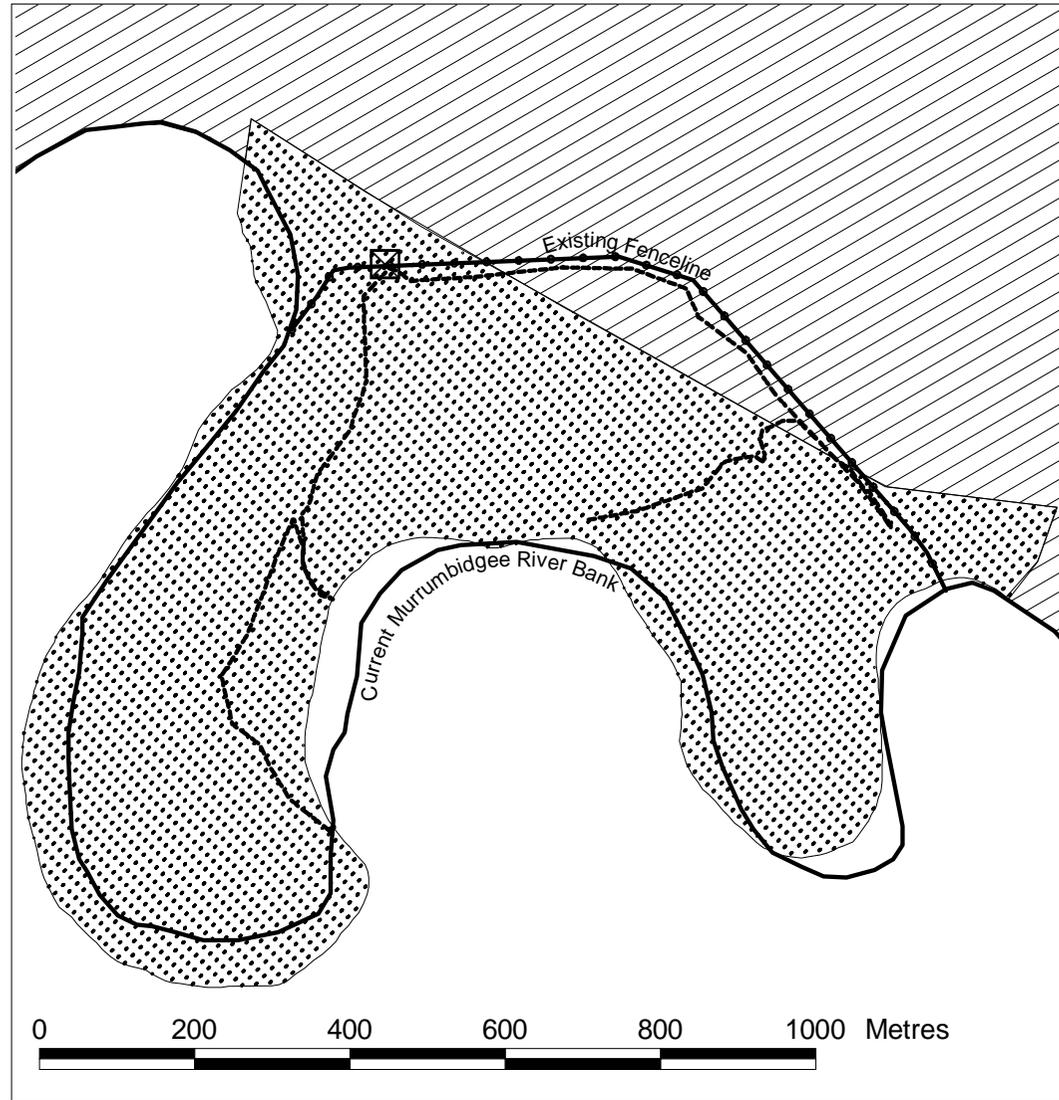
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2.6 RESERVE MAP



Narrandera Nature Reserve



3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
<p>Soil and Water Conservation</p> <p>Narrandera Nature Reserve adjoins the Murrumbidgee River.</p> <p>Given the location of the reserve on the bend of a major river, there is potential for erosion and deposition during flood events.</p>	<p>Soil erosion resulting from human activity is minimised.</p>	<p>Undertake all works in a manner that minimises erosion and water pollution.</p> <p>No management activities occur in the reserve that may create erosion. Fire trails are slashed.</p> <p>Natural erosion and deposition will be allowed to continue.</p>	<p>Medium</p> <p>High</p>
<p>Native Plant and Animal Conservation</p> <p>A number of threatened species such as Koalas and Superb Parrots are known to occur in the reserve. However, knowledge of threatened species and the impacts of past and current management is limited.</p> <p>A draft recovery plan has been prepared for the Koala but this does not deal specifically with re-established colonies, such as the one within Narrandera Nature Reserve. Recovery plans may be prepared in the future for other threatened species found in the reserve.</p> <p>The viability of some species found in the reserve is compromised by the small size of the reserve. There is a need to encourage conservation of vegetation on neighbouring land to provide wildlife corridors.</p>	<p>All native plant and animal species and communities are conserved.</p> <p>Structural diversity and habitat values are restored in areas subject to past clearing or logging.</p>	<p>Monitor vegetation changes over time by establishing photo monitor points and taking photographs yearly.</p> <p>Undertake surveys for threatened plant and animal species.</p> <p>Implement measures included in recovery plans for threatened species, and particularly any recommendations of the Koala Recovery Plan regarding re-introduced populations.</p> <p>Work with neighbours (particularly Narrandera Shire) and government agencies to encourage conservation of remnant native vegetation in the vicinity of the reserve, including on the adjoining Narrandera Common.</p>	<p>Medium</p> <p>High</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p>Introduced Species</p> <p>Blackberry (<i>Rubus ulmifolius</i>) and Noogoora Burr (<i>Xanthium occidentale</i>) are weeds of particular concern in the reserve. Rabbit (<i>Oryctolagus cuniculus</i>) numbers are very low in the reserve.</p> <p>The Western Rivers Region's Pest Control Strategy outlines criteria for prioritising pests and gives priority to the control of Blackberry in Narrandera Nature Reserve.</p> <p>Introduced species are largely confined to problems with wandering horses and cattle from the neighbouring Narrandera Common, which may enter the reserve when the stock-proof fence is down.</p>	<p>The impact of introduced species on native species and neighbouring lands is minimised.</p>	<p>Monitor noxious and significant environmental weeds. Treat any outbreaks.</p> <p>Seek the cooperation of other authorities and neighbours in implementing weed and pest animal control programs. As necessary undertake control programs for blackberry, noogoora burr and rabbits.</p> <p>Undertake pest species control in accordance with the Western Rivers Region's Pest Control Strategy.</p> <p>Maintain fencing between Narrandera Common and the reserve to minimise intrusions by wandering livestock. Fence down riverbank to stop access during periods of low river height. If stock do enter the reserve, ensure removal and fence repairs are undertaken as quickly as possible.</p>	<p>High</p> <p>Medium</p> <p>High</p> <p>High</p>
<p>Cultural Heritage</p> <p>There are no known sites of cultural significance on the reserve other than the plaque describing the reintroduction of koalas.</p> <p>More research is required to gain knowledge about the cultural values of the reserve.</p>	<p>Cultural features are conserved and managed in accordance with their significance.</p>	<p>Retain the plaque at the entrance of the reserve.</p> <p>Consult the Narrandera Local Aboriginal Land Council and local historic society about the cultural heritage of the reserve. Involve them in any aspects of management likely to affect heritage values.</p>	<p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p>Fire Management</p> <p>Fire is a rare natural feature of the environment of the reserve.</p> <p>There has been one fire in the reserve in the last 30 years, in 1990. This fire burnt about half the reserve.</p> <p>Overall fire risk is seen as low. Potential fire ignition sources are fishermen along the riverbanks, and lightning strikes.</p> <p>The River Red Gum community is fire sensitive. There is no demonstrated requirement for burning within the reserve within the life of this plan.</p>	<p>Persons and property are protected from bushfire.</p> <p>Fires are minimised in extent to protect koalas and their habitat.</p>	<p>Maintain a fire access trail/break (Strategic Fire Advantage Zone) between the reserve and Narrandera Common. Ensure local fire brigades can access the reserve if necessary to extinguish fires.</p> <p>Manage the remainder of the reserve as a Heritage Area Management Zone. Priority will be placed on protection of the natural values of the reserve. To this end, no prescribed burning will be undertaken in the reserve unless research shows that fire is necessary to maintain the natural biodiversity.</p> <p>Participate in MIA Zone Bush Fire Management Committee. Maintain coordination and cooperation with Rural Fire Service and local RFS brigades with regard to fire trail maintenance and fire suppression.</p> <p>Prepare fire control guidelines annually, as part of the Regional Incident Procedures, to minimise fire spread and minimise the impact of control operations.</p>	<p>High</p> <p>High</p> <p>High</p> <p>High</p>
<p>Management Operations</p> <p>Trails exist within the reserve for management purposes such as fire and weed control.</p> <p>The electricity pole still stands within the reserve fence, though is no longer needed to supply power to the fence.</p> <p>Parts of the gazetted reserve have been fenced outside the reserve and are within Narrandera Common.</p>	<p>Management facilities adequately serve management needs and have acceptable impact.</p> <p>That all parts of the reserve are managed for conservation.</p>	<p>Retain existing trails (see Reserve Map) for management purposes. No additional trails will be created.</p> <p>Approach Country Energy regarding removal of the pole and electricity wires over the Murrumbidgee River.</p> <p>Liaise closely with Narrandera Shire Council in regard to the management of the Common, particularly the areas adjoining the nature reserve.</p> <p>When replacing fencing, consider adjusting the fence location to more closely align with the reserve boundary.</p>	<p>High</p> <p>Medium</p> <p>High</p> <p>Low</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p>Research</p> <p>Scientific study is needed to improve understanding of the reserve's natural and cultural heritage, the processes that affect them and the requirements for management of particular species.</p>	<p>Research enhances the management information base and has minimal environmental impact.</p>	<p>Undertake and encourage research to improve knowledge and management of natural and cultural heritage. Ensure a report is provided to the Region if research work is conducted on the reserve.</p>	<p>Low</p>
<p>Visitor Use</p> <p>Use of the reserve must be carefully managed since it is a relatively small and significant area of remnant vegetation.</p> <p>There is no public vehicle access into the reserve. There are no visitor facilities and none proposed.</p> <p>Current visitor use of the reserve includes birdwatching, bushwalking and nature study, particularly Koala spotting. People also go fishing along the river frontage of the reserve.</p>	<p>The local community is aware of the significance of the area and of management programs.</p> <p>Visitor use is ecologically sustainable.</p>	<p>Public access on foot to undertake low-key activities such as birdwatching, bushwalking, fishing and Koala spotting will be permitted.</p> <p>Driving, camping, barbecues, cycling, horse riding and competitive sports will not be permitted in the reserve.</p> <p>Continue to assist and support the Narrandera Koala Regeneration Centre Supervisory Committee with the Annual Koala Count each year (weather permitting).</p> <p>Permit organised group educational visits, subject to limits on numbers and other conditions if necessary to minimise impacts. Coordinate with Narrandera Tourist Information Centre who organise small tours.</p> <p>Organise media releases, educational material and contact with neighbours and community organisations as needed to promote appropriate use of the reserve.</p> <p>Impacts of fishing on the riparian zone will be monitored.</p>	<p>High</p> <p>High</p> <p>High</p> <p>Medium</p> <p>Medium</p> <p>Low</p>

Key to priorities

High priority activities are those imperative to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.

Medium priority activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.

Low priority activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.