

**WARRABAH NATIONAL PARK**  
**PLAN OF MANAGEMENT**

**NSW National Parks and Wildlife Service**

**Part of the Department of Environment and Conservation (NSW)**

**November 2003**

**This plan of management was adopted by the Minister for the Environment on 10<sup>th</sup> November 2003.**

Inquiries about this draft plan of management of Warrabah National Park should be directed to the ranger at the Armidale Area Office, 85 Faulkner Street, Armidale, or by telephone on (02) 6776 0000.

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## FOREWORD

Warrabah National Park is located on the northern tablelands near Manilla. It covers an area of 3984 hectares and is bisected by the Namoi River. It was initially established in April 1971 as the Warrabah Nature Reserve, however, following the dedication of additional lands the nature reserve was declared as Warrabah National Park in 1984

The park was reserved for its range of woodland associations, recreational opportunities associated with the Namoi River, aesthetic qualities of the riverine environment and outstanding topographic features with isolated granite boulders scattered throughout the park rising to massive tor forms on the ridgelines to the north and west.

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 a reserve will be managed in the years ahead.

A draft plan of management for Warrabah National Park was placed on public exhibition for three months from 4<sup>th</sup> October 2002 until 3<sup>rd</sup> February 2003. The exhibition of the plan of management attracted 2 submissions which raised 6 issues. All submissions received were carefully considered before adopting this plan of management.

The emphasis in this plan of management for Warrabah National Park is to protect the outstanding combination of physical, biological and scenic features of Warrabah National Park, including areas of scientific importance and areas which are sensitive to disturbance. Visitor facilities and vehicle access will be provided to selected sites adjacent to the Namoi River in the south-west of the park. These sites have been selected to minimise adverse impacts to the riparian environment. The remainder of the park will continue to be available for self-reliant recreation.

This plan of management establishes the scheme of operations for Warrabah National Park. In accordance with section 75 of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

**BOB DEBUS**  
**Minister for the Environment**

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## 1. MANAGEMENT CONTEXT

### 1.1 LOCATION AND REGIONAL SETTING

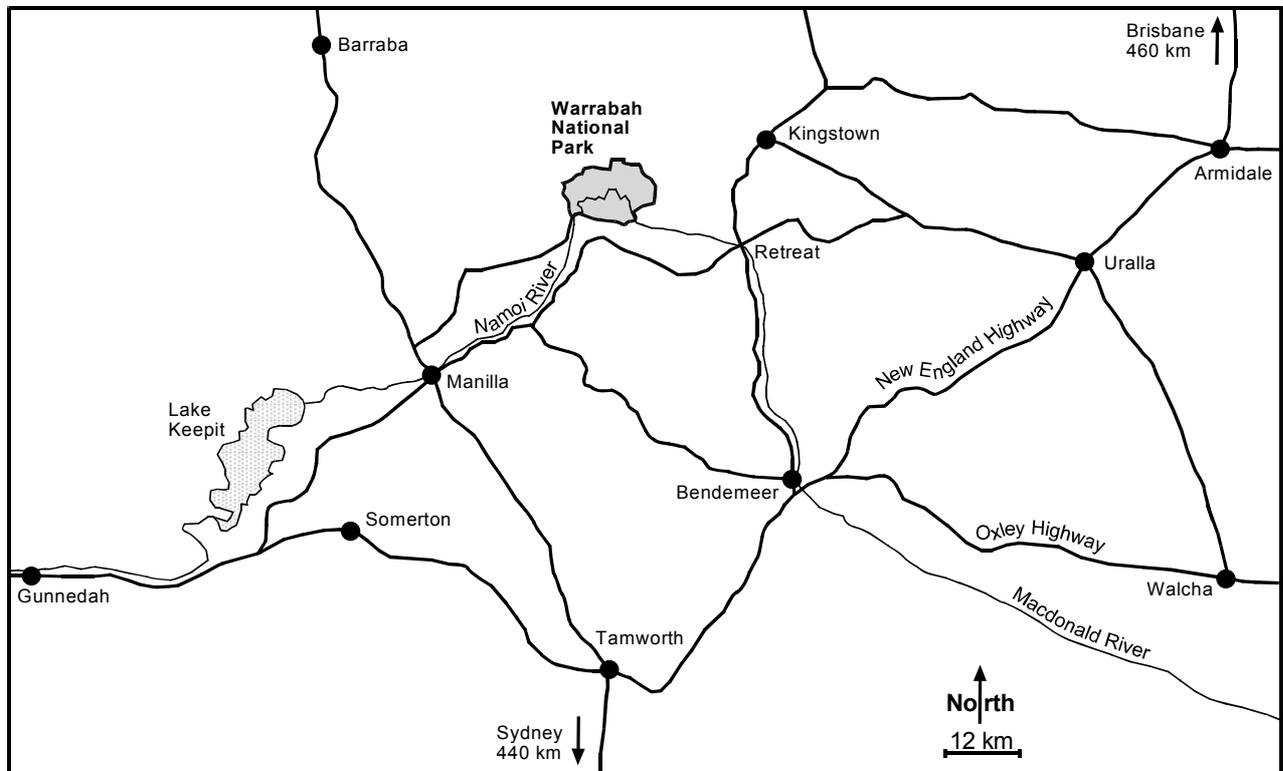
Warrabah National Park is located approximately 480 km north of Sydney (Map 1). The closest town is Manilla and the park lies in Manilla Shire. Tamworth is 49 km to the south (80 km by road) and Armidale is 53 km east of the park (97 km by road). These towns are tourist destinations and some use of the park arises from information provided by local tourist operators.

Warrabah National Park (Map 2) covers an area of 3984 ha. and is bisected by the Namoi River, a tributary of the Barwon River system and part of the much larger Murray-Darling Basin. The main ridge in the park is part of the Nandewar/Moonbi Range system which extends into southern Queensland. The park takes in part of the North-western Slopes, and the deeply incised valley of the Namoi River where it makes its final descent from the Tablelands before reaching the Western Plains. Map 2 provides further details of the park's features.

The country surrounding the park has been farmed since settlers first arrived in the Tamworth area in 1830, and both the Namoi River and adjacent Peel River valleys, still support major agricultural activities. These agricultural lands now surround the park.

Initially established in April 1971 as the Warrabah Nature Reserve covering an area of 836 ha., the dedication of an additional area saw the revocation of the nature reserve declaration and that land included in the new Warrabah National Park in 1984. An additional 513 ha. of land adjoining the north-east boundary of the park was purchased in 2002 but has not yet been gazetted as park.

**Map 1. Warrabah National Park Regional Setting**



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## 1.2 SIGNIFICANCE OF THE PARK

Warrabah National Park is situated on the Bundarra Granites. This formation is a relatively narrow band of rock (averaging about 20 km wide) 250 million years old extending north and south along the edge of the western slopes from near Tamworth to the Queensland border.

The park was reserved for its range of woodland associations, recreational opportunities associated with the Namoi River, aesthetic qualities of the riverine environment and outstanding topographic features with isolated granite boulders scattered throughout the park rising to massive tor forms on the ridgelines to the north and west.

The significance of Warrabah National Park can be summarised as follows:

- **Landscape Conservation Significance:** Warrabah National Park protects:
  - the Bundarra Granites which have only recently been recognised and have been referred to as the 'spinal column' of the region extending from the Bendemeer/Tamworth district to near Texas on the Queensland border;
  - the riparian environment adjacent to the Namoi River which adds to the scenic beauty of a wild and reasonably remote area that has not been developed or farmed due to difficult access and poor productivity; and,
  - a section of the Namoi River valley which shows major evidence of erosional forces in action over a long period of time as the river has cut its way down to the level of the western plains, leaving a series of stepped cascades. This erosion followed by long term weathering has created a complex pattern of ridges capped by massive tor formations, one of the highlights of the granite geology of the Western Slopes and of the park.
- **Nature Conservation Significance:** the park:
  - is part of a system of reserved lands that protect areas of remnant vegetation on the edge of the Northern Tablelands and North West Slopes of New South Wales, including Mount Kaputar National Park to the west, and Ironbark, The Basin, Linton, Mount Yarrowyck and Watsons Creek Nature Reserves to the north, south and east;
  - is an important link in the conservation of protected remnant forest and land;
  - supports an extensive mosaic of predominantly eucalypt woodland associations;
  - is an extensive tract of land with its natural processes not substantially modified and which is therefore of outstanding value for biodiversity conservation; and,
  - protects an undeveloped rugged and scenic section of the Namoi River before it meets the Western Plains.
- **Cultural Heritage Conservation:** the park includes:
  - places which may after further research and archaeological survey indicate past use by the Aboriginal Gamilaroi people; and,
  - places which demonstrate early European settlement and land use in the upper Namoi River area last century.

- **Recreation, Education and Tourism:** the park provides opportunities for:
  - solitude and self-reliant recreational activities in a natural and remote setting;
  - vehicle based camping and picnicking, as well as bushwalking, fishing, canoeing, swimming and other adventure activities in a natural setting;
  - education due to it containing a variety of landscapes and flora and fauna communities; and,
  - easy access to the residents and visitors of the North West Slopes and Plains. Warrabah National Park's topography and silhouette formations, although not unique to the region, are in an area that is readily accessible to the public.

# Warrabah National Park



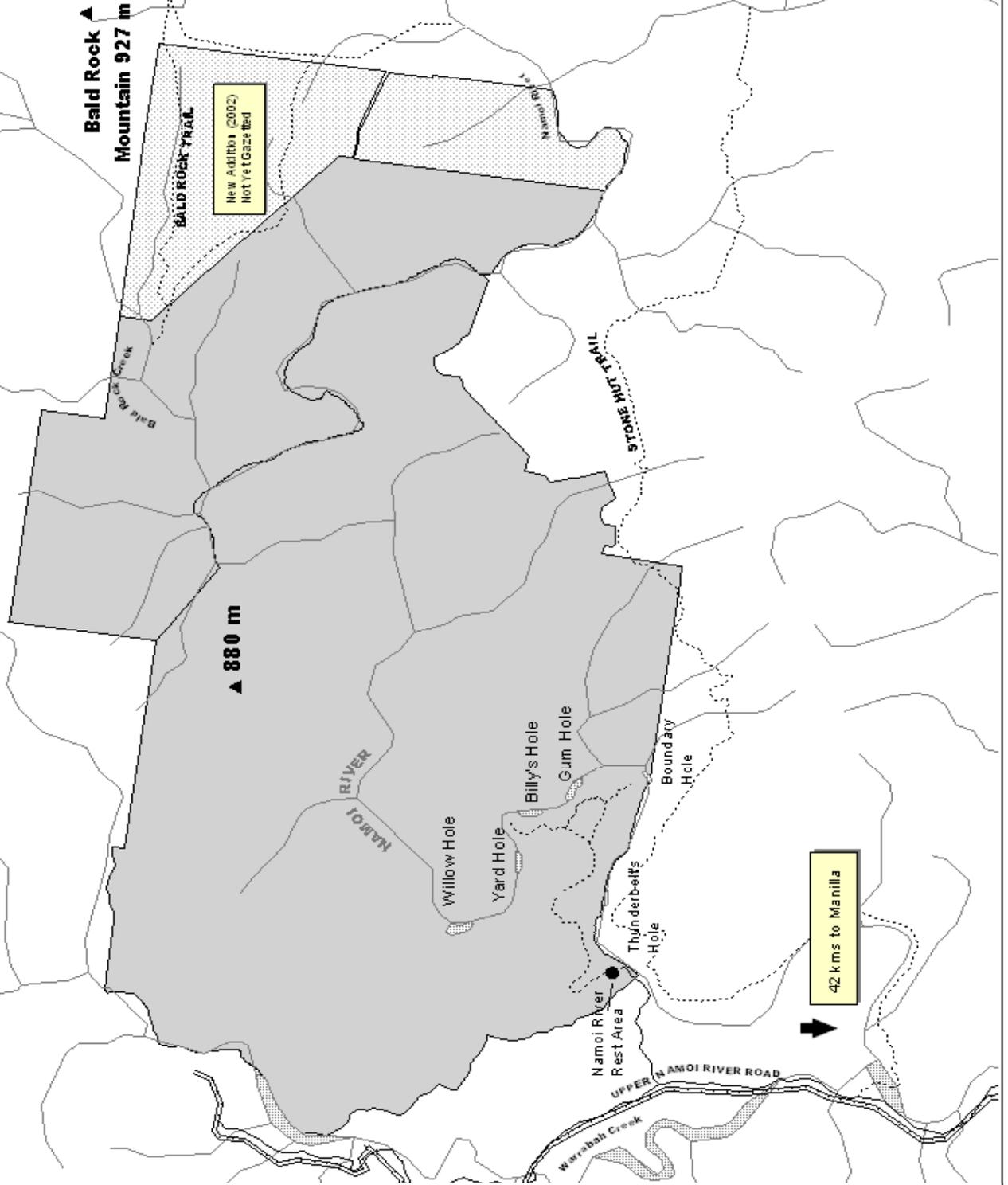
Projection: AMG Zone 56



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Map 2. Warrabah National Park



## **2 OBJECTIVES OF MANAGEMENT**

### **2.1 LEGISLATIVE AND POLICY FRAMEWORK**

The management of national parks in New South Wales (NSW) is in the context of the legislative and policy framework, primarily the *National Parks and Wildlife Act 1974 (NPW Act)*, the *Threatened Species Conservation Act 1995 (TSC Act)* and National Parks and Wildlife Service policies. The policies arise from the legislative background, the corporate goals of the National Parks and Wildlife Service (NPWS) and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic site conservation, recreation, commercial use, research and communication. Other legislation, international agreements and charters may also apply to management of the area. In particular, the *NSW Environmental Planning and Assessment Act 1979* requires the assessment and mitigation of environmental impacts of any works proposed in this plan.

### **2.2 NATIONAL PARKS IN NEW SOUTH WALES**

National parks are reserved under the *NPW Act* to protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor use.

Under the Act, national parks are managed to:

- conserve biodiversity, maintain ecosystem functions, protect geological and geomorphological features and natural phenomena and maintain natural landscapes;
- conserve places, objects, features and landscapes of cultural value;
- protect the ecological integrity of one or more ecosystems for present and future generations;
- promote public appreciation and understanding of the park's natural and cultural values;
- provide for sustainable visitor use and enjoyment that is compatible with conservation of natural and cultural values;
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of natural and cultural values; and
- provide for appropriate research and monitoring.

### **2.3 OBJECTIVES**

The following specific objectives will be applied to the management of Warrabah National Park, in addition to the general objectives set out above:

- To protect areas of scientific importance and areas which are sensitive to disturbance.
- To protect the outstanding combination of physical, biological and scenic features of Warrabah National Park.
- To protect the natural condition and diversity of native flora and fauna communities within the park, with emphasis on the conservation of rare, threatened and/or isolated flora and fauna species and communities.
- To manage Warrabah National Park as part of the system of protected lands along the western fall of the New England Tablelands.

- To promote public awareness of the park, with emphasis on:
  - conservation of the woodland and plant and animal communities of the park; and
  - preservation of the natural, scenic and recreation values of the Namoi River.
- To enable visitors to experience the scenic and natural qualities of the park by providing visitor facilities and vehicle access to selected sites adjacent to the Namoi River in the south-west of the park.

## **2.4 OVERALL STRATEGY**

The emphasis of management for Warrabah National Park for the duration of this plan will be to ensure the protection of the area and the maintenance of its natural processes.

Visitor facilities servicing river based recreational activities will be planned and sited to minimise adverse impacts to the riparian environment.

### **3. POLICIES AND FRAMEWORK FOR MANAGEMENT**

This section contains the policies and framework for management of Warrabah National Park together with relevant background information. Policies are summarised under the following headings:

- natural heritage;
- cultural heritage; and
- promotion and use of the park.

#### **3.1 NATURAL AND CULTURAL HERITAGE**

##### **3.1.1 Geology, Landform, Hydrology and Soil**

Warrabah National Park lies on the western side of the Nandewar Range at the western edge of the New England Tablelands.

Bundarra Granite dominates the geology of the park and forms a distinctive north-tending ridge in the New England region. Weathering and erosion of the coarse granites has resulted in spectacular rock formations in valley and ridge-top locations.

Part of the middle catchment of the Namoi River, and 14 km of the river itself, is protected within the park. This section of the river includes significant wild and scenic values including boulder-strewn rapids and cascades, sandy beaches and deep pools. The section of the Namoi River that traverses the park is one of only two western flowing rivers in the north of the state identified in a systematic statewide study as having wild and scenic qualities.

The incised river valley is contrasted by ridges and hills dominated by single and multiple granite tor formations. The Namoi High Tops in the north and east of the park provide a dramatic backdrop to the riverine environment of the valley floor. Local relief is up to 500 m.

The formation and distribution of soils in the park is largely influenced by the underlying geology and topography. Typically, the coarse granite based soils tend to be acid and highly leached. There are some areas of colluvium-alluvium at the base of gentle valleys and on sweeping river terraces.

The *Catchment Management Act* came into effect in 1989. Total catchment management provides an umbrella framework to aim for water reform via cleaner water, reduced soil erosion, improved vegetation cover, the maintenance of ecological processes and a balanced and healthier environment. It also provides a focus to balance conservation needs against development pressures and encourages a more aware and involved community. An important means of achieving these aims is the support of catchment management at a local level.

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## Policies

- The outstanding scenery and natural features of Warrabah National Park will be protected.
- The water quality of catchments within the park will be maintained and all practical steps taken to limit the entry of pollutants.
- All relevant management activities in the park will incorporate soil erosion management principles and practices.
- Emphasis will be given to protecting the wild and scenic values of the Namoi River.
- The National Parks and Wildlife Service will continue to participate in and support Total Catchment Management.
- Disturbed sites not required for public use or management purposes will be progressively rehabilitated and returned to a natural state.

### 3.1.2 Native Flora

The park is dominated by woodland and forest communities with four major associations identified. The shrub understorey is characterised by dense stands of Grey Teatree (*Leptospermum brevipes*) on the slopes above the Namoi River and Cough bush (*Cassinia laevis*) in other areas. The ground layer is dominated by perennial grasses.

A summary of the woodland and forest communities follows:

#### **Riverine Woodland**

This association occurs along the Namoi River and Bald Rock Creek and is characterised by stands of River Oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) and River Red Gum (*Eucalyptus camaldulensis*). The understorey features Rusty Fig (*Ficus rubiginosa*), Sticky Hopbush (*Dodonaea viscosa*) and River Bottlebrush (*Callistemon sieberi*). Growing in or near the river itself are a number of different sedges and rushes and other aquatic herbs.

#### **Hill Red Gum - Cypress Pine Woodland**

Stunted trees up to ten metres occur on the lower and middle slopes of the hills within the park. These include Hill Red Gum (*E. dealbata*), White Cypress Pine (*Callitris glaucophylla*) and Black Cypress Pine (*C. endlicheri*). Grey Teatree, Silver Wattle (*Acacia neriifolia*) and Cough Bush commonly form the understorey. Caley's Ironbark (*Eucalyptus caleyi* subsp. *caleyi*) is an important tree species on the higher slopes associated with this community.

#### **Red Stringybark - Quinn's Mallee - Caley's Ironbark Woodland**

Located on upper southerly facing slopes, trees in this association become taller and form a forest community. The dominant trees are Red Stringybark (*E. macrorhyncha*), Quinn's Mallee (*E. quinniorum*) and Caley's Ironbark. Associated tree species include Rough-barked Apple (*Angophora floribunda*) and scattered Black Cypress Pine. The low, scattered understorey comprises Sticky Hopbush, Broad-leaved Geebung (*Persoonia cornifolia*) and Rusty Fig, with an almost continuous ground layer of Tussock Grass (*Poa* sp.) and Kangaroo Grass (*Themeda australis*).

#### **Caley's Ironbark - Orange Gum - Hill Red Gum Dwarf Woodland**

Structurally, this is a dry scrub as the eucalypt species are less than eight metres tall and branching begins at or just above ground level. Caley's Ironbark, Orange Gum (*E. prava*), Hill Red Gum and a number of Wattles (*Acacia* spp.) dominate. Motherumbah (*Acacia cheelii*), Mountain Hickory (*A. penninervis*), Broad-leaved Geebung, Cough Bush and Triggerplant (*Stylidium laricifolium*) occur on the exposed ridge tops on shallow soils where the vegetation cover is discontinuous and there are large rock outcrops. These outcrops also support small

areas of heath dominated by Blunt Beard-heath (*Leucopogon muticus*) and Common Fringe-myrtle (*Calytrix tetragona*).

On the plateaus between the ridge tops, stunted eucalypts from the dwarf woodland communities occur with a hummock grassland understorey of Porcupine Grass (*Triodia scariosa*), an unusual grass species for the New England region.

At least 522 plant species have so far been recorded in Warrabah National Park (364 native and 158 exotic species). Two species currently known from within the park boundary are officially considered to be rare, namely *Eucalyptus quinniorum* (a recently described mallee eucalypt), and *Derwentia arenaria*, a herb to one metre with blue flowers. These two species are relatively common in the north-eastern section of the park. Neither of these rare species are considered to be threatened.

Warrabah National Park is home to at least 25 orchid species, four of which have particular conservation significance. *Pterostylis longicurva*, a small greenhood which was previously (but no longer) listed as rare, is widespread in rocky areas in the eastern half of the park. Three currently undescribed species have also been observed in the park and are likely to be listed as rare once they have been formally described and named. They are tentatively referred to as *Acianthus* sp. aff. *fornicatus*, *Pterostylis* sp. aff. *revoluta* and *Caladenia* sp. aff. *tentaculata*.

## Policies

- The management of flora communities will be directed towards promoting biodiversity of native plants and the protection of rare or threatened species in particular.
- Where a species or community under threat is particularly sensitive to disturbance, action will be taken to control or eliminate threats and provide additional protection where considered appropriate.

## Actions

- The distribution of flora communities within Warrabah National Park will be mapped and given special management consideration.
- Cleared areas not required for management or public use will be progressively revegetated.

### 3.1.3 Native Fauna

Although a diversity of habitats are available within Warrabah National Park, fauna records for the park are considered incomplete and fragmentary.

The known mammalian fauna recorded within the park includes eastern grey kangaroos (*Macropus giganteus*), Common Wallaroos (*Macropus robustus*), the Red-necked Wallaby (*Macropus rufogriseus*), Platypus (*Ornithorhynchus anatinus*), Short-beaked Echidna (*Tachyglossus aculeatus*) and the Common Brushtail Possum (*Trichosurus vulpecula*).

Common reptiles include the Lace Monitor (*Varanus varius*), Gould's Sand Goanna (*Varanus gouldii*), Southern Spotted Velvet Gecko (*Oedura tryoni*), Red-bellied Black Snake (*Pseudechis porphyriacus*) and several skinks. A number of frog species such as the Dwarf Green Tree Frog (*Litoria fallax*), Spotted Grass Frog (*Limnodynastes tasmaniensis*) and Desert Tree Frog (*Litoria rubella*) have also been observed in the park.

The Namoi River provides habitat for a vulnerable and as yet undescribed species of Tortoise (*Elseya bellii*) found only within the Namoi/Gwydir catchment, and recently found within the park. Freshwater fish species such as the Murray Cod (*Maccullochella peelii*) and the Freshwater Catfish (*Tandanus tandanus*) are regularly caught in the river within the park, while

smaller species such as the Western Carp Gudgeon (*Hypseleotris klunzingeri*) are also common.

The bird species are well represented with over 120 species currently listed, including the Little Corella (*Cacatua pastinator*), Eastern Yellow Robin (*Eopsaltria australis*), Little Eagle (*Hieraaetus morphnoides*), Wedgetail Eagle (*Aquila audax*), Collared Sparrowhawk (*Accipiter cirrhocephalus*), Crimson Rosella (*Platycercus elegans*), Eastern Rosella (*Platycercus eximius*), Sulphur-crested Cockatoo (*Cacatua galerita*), Superb Fairy-wren (*Malurus cyaneus*), Varied Sittella (*Daphoenositta chrysoptera*), and the White-browed Scrubwren (*Sericornis frontalis*) to name a few.

The park is known to be used by the Turquoise Parrot (*Neophema pulchella*), a vulnerable species under the *Threatened Species Conservation* (TSC) Act 1995. There are no records of this species breeding within the park.

On the basis of anecdotal reports and observations by NPWS staff it is likely that a small population of Brush-tailed Rock-wallabies (*Petrogale penicillata*) resides within the park. The Brush-tailed Rock-wallaby is listed as a vulnerable species under the TSC Act 1995 because of a severe reduction within NSW of its distribution due to habitat destruction.

### **Policies**

- Native fauna communities will be conserved by maintaining natural processes and diversity of habitats.
- The habitats of rare or threatened species will be protected and manipulated where necessary to favour these species.
- Encouragement will be given to scientific and educational inquiry into fauna species and their habitat requirements, with emphasis being placed on rare or threatened species.

### **Actions**

- A review will be undertaken to determine the conservation status of native animals within the park and to identify known localities of rare or threatened species.
- The location of rare or threatened species will be mapped for management purposes.

#### **3.1.4 Cultural Heritage**

Cultural heritage includes both indigenous and non-indigenous history. It comprises important components of the environment that may have aesthetic, historic, scientific and social significance to present and future generations.

Warrabah National Park lies within the territory of the Gamilaroi Aboriginal people. The archaeological evidence for their use of the area is minimal, due partly to the lack of archaeological surveys combined with difficult topography. It is expected that sections of the river terraces were used for campsites.

The park falls within the area of the Tamworth Aboriginal Land Council.

European use of the area has been associated with grazing and timber getting. At two locations within the park there is evidence of sheep yards which were constructed of White Cypress Pine and are in an advanced state of decay. Grazing Horse yards and other fences are also present. Evidence of timber getting operations include log dumps and snig tracks.

### **Policies**

- The Tamworth Aboriginal Land Council and other relevant Aboriginal community organisations will be consulted and actively involved in all aspects of management of Aboriginal sites and values within the park.
- Significant cultural heritage sites will be protected and where appropriate the natural degradation of sites will be retarded, and sites protected from user and management activities.

### **Actions**

- Research into the cultural and scientific significance of Aboriginal sites within the park will be undertaken.
- Further research into the European history of the area such as logging and grazing will be undertaken.

## **3.2 THREATS TO PARK VALUES**

### **3.2.1 Introduced Plants and Animals**

Introduced plants and animals are those species not native to the park. They may have an unacceptable impact upon native wildlife, soils and water and on the recreational, scenic, cultural and scientific values of the park.

A total of 141 introduced flora species has been recorded within the park, representing about 29% of the total number of plants. The occurrence of introduced flora species is often associated with disturbed sites, in particular those areas of the park previously subject to logging and grazing, areas adjacent to cultivated pastures and the banks and terraces of the Namoi River.

The Namoi River is a major source of weed introduction and dispersal throughout the park, bringing introduced plants from agricultural lands upstream.

In most areas of the park, however, introduced flora species are not of major concern. Weeping Willow (*Salix babylonica*) transported by streams have however spread into the park and are found in the bed and banks of the river.

Introduced animals found within the park include the fox (*Vulpes vulpes*), goat (*Capra hircus*), pig (*Sus scrofa*), cat (*Felis catus*), and rabbit (*Oryctolagus cuniculus*). All these animals have an impact on the park either by displacement or competition with native animals, by predation and the grazing of plants or directly through soil disturbance.

### **Policies**

- Introduced flora and fauna will be controlled and where possible eradicated.
- Priority for the control of introduced flora and fauna will be given to those which:
  - are declared noxious;
  - conflict with significant natural resources;
  - are causing damage to cultural resources;
  - are or may affect neighbouring lands;
  - are new isolated occurrences; and
  - have the potential to be spread through internal access systems.

- Techniques which have minimal impacts on native ecosystems will be utilised for the control of introduced flora and fauna and will be designed and implemented in such a manner as to minimise the impact on non-target species and other values.
- Vertebrate pest control programs will be carried out in conjunction with adjoining landholders and the Rural Lands Protection Board.
- Dogs, domestic stock and other introduced animals will not be permitted in the park with the following exceptions:
  - authorised use of horses to retrieve stock; and
  - guide dogs for the disabled.

### **Actions**

- The occurrence, distribution and density of introduced flora and fauna species causing, or having potential to cause significant environmental damage will be mapped.
- A control program for introduced flora and fauna will be prepared and progressively implemented as resources become available.
- Priority will continue to be given to the control of goats by shooting and pigs by shooting, trapping and/or poisoning.

### **3.2.2 Fire**

Management of fire in the park is an important and complex issue. Management must aim to achieve long term conservation of native plant and animal communities while providing ongoing protection of life and property within and adjacent to the park. A draft fire management strategy has been prepared that details strategies to achieve this balance, however some important aspects of fire management are considered below.

#### ***Fire history and behaviour***

Fire has long been a major factor in the Australian environment, with fires originating from both natural and human sources. Aboriginal people used fire to encourage grazing plants in areas in which they hunted game and keep corridors open in lands they travelled through, but little is known about their use of fire in the Warrabah area.

Evidence of fire within the park is very limited and there appears to have been a regime of infrequent fires since European settlement of the area. This view is partly supported by significant stands of White Cypress Pine, a species very susceptible to fire, and the dense, mature stands of grey tea tree and *Cassinia* currently present throughout the park.

A small wildfire occurred near Willow Hole in the 1980/81 fire season and most of the northern half of the park burned in 1982/83. In 1997 a small planned burn was carried out along the southern boundary adjacent to the Stone Hut Fire Trail. The remainder of the park has not been burnt for at least 29 years (since dedication under the NPW Act).

A fire burnt in September 2000 on land adjacent to the north east boundary of the park, land which has been recently acquired.

Wildfire is more likely to occur under conditions of below average rainfall and dry north to north-westerly winds. There is a high potential for fire to escape from remote fishing/camping sites along the river. Dry thunderstorms are another possible ignition source.

Large areas of the park contain vegetation communities that do not produce high ground fuel loads. During years of good rainfall, however, dense growth of grass and herbs in open areas may result in short term increases in the fire hazard. The steep terrain and shrubby understorey

of the park are likely to result in rapid spread and relatively high intensity of bushfires but the bare ridgetops and the Namoi River act as natural fire barriers.

### ***Ecological requirements in relation to Fire***

Fire frequency, intensity and season of occurrence, together known as fire regime, are the major factors influencing the distribution and composition of plant and animal communities. Research into fire ecology has established broad principles for the management of fire in an effort to avoid extinction of species:

- plant and animal species respond similarly to fire according to the characteristics of their life-history. It is not necessary to specify fire regimes for the conservation of every species; rather fire regimes for populations and communities or an ecosystem should be developed;
- variable fire regimes are required across the landscape to maintain natural diversity. Management of fire within and adjacent to the park should aim, where practical, to provide a mosaic of fires of high, moderate and low intensity, frequency and extent. Extinctions are likely when fire regimes of relatively fixed intensity, frequency and location prevail without variation.

There is a lack of specific knowledge about the ecological effects of fire on the vegetation communities of the New England Tablelands and Western Slopes. The fire management plan contains biological bushfire thresholds for the vegetation communities of the park and fire management guidelines for the rare or threatened plant and animal species. These will be subject to review as knowledge improves.

Current information suggests that continued absence of fire in the heathland communities of the park may lead to a decline in the number of species. Unburnt woodland communities will also reach the lower end of their maximum fire-free thresholds in the next few years.

A serious risk to the natural heritage of the park is the potential for the entire park to be burnt in one wildfire event. Much of the park is surrounded by cleared land and this may constrain the ability of wildlife populations to recover following a large fire event.

### ***Fire management zones, strategies and cooperative arrangements***

Under the *Rural Fires Act 1997* the Service is a fire authority and is responsible for controlling bushfires on the park and ensuring that they do not cause damage to other land or property. The Service fulfils these responsibilities by undertaking bushfire mitigation prevention and suppression strategies within the park. The Service may also assist with the control and suppression of fires adjacent to the park. An important part of the Service's fire management is participation as a member of the Manilla Bush Fire Committee that aims to coordinate fire management and fire control on a district basis.

The Service has also prepared a draft fire management strategy for the park which complements operation and bush fire risk management plans prepared by the Manilla Bush Fire Committee.

The fire management strategy aims to:

- prevent the occurrence of human caused unplanned bushfires on the park;
- suppress unplanned bushfires where these are in conflict with the desired fire regime;
- minimise the potential for spread of bushfires on, from or into the park;
- protect from bushfires, persons and property on, or immediately adjacent to, the park;
- manage bushfires to avoid the extinction of all species that are known to occur naturally within the park; and
- protect from damage by bushfires all Aboriginal sites, historic places and culturally significant features which are known to exist within the park.

Five fire management zones are currently applied over the park landscape:

- two large Heritage Fire Management Zones to manage and protect natural heritage values through appropriate fire regimes;
- two smaller Strategic Fire Management Zones to reduce wildfire intensity and fire spotting distance in order to assist in the strategic control of wildfires; and
- an Asset Protection Zones around the Namoi River rest area;

Objectives and strategies are set out for each zone. Fire management strategies include fuel reduction, ecological burning, fire trails, detection and cooperative arrangements. Planned burning will be undertaken where feasible to produce a mosaic of age classes within the heath, woodland and dry forest communities. As far as possible, fire will be excluded from the riparian forest. Close to boundary areas, fuel reduction programs and fire trail maintenance systems will be designed and implemented in cooperation with neighbours.

### **Policies**

- Liaison will be maintained and cooperative strategies developed with bushfire brigades, local government and neighbours to ensure coordination in fire management in Warrabah National Park and on adjoining lands.
- The cooperation of all relevant authorities, neighbours and visitors will be sought in preventing and reducing unplanned fires.
- Prescription burning will be undertaken in the park where required to meet fire management objectives and ecological thresholds as set out in the fire management plan.
- The Service will seek to improve community understanding of the role and management of fire within the park.
- Priority in all fire management will be given to areas of the park adjoining property where there is a high fire risk.
- Research into fire in the park's environment will be undertaken and encouraged, particularly with respect to:
  - management of vegetation communities and animal habitats; and
  - fire behaviour, fire hazard and fire risk assessment.
- All fires occurring in the park will be recorded and mapped to assist in the identification of high risk fire areas and trends in fire occurrence.

### **Action**

- The fire management strategy for Warrabah National Park will be finalised and implemented.

## **3.3 USE OF THE PARK**

Warrabah National Park will be managed to ensure that its use, whether by the general public, special interest groups, NPWS managers or other authorities, is appropriate and conforms with the management objectives and strategies of this plan.

The major categories of use that may be appropriate within NPWS areas are:

- environmental education and the promotion of natural and cultural heritage conservation;
- recreation in a natural setting;
- scientific research; and
- management operations by the NPWS and other authorities.

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The extent to which these categories of use are appropriate to Warrabah National Park is indicated in the following sections.

### **3.3.1 Information and Education**

The principal users of Warrabah National Park are residents of the New England area with 40% of visitors recorded within a recent survey coming from Tamworth, a population centre of 35,000. Warrabah National Park also services the centres of Manilla, Gunnedah and Armidale. These will be the target groups towards which promotion of the park will be primarily directed. The park will also continue to be promoted as part of an important series of parks and reserves in New South Wales. In addition to Service promotion, Manilla Shire Council regards the park as a key element in its tourism strategy and promotes the park to visitors to the district.

There is a strong public expectation that information about the park and its features will be readily available. Interpretation also assists in the protection of natural and cultural features and is a major aspect of managing public use. Warrabah National Park has a significant role to play in these local communities as a resource for environmental study and education.

The major themes appropriate for the promotion of Warrabah National Park amongst visitors to the park include:

- its importance in conserving a significant section of wild and scenic river on the Western Slopes;
- the area's importance as part of a system of conservation areas along the Western Slopes between the New England Tablelands and the Western Plains;
- the catchment management of the Namoi River system;
- the appreciation of the opportunities which are provided in the park for river based recreation; and
- the spectacular scenery associated with the high granite outcrops and rocky river cascades.

Appreciation, understanding and use of the park environments can be achieved most effectively by increasing interpretation programs in areas which are accessible to most park visitors. Priority will therefore be given to:

- the maintenance and extension of outdoor displays within the park;
- providing printed information about features within the park, as part of a pre-visit information service; and
- providing targeted information to organised groups using the park.

*Discovery* programs are conducted during NSW school holiday periods and place emphasis on interpreting the natural and cultural features of those sections of the park most popular with visitors.

A further aspect of management which has priority is to promote within the local community, particularly neighbours of the park, the importance and purpose of management programs relating to the protection of the natural and the cultural heritage of Warrabah National Park and the control of weeds, feral animals and fire.

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## Policies

- Warrabah National Park will be promoted within the context of other conservation areas along the Western Slopes between the New England Tablelands and Western Plains that offer complementary recreation and environmental education opportunities.
- Interpretation programs will promote public awareness of the park emphasising:
  - the importance of catchment management in the Namoi River system;
  - the spectacular scenery which is a product of the river carving a gorge through the granite rocks of the park;
  - the opportunities provided within the park for river based recreation and the safety issues associated with these activities;
  - fire management and introduced species issues; and
  - the biodiversity values of the park.
- Promotion of the area will be directed towards encouraging passive recreational use.
- The importance and purpose of management programs relating to the protection of the natural and cultural heritage of Warrabah National Park and the control of fire, weeds and feral animals will be promoted within the local community, particularly the neighbours of the park.

## Actions

- A basic visitor use survey and monitoring program will be undertaken at regular intervals.
- Interpretive displays will be provided where visitor facilities are established. Where walking tracks are developed, interpretation of features along these walks will be provided.
- Information will be provided to park visitors through printed material, signs and displays on:
  - the park's natural values;
  - access to and within the park;
  - recreation facilities and appropriate recreational activities;
  - park management issues;
  - legal requirements; and
  - potential hazards.
- Brochures on the park will be distributed from tourist information outlets, user groups, Councils and NPWS offices.
- *Discovery* programs may be run during holiday periods. These programs will be run on the basis of recovering all or some of the costs from participants.

### 3.3.2 Recreation Opportunities

Recreational use of the park is mainly focussed on the Namoi River and is mainly vehicle-based. Recreational opportunities available in the park include:

- riverside vehicle-based camping,
- walk-in camping,
- riverside picnicking,
- bushwalking including river walking,
- swimming,
- canoeing, rafting and liloing,
- fishing, and
- nature study and photography.

Only a limited number of park visitors undertake activities which would take them away from the vehicle access trails. This means that in excess of 90% of the park, which includes 12 km of spectacular river gorge, receives low levels of visitor use. The provision of more comprehensive information to potential park users could result in more extensive use of the park for non vehicle-based activities included extended canoe/rafting trips and extended bush/river walks involving bush camping.

Following establishment of the park in 1984 the access track to the Namoi River at the park entrance was upgraded. A vehicle use pattern developed to fishing spots upstream of the park entrance utilising a series of old logging trails. The 7 km of access trails within the park currently vary in standard from 2WD within the Namoi River day-use and camping area to 4WD beyond this location. 4WD use of some trails and several small river flats associated with holes along the Namoi River has resulted in serious environmental impact and impassable trails. Approximately 2.5 km of this trail network, immediately beyond the Namoi River day-use and camping area, has been gravel surfaced and/or drainage works implemented to stabilise the highly erodable surface.

The only facilities currently in the park are at the Namoi River day-use and camping area near the entrance to the park. The day-use area carpark has a capacity of 16 vehicles. The camping area has 22 campsites, each with a barbecue and bench. Sixteen of the campsites are located on the northern side of the access road and comprise 3 group or large vehicle-based sites and 13 individual vehicle-based camp sites. On the southern side of the access road there are 6 walk-in (up to 50 metres) campsites.

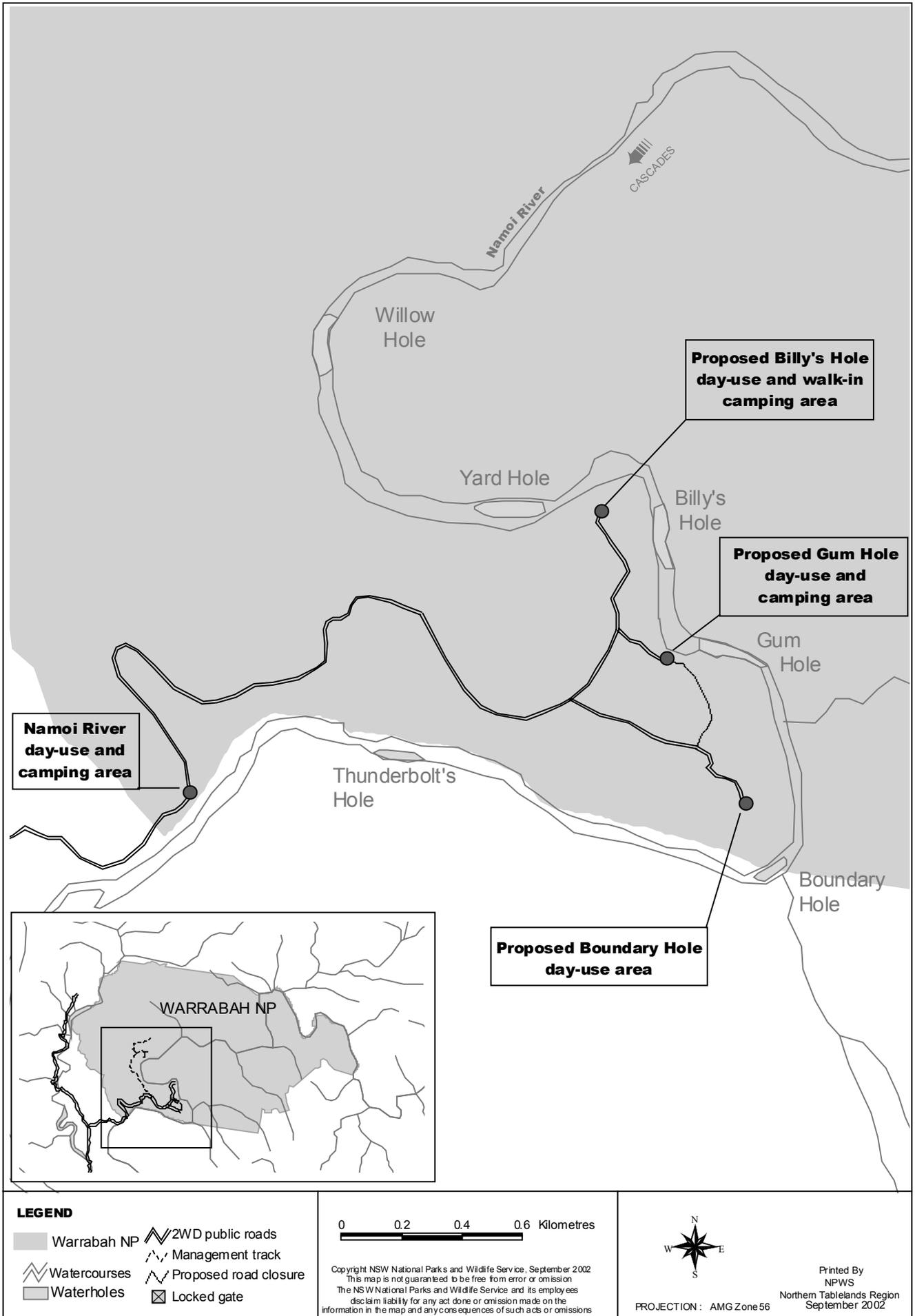
An estimated 7000 people visit the park each year. During holiday periods both the Namoi River day-use and camping area are used to capacity. There is a need to review and redevelop the Namoi River day-use and camping area to provide an increased day-use area south of the access road, and increased day-use carparking. This can be achieved by converting the existing campsites and day-use parking south of the main access road into a day-use area and expanding carparking on the main access road.

Informal camping and day-use occurs at a number of locations upstream of the Namoi River day-use and camping area. Boundary Hole and Willow Hole are primarily day-use areas. Gum Hole, Billy's Hole and Yard Hole are used for both camping and day-use. Camping at these locations is mainly vehicle-based with the current number of informal sites being in the order of 4, up to 3, and 1 respectively.

It is proposed that the park should provide a range of settings from developed to remote. As remoteness of settings increase, provision of facilities decreases. In order to provide this range of settings, the plan proposes a balance between vehicle-based and non-motor vehicle-based access (refer Table 1 and Map 3).

Approximately 4 km of trails, to the Gum Hole day-use and camping area, to the day-use area at Boundary Hole and to the day-use and walk-in camping area at Billy's Hole, will be upgraded and maintained to 2WD standard. Vehicle access to Boundary Hole and Billy's Hole will terminate at carparks which are approximately 200 and 150 metres respectively from the Namoi River flats. The reason for terminating vehicle access at this point is due to the difficulty in maintaining a safe, trafficable road beyond this point. Vehicle access to Yard Hole and Willow Hole will be closed to provide for 'easily accessible' pack camping at both these sites. No facilities will be provided beyond these locations.

**Map 3. Warrabah National Park Public Access and Facilities**



Park locations	Setting	Facilities	Access	Day-use	Vehicle-based camping	Walk-in camping	Pack camping
Namoi River	Developed	More	2wd	✓	✓	✗	✗
Boundary Hole			2wd	✓	✗	✗	✗
Gum Hole			2wd	✓	✓	✗	✗
Billy's Hole			2wd	✓	✗	✓	✗
Yard Hole			Walk in	✗	✗	✗	✓
Willow Hole			Walk in	✗	✗	✗	✓
Other areas			Remote	None	Walk in	✗	✗

**Table 1:** Summary of proposed setting, level of facilities and camping types for designated locations in the park.

### Policies

A broad range of visitor experiences will be provided, with these experiences becoming more self-reliant as distance from the Namoi River day-use and camping area increases.

- Visitors will be encouraged to more fully appreciate the park by the provision of improved information on the recreation opportunities available.
- The vehicle access system and visitor facility areas will be formalised as shown on Map 3.
- Pack camping will be permitted upstream of Willow Hole.
- Recreational horse riding will not be permitted in the park.
- Visitors will be encouraged to remove their own garbage from the park.
- Where cost effective to implement, visitor services will be subject to the principles of cost recovery.

### Actions

- The Namoi River day-use and camping area will be redeveloped to provide for an increased day-use area south of the access road by removing the existing campsites and day-use parking south of the main access road, and expanding carparking on the main access road.
- Approximately 4 km of trails, to the proposed Gum Hole day-use and camping area, to the proposed day-use area at Boundary Hole and to the proposed day-use and walk-in camping area at Billy's Hole, will be upgraded to 2WD standard. Vehicle access to Boundary Hole and Billy's Hole will terminate at carparks which are approximately 200 and 150 metres respectively from the Namoi River flats.
- Day-use facilities will be provided at Boundary Hole. Facilities will include carparking for around 10 vehicles approximately 200m from the river, a walking track to the river and toilet facilities.
- Day-use car parking and vehicle-based camping will be provided at Gum Hole. Facilities will include carparking for approximately 5 day-use vehicles, approximately 5 formal vehicle-based camping sites with level camping areas, vehicle parking, barbecue and bench, and toilet facilities.

- Car parking and walk-in camping will be provided at Billy's Hole. Facilities will include carparking for around 10 vehicles approximately 150m from the river, a walking track to the river, walk-in campsites and toilet facilities.
- Information will be developed to facilitate safe and environmentally sound use of the park, including for bush camping, bushwalking and group activities, particularly in areas of the park beyond formally provided visitor infrastructure.
- Garbage receptacles will not be provided in day use and walk-in camping areas. Signage will be erected advising visitors to these areas to take their garbage with them when leaving the park.

### **3.3.3 Scientific use**

The purpose of scientific study in Warrabah National Park is to improve the understanding of the park's natural and cultural heritage and the processes which affect them. Research will focus also on the requirements for the management of particular species. Data and findings from research and surveys will be utilised in park management.

#### **Policies**

- Priority will be given to research into:
  - the ecology, status and distribution of flora and fauna species and communities;
  - the effects of fire on the reserve's flora and fauna communities;
  - the protection of rare flora and fauna species; and
  - the impacts of introduced species and potential control measures.
- All research will be subject to NPWS policy and procedures for scientific permits.

#### **Action**

- A schedule listing areas for priority research will be prepared.

### **3.3.4 Management Operations**

The park is managed from an operational base in Armidale. There are no maintenance facilities located within the park itself.

- A system of park management trails is maintained within the park (Map 2).

#### **Policies**

- This system of management trails will be maintained by the NPWS for essential management purposes (Map 2).
- Only authorised use of the management trail system will be permitted.

#### **Action**

- Access agreements to be negotiated with neighbours to ensure ongoing access to the reserve via the park management trails.

#### 4. PLAN IMPLEMENTATION

This plan of management is part of a framework of management developed by the National Parks and Wildlife Service. The framework includes the NSW *National Parks and Wildlife Act* 1974, field management policies, established conservation and recreation philosophies and strategic planning at corporate, regional and district levels.

The orderly implementation of this plan will be undertaken within the Northern Tablelands Region Operational Plan. Priorities, determined in the context of area and regional operational planning, will be subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister.

The environmental impact of all development proposals and other management activities will continue to be assessed, and any necessary investigations undertaken in accordance with established environmental assessment procedures.

Section 81 of the NSW *National Parks and Wildlife Act* 1974 requires that this plan shall be carried out and given effect to, and that no operations shall be undertaken in relation to Warrabah National Park unless they are in accordance with the plan. However, if after adequate investigation, operations not included in the plan are found to be justified, this plan may be amended in accordance with Section 73B of the Act.

As a guide to the orderly implementation of this plan, relative priorities for identified activities are summarised in Table 1.

**Table 2 Relative priorities for the implementation of actions identified in the plan.**

Action (summary)	Plan reference	Priority
Map the distribution of flora communities within Warrabah National Park.	3.1.2	High
Revegetate cleared areas not required for management or public use.	3.1.2	Medium
Review the conservation status of native fauna within the park and identify known localities of rare or threatened species.	3.1.3	High
Map the location of rare or threatened species.	3.1.3	High
Undertake research into the cultural and scientific significance of Aboriginal sites within the park.	3.1.4	Medium
Undertake further research into the European history of the area, such as logging and grazing.	3.1.4	Medium
Map the occurrence, distribution and density of introduced flora and fauna species causing, or having the potential to cause significant environmental damage.	3.2.1	High
Prepare and implement a control program for introduced flora and fauna.	3.2.1	High
Continue control of goats and pigs.	3.2.1	High

<b>Action</b> (summary)	<b>Plan reference</b>	<b>Priority</b>
Finalise and implement the Fire Management Plan for Warrabah National Park.	3.2.2	High
Undertake a basic visitor use survey and monitoring program at regular intervals.	3.3.1	Medium
Provide interpretative displays where visitor facilities and walking tracks are established.	3.3.1	Medium
Provide visitors to the park with printed material on the park's natural values, access, recreation facilities and activities, management issues, legal requirements and potential hazards.	3.3.1	Medium
Distribute brochures on the park through tourist information outlets, user groups, Councils and NPWS offices.	3.3.1	Medium
Investigate running <i>Discovery</i> programs.	3.3.1	Medium
Provide additional day-use facilities at the Namoi River picnic and camping area.	3.3.2	Medium
Upgrade approximately 4 km of the existing trails in the park to increase vehicle access.	3.3.2	High
Provide day use facilities at Boundary Hole.	3.3.2	Medium
Provide car parking and camping facilities at The Gum Hole.	3.3.2	Medium
Provide walk-in camping facilities at Billy's Hole.	3.3.2	Medium
Encourage safe and environmentally sound use of the park through the provision of information.	3.3.2	Medium
Remove garbage receptacles in day use areas. Provide signs advising visitors to remove their garbage.	3.3.2	Medium
Prepare a schedule listing areas for priority research.	3.3.3	Medium
Access agreements to be negotiated with neighbours to ensure ongoing access to the reserve via the park management trails.	3.3.4	Medium

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