

WANNA WANNA NATURE RESERVE

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment and Conservation (NSW)

May, 2006

This plan of management was adopted by the Minister for the Environment on 31st May 2006.

Acknowledgments

This plan of management is based on a draft plan prepared by staff of the South West Slopes Region of the National Parks and Wildlife Service (now part of the Department of Environment and Conservation NSW).

Cover photograph by David Leigh, NPWS.

The NPWS acknowledges that this nature reserve exists within Ngunnawal Country and the Ngunnawal Local Aboriginal Land Council boundary.

Inquiries about this draft plan of management should be directed to the NPWS Queanbeyan Area Office, 6 Rutledge St, Queanbeyan NSW 2620 or by telephone on 62992929.

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FOREWORD

Wanna Wanna Nature Reserve is located in the southern tablelands of NSW, approximately five kilometres east of Queanbeyan. It was gazetted as part of the Southern Regional Forest Agreement in 2001, and is 33 hectares in size.

The reserve is located on the flat raised plateau that forms the watershed between the Molonglo and Queanbeyan Rivers to the east of the Queanbeyan fault line.

The reserve is dominated by regrowth dry sclerophyll forest consisting of scribbly gum, long-leaved bundy, red stringybark, brittle gum and red box. The understorey is generally very sparse, consisting of a litter bed with occasional shrub or tussock grass. The locality has abundant birdlife with over 45 species being recorded to date.

Much of the reserve is naturally recovering from past logging and firewood collection. Due to its small size and location, the reserve attracts little use except for some limited bushwalking.

The *National Parks and Wildlife Act, 1974* requires a plan of management to be prepared for each park and 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 Wanna Wanna Nature Reserve was placed on public exhibition from 25th February until 30th May 2005. The exhibition of the draft plan attracted 4 submissions that raised 2 issues. All submissions received were carefully considered before adopting this plan.

This plan of management establishes the scheme of operations for Wanna Wanna Nature Reserve. In accordance with Section 73B 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 LEGISLATIVE AND POLICY FRAMEWORK

The management of nature reserves in NSW is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the NPW Regulation, the *Threatened Species Conservation Act 1995* 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 Wanna Wanna Nature Reserve except in accordance with the plan. The plan will also apply to any future additions to Wanna Wanna 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 PURPOSES AND PRINCIPLES

Nature reserves are reserved under the NPW 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 to provide for visitor use.

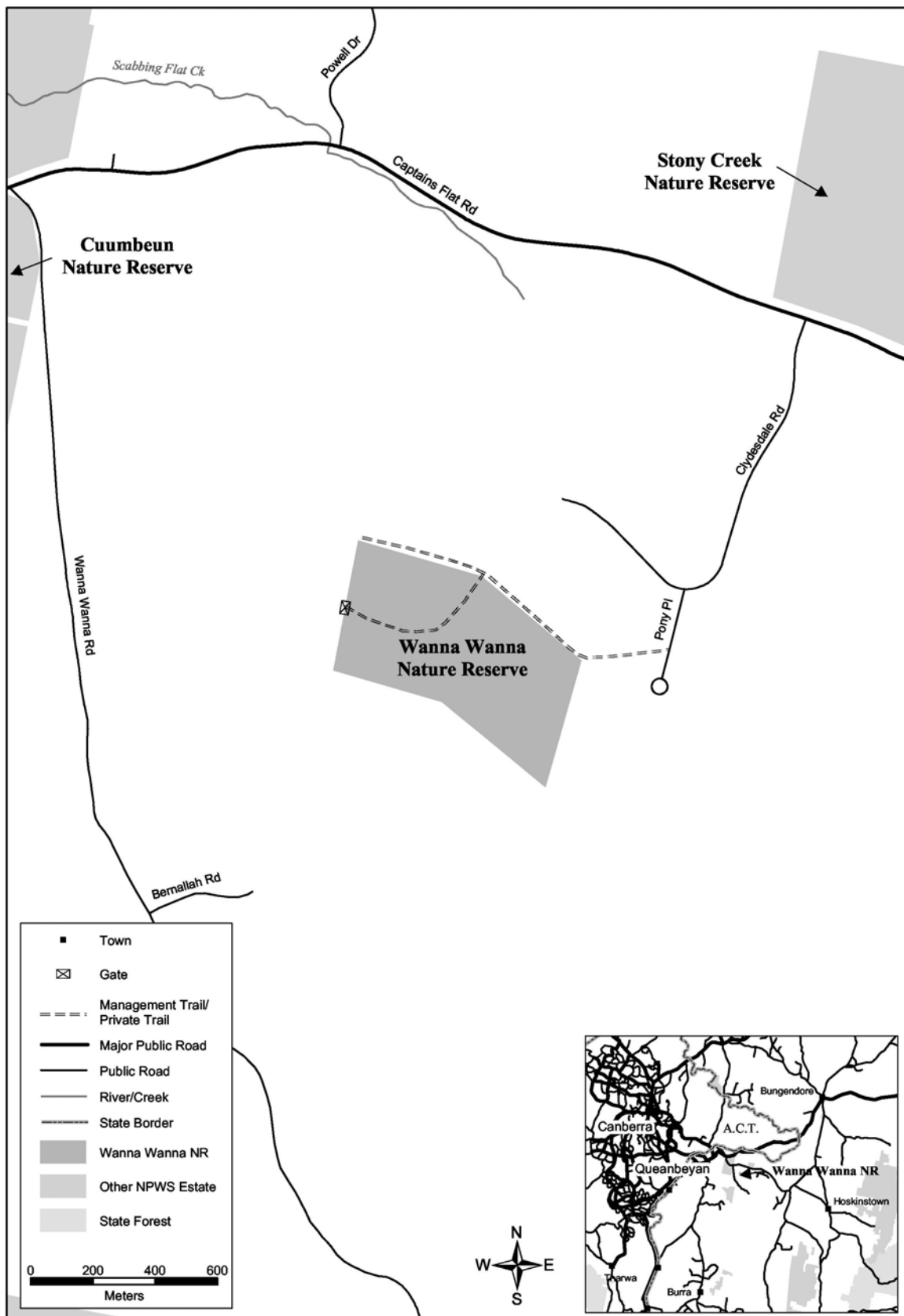
1.3 REGIONAL FOREST AGREEMENTS

Regional Forest Agreements (RFAs) are one of the principle means of implementing the National Forest Policy Statement of 1992. Under this Statement Commonwealth, State and Territory governments agree to work towards a shared vision for Australia's forests. This aims to maintain native forest estate, manage it in an ecologically sustainable manner and develop sustainable forest-based industries.

The Statement provided for joint comprehensive assessments of the natural, cultural, economic and social values of forests. These assessments formed the basis for negotiation of Regional Forest Agreements that provide, amongst other things, for Ecologically Sustainable Forest Management.

The Southern Region Regional Forest Agreement of 2000 covers the planning area. The process leading up to the RFA provided for major additions to the reserve system, including the establishment of Wanna Wanna Nature Reserve.

Reserve Map



2. WANNA WANNA NATURE RESERVE

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Wanna Wanna Nature Reserve is located in the southern tablelands of NSW, approximately five kilometres east of Queanbeyan.

The nature reserve was gazetted as part of the Southern Regional Forest Agreement in 2001, and is 33 hectares in size. The reserve's name was selected in recognition of the reserve's location near the once extensive "Wanna Wanna" property.

The reserve is located within a largely rural residential area, administered by the Queanbeyan City Council.

2.2 LANDSCAPE

Natural and cultural heritage and on-going use are strongly inter-related and together form the landscape of an area. Much of the Australian environment has been influenced by past Aboriginal and non-Aboriginal land use practices, and the activities of modern day Australians continue to influence bushland through recreational use, cultural practices, the presence of introduced plants and animals and in some cases air and water pollution.

The geology, landform, climate and plant and animal communities of the area, plus its location, have determined how it has been used by humans. Clearing, grazing and impacts from past recreational activities are all activities that have shaped the reserve, and indeed the surrounding region, and have led to the landscape that exists today.

Both Aboriginal and non-Aboriginal people place cultural values on natural areas, including aesthetic, social, spiritual, recreational and other values. Cultural values may be attached to the landscape as a whole or to individual components, for example to plant and animal species used by Aboriginal people. This plan of management aims to conserve both natural and cultural values. For reasons of clarity and document usefulness natural and cultural heritage, non-human threats and on-going use are dealt with individually, but their inter-relationships are recognised.

2.3 NATURAL HERITAGE

2.3.1 Landform, Geology and Soils

The reserve is located on the flat raised plateau that forms the watershed between the Molonglo and Queanbeyan Rivers to the east of the Queanbeyan fault line. The reserve has an altitudinal range from 760 to 840m. The southern drainage lines ultimately enter the Queanbeyan River, while those feeding from the reserve to the north enter the Molonglo River. Soils consist of skeletal orange brown podzols.

2.3.2 Native Plants

The reserve is dominated by regrowth dry sclerophyll forest consisting of scribbly gum *E. rossii*, long-leaved bundy *E. nortonii*, red stringybark *E. macrorhyncha*, brittle gum *E. mannifera* and red box *E. polyanthemos*. The understorey is generally very sparse, consisting of a litter bed with occasional shrub or tussock grass. In the lower relief drainage lines red-anther wallaby grass *Danthonia pallida* grows more densely. A sparse shrub layer includes box-leaved wattle *Acacia buxifolia* ssp *buxifolia*, austral indigo *Indigofera australis*, five corners *Styphelia triflora* and a bush-pea *Pultenaea procumbens*.

2.3.3 Native Animals

The only fauna survey undertaken in the reserve has been a targeted survey for bats in a disused mine shaft in the reserve. Fauna recorded in similar habitat in the nearby Cuumbeun and Stony Creek Nature Reserves are expected to also be present in this reserve. Native mammals recorded in the reserves include the eastern grey kangaroo *Macropus giganteus*, swamp wallaby *Wallabia bicolor*, sugar glider *Petaurus breviceps*, ringtail possum *Pseudocheirus peregrinus*, brushtail possum *Trichosurus vulpecula*, agile antechinus *Antechinus agilis* and echidna *Tachyglossus aculeatus*. Eight species of bats have also been recorded in the locality, including the eastern false pipistrelle *Falsistrellus tasmaniensis*, which is listed as vulnerable on the *Threatened Species Conservation Act 1995*, however none were found in the mineshaft.

The locality has abundant birdlife with over 45 species being recorded to date, including the leaden flycatcher *Myiagra rubecula*, olive-backed oriole *Oriolus sagittatus* and spotted quail-thrush *Cinclosoma punctatum*. A number of threatened bird species that inhabit box woodland have been recorded in the vicinity of the reserve, including the hooded robin *Melanodryas cucullata*, speckled warbler *Pyrrholaemus saggitata* and diamond firetail *Stagonopleura guttata*.

Five species of skink and three species of dragons have been recorded in the vicinity of the reserve, as well as two species of snakes.

2.4 CULTURAL HERITAGE

2.4.1 Aboriginal Heritage

The reserve is located in an area thought to be on the fringe of lands occupied by the Ngunawal, Ngarigo and Wolgal people (Tindale, 1974). Today the reserve lies within the area of the Ngannawal Local Aboriginal Land Council.

No Aboriginal sites were identified in a recent archaeological survey of the reserve (Dearling, 2002), however, Saunders (2001) found one open artefact scatter and two isolated finds on a proposed sub-division near Wanna Wanna Road, to the south of the reserve. The artefacts at the site were made from quartz, volcanic rock and fine grained siliceous stone.

Dearling (2002) stated that more sites may be located within the reserve and identified the following criteria for predicting the distribution of Aboriginal sites in the local

landscape, based on Saunders (1999, 2001):

- open campsites will be located near streams, especially on elevated level ground and low gradient basal slopes;
- large open campsites will occur more frequently within 100-150m of major drainage lines, with a preference for areas at the confluence of major streams;
- open artefact scatters that occur away from creeks will tend to be small and sparse;
- scarred trees may occur wherever old growth trees of sufficient age are present.

Due to its position in the landscape and absence of old growth trees, small artefact scatters are the only sites likely to occur in the reserve.

2.4.2 Non-Aboriginal Heritage

Prior to 1891, two mining leases were issued for parts of the reserve. In the early 1900s these leases were utilised by the Carwoola Copper Prospect Mine. One mineshaft, two shallow pits and mullock heaps have been recorded. The reserve has also been used as a source of firewood by locals.

2.5 THREATS TO THE NATURE RESERVE

2.5.1 Fire

Fire is a natural feature of many environments and is essential to the survival of some plant communities. Inappropriate fire regimes, however, can lead to loss of particular plant and animal species and communities. Fire can also damage cultural heritage, recreation and management facilities and can threaten visitors and neighbouring land.

There have been no recorded wildfires within the reserve. The reserve adjoins a number of rural residential holdings, located on the same vegetation type as that occurring in the reserve. Fuel loads for this vegetation type were assessed in Cuumbeun Nature Reserve in March 2003 and averaged at 14.4 t/ha. As this was at the end of summer at the peak of an extended drought, when minimal decomposition of litter had occurred for a long period of time, these loads would represent peak fuel levels for this vegetation type. Rural Fire Service (RFS) guidelines recommend fuel loadings be maintained at between 8 and 15 tonnes per hectare for 60-80% of strategic fire management zones, which lie generally within 500 metres of assets. Fuel levels measured under peak loads fall within this range.

The NPWS maintains cooperative arrangements with surrounding landowners and RFS brigades and is actively involved in the Lake George Zone Bushfire Management Committee. Cooperative arrangements include approaches to fuel management, support for neighbours' fire management efforts and information sharing.

Research conducted in similar dry sclerophyll forest in the region (Doherty, 1997) suggests that, in general, a long fire interval of up to 100 years is beneficial for floral biodiversity in this vegetation type. Strategic burning of smaller portions of the reserve for asset protection may, however, be undertaken at shorter intervals.

3. REFERENCES

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4. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
Soil and water conservation Soils are skeletal and support little ground cover particularly on the slopes. Any disturbance of cover would increase erosion potential.	Soil erosion is minimised. Water quality is not compromised.	Undertake all works in a manner that minimises erosion and water pollution.	High
Native plant and animal conservation Vegetation survey and mapping has been undertaken in the reserve. Much of the reserve is naturally recovering from past logging and firewood collection. The reserve is covered with moderately dense eucalypt regrowth. Few mature trees with hollows for nesting fauna are present. The reserve provides habitat for fauna occurring in the area.	All native plant and animal species and communities are conserved. Structural diversity and habitat values are restored in areas subject to past logging.	Prevent public vehicular access to the reserve to prevent firewood collection. Work with neighbours and catchment management authorities to encourage conservation of remnant native vegetation in the vicinity of the reserve, including developing links to other areas of remnant vegetation.	High Low

Current Situation	Desired Outcomes	Strategies	Priority
<p>Introduced species</p> <p>The reserve is largely weed free. A small patch of sweet briar and blackberry has been recorded in the south-eastern corner of the reserve.</p> <p>Environmental weeds in the vicinity of the reserve but not recorded within the reserve include serrated tussock, St Johns wort, Chilean needle grass, pine wildings and broom.</p> <p>Introduced animals include foxes, rabbits and cats.</p>	<p>The impact of introduced species on native species and neighbouring lands is minimised.</p>	<p>Control and where possible eradicate introduced plants and animals.</p> <p>Monitor the reserve for new weeds.</p> <p>Due to the small size of the reserve, fox baiting will not be undertaken within the reserve. NPWS will participate in co-operative fox control programmes outside the reserve where these meet objectives of the broader community and are demonstrated to have low impacts on non-target fauna.</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p>Fire management</p> <p>Fuel levels in the vegetation type occurring within the reserve and surrounding holdings are at the upper limit of recommended levels for strategic fire management zones, based on research undertaken in the nearby Cuumbeun Nature Reserve.</p> <p>Research conducted in similar dry sclerophyll forest in the region (Doherty, 1997) suggests that, in general, a long fire interval of up to 100 years is beneficial for floral biodiversity. Therefore, given the small size of the reserve, no prescribed burning for the purposes of biodiversity management will be undertaken within the life of this plan.</p> <p>Widespread, high intensity fires have the potential to destroy food, perching and nesting resources in the reserve.</p>	<p>Persons and property are protected from bushfire.</p> <p>Cultural features are protected from damage by fire.</p> <p>Fire regimes are appropriate for conservation of plant and animal communities.</p>	<p>Participate in the Lake George Zone Bushfire Management Committee. Maintain coordination and cooperation with Rural Fire Service, brigades and neighbours with regard to fuel management and fire suppression.</p> <p>Prepare a map-based fire management strategy and fire operations map for the reserve by the end of 2006.</p> <p>Fire management guidelines for maintaining the biodiversity values of the reserve include:</p> <ul style="list-style-type: none"> • Contain fires to as small an area as possible • Maintain as much of the reserve as possible in as old a fire age class as possible • Monitor biodiversity in the reserve and adapt fire management accordingly. 	<p>Medium</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p>Cultural heritage</p> <p>No Aboriginal sites have been identified within the reserve. The reserve contains a mine shaft from previous mining activities.</p> <p>A preliminary study of the Aboriginal heritage of the reserve was undertaken in early 2002. The study identified that no additional broad-scale survey for Aboriginal sites was required, but flagged the necessity for ongoing site-specific survey for any works conducted within the reserve.</p>	<p>Cultural features are conserved and managed in accordance with their significance.</p>	<p>Precede all ground disturbance work by a check for cultural features.</p> <p>Any works undertaken will incorporate appropriate conservation measures to mitigate impacts on cultural heritage.</p> <p>Consult and involve the Ngunnawal Local Aboriginal Land Council and other Aboriginal stakeholders in all aspects of management of Aboriginal sites, places and values, and interpretation of Aboriginal sites and values.</p> <p>Continue to build on existing relationships with the local Aboriginal community to enhance exchange of information about park values.</p> <p>Assess the significance of the mine and undertake protection works if required.</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Low</p>

Current Situation	Desired Outcomes	Strategies	Priority
Visitor use Due to its small size and location, the reserve attracts little use except for some limited bushwalking. Access to the reserve is via a public road to the reserve boundary. There is no public vehicular access within the reserve.	The local community is aware of the significance of the area and of management programs. Visitor use is ecologically sustainable.	Exclude vehicular access except for essential management requirements of the reserve. Permit day bushwalks, informal picnics and educational visits, subject to limits on numbers and other conditions if necessary to minimise impacts. No facilities will be provided and no fires will be permitted in the reserve. Prohibit camping, trail bike riding and horse riding. Monitor levels and impacts of use. Organise media releases, educational material and contact with neighbours and community organisations.	High Medium High Medium Low
Management operations The reserve is serviced by a perimeter trail along the northern boundary and one trail across the main ridgeline in the reserve (see reserve map). Boundary fences are of a varying standard.	Management facilities adequately serve management needs and have acceptable impact.	Maintain the trails shown on the map for management purposes. Fences will be maintained as required and as funding permits.	Medium Medium

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.