

CAREUNGA NATURE RESERVE

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment and Conservation (NSW)

October 2004

This plan of management was adopted by the Minister for the Environment on 25 October 2004.

For additional information or enquiries on any aspect of this reserve, contact the Service's Narrabri Area Office at 1/100 Maitland Street, Narrabri, NSW 2390, or by phone on (02) 6792 7300.

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FOREWORD

Careunga Nature Reserve covers an area of 469.4 hectares and was formerly Careunga State Forest. It is located in the North-West Plains of New South Wales, 41 kilometres north by road of the town of Ashley in the Moree Plains Shire.

Careunga Nature Reserve is located within the Brigalow Belt South Bioregion. It contains Belah Woodland with an understorey of Wilga and Budda. Small stands of mature Brigalow occur on the western boundary and in the central-north part of the Reserve. Brigalow within the Brigalow Belt South Bioregion is listed as an Endangered Ecological Community under both the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

Careunga Nature Reserve provides habitat for 66 bird species, 11 mammal species, 3 reptile and 2 amphibian species. Four birds recorded in the Reserve are listed as vulnerable under the NSW *Threatened Species Conservation Act 1995*.

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 Careunga Nature Reserve was placed on public exhibition for three months from 19 September until 19 December 2003. The exhibition of the plan of management attracted 2 submissions which raised 2 issues. All submissions received were carefully considered before adopting this plan of management.

This plan of management establishes the scheme of operations for Careunga 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

1. NATURE RESERVES IN NEW SOUTH WALES

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*, the National Parks and Wildlife Land Management Regulation, the *Threatened Species Conservation Act 1995* and the policies of the National Parks and Wildlife Service. Section 72AA of the National Parks and Wildlife 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 National Parks and Wildlife Act. No operations may be undertaken within Careunga Nature Reserve except in accordance with this plan. This plan will also apply to any future additions to Careunga Nature Reserve. Where management strategies or works are proposed for the nature reserve or any additions that are not consistent with this 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.

2. CAREUNGA NATURE RESERVE

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Careunga Nature Reserve (hereafter known as “the Reserve”) is located in the North-West Plains of New South Wales, 41 kilometres north by road of the town of Ashley in the Moree Plains Shire. Gazetted on the 8th January 1971, the Reserve covers 469.4 hectares and was formerly Careunga State Forest. Nearby reserves include Midkin Nature Reserve (35 kilometres south), Boomi, Boomi West and Boronga Nature Reserves (40 kilometres north-west), and Planchonella Nature Reserve (75 kilometres east).

The Reserve is bounded on all sides by land that is either wholly or substantially cleared, and devoted to either cropping or grazing. An exception to this is a small patch of woodland on private land adjoining the south-west corner of the Reserve.

2.2 NATURAL AND CULTURAL HERITAGE

Landform, Geology and Soils

Located within the Brigalow Belt South Bioregion, the Reserve is situated on a flat colluvial plain at an altitude of approximately 190m ASL. While the Reserve is located within the Macintyre River Catchment, there are no drainage lines inside the Reserve. Artificial bore drains run in a south-westerly direction at both the north-west and south-east corners of the Reserve.

The Reserve is located on grey alkaline cracking clays, being part of the Northern Outwash province of the Brigalow Belt South Bioregion (Soil Information Systems Unit 2002).

Native Plants

Specific flora surveys have been carried out but no reports have been published. No threatened plant species have been recorded in the Reserve. The predominant vegetation type is that of Belah (*Casuarina cristata*) Woodland with an understorey of Wilga (*Geijera parviflora*) and Budda (*Eremophila mitchellii*). Belah Woodland covers approximately 5.2% of the Moree Plains Shire (D. Baber, pers. com. January 2003).

Small stands of mature Brigalow (*Acacia harpophylla*) occur on the western boundary and in the central-north part of the Reserve, and Myall (*A. pendula*) occurs in the southern portion of the Reserve. Brigalow within the Brigalow Belt South Bioregion is of significance due to its listing as an Endangered Ecological Community under both the State *Threatened Species Conservation Act 1995* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*. An endangered ecological community is an assemblage of organisms in a particular area that is likely to become extinct if threats continue. Component species of an endangered ecological community may be common and widespread, however, the particular combination of species that makes up the ecological community is threatened with extinction.

Native Animals

The Reserve provides a range of habitat for a variety of birds, mammals, reptiles and amphibians. The Belah Woodland with its shrubby understorey provides valuable foraging and nesting habitat for woodland bird species, while raptors and grazing mammals favour the areas of open grassland. The surrounding areas have been substantially modified for agricultural purposes increasing the value of this remnant for habitat and breeding of native fauna.

Limited survey work and incidental observations have yielded records of two amphibian, three reptile, 11 mammal, and 66 bird species. Of these the Turquoise Parrot (*Neophema pulchella*), Painted Honeyeater (*Grantiella picta*), Hooded Robin (*Melanodryas cucullata*), and Grey-crowned Babbler (eastern sub-species) (*Pomatostomus temporalis temporalis*) are listed as Vulnerable under the NSW *Threatened Species Conservation Act 1995*.

The Common Brushtail Possum (*Trichosurus vulpecula*) has been observed once in the Reserve. This species is considered to be declining within the Brigalow Belt South Bioregion (NPWS 2000), therefore this record is significant due to the isolation of the Reserve. Anecdotal evidence suggests the presence of small ground-dwelling mammals through unconfirmed records of a Paucident Planigale (*Planigale gilesi*) and a Brown Antechinus (*Antechinus stuartii*). The latter record is of a dubious nature as it would be well outside of its known range. It is therefore more likely that it was a Yellow-footed Antechinus (*A. flavipes*). Further surveys in the Reserve are scheduled as part of the Narrabri District Reserve Biodiversity Assessment and Monitoring Strategy (Bullers, 1998).

Aboriginal Heritage

The Reserve falls within the area occupied by the Kamilaroi Aboriginal People and administered by the Toomelah Local Aboriginal Land Council.

At least eight records of Aboriginal use of the surrounding area exist, with a number of scarred trees, open camp sites, and ceremonial sites located within 25 kilometres of the Reserve. No official records exist of Aboriginal sites within the Reserve itself, although there are thought to be some unrecorded sites present (A. Denison, pers. com. March 2003).

Non-Aboriginal Heritage

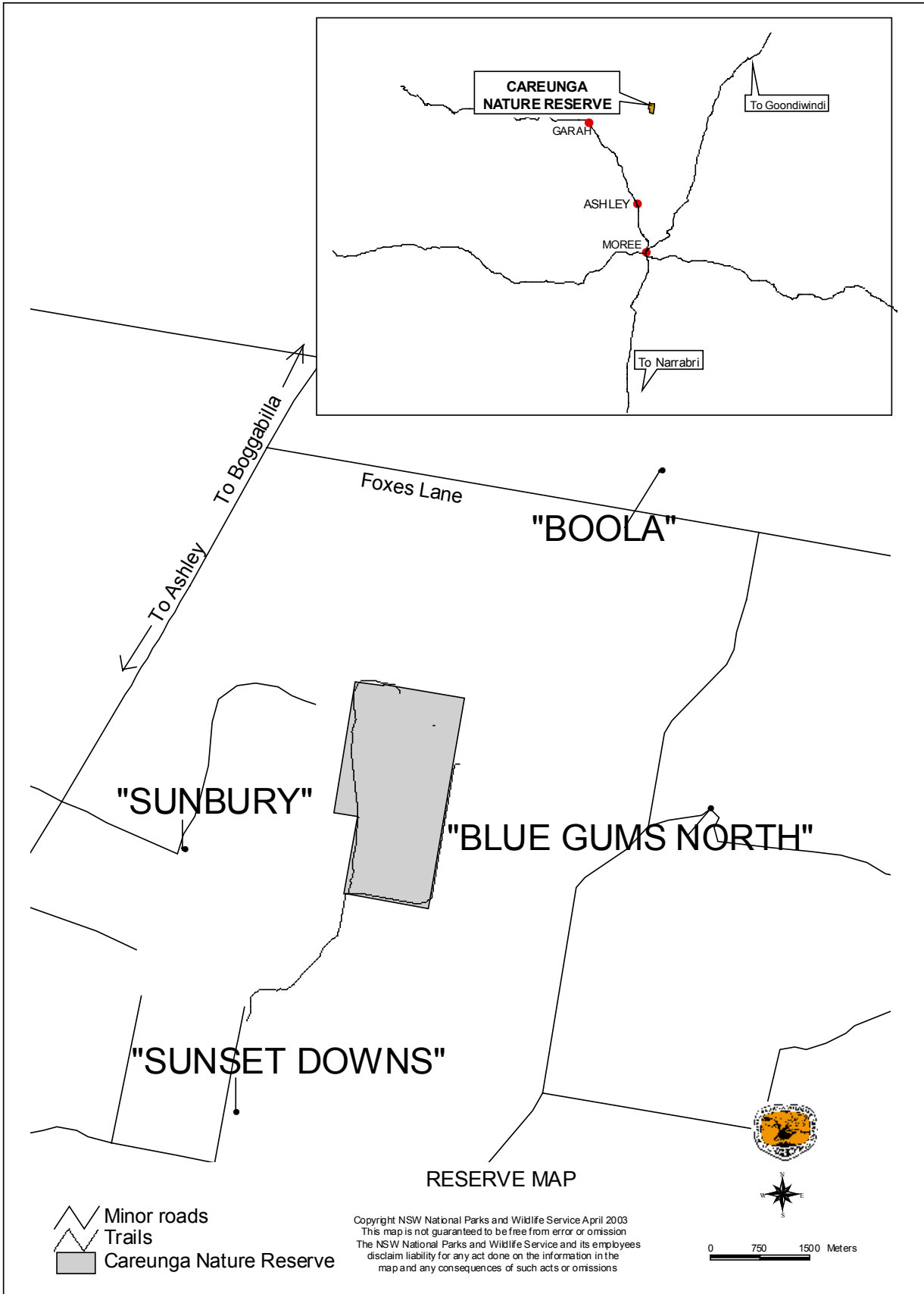
The only non-Aboriginal heritage of interest within the Reserve is the Careunga Well. Little information is available on this feature, apart from the possibility that its use was associated with a homestead or stock water supply (NPWS 2003). The well is in remarkably good condition, but is a potential safety hazard for fauna and Reserve visitors.

The Reserve was previously State Forest until gazetted as a nature reserve in 1971. Evidence of this past history still exists in the form of many cut stumps and felled logs. Little is known of its landuse prior to this, although it was probably used for stock grazing by surrounding landowners.

References

- Bullers, R. (1998) *Narrabri District Reserve Biodiversity Assessment and Monitoring Strategy*, New South Wales National Parks and Wildlife Service.
- NPWS (2003), *Item 8809 – Unpublished report*, Historic Heritage Information Management System, Hurstville.
- NPWS (2000), *Preliminary Fauna Survey (Stage 1) NSW Western Regional Assessments*, Resource And Conservation Assessment Council, Sydney.
- Soil Information Systems Unit (2002), *Soil Landscape Reconnaissance Mapping – Brigalow Belt South Stage 2*, Department of Land and Water Conservation, Sydney.

RESERVE MAP



3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
<p>Native plant and animal conservation</p> <p>The endangered Brigalow within the Brigalow Belt South Bioregion community occurs in a small area of the Reserve.</p> <p>No reports have been published on the limited flora and fauna surveys carried out in the Reserve.</p> <p>Four Vulnerable species of bird have been found in the Reserve.</p> <p>The Reserve is an isolated stand surrounded by agricultural land. There is a need for conservation of vegetation on neighbouring land.</p>	<p>All native plant and animal species and communities are conserved.</p> <p>Expanded knowledge of flora and fauna and their ecological requirements.</p>	<p>Compile a vegetation map for the Reserve showing the communities present.</p> <p>Collate and publish known information in order to set baseline data for the Reserve.</p> <p>Undertake regular surveys for threatened plant and animal species.</p> <p>Work with neighbours and vegetation management committees to encourage conservation of remnant native vegetation in the vicinity of the Reserve.</p>	<p>High</p> <p>Medium</p> <p>Low</p> <p>Medium</p>
<p>Cultural heritage</p> <p>No Aboriginal sites have been recorded on the reserve although sites have been found in the general vicinity.</p> <p>Sparse information is available on the Careunga Well. It is a potential safety hazard.</p>	<p>Cultural features are conserved and managed in accordance with their significance.</p>	<p>Precede all work by a survey for cultural features.</p> <p>Consult and involve the Toomelah Local Aboriginal Land Council in all aspects of management of Aboriginal sites, places and values.</p> <p>Investigate the historical significance of the Careunga Well. Cover the well to prevent animals and people accidentally falling into it.</p>	<p>High</p> <p>High</p> <p>Low</p>

<p>Management operations</p> <p>There are a number of trails in the reserve, not all of which are required for management purposes. Trails along the southern boundary, part of the western boundary and part of the northern boundary are external to the reserve but are used for management purposes.</p> <p>Access to the Reserve is through private land.</p> <p>Boundary fence condition is variable, with sections requiring maintenance and replacement.</p>	<p>Management facilities adequately serve management needs and have acceptable impact.</p>	<p>Close and rehabilitate any trails not required for management purposes (ie: not shown on Reserve Map). Maintain required trails in a condition suitable for effective management.</p> <p>All NPWS staff are to notify neighbours when planning work in the Reserve or when gaining access to the Reserve.</p> <p>Erect and maintain appropriate boundary fencing in accordance with NPWS policy.</p>	<p>Medium</p> <p>High</p> <p>High</p>
<p>Fire management</p> <p>No fire management plan exists for the Reserve.</p> <p>No known fires have occurred in the Reserve during its 32 year tenure by NPWS. Fire is a natural feature of the environment of the Reserve, however, frequent or regular fire can cause loss of particular plant and animal species and communities.</p>	<p>Fire management appropriate to the Reserve is utilised.</p> <p>Fire regimes are appropriate for long-term maintenance of the Reserve's plant and animal communities.</p>	<p>Develop a Fire Management Plan for the Reserve by 2006 detailing detail life, property and natural and cultural resource protection strategies. Participate in Moree Plains Bush Fire Management Committee. Maintain coordination and cooperation with Rural Fire Service brigades, Council fire control officers and neighbours with regard to fuel management and fire suppression.</p> <p>Encourage further research into the ecological effects of fire in the Reserve, with particular regard to threatened species.</p>	<p>High</p> <p>Medium</p>

<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.</p>	<p>Undertake and encourage research to improve knowledge and management of natural and cultural heritage, whilst minimising any environmental impacts.</p> <p>Prepare a prospectus to encourage and guide research by educational organisations and others in the Reserve.</p>	<p>Medium</p> <p>Low</p>
<p>Introduced species</p> <p>Feral pigs and foxes are the species of main concern present in the Reserve. NPWS currently undertakes control programmes for these species.</p> <p>Noxious weeds present include African boxthorn (<i>Lycium ferocissimum</i>), Galvanised Burr (<i>Sclerolaena birchii</i>), Prickly Pear (<i>Opuntia stricta</i>) and Velvety Tree Pear (<i>O. tomentosa</i>). Chemical control is currently undertaken for these species.</p> <p>Stock incursions from neighbouring properties occur infrequently.</p>	<p>The impact of introduced species on native species and neighbouring lands is minimised.</p> <p>The impact of domestic stock on native flora and fauna within the Reserve is minimised.</p>	<p>Continue and expand programmes to control, and where possible eradicate, introduced plant and animal species as per the Narrabri Area Pest Species Management Strategy in cooperation with neighbours where appropriate.</p> <p>Survey for and map the location of weed species both on the Reserve and adjacent to the Reserve to maximise efficiency of control measures.</p> <p>Monitor for new weed infestations especially noxious weeds. Treat any outbreaks based on established priorities.</p> <p>Encourage maintenance of effective boundary fencing with grazing properties to prevent domestic stock from entering the Reserve.</p>	<p>High</p> <p>High</p> <p>High</p> <p>High</p>

<p>Visitor use</p> <p>No public roads access the Reserve. Visitation has previously been limited to NPWS staff and neighbours utilising the southern trail as a through-road between paddocks.</p> <p>The natural features within the Reserve provide opportunities for education regarding nature conservation and cultural heritage.</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>No visitor facilities will be constructed as the Reserve is of such limited size and further fragmentation is to be avoided. No camping or fires will be permitted.</p>	High
		<p>Permit educational and special interest visits subject to prior consent from NPWS and relevant neighbours. (with limits on numbers and frequency of visits and other conditions to minimise impacts). Monitor levels and impacts of use.</p>	High
		<p>Promotion of an awareness of the conservation value of the Reserve through liaison with the local community and through provision of appropriate information will assist in minimising damaging activities and maximising conservation outcomes.</p>	Medium
		<p>Maintain contact with neighbours and the community regarding management activities and visitation within the Reserve.</p>	Medium

Priority assigned to proposed activities:

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.