

**BUNGABBEE AND MUCKLEEWEE MOUNTAIN**

**NATURE RESERVES**

**PLAN OF MANAGEMENT**

**NSW National Parks and Wildlife Service**

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

**June 2006**

**This plan of management was adopted by the Minister for the Environment on 29<sup>th</sup> June 2006.**

### **Acknowledgments**

This plan is based on a draft plan prepared by Damien Hofmeyer with assistance from Noel Parker (volunteer), Gina Hart (NPWS) and Northern Rivers Region staff and the Northern Directorate planning staff.

Cover photograph of Bungabbee Nature Reserve by Graeme McGregor, NPWS.

Inquiries about Bungabbee and Mucklewee Mountain Nature Reserves and this plan of management should be directed to the NPWS Richmond River Area Office at Colonial Arcade, 75 Main St, Alstonville, NSW, 2477 or by telephone on (02) 6627 0200.

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## FOREWORD

Bungabbee and Muckleewee Mountain Nature Reserves are located approximately 20km north-west of Lismore in northern NSW. They were both formerly part of Bungabbee State Forest.

The reserves contain eight different forest types and over 110 plant species, including three species listed under the *Threatened Species Conservation Act 1995* (TSC Act). In addition 135 animal species have been recorded in the reserves, including 10 threatened species listed under the TSC Act.

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 Bungabbee and Muckleewee Mountain Nature Reserves was placed on public exhibition for three months from 6<sup>th</sup> December 2002 until 28<sup>th</sup> March 2003. The exhibition of the plan of management attracted 4 submissions which raised 9 issues. All submissions received were carefully considered before adopting this plan of management.

This plan of management provides for the protection of the native plants and animals found in the reserves, including the endangered native jute *Corchorus cunninghamii* which only occurs in a limited range within Bungabbee Nature Reserve. It also provides for a cultural heritage study of the reserves in conjunction with the local Aboriginal community and development of fire management strategies.

This plan of management establishes the scheme of operations for Bungabbee and Muckleewee Mountain Nature Reserves. 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 the legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act) and Regulations, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). 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 NSW *Environmental Planning and Assessment Act 1979* (EPA Act) requires the assessment and mitigation of environmental impacts of any works proposed in this plan.

This plan applies both to the land currently reserved and to any future additions. Where management strategies or works are proposed for the nature reserves or any additions that are not consistent with this plan, an amendment to the plan will be required.

### Ministerial Roads

The planning area also contains a 'Ministerial road', which is vested in the Minister for the Environment on behalf of the Crown for the purposes of Part 11 of the NPW Act. Ministerial roads were created by the Forestry and National Parks Estate Act 1998 to ensure that the access arrangements that existed immediately before a reserve's creation could continue. This primarily relates to use of these roads for timber hauling and private property access. Whilst Ministerial roads do not form part of the gazetted reserve area, the management of these roads is subject to the provisions of this plan, the NPW Regulations and the requirements of the EPA Act.

## 1.2 Management Objectives

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.

## **2. BUNGABBEE & MUCKLEEWEE MOUNTAIN NATURE RESERVES**

### **2.1 Location, Gazettal and Regional Setting**

Bungabbee and Muckleewee Mountain Nature Reserves (referred to as 'the Reserves' in the plan) are located approximately 20km north-west of Lismore in northern NSW (see Map).

Bungabbee Nature Reserve (172ha) and Muckleewee Mountain Nature Reserve (345ha) were formerly part of Bungabbee State Forest. The Reserves were dedicated on 1 January 1999 under the *Forestry and National Parks Estate Act 1998* and are subject to the North East Regional Forests Agreement. The Reserves are located in the Lismore City Council local government area.

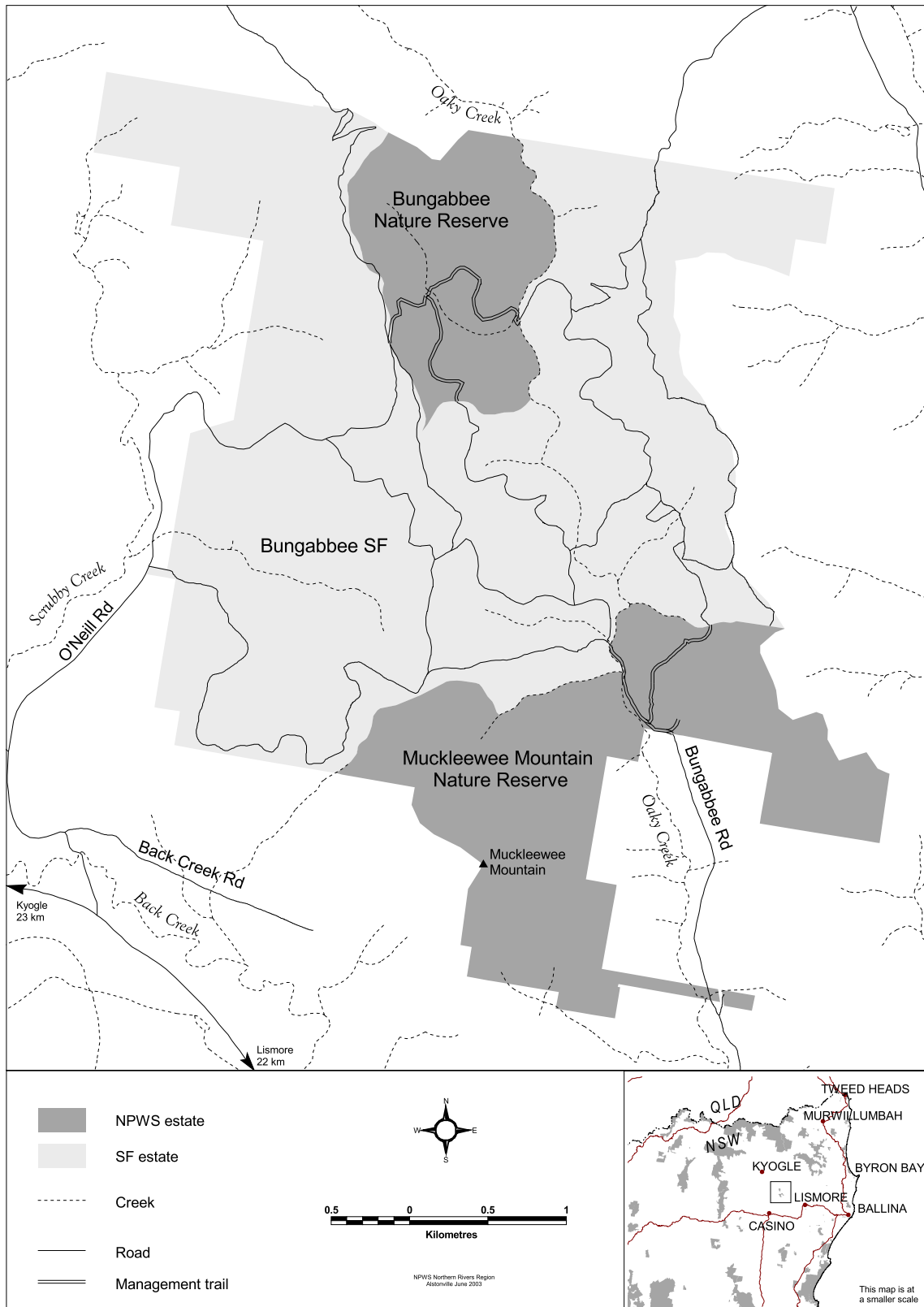
The surrounding land use is predominantly dairying, cattle grazing and timber production. The Reserves are dissected by Bungabbee State Forest which is managed by State Forests of NSW (SFNSW).

### **2.2 Landscape Context**

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. The Reserves have been grazed and logged throughout the years, however some of the area was untouched as the ridge slopes were too steep to log. The adjoining Bungabbee State Forest is still being logged for timber.

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.



**Map 1: Bungabbee and Muckleewee Mountain Nature Reserves and their regional setting**

## 2.3 Natural And Cultural Heritage Values

### Geology, landform and hydrology

The Reserves are located at the southern end of the Mackellar Range, a volcanic north-south oriented ridgeline. The topography is characterised by steep slopes and sharp narrow ridges.

Muckleewee Mountain Nature Reserve largely comprises a steep mountain peak (Muckleewee Mountain) with an elevation at its peak of 375m. Bungabbee Nature Reserve mainly encompasses a steep, south-facing slope.

Oaky Creek flows through the Reserves and feeds Back Creek, Leycester and Terania Creeks which in turn flow into the Wilsons River, a major tributary of the Richmond River.

The Reserves are composed of Lamington volcanics dominated by Lismore basalt deposited during the Tertiary period with bole & minor agglomerate. The upper slopes of the Reserves consist of dark brown plastic clays which are overlaid by a topsoil of dark brown friable clay loam. In the lower portions of the Reserves the topsoil moves from the dark brown friable clay loam to a black friable cracking clay (Morand, 1994).

### Native flora and fauna

A large part of Bungabbee Nature Reserve forms part of a major regional corridor under the NPWS Key Habitats and Corridors project for north-east NSW.

The NPWS records show that the Reserves contain eight different forest types. Five of those forest types occur in both Reserves and include white mahogany (*Eucalyptus acmenoides*)-red mahogany (*E. resinifera*)-grey ironbark (*E. paniculata*)-grey gum (*E. propinqua*) alliance; grey gum-grey ironbark-white mahogany alliance; forest red gum (*E. tereticornis*)-grey gum/grey ironbark-rough barked Apple (*Angophora floribunda*) alliance; brush box (*Lophostemon confertus*) alliance; and flooded gum (*E. grandis*) type.

Bungabbee Nature Reserve also contains a hoop pine (*Araucaria cunninghamii*) forest and flooded gum/brush box alliance. Forest red gum also occurs as a distinct forest within Muckleewee Mountain Nature Reserve.

Over 110 plant species have been recorded in the Reserves including three species listed under the *Threatened Species Conservation Act 1995* (TSC Act). A total of 135 animal species have been recorded in the Reserves including 10 threatened species listed under the TSC Act. Table 1 contains a list of threatened species recorded in the Reserves.

Five of the threatened fauna species recorded in the Reserves are dependant upon tree hollows most notably the yellow bellied glider and glossy black cockatoos.

**Table 1. Threatened species recorded in the Reserves.**

Common Name	Scientific Name	Status
<b>Plants</b>		
*Native jute	<i>Corchorus cunninghamii</i>	Endangered
*Prickly desmodium	<i>Desmodium acanthocladum</i>	Vulnerable
*Brush sophora	<i>Sophora fraseri</i>	Vulnerable
<b>Birds</b>		
Glossy black-cockatoo	<i>Calyptorhynchus lathami</i>	Vulnerable
Barred cuckoo-shrike	<i>Coracina lineata</i>	Vulnerable
Wompoo fruit-dove	<i>Ptilinopus magnificus</i>	Vulnerable
Masked owl	<i>Tyto novaehollandiae</i>	Vulnerable
Sooty owl	<i>Tyto tenebricosa</i>	Vulnerable
Powerful owl	<i>Ninox strenua</i>	Vulnerable
<b>Mammals</b>		
Parma wallaby	<i>Macropus parma</i>	Vulnerable
Little bent-wing bat	<i>Miniopterus australis</i>	Vulnerable
Yellow-bellied glider	<i>Petaurus australis</i>	Vulnerable
Grey-headed flying-fox	<i>Pteropus poliocephalus</i>	Vulnerable

\* Species also listed under the Commonwealth's *Environmental Protection and Biodiversity Act 1999*.

### Cultural heritage

Aboriginal communities have an association and connection to the land. The land and water biodiversity values within a landscape are central to Aboriginal spirituality and contribute to Aboriginal identity. Aboriginal communities associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge and strengthening social bonds. Aboriginal heritage and nature are inseparable from each other and need to be managed in an integrated manner across the landscape.

The Reserves are of cultural importance to the Aboriginal people of the Bundjalung Nation, in particular the Widjabul people. The Reserves are situated within the area of the Gugin-Guddaba Local Aboriginal Land Council (LALC).

The close proximity of recorded sites indicate that the Reserves may be part of a larger cultural landscape which is significant to the local Aboriginal community although no specific cultural or historic heritage study has been conducted for the Reserves. NPWS records show that there is one known Aboriginal artefact site within Muckleewee Mountain Nature Reserve. Three other sites, including two artefact sites and a ceremonial ring, occur just outside the Reserves.

State Forests of NSW formerly managed the Reserves. Timber production and associated grazing leases are the main historic themes associated with the area. There are no confirmed historic sites in the Reserves.



A set of old yards and a suspected contaminated cattle dip site (circa 1950s) exist in a cleared area on the south-eastern boundary of Mucklewee Mountain Nature Reserve (refer to section 2.6, Threats). The cultural significance of these sites has not been assessed.

## **2.4 Public Use**

The Reserves experience a low level of recreational use, with the main activities being bushwalking, nature appreciation, cycling, horse riding, bush camping, four wheel driving and trail bike riding. There are no visitor facilities in the Reserves.

Under the NPW Act, the provision of recreation opportunities is not a primary management objective for nature reserves. Day use, camping areas and other visitor opportunities are provided nearby by NPWS and other authorities.

Horse riding by both individuals and organised groups (including an annual endurance ride) has previously occurred within both of the Reserves and the adjoining Bungabbee State Forest. Whilst exemption for the endurance ride was granted in 2002, this was on the basis that it was a once off consent and the ride must look for alternative routes in future. Horse riding in general is not permitted in nature reserves. Opportunities for horse riding exist within the neighbouring Bungabbee State Forest.

## **2.5 Other Uses**

There are two registered apiary sites within Mucklewee Mountain Nature Reserve which existed prior to the gazettal of the Reserves. The NPWS policy on bee keeping allows existing sites to continue but does not allow any new or additional sites. It may be necessary to relocate existing bee sites where apiary activities result in unacceptable environmental impacts or are inconsistent with park management.

## **2.6 Research**

A research program is being undertaken in the Reserves to identify population numbers and threats to the endangered native jute (*Corchorus cunninghamii*).

Five threatened species, which are dependent upon hollows, occur within the Reserves. No research has been carried out on the current usage and importance of the hollows found within the Reserves.

## **2.7 Threats to Reserve Values**

### **Introduced species**

A number of weed species occur in the Reserves. Lantana (*Lantana camara*) occurs in moderate to heavy density along many of the water courses. Other weeds present include crofton weed (*Ageratina adenophora*) and groundsel bush (*Baccharis halimifolia*) and isolated occurrences of camphor laurel (*Cinnamomum camphora*).

Historical records indicate that removal of lantana was carried out in Bungabbee State Forest between 1920 and 1930 (State Forests, 1995). In the last few years the NPWS has engaged contractors to spray noxious weeds within the Reserves. To date this work has focussed on groundsel bush.

Cattle enter the Reserves from adjoining properties where fencing is not adequate. Wild dogs, dingos, feral cats and foxes have also been recorded in the Reserves, however, their densities are unknown.

Predation by the red fox (*Vulpes vulpes*) is listed under the TSC Act as a key threatening process for the conservation of biodiversity. A threat abatement plan has been prepared for the control of foxes in NSW (NPWS 2001). This plan details specific fox control and monitoring programs at a number of priority sites across the Northern Rivers.

### **Former Cattle Spray Site**

A set of old yards and a suspected contaminated cattle spray site (circa 1950s) exists near the south-eastern boundary of Muckleewee Mountain Nature Reserve. This site was originally thought to be a cattle dip site, however, investigations by the Department of Agriculture confirmed it was a former privately-owned cattle spray site.

### **Fire**

Uncontrolled wild fire and inappropriate fire regimes are a significant risk to the Reserves' ecosystems.

Records indicate that the Reserves and neighbouring lands have experienced four intense wildfires since 1975 with the latest being in 1994. The drier northern and western aspects and steep terrain within Muckleewee Mountain Nature Reserve promotes high fire intensities in the event of a wildfire. A cooperative fire management approach between the NPWS and reserve neighbours is essential, particularly given the limited availability of management trails within Muckleewee Mountain Nature Reserve.

The steep south-eastern aspect of Bungabbee Nature Reserve affords a wetter vegetation type than that of Muckleewee Mountain Nature Reserve and thus a lower risk of high intensity fire, however, Bungabbee Nature Reserve would carry fire in areas that are flat or tending towards north facing slopes and ridges.

### **Trail management**

The erosion of past logging tracks causes loss of soil and siltation of creeks. Unauthorised trail bike riding and recreational four-wheel driving have exacerbated soil erosion on steeper trails. The use of trail bikes on the trails within Bungabbee State Forest was not permitted by SFNSW.

A large amount of these former logging tracks are not required for the long-term management of the Reserves. These tracks have been identified for closure and rehabilitation. The closure of the tracks will reduce the risk of weed infestation within the reserve as a result of vehicles spreading seed. Rehabilitation of the trails will provide unfragmented habitat and reduce the amount of soil run off.

Trails to be retained for management purposes are not available for unauthorised public vehicle access in accordance with NPWS policy. Use of these trails by motor vehicles (including trail bikes), particularly during wet periods, exacerbates erosion, reduces the effect of drainage works and places at risk the safety of the vehicle user.

## MANAGEMENT STRATEGIES

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Native flora &amp; fauna</b> Surveys of native flora &amp; fauna have not been undertaken in the Reserves.</p> <p>Under the TSC Act, Recovery Plans or Priority Action Statements are required to be prepared for threatened species and Threat Abatement Plans for threatening processes. These plans will identify actions to assist in the recovery of threatened species populations.</p> <p>The endangered native jute plant <i>Corchorus cunninghamii</i> occurs in a limited range within Bungabbee Nature Reserve.</p> <p>Yellow-bellied gliders have specific habitat and area requirements. They are an indicator species.</p> <p>Locations and usage of hollow-bearing trees are unknown within both Reserves.</p>	<ul style="list-style-type: none"> <li>• Increased knowledge of existing fauna &amp; flora and their ecological requirements.</li> <li>• Accurate information of all species &amp; communities is obtained to provide base line data to assist ongoing management.</li> <li>• The diversity of existing native fauna &amp; flora is maintained and threatened species are protected from further decline.</li> <li>• <i>Corchorus cunninghamii</i> remains viable within the Reserves.</li> <li>• Location and usage of all hollow-bearing trees are known within the Reserves.</li> <li>• Conservation of the yellow-bellied glider habitat is given priority in management and planning of fire within the Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct flora and fauna surveys to identify existing flora and fauna &amp; communities.</li> <li>• Implement Recovery Plans and Priority Actions for threatened species and Threat Abatement Plans for threatening processes.</li> <li>• Threats to native flora and fauna species and communities, such as fire, pests, erosion and loss of habitat, will be prioritised and action taken</li> <li>• Opportunistic surveys will be undertaken after disturbance for <i>Corchorus cunninghamii</i> within the Reserves.</li> <li>• Planning for fire management and weed removal will take into consideration the requirement of hollow-bearing trees and the species which depend upon them.</li> </ul>	<p>Medium</p> <p>High</p> <p>Medium</p> <p>Medium</p> <p>High</p>

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Introduced flora &amp; fauna</b> Wild dogs, foxes and feral cats are known to occur in the Reserves and pose a significant threat to native fauna.</p> <p>Introduced flora such as lantana, groundsel bush and crofton weed occurs in disturbed areas throughout the Reserves and are a threat to native flora and neighbouring lands.</p> <p>A groundsel control program is in place.</p> <p>Cattle are entering the Reserves from adjoining properties where fencing is not adequate.</p>	<ul style="list-style-type: none"> <li>• Introduced species are controlled and where possible, eradicated.</li> <li>• Any pest management work is carried out as per an approved and prioritised planning process.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare and implement a Pest Management Plan for the Reserves, including coordination: <ul style="list-style-type: none"> <li>• with the Casino Rural Lands Protection Board and neighbours of the Reserves; and</li> <li>• of noxious weeds programs with Far North Coast Weeds.</li> </ul> </li> <li>• Encourage and assist neighbours to construct and/or maintain boundary fences to exclude stock.</li> </ul>	<p>High</p> <p>Medium</p>
<p><b>Cultural Heritage</b> No cultural or historic heritage study has been conducted for the Reserves, although a site visit has been undertaken with Aboriginal representatives. NPWS records indicate that one Aboriginal artefact site exists within Mucklewee Mountain Nature Reserve. Three other sites consisting of two artefact sites and a ceremonial ring are recorded close to the Reserves' boundaries.</p>	<ul style="list-style-type: none"> <li>• Greater involvement of the local Aboriginal community in cultural heritage management of the Reserves.</li> <li>• Aboriginal sites and their cultural landscape are protected and managed in conjunction with the local Aboriginal community.</li> </ul>	<ul style="list-style-type: none"> <li>• Involve the local Aboriginal community, any Native Title claimants and holders and the Gugin-Guddaba Local Aboriginal Land Council in the management of the cultural heritage of the Reserves. This will include organising on-site community days for local NPWS staff to meet Aboriginal representatives</li> <li>• Undertake a cultural heritage study of</li> </ul>	<p>High</p> <p>High</p>

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Cultural Heritage (continued)</b>  Management of the artefact site within Muckleewee Mountain Nature Reserve will be complementary to the management of the neighbouring artefact and ceremonial sites to provide representation of the values within their cultural landscape</p>	<ul style="list-style-type: none"> <li>Any historical sites are identified and protected.</li> </ul>	<p>the Reserves in conjunction with the local Aboriginal community.</p> <ul style="list-style-type: none"> <li>Develop management strategies with the local Aboriginal community to protect Aboriginal sites on and off the Reserves in association with their cultural landscape.</li> <li>Encourage research into the historic heritage of the Reserves in conjunction with relevant historical societies and local community members.</li> </ul>	<p>High</p> <p>Medium</p>
<p><b>Fire management</b>  Fire history records show four wildfires have been recorded in the Reserves and Bungabbee SF since 1975.</p> <p>The wet sclerophyll vegetation of Bungabbee Nature Reserve is susceptible to decline with too frequent fire. Based on the current fire history of this reserve, the exclusion of fire is a high priority.</p> <p>The predominant topography, drier vegetation type and potential for fire supporting weather within Muckleewee Mountain Nature Reserve has the potential to support high fire intensities in the event of a wildfire.</p>	<ul style="list-style-type: none"> <li>Fire will be managed to protect life, property, cultural values and the Reserves natural systems.</li> <li>Information on assets and fire control advantages are available for use in emergency situations.</li> </ul>	<ul style="list-style-type: none"> <li>Fire management strategies will be prepared and implemented for the Reserves. The fire strategies will be developed in consultation with State Forests, the Rural Fire Service and neighbours.</li> </ul>	<p>High</p>

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Public use</b>  Visitor facilities are not provided in the Reserves. Day use and camping areas are provided in nearby reserves. Self-reliant and low impact use such as bushwalking, cycling and nature appreciation activities are considered appropriate for nature reserves.</p> <p>Unauthorised camping, horse riding, trail bike riding and four wheel driving activities are currently undertaken in the Reserves.</p> <p>Cycling occurs in the Reserves and the neighbouring Bungabbee State Forest. This activity may be permitted on management trails under NPWS policy.</p>	<ul style="list-style-type: none"> <li>• Visitor use is self-reliant, low impact and compatible with Reserve values and NPWS policy.</li> </ul>	<ul style="list-style-type: none"> <li>• Visitor facilities, including public access roads, will not be provided.</li> <li>• Cycling will be permitted on management trails.</li> <li>• Relevant signage will be located to identify the Reserves' boundaries, management trails and appropriate visitor use of the Reserves.</li> <li>• In accordance with NPWS policy and regulations, prohibit activities that are not consistent with the appreciation of wildlife, natural environments and natural phenomena: including camping, horse riding, four wheel driving and trail bike riding.</li> </ul>	<p>Low</p> <p>Low</p> <p>High</p> <p>Low</p>
<p><b>Research &amp; Education</b>  Research is currently being conducted in the Reserves on the population numbers and threats of the endangered native jute (<i>Corchorus cunninghamii</i>).</p>	<ul style="list-style-type: none"> <li>• Appropriate research and educational activities are undertaken which assist management and visitor understanding of the Reserves' values.</li> <li>• Research into threatened species will be linked to recovery plans for each individual species.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to support research related to the distribution of and threats to the endangered native jute (<i>Corchorus cunninghamii</i>) as per the Recovery Plan.</li> <li>• Promote other research programs that assist management and improve understanding of the Reserves' natural and cultural heritage values and threatening processes.</li> </ul>	<p>Medium</p> <p>Low</p>

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Management trails</b>  Numerous former logging trails exist within the Reserves. Many of these are no longer required for the ongoing management of the Reserves.</p> <p>The management trails in the Reserves have been assessed for their suitability for fire control and other management purposes. Map 1 shows the trails that will be maintained and gated for management purposes.</p> <p>The deterioration of trails to be retained for management purposes is being accelerated through unauthorised use by trail bikes and four wheel drives, especially during wet conditions.</p> <p>The east-west trail through Bungabbee Nature Reserve is a Ministerial road (refer to 1.1 Legislative and Policy Framework) which provides access for SFNSW to the adjoining Bungabbee State Forest. The Service does not currently have a formal access agreement with SFNSW.</p>	<ul style="list-style-type: none"> <li>• The management trail network is appropriate for management purposes and is only accessed by authorised users.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain the management trail network in the Reserves as shown on figure 1.</li> <li>• Gate trails as necessary to exclude unauthorised access and ensure they remain trafficable for management purposes. Keys will be given to emergency service organisations.</li> <li>• Trails no longer required for management will be closed and rehabilitated.</li> <li>• Negotiate access agreements with SFNSW regarding the Ministerial road used to access the adjoining state forest. These arrangements will include the standard of road and sharing of maintenance costs and labour.</li> </ul>	<p>Low</p> <p>High</p> <p>High</p> <p>Low</p>

Current situation	Desired outcome	Proposed actions & guidelines	Priority
<p><b>Other Uses</b> Two registered apiary sites exist within Muckleewee Mountain Nature Reserve.</p> <p>A set of old yards and a suspected contaminated cattle spray site (circa 1950s) on the south-eastern boundary of Muckleewee Mountain Nature Reserve are being assessed by the Department of Agriculture to determine control measures.</p>	<ul style="list-style-type: none"> <li>• Apiary sites are managed with minimum impact on park values.</li> <li>• The spray site is managed as required to minimise any contamination.</li> </ul>	<ul style="list-style-type: none"> <li>• Manage registered apiary sites as per NPWS policy and apiary holders licensing conditions.</li> <li>• Manage the former spray site in accordance with recommendations by NSW Agriculture.</li> </ul>	<p>Low</p> <p>High</p>

### Legend for Priorities

**High priority** actions are those that are imperative to the achievement of management objectives identified in this Plan and need to be implemented in the near future to prevent degradation of the natural and cultural values or physical resources of the Reserve, significant costs associated with rehabilitation at a later date, and/ or unacceptable risk to the public.

**Medium priority** actions are those that are necessary to achieve management objectives but will be implemented as resources become available because the time frame for their implementation is not urgent.

**Low priority** actions are desirable to achieve management objectives but can wait until resources become available.



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