

**COOPERABUNG CREEK NATURE RESERVE**  
**PLAN OF MANAGEMENT**

**NSW National Parks and Wildlife Service**  
**September 2003**

**This plan of management was adopted by the Minister for the Environment on 16<sup>th</sup> September 2003.**

For additional information or enquiries on Cooperabung Creek Nature Reserve or this plan of management, contact the Service's Mid North Coast Regional Office at 152 Horton Street, Port Macquarie NSW 2444 or by phone on (02) 6586-8300.

Photograph of the dry rainforest in Cooperabung Creek Nature Reserve by Susan Phillips.

**NSW National Parks and Wildlife Service**

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## FOREWORD

Cooperabung Creek Nature Reserve is located on the Mid North Coast of NSW, mid way between Port Macquarie and Kempsey on the western side of the Pacific Highway. It was previously part of Ballengarra State Forest.

Ninety percent of the vegetation of Cooperabung Creek Nature Reserve is dry open forest, with moist hardwoods and rainforest occupying the moist shaded gullies at lower elevations. Although no fauna surveys have been undertaken in the nature reserve, 17 animal species listed under the Threatened Species Conservation Act are known or predicted to occur in the reserve.

Passionfruit Road provides public vehicular access through Cooperabung Creek Nature Reserve. No facilities are provided within the nature reserve.

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 Cooperabung Creek Nature Reserve was placed on public exhibition for three months 15<sup>th</sup> November 2002 until 24<sup>th</sup> February 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 aims conserve the biodiversity and maintain ecosystem functions within Cooperabung Creek Nature Reserve. Any places, objects, features or landscapes found to be of cultural value will be conserved. Access will continue to be provided along Passionfruit Road through the reserve, and fire management strategies will be prepared for the reserve as a high priority.

This plan of management establishes the scheme of operations for Cooperabung Creek Nature Reserve. In accordance with section 76 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), the *Threatened Species Conservation Act 1995* (TSC Act), and the policies of the NSW National Parks and Wildlife Service (NPWS). The policies arise from the legislative background, the NPWS corporate goals 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* (EP&A Act) requires the assessment and mitigation of environmental impacts of any works proposed in this plan.

Cooperabung Creek Nature Reserve includes one Ministerial road, Passionfruit 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 under section 13 of the *Forestry and National Parks Estate Act 1998* to ensure the continuation of access arrangements which existed immediately before the reserve's creation. 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 nature reserve, the management of this road is subject to the provisions of this plan, the NPW Regulations and the requirements of the EP&A Act.

### 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. COOPERABUNG CREEK NATURE RESERVE**

### **2.1 LOCATION, GAZETTAL AND REGIONAL SETTING**

Cooperabung Creek Nature Reserve (hereafter called “the reserve”) is located on the Mid North Coast of NSW, mid way between Port Macquarie and Kempsey close to the western side of the Pacific Highway, 5km north of Telegraph Point. The reserve was gazetted on 1 January 1999 as part of the Regional Forest Agreement (RFA) process and covers an area of 325 ha. It was previously part of Ballengarra State Forest. The reserve is named after the nearby Cooperabung Creek.

The reserve is part of the lower foothills of the eastern extremity of Cooperabung Range, which is the watershed between the Hastings and Macleay catchments. State forests to the north and west connect the reserve to Kumbatine National Park and thence to Willi Willi and Werrikimbee National Parks. Lands to the east and south are predominantly freehold with pastoral activities.

The nature reserve lies within the Hastings local government area, the State Electorate of Oxley, the North Coast Catchment Management Board area, the Kempsey Local Aboriginal Land Council and the Kempsey Rural Lands Protection Board areas.

#### **Regional Forest Agreements**

Regional Forest Agreements are one of the principal means of implementing the National Forest Policy Statement of 1992. Under this Statement, Commonwealth, State and Territory governments agreed to work towards a shared vision for Australia’s forests. This aimed 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 North East RFA covers the planning area. The process leading up to the RFA provided for major additions to the reserve system, including establishment of Cooperabung Creek Nature Reserve.

### **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 the environment through recreational use, cultural practices, the presence of introduced plants and animals and in some cases air and water pollution.

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 AND CULTURAL HERITAGE

### Landform, Geology and Soils

The majority of the reserve is comprised of rolling to steep slopes with ridgecrest elevations of 60-80m on Carboniferous lithic sandstones and mudstones. The lower slopes are transferral landscapes with alluvial soils in the lowest elevations.

### Catchment values

Passionfruit Creek is an ephemeral creek, which drains the reserve into Cooperabung Creek. This creek runs into the Wilson River, a major tributary of the Hastings River, below Telegraph Point.

### Native Plants

A survey of forest types (SFNSW 1965) found dry open forest over approximately 90% of the reserve, with moist hardwoods and rainforest occupying the moist shaded gullies at lower elevations. Table 1 lists the main overstorey species recorded during the survey.

**Table 1** Forest types within the reserve

Overstorey species	Approx.Area ha	Cumulative %
grey gum, grey ironbark, white mahogany	146.7	40.1
spotted gum, grey ironbark, grey gum	75.6	60.7
dry blackbutt	53.4	75.3
narrow-leaved white mahogany-red mahogany, grey ironbark, grey gum	41.9	86.7
inland brush box	26.9	94.1
moist blackbutt	11.1	97.1
flooded gum	4.4	98.3
blue gum	3.2	99.2
spotted gum, grey ironbark, grey gum	1.7	99.6
booyong	0.8	99.8
blue gum	0.4	99.9
viney scrub	0.2	100.0

There has been no comprehensive flora survey carried out in the reserve, however models developed as part of the comprehensive regional assessment (CRA) process have predicted that the silkpod (*Parsonsia dorrigoensis*) is likely to occur. This species is listed as vulnerable under the TSC Act and as endangered under the Commonwealth's *Environmental Protection and Biodiversity Conservation Act 1999*.

## Native Animals

The nature reserve forms part of a corridor of protected lands and forested ecosystems from the parks and reserves of the eastern escarpment of the Great Dividing Range to valley floor habitats.

Threatened animals known to occur in the reserve include the brush-tailed phascogale (*Phascogale tapoatafa*), the glossy black cockatoo (*Calyptorhynchus lathami*) and the barking owl (*Ninox connivens*). All three species are listed as vulnerable under the TSC Act, and recovery plans are in preparation for them..

There has been no comprehensive fauna survey carried out within the reserve, however the reserve has been modelled during the CRA process as providing suitable habitat for other threatened species. The species which may be expected to occur within the reserve are shown in Table 2.

**Table 2** Animals for which the reserve is predicted to provide suitable habitat

Common name	Scientific name	TSC Act
<b>Mammals</b>		
greater broad-nosed bat	<i>Scoteanax rueppellii</i>	Vulnerable
eastern free-tail bat	<i>Mormopterus norfolkensis</i>	Vulnerable
koala	<i>Phascolarctos cinereus</i>	Vulnerable <sup>r</sup>
yellow-bellied glider	<i>Petaurus australis</i>	Vulnerable
parma wallaby	<i>Macropus parma</i>	Vulnerable
squirrel glider	<i>Petaurus norfolcensis</i>	Vulnerable
eastern chestnut mouse	<i>Pseudomys gracilicaudatus</i>	Vulnerable
large-footed fishing bat	<i>Myotis adversus</i>	Vulnerable
large-eared pied bat	<i>Chalinolobus dwyeri</i>	Vulnerable
golden-tipped bat	<i>Kerivoula papuensis</i>	Vulnerable
<b>Birds</b>		
osprey	<i>Pandion haliaetus</i>	Vulnerable <sup>r</sup>
sooty owl	<i>Tyto tenebricosa</i>	Vulnerable
masked owl	<i>Tyto novaehollandiae</i>	Vulnerable
<b>Amphibians</b>		
green-thighed frog	<i>Litoria brevipalmata</i>	Vulnerable

r = recovery plan in preparation

NPWS is required by the TSC Act to prepare and implement recovery plans for all listed threatened species. These are progressively being prepared and will be used to guide management of threatened species in the area.

## Aboriginal Heritage

The reserve is within the Dunghutti tribal area and the area of the Kempsey Local Aboriginal Land Council. There have been no Aboriginal sites recorded within the reserve, however no systematic studies have been undertaken. Stone arrangements and camp sites exist in other areas of the Cooperabung Range. The area provided resources for year-round occupation by the Dunghutti people, including a rich variety of foods, medicines, shelter and utensils.

## Non-Aboriginal Heritage

The reserve was formerly logged as part of Ballengarra State Forest. Selective harvesting thinned the useful timber trees, while low value trees were removed by ringbarking or felling, some of these being salvaged for sleeper timber.

There are no known historic sites on or near the reserve.

## Recreation

There are no recreation facilities within the reserve. A reserve identification sign is located at the eastern boundary on Passionfruit Road.

Recreational activities not consistent with the study of nature and natural environments are generally considered inappropriate uses of a nature reserve. Horse riding occurred within the reserve under previous tenure. This activity is inconsistent with the purposes of a nature reserve under the NPW Act and is not permitted in a nature reserve under NPWS policy. The reserve currently receives low levels of use for activities such as nature study, walking and bird watching. Passionfruit Road provides vehicular access through the reserve.

## 2.4 THREATS TO THE RESERVE'S VALUES

### Introduced plants

Weed species are currently a minor problem within the reserve. There has been no comprehensive study of weeds undertaken in the reserve, however casual observation indicates that pink flowered lantana (*Lantana camara*) is common throughout the reserve, particularly in the moist and semi-moist areas. The red flowered lantana, which is listed as noxious in Hastings Shire, has not been noted in the reserve. Lantana will require monitoring and may require targeted control.

### Introduced animals

Introduced animal species within the reserve are of concern because they have the potential to have detrimental effects on ecological values and can spread to neighbouring land. Pest animals known to occur in the reserve include foxes (*Vulpes vulpes*), wild dogs (*Canis familiaris*) and feral cats (*Felis catus*). Predation by foxes on native animals is listed as a key threatening process under the TSC Act and is considered a significant problem in the Mid North Coast Region.

Other pest animals likely to occur in the reserve are the rabbit (*Oryctolagus cuniculus*), house mouse (*Mus musculus*), black rat (*Rattus rattus*) and the brown hare (*Lepus capensis*).

Domestic cattle occasionally enter the reserve along the southern boundary. The memorandum of understanding between the NPWS Mid-North Coast Region and the NSW Farmers Association for stock removal defines the procedures for removal of stock from the reserve. NPWS policy on boundary fencing also covers fencing adjacent to private property, leasehold and Crown lands.



## **Fire**

The fire history of the reserve is poorly known, however, it is likely that the dry forest areas have been burnt beyond the desired threshold for these forest communities. There is a dam built for fire-fighting purposes adjacent to the upper Passionfruit Road bridge.

A fire management plan is required to identify the bushfire threat and requirements for community protection measures in areas where it is identified that fire is a threat to property and the conservation of native plants, animals, or any cultural features that may be found within the reserve.

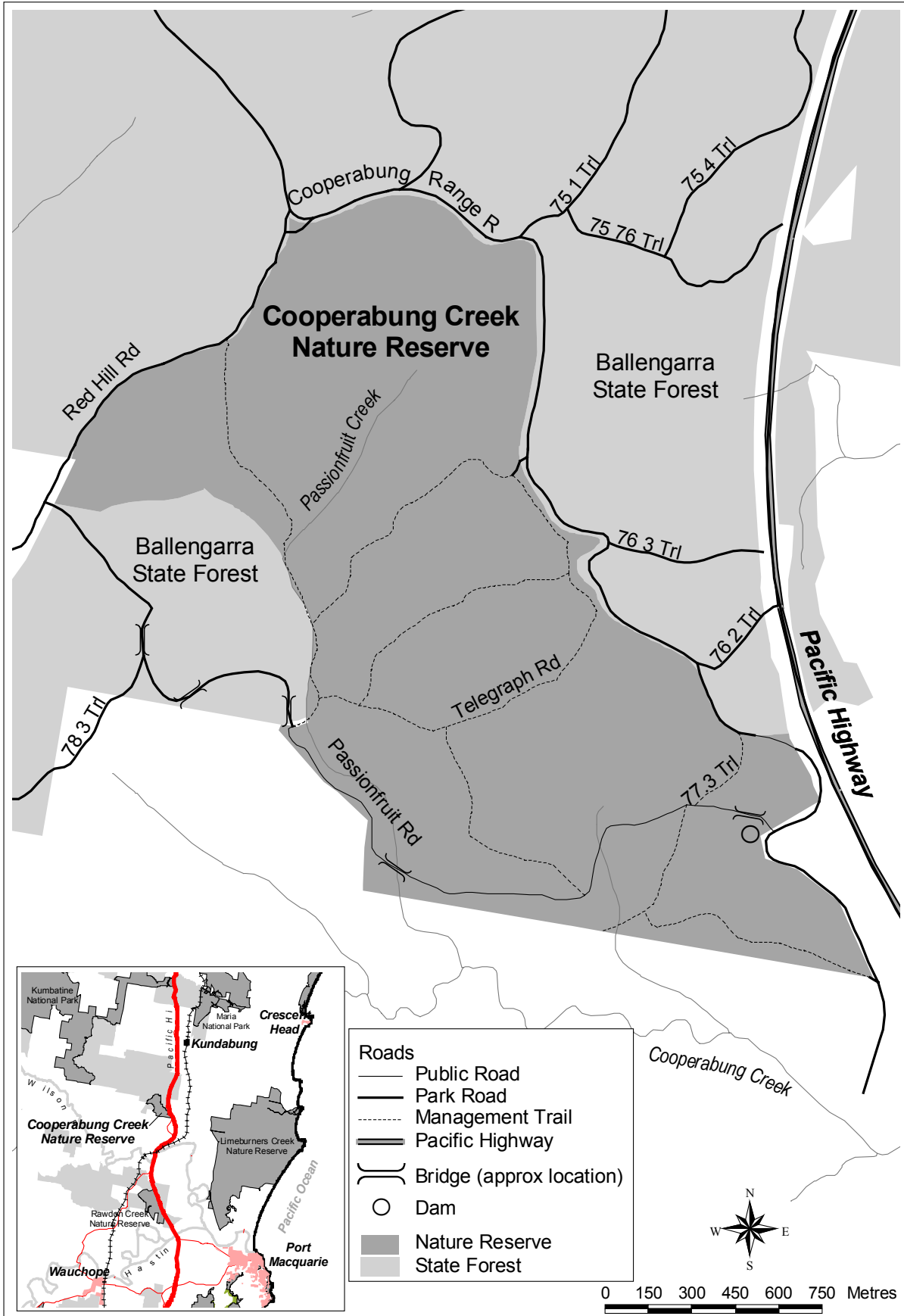
## **Modification of surrounding lands**

The state forest to the north-east and west of the reserve has been extensively modified by logging but provide a vegetated corridor to Kumbatine National Park. Lands to the south and east have been cleared for grazing. There are rural residential developments in the nearby Red Hill area to the south-west and also to the south east.

## **Other uses of the reserve**

There are two bee sites located within the reserve that pre-date its gazettal. The European honey bee can have adverse impacts on some native plants and animals (Paton, 1996). 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, user conflicts or are inconsistent with park management. The existing apiary sites are limited in size and are maintained by mowing or slashing. Access to the sites is via management trails on the reserve.

# RESERVE MAP



### 3 MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Soil and water conservation</b></p> <p>There are currently no major problems with erosion or water quality, although the soils are highly erodible if exposed.</p>	<ul style="list-style-type: none"> <li>• Soil erosion is minimised.</li> <li>• The water quality and health of reserve's streams is maintained.</li> </ul>	<ul style="list-style-type: none"> <li>• Undertake all works in a manner that minimises erosion and water pollution.</li> <li>• Liaise with the North Coast Catchment Advisory Council to maintain water quality in the reserve's catchment.</li> </ul>	<p>High</p> <p>Low</p>
<p><b>Native plant and animal conservation</b></p> <p>The reserve has been intensively managed for timber production, resulting in a lowered plant species diversity and lower density of nesting hollows for larger arboreal species.</p> <p>Modelling has identified that the reserve contains potential habitat for a number of threatened species</p>	<ul style="list-style-type: none"> <li>• The full range of native plant species found in the reserve is conserved.</li> <li>• The habitat and populations of all native animal species are protected.</li> </ul>	<ul style="list-style-type: none"> <li>• Undertake or encourage a survey of plant and animal species, in particular to determine the occurrence of significant species.</li> <li>• Allow natural regeneration of past cleared and logged areas.</li> <li>• Liaise with neighbours, Landcare, vegetation management committees and other land use authorities to encourage retention, and if possible expansion, of areas of native vegetation close to the reserve.</li> </ul>	<p>Medium</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Cultural heritage</b></p> <p>There are no known Aboriginal or European cultural sites within the reserve.</p> <p>No cultural heritage surveys have been undertaken in the reserve.</p>	<ul style="list-style-type: none"> <li>Cultural features and values are identified, recorded, and appropriately conserved and managed.</li> </ul>	<ul style="list-style-type: none"> <li>Undertake an archaeological survey and cultural assessment prior to all works with the potential to impact on Aboriginal and non-Aboriginal sites and values.</li> <li>Consult with the Kempsey Local Aboriginal Land Council in all aspects of management of Aboriginal sites, places and values. Provide copies of any research findings on Aboriginal cultural heritage to the Land Council.</li> <li>Encourage research into the cultural heritage of the reserve</li> </ul>	<p>High</p> <p>High</p> <p>Medium</p>
<p><b>Introduced species</b></p> <p>The NPWS Regional Pest Management Strategy (NPWS 2001) provides the framework for ongoing control of the pest animals and weeds in the reserve.</p> <p>Pest animals in the reserve include foxes, dogs and feral cats. NPWS ground baiting for wild dogs occurred to the west along Cooperabung Range Road in 2001.</p> <p>Weed species, apart from lantana, are uncommon.</p> <p>Domestic cattle occasionally gain access to the reserve.</p>	<ul style="list-style-type: none"> <li>The impact of introduced species on native biodiversity and neighbouring lands is minimised.</li> </ul>	<ul style="list-style-type: none"> <li>Control, and where possible eradicate, introduced pest plant and animal species in accordance with the Regional Pest Management Strategy. Control of foxes and wild dogs will be a priority</li> <li>Seek the cooperation of neighbours, the Kempsey Rural Lands Protection Board, Hastings Council, the Mid North Coast Weeds Advisory Council, and other stakeholders in implementing weed and pest animal control programs.</li> <li>Encourage maintenance of effective fencing of boundaries with grazing properties to prevent domestic stock from entering into the reserve.</li> <li>Remove wandering domestic stock as soon as possible.</li> </ul>	<p>High</p> <p>Medium</p> <p>Medium</p> <p>Medium</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Fire management</b></p> <p>Fire is a natural feature of the environment of the reserve and is essential to the survival of some plant communities.</p> <p>Frequent or regular fire, however, can cause loss of particular plant and animal species and communities.</p> <p>Fire could also damage fences or any cultural features that may be found on the reserve, as well as threaten neighbouring land.</p> <p>The reserve is likely to have been burnt at a frequency too high to maintain biodiversity.</p> <p>Control of the reserve's fire regime is facilitated by the internal network of roads, internal trails, boundary fire trails and adjacent roads.</p>	<ul style="list-style-type: none"> <li>• The potential for spread of wildfire on, from, or into the reserve is minimised.</li> <li>• Life and property are protected from fire.</li> <li>• Fire regimes are appropriate for long-term maintenance of the reserve's plant and animal communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare and implement a fire management plan for the reserve.</li> <li>• Restrict the use of heavy vehicles and machinery to existing roads and trails.</li> <li>• Encourage research into the ecological effects of fire in the reserve, particularly the fire response of significant plant species and the fire requirements of the communities.</li> <li>• Use prescribed fire to achieve a variety of fire regimes in appropriate vegetation types and maintain habitat suitable for species with specific requirements. Exclude fire from rainforest communities.</li> <li>• Continue to actively participate in the Hastings Bush Fire Management Committee. Maintain close contact and cooperation with neighbours, Council fire officers and volunteer bush fire brigades concerning fire management on the reserve.</li> <li>• Close the reserve to public use during periods of extreme fire danger.</li> </ul>	<p>High</p> <p>High</p> <p>Low</p> <p>High</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Visitor use</b></p> <p>Use of the reserve must be carefully managed since it is a relatively small and significant area of remnant vegetation.</p> <p>Promotion of community understanding and appreciation of the conservation values of the reserve will be important for minimising damaging activities.</p> <p>Nearby residents have used Passionfruit Road for walking and horse riding for many years.</p> <p>Bushwalking groups have also used Passionfruit Road for many years.</p>	<ul style="list-style-type: none"> <li>• There is widespread community understanding and appreciation of the reserve's natural and cultural values as well as management programs.</li> <li>• Visitor use is ecologically sustainable and consistent with its management as a nature reserve.</li> </ul>	<ul style="list-style-type: none"> <li>• Liaise with neighbours and community organisations to promote community understanding of the reserve's values and management strategies.</li> <li>• Maintain the reserve identification signage at reserve boundaries and update signage to indicate those activities that are permitted and not permitted. Provide no other visitor facilities.</li> <li>• Permit low impact recreation, educational visits and group activities such as bird watching, nature observation and bushwalking</li> <li>• Permit public vehicular access and cycling on Passionfruit Road only.</li> <li>• Prohibit horse riding, wood fires and camping.</li> </ul>	<p>Medium</p> <p>High</p> <p>High</p> <p>High</p> <p>High</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Research and monitoring</b></p> <p>Scientific study is needed to improve understanding of the reserve's natural and cultural heritage, the processes that affect it and the requirements for management of particular species.</p> <p>Monitoring will also be conducted in the reserve as part of regional measurement of environmentally sustainable forest management (ESFM) performance indicators.</p>	<ul style="list-style-type: none"> <li>• Research is undertaken that enhances the information base and assists management of the reserve.</li> <li>• Research causes minimal environmental damage.</li> <li>• Monitoring shows that the reserve is being managed on an ecologically sustainable basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Undertake or encourage research to improve knowledge and management of the reserve's natural and cultural heritage, as well as visitor use.</li> <li>• Encourage research by other organisations into matters that are directly useful for management purposes, particularly the ecological requirements of significant species in the reserve.</li> <li>• Require any research structures and long term markers to be placed in locations that will minimise their visual impact and require their removal upon completion of the research.</li> <li>• Undertake ESFM monitoring in accordance with regional programs.</li> </ul>	<p>Medium</p> <p>Low</p> <p>High</p> <p>Medium</p>
<p><b>Management operations</b></p> <p>Roads and trails are currently in good condition, apart from a wooden culvert on the trail accessing the Passionfruit Road dam.</p>	<ul style="list-style-type: none"> <li>• Management facilities adequately serve management needs and have acceptable impact.</li> </ul>	<ul style="list-style-type: none"> <li>• Close, and rehabilitate where necessary, all roads not required for management purposes or essential access to private lands (ie not shown on the map in this plan).</li> <li>• Maintain Passionfruit Road to a 2WD all weather standard.</li> <li>• Maintain management trails shown on the reserve map to the appropriate standard. These trails will not be available for recreational vehicle use.</li> <li>• Gate management trails as required.</li> <li>• Repair or replace the wooden culvert allowing access to Passionfruit dam.</li> </ul>	<p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Low</p> <p>Medium</p>

Current Situation	Desired Outcomes	Strategies	Priority
<p><b>Non-NPWS uses</b></p> <p>There are two apiary sites on the reserve.</p> <p>The existing apiary sites are limited in size and are maintained by mowing or slashing.</p> <p>Access to the sites is via management trails that will be maintained according to NPWS requirements.</p>	<ul style="list-style-type: none"> <li>• Non-NPWS uses have minimal environmental impact, user conflicts or inconsistencies with the park management program.</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate whether existing authorised apiary sites in the reserve need to be relocated within the reserve due to unacceptable environmental impacts, user conflicts or inconsistencies with the park management program such as the closure or alteration of a road or trail.</li> <li>• Relocation of existing apiary sites, if required, will be in accordance with the NPWS policy on beekeeping and will be undertaken in consultation with the consentee.</li> <li>• Permit apiarists to clear a minimal area of their existing sites for hives by mowing/slashing only.</li> <li>• Monitor use of apiary sites and bees in the reserve. Liaise with apiarists to remove any feral bee hives that may establish in the reserve.</li> </ul>	<p>Medium</p> <p>Medium</p> <p>High</p> <p>Medium</p>

**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.

This plan applies both to the land currently reserved as Cooperabung Creek Nature Reserve and to any future additions to the reserve. Once a plan has been adopted by the Minister it must be implemented, and no operations may be undertaken except in accordance with the plan. If management strategies or works are proposed for Cooperabung Creek Nature Reserve or for any additions that are not consistent with this plan, an amendment to the plan will be required.



#### 4 REFERENCES

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## GLOSSARY

### ACRONYMS USED

NPW Act	NSW <i>National Parks and Wildlife Act</i> (1974)
NPWS	NSW National Parks and Wildlife Service
TSC Act	NSW <i>Threatened Species Conservation Act</i> (1995)

### SELECTED DEFINITIONS

Biodiversity	Biological diversity, namely the variety of life forms: the different plants, animals and microorganisms, the genes they contain, and the ecosystems they form. It is usually considered at three levels: genetic diversity, species diversity and ecosystem
Cultural heritage	Encompasses past and present cultural associations of all people in Australia, including tradition, knowledge and customs. It can be tangible (i.e. have physical manifestations in the form of art, buildings etc.) or intangible (i.e. spiritual or social associations, songs, stories and cultural practices). Cultural significance includes values that are social, spiritual, aesthetic, historic and scientific. When natural resources acquire meaning for a particular group, they become cultural resources as well.
Ecologically sustainable use	Using society's natural resources within the capacity of the species and ecosystems, so that the health, diversity and productivity of the environment and the ecological processes on which life depends are conserved and enhanced, and the quality of life, now and in the future, can be increased.
Fauna	Any mammal, bird, reptile or amphibian. NPWS has responsibility for the conservation of fauna. Note this definition excludes fish or invertebrates.
Feral species	A domesticated species that has become wild
Fire authorities	Organisations (including land management authorities such as NPWS) vested by the <i>RF Act</i> with the responsibility to suppress fires. Under the <i>RF Act</i> , Fire management activities on NPWS reserves are the responsibility of NPWS
Fire Management	Includes all activity associated with the use and control of fire in bushland designed to achieve stated objectives for the protection of life and property, and the maintenance of wildlife communities.
Fire management plan	A plan of operations to prevent, detect and suppress unplanned fires and to reduce bushfire hazard, prepared by a Bushfire Management Committee, constituted under the <i>RF Act</i> for coordinated fire management and operations within a rural fire district.

Historic places	Landscapes, sites buildings or other works together with pertinent contents and surroundings and include structures, ruins, archaeological sites and areas
Introduced species	A species occurring in an area outside its historically known natural range as a result of intentional or accidental dispersal by human activities. Also known as exotic or alien species.
Ministerial roads	Road corridors through the park/ reserve which, although managed by NPWS, do not form part of the gazetted area of the park/ reserve. Typically the access to adjacent State forest or private land, these roads are vested in the name of the Minister for the Environment.
Park roads	Access roads, which form part of the gazetted area of a park/ reserve, maintained by the NPWS for public use primarily to access visitor facilities and points of interest.
Policy	A statement of attitude and courses of action, directed toward the attainment of NPWS corporate goals and/or objectives.
Recovery plan	A document, prepared under the <i>TSC Act</i> , that identifies the actions to be taken to promote the recovery of a threatened species, or endangered population or ecological community.
Regeneration	The recovery of natural integrity following disturbance or degradation. This can be achieved through totally natural processes or an assisted process, where human intervention (through removing weeds or planting seedlings) accelerates recovery.