

**URALBA NATURE RESERVE**  
**PLAN OF MANAGEMENT**

**NSW National Parks and Wildlife Service**

**June 2002**

This plan of management was adopted by the Minister for the Environment on 25<sup>th</sup> June 2002.

## **Acknowledgment**

This plan of management was prepared by Ms Lee Middleton as partial fulfilment of a Bachelor of Applied Science (Coastal Management) at Southern Cross University, Lismore.

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## Foreword

Uralba Nature Reserve covers an area of approximately 155 hectares on the Blackall Range near Alstonville in far northeast New South Wales.

The gullies of the western side of the Reserve contain important remnants of the former "Big Scrub" which was once the largest continuous tract of sub-tropical rainforest in Australia covering approximately 75,000 hectares of the rich basalt soils between Ballina, Lismore and Bangalow. From the 1860s onwards the Big Scrub was heavily cleared for valuable timber species and later agriculture, and by 1900 was essentially gone. Today approximately 0.4% of the original Big Scrub remains, and even less is in relatively intact condition. Other Big Scrub remnants include Boatharbour, Victoria Park, Davis Scrub, Hayters Hill, Andrew Johnston Big Scrub and Wilson Nature Reserves.

The eastern side of the Reserve occurs on the forested ridge of the Blackall Range which is an important landscape feature visible from the surrounding coastal plains, Alstonville Plateau and highways.

The plan of management recognises the conservation and landscape values of the Reserve. Visitor facilities, including public vehicular access, will not be provided in order to minimise impacts within this small reserve. Opportunities for visitors to enjoy and experience the Big Scrub rainforests are available at nearby Victoria Park.

A draft plan of management for Uralba Nature Reserve was placed on public exhibition for two months from August to October 2001. The plan has been amended to reflect comments received from the public submissions on the draft plan of management, and from the NPWS Northern Rivers Regional Advisory Committee and the NSW National Parks and Wildlife Advisory Council.

This plan of management establishes the scheme of operations for Uralba Nature Reserve. In accordance with Section 76 of the *National Parks and Wildlife Act 1974* this plan is hereby adopted.

**BOB DEBUS**

**Minister for the Environment**

# Uralba Nature Reserve

## Management direction and objectives

### Management Objectives

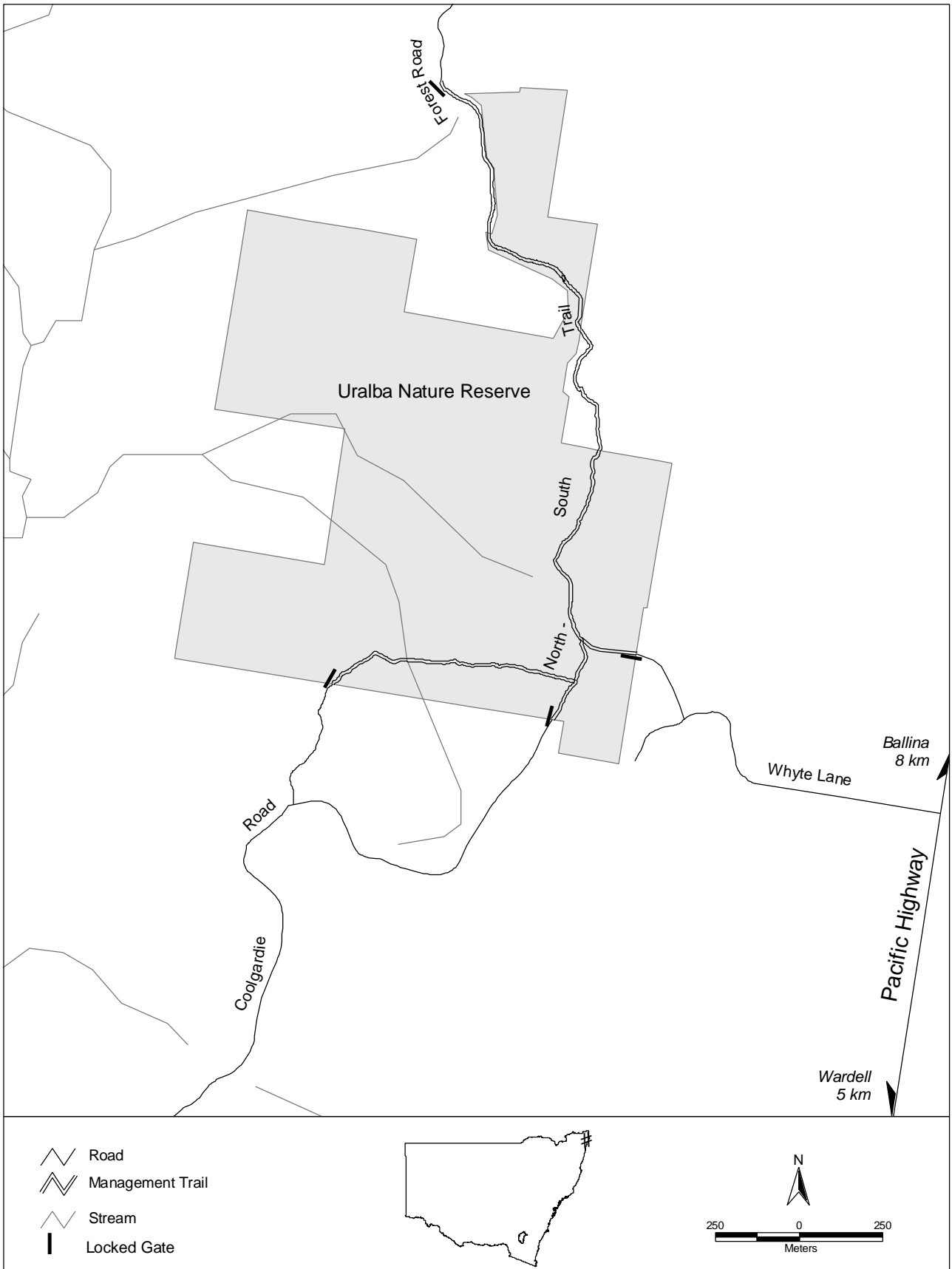
Uralba Nature Reserve (the Reserve) is dedicated under the NSW *National Parks and Wildlife Act 1974* (NPW Act) and must be managed in accordance with the Act. Under the NPW Act, nature reserves are valuable refuge areas where natural processes, phenomena and wildlife can be studied and protected.

Nature Reserves, unlike National Parks, do not include provision for recreational opportunities as a major management objective but aim to:

- protect and preserve scenic and natural features;
- conserve wildlife;
- preserve Aboriginal sites and historic features;
- maintain natural ecological processes;
- encourage scientific and educational inquiry into environmental features and processes.

In addition specific management objectives for Uralba Nature Reserve include the:

- protection of wildlife including rare, threatened and significant species;
- control and minimisation of the impacts of introduced species;
- community involvement in the management and protection of the Reserve;
- prevention and control of wildfire;
- exclusion of inappropriate uses from the Reserve, including illegal vehicular access;
- improved information to assist management of the natural and cultural values of the Reserve as a result of the promotion of appropriate scientific research.



**Map: Uralba Nature Reserve**

## **Basis for management**

### **Regional context**

Uralba Nature Reserve, situated approximately 5kms southeast of Alstonville in far northern NSW, was originally gazetted as Uralba State Forest in 1913 followed by dedication as a nature reserve on the 10th October 1975. The Reserve has an area of approximately 155 hectares.

Uralba Nature Reserve protects a small area of remnant native vegetation of the Blackwall Range which is surrounded by a variety of agricultural land uses and remnant forests. Adjoining the northern extremity of the Reserve is 15.38 hectares of private forest protected under a NPWS Voluntary Conservation Agreement (VCA). A VCA also protects 7.3 hectares of land on the eastern flank of the Blackwall Range approximately 2km south of the Reserve.

### **Natural and cultural heritage values**

#### **Geomorphology**

Located on the Blackwall Range, the Reserve ranges in altitude from 40 –160 metres above sea level. The majority of the Reserve is composed of meta-sedimentary geology of the Neranleigh – Fernvale Group, comprising shales, siltstones and sandstones with occasional units of greywacke, volcanic tuff, cobble conglomerates, quartzite, slate and phyllite. Resultant soils are yellow and red podzols which are shallow, stony, low in fertility and highly erodible if the surface vegetation is disturbed.

A small capping of Lismore basalt occurs in the northern section of the Reserve at altitudes above 140 metres.

The average slope ranges from 3% – 20%, with local maximums of greater than 33% in the eastern and western falls of the Reserve. Ridges and crests are generally narrow (about 100 – 150 metres in width).

#### **Native flora**

Prior to 1950, while managed as a State forest, the area was logged for blackbutt (*Eucalyptus pilularis*). Evidence of this past logging activity remains in the form of logging trails and tree stumps although regeneration of the forest is occurring and weed invasion has been limited.

The Reserve supports a range of plants as a result of variations in topography, aspect, soil type and past land uses. These communities include blackbutt forest which inhabits the low fertility soils of the ridgelines and subtropical and warm temperate rainforest situated in the gullies and lower elevations of the Reserve. The gully rainforests are important remnants of the former “Big Scrub” rainforest, which once covered 75,000 ha on the north coast of NSW but has since been reduced to around only 100 ha in relatively intact condition (Floyd 1990).

The development of rainforest in the Reserve is a function of aspect, topography and absence of fire. Basaltic enrichment in the northern part of the Reserve may also be a factor in rainforest development. The rainforest on the Reserve contains 53 species (Floyd 1984), including:

- Wisteria vine (*Millettia megasperma*), small-flower lace flower (*Archidendron muellerianum*), and shrubby wing-leaved tulip (*Harpullia alata*) which reach their southern most extension in the Reserve;
- Rusty oak (*Helicia ferruginea*) and mangobark (*canarium australasicum*) which are typical of the warm temperate rainforests of the Nightcap Range and reach their southern most extension in the Reserve.
- Smooth-leaved quandong (*Elaeocarpus eumundi*) (the Reserve contains what is probably the largest specimen in NSW);
- Short-stalked muttonwood (*Rapanea variabilis*) which is found at its southern distribution limit,
- Fan bristle fern (*Gonocormus saxifragoides*) which was sighted in 1984 after the species had not been located in the Reserve for over one hundred years. This species is also located at Minyon Falls in Nightcap National Park; and
- Richmond birdwing butterfly vine (*Pararistolochia praevenosa*) which occurs in the rainforest habitats of the reserve. This plant is the principal larval food source for the Richmond birdwing butterfly (*Ornithoptera richmondia*).

A few plant species commonly associated with coastal communities are also present in the Reserve as past sea levels reached the base of the Blackwall Range.

A plant inventory of species in the rainforest gullies in the southern corner of the Reserve has been undertaken (Floyd 1984), however, a survey of the remainder of the Reserve is required.

## Native fauna

Vulnerable species found in the Reserve include the koala (*Phascolarctos cinereus*), common Planigale (*Planigale maculata*), pouched frog (*Assa darlingtoni*), common blossom bat (*Syconycteris australis*) and little bent-wing bat (*Miniopterus australis*). Koalas have also been recorded in the adjoining VCA and along Forest Road. Vulnerable birds recorded include Albert's lyrebird (*Menura alberti*), bush hen (*Amaurornis olivaceus*), marbled frogmouth (*Podargus ocellatus*), sooty owl (*Tyto tenebricosa*) and rose-crowned fruit dove (*Ptilinopus regina*).

The only studies of native fauna in the Reserve have been of selected bird species, including the Albert's lyrebird (Bower, 1997), and three small vertebrate surveys in 1984 and 1989 by university students. Bower indicates the Reserve is valuable habitat for the Albert's lyrebird. Further research to ascertain the population of the Albert's lyrebird is warranted.

## Cultural heritage

No cultural heritage sites have been recorded in the Reserve, although the area has a history of Aboriginal, agricultural and forestry use. The Reserve lies within the area of

the Jali Local Aboriginal Land Council and the Council will be consulted on any matters that may affect Aboriginal cultural heritage values.

## **Science and education**

Little scientific research has been undertaken in the Reserve. Lack of information pertaining to the type of flora and fauna occupying the Reserve suggests there are opportunities for further research that may improve management of the Reserve.

## **Recreation, tourism and public access**

The NPWS has not promoted visitation to Uralba Nature Reserve. The Reserve is not externally signposted and there are no visitor facilities.

Illegal camping, horse riding and trail bike riding are adversely impacting on the Reserve. Four wheel drive vehicle use has caused erosion and degradation to the north-south trail in the Reserve. These activities are difficult to control because the Reserve is poorly identified by signage and there are no controls on access from Forest Road.

## **Management trails.**

There are three trails in the Reserve that provide access for management purposes (see the map).

The main north-south trail forms an extension of Forest Road. This trail extends to the southern boundary of the Reserve and provides access for the majority of management related activities. A secondary trail runs off the north-south trail, entering private property on the southern boundary of the Reserve. This trail is not considered to be important for management purposes. An overgrown trail extends eastwards off the main north-south trail and links to Whyte Lane on the eastern boundary of the Reserve.

A number of old snig trails extend off the north-south trail, but these are generally regenerating and in time will not be evident if left undisturbed.



## Management Strategies

Current Status	Desired outcomes	Strategies and actions	Priority
<p><b>Native Flora</b> The only comprehensive vegetation study in the Reserve, which examined the rainforest gullies, was undertaken by Floyd (1984). Seven species were found to be at their southern most extent in this survey. Further vegetation surveying of the Reserve would be desirable to ensure vegetation values are adequately protected.</p> <p>Two voluntary conservation agreement (VCA) areas exist in the immediate vicinity of the Reserve.</p>	<ul style="list-style-type: none"> <li>• The natural diversity of native flora and associated communities within the Reserve are preserved and protected.</li> <li>• All vegetation associations within the Reserve are documented.</li> </ul>	<ul style="list-style-type: none"> <li>• A flora survey will be carried out to develop an inventory of plant species, define specific floristic associations, and determine the status of significant species. Locations of significant plant species will be recorded and periodic inspections undertaken to monitor population status.</li> <li>• Plant communities degraded from past logging operations will be monitored to ensure adequate natural rehabilitation occurs.</li> <li>• In cooperation with relevant agencies, the community and Ballina Shire Council, the feasibility of establishing vegetation corridors to connect the Reserve with nearby native vegetation remnants and other protected areas will be investigated.</li> </ul> <p>Neighbours will be encouraged to protect high quality native vegetation on nearby and adjoining private lands, particularly where such lands provide a vegetation corridor (refer to Native Fauna section below).</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p>
<p><b>Native Fauna</b> The status of native fauna in the Reserve is not known. Despite a lack of formal research eight vulnerable animals have been recorded in the Reserve.</p> <p>A survey for Albert's lyrebird in the Blackwall Range (Bower, 1997) found a small population in Uralba Nature Reserve and recommends further survey work is undertaken.</p>	<ul style="list-style-type: none"> <li>• Native fauna and their habitat is protected and preserved.</li> <li>• The type and status of native fauna in the Reserve is known.</li> <li>• There are secure wildlife corridors linking to the Reserve.</li> </ul>	<ul style="list-style-type: none"> <li>• A survey will be undertaken to develop a fauna inventory, however emphasis will be placed on threatened and significant species, including the koala.</li> <li>• Wildlife corridors surrounding the Reserve will be identified and mapped. NPWS staff will inform surrounding landholders of the significance of wildlife corridors and encourage them to rehabilitate and/or protect these corridors.</li> <li>• Undertake a further survey for Albert's lyrebird to determine its conservation status and importance of the habitat in the Reserve for lyrebirds.</li> </ul>	<p>High</p> <p>High</p> <p>High</p>

Current Status	Desired outcomes	Strategies and actions	Priority
<p><b>Cultural Heritage</b> Additional information concerning Aboriginal heritage values of the Reserve is required.</p>	<ul style="list-style-type: none"> <li>• Aboriginal heritage values are identified and protected.</li> </ul>	<ul style="list-style-type: none"> <li>• Any new works in the Reserve will be preceded by a cultural heritage assessment</li> <li>• Encourage further study of the Aboriginal heritage values of the Reserve in consultation with the local Aboriginal community.</li> </ul>	<p>High</p> <p>Medium</p>
<p><b>Fire Management</b> There is no fire management plan for the Reserve.</p> <p>The rainforest communities in the Reserve are vulnerable to wildfire during extended dry periods.</p> <p>A fire occurred at the northern extremity of the Reserve in 1995/96. In 1972/73 a fire originating from a sugar cane burn off occurred along the eastern Reserve boundary.</p>	<ul style="list-style-type: none"> <li>• Biological diversity of the Reserve is protected from fire threats.</li> <li>• Human life and property are protected from fire.</li> <li>• Any identified cultural heritage sites are protected from fire and associated fire control activities.</li> <li>• Fire does not occur in rainforest communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage neighbours to undertake and maintain firebreaks particularly on the north and northeastern boundaries.</li> <li>• Fire will be excluded from the small gullies running west into Yellow Creek to protect the sensitive rainforest communities.</li> <li>• A fire management plan will be developed for the Reserve by 2008. Pending preparation of the plan, no prescribed burning will be undertaken and wildfires will be extinguished at the earliest opportunity.</li> </ul>	<p>High</p> <p>High</p> <p>Medium</p>

Current Status	Desired outcomes	Strategies and actions	Priority
<p><b>Introduced Flora and Fauna</b> Camphor laurel (<i>Cinnamomum camphora</i>), lantana (<i>Lantana camara</i>) and crofton weed (<i>Ageratina adenophora</i>) exist within the Reserve, particularly along the boundaries, trails and in disturbed areas. Isolated occurrences of mistflower (<i>Ageratina riparia</i>), white passionflower (<i>Passiflora subpeltata</i>) and common passionfruit (<i>Passiflora edulis</i>) also occur. Lantana is also prevalent alongside tracks and disturbed areas. Crofton weed is listed as a noxious weed under the <i>Noxious Weeds Act 1993</i>.</p> <p>The European red fox (<i>Vulpes vulpes</i>) is believed to be abundant within the Reserve. The fox is listed as a key threatening species under the <i>Threatened Species Conservation Act 1995</i> and is known to impact on Albert's lyrebird.</p> <p>Other possible pest species include the common cat (<i>Felus catus</i>) and the cane toad (<i>Bufo marinus</i>).</p>	<ul style="list-style-type: none"> <li>• The status of introduced plants and animals is known and controlled, and where possible, eradicated.</li> <li>• Areas of weed infestation are reduced.</li> </ul>	<ul style="list-style-type: none"> <li>• A pest species management plan will be developed for the Reserve.</li> <li>• As an interim measure the following pest species programs will be undertaken: <ul style="list-style-type: none"> <li>- A fox eradication program to enhance protection of the Albert's Lyrebird, and</li> <li>- A control program for camphor laurel, lantana and crofton weed.</li> </ul> </li> <li>• Reserve neighbours will be informed of the importance of controlling introduced species, including the provision of adequate boundary fences to exclude stock from impacting upon the Reserve.</li> </ul>	<p>High</p> <p>High</p> <p>High</p>

Current Status	Desired outcomes	Strategies and actions	Priority
<p><b>Recreation and public access</b> It has been observed that motorbike riders and horse riders illegally use the area for recreation. This practice has contributed to trail erosion and other habitat impacts.</p> <p>No visitor facilities are provided, and no directional and few boundary identification signs currently occur.</p>	<ul style="list-style-type: none"> <li>• Pedestrian access continues to be permitted in the Reserve.</li> <li>• Illegal vehicular and horseriding access ceases.</li> <li>• Boundary and regulatory signage is provided where appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Only walking and cycling will be permitted in the Reserve, however, cycling is restricted to the north-south trail only.</li> <li>• Public access to the Reserve will only be provided from the Forest Road entrance.</li> <li>• To minimise recreational impacts on the Reserve, locked gates and appropriate signage will be erected at trail entrances on the Reserve's northern, southern and eastern boundaries (see the map).</li> </ul>	<p>High</p> <p>High</p> <p>High</p>
<p><b>Management trails</b> The management trails are generally in poor condition and need some upgrading to ensure erosion is minimised so that management vehicles and permitted recreation activities (refer to recreation and public access section above) can safely access the Reserve.</p>	<ul style="list-style-type: none"> <li>• Identified trails are safe and have minimal impact on the environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Soil conservation works will be carried out on steep sections of the north-south trail where erosion is occurring.</li> <li>• Undertake minimal work to upgrade the north-south trail to allow for management vehicles and permitted recreation activities.</li> <li>• If necessary gravel may be imported into the Reserve to repair the north-south trail but care must be taken to ensure it is free of weeds and pathogens.</li> <li>• Old snig trails will be allowed to revegetate.</li> <li>• The north-south trail will be stabilised so that it is suitable for access for weed control purposes, and will be considered for closure when the primary purpose of the trail (removal of weeds) is achieved. The two east-west trails shown on the map and any other trails will be allowed to revegetate. Public vehicles will not be permitted on management trails.</li> </ul>	<p>High</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Medium</p>

Current Status	Desired outcomes	Strategies and actions	Priority
<p><b>Scientific and educational</b> Information pertaining to the flora and fauna of the Reserve is limited.</p>	<ul style="list-style-type: none"> <li>• The community's awareness and appreciation of the Reserve's values are raised.</li> <li>• There is improved understanding of the status of the flora and fauna of the Reserve and their ecological requirements.</li> <li>• Scientific research facilitates better management of the Reserve.</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage educational institutions to undertake appropriate research that will benefit management of the Reserve. Areas of research that may assist Reserve management include:               <ol style="list-style-type: none"> <li>i. Flora and fauna inventory;</li> <li>ii. The production of a vegetation map;</li> <li>iii. The status of introduced species and the production of pest species management plans.</li> </ol> </li> </ul>	<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 as the time-frame for their implementation is not critical.

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

## Key References

Bower, H. (1997) *The suitability of isolated Big Scrub remnants as habitat for sooty owls, marbled frogmouth and Albert's lyrebird*. Integrated project. Southern Cross University, Lismore.

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