

BINNAWAY AND WEETALIBAH NATURE RESERVES

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

December 2003

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FOREWORD

Binnaway and Weetalibah Nature Reserves are located within the north west slopes and plains of New South Wales. The Reserves are situated within the foothills and low ridge country south of the Warrumbungle Range and west of the Great Dividing Range. Binnaway Nature Reserve is approximately 30 kilometres south east of Coonabarabran and 10 kilometres north west of Binnaway within the Coonabarabran Shire. Weetalibah is approximately 20 kilometres north west of Coolah and 50 kilometres south east of Coonabarabran within the Coolah Shire.

The Reserves are part of only two percent of the original vegetation and habitat of the Southern Brigalow Belt South Bioregion that is reserved in conservation areas. As well as being an important remnant of poorly conserved plant communities, Binnaway Nature Reserve contains ten plant species that are considered to be of conservation significance, while Weetalibah Nature Reserve contains twelve species considered to be of conservation significance. The Reserves and surrounding scrubs also provide important woodland habitat comprising a varied shrub and ground vegetation, tree hollows, fallen and hollow logs and rocky outcrops and caves that support a variety of animals in an otherwise modified environment.

The *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 the area will be managed in the years ahead.

A draft plan of management for Binnaway and Weetalibah Nature Reserves was placed on public exhibition for three months from 7th March until 2nd June 2003. The exhibition of the plan of management attracted 3 submissions which raised 4 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 on the Reserves. It also provides for on-going consultation with Kamilaroi and Wiradjuri elders and the Gilgandra Local Aboriginal Land Council in all aspects of management of Aboriginal sites, places and values.

This plan of management establishes the scheme of operations for Binnaway and Weetalibah 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 a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974*, the National Parks and Wildlife Regulation, the *Threatened Species Conservation Act 1995* 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 *Environmental Planning and Assessment Act 1979* (EPA Act) requires the assessment and mitigation of the environmental impacts of any works proposed in this plan.

The plan of management is a statutory document under the National Parks and Wildlife Act. 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 after adequate investigation, operations not included in the plan are found to be justified, the plan may be amended in accordance with section 73B of the Act.

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

1.1 MANAGEMENT PURPOSES AND PRINCIPLES

Nature reserves are reserved under the National Parks and Wildlife 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. BINNAWAY AND WEETALIBAH NATURE RESERVES

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Binnaway and Weetalibah Nature Reserves are located within the north west slopes and plains of New South Wales. The Reserves are situated within the foothills and low ridge country south of the Warrumbungle Range and west of the Great Dividing Range. The Reserves lie within the Brigalow Belt South biogeographical region of Australia (Thackway and Cresswell, 1995).

Binnaway Nature Reserve is approximately 30 kilometres south east of Coonabarabran and 10 kilometres north west of Binnaway within the Coonabarabran Shire. Previously Binnaway State Forest, it has a history of low intensity logging, burning and grazing. The 3699 hectare Reserve was gazetted on 12th March 1976. The Reserve is situated within a larger generally unmodified area of vegetation known as the Binnaway Scrub. Adjacent lands include Vacant Crown Lands, travelling stock routes and freehold land.

Weetalibah is approximately 20 kilometres north west of Coolah and 50 kilometres south east of Coonabarabran within the Coolah Shire. Gazetted on 16th August 1968, the 613 hectare reserve was previously a Faunal Reserve with a history prior to that of low to medium logging and grazing. The Reserve is situated within a larger generally unmodified area of Vacant Crown and Freehold lands known as the Weetalibah Scrub.

2.2 NATURAL AND CULTURAL HERITAGE

Landform, Geology and Soils

The Reserves lie at the southern edge of the Pilliga land system which comprises the woodlands associated with the Pilliga sandstone plateaux, ridges and drainage systems. The landscapes are characterised by undulating hills dissected by narrow creeks and drainage lines, with alluvial flats and small confined floodplain and run-on areas. The main landforms are broad ridges, plateaux and slopes with some steeper rocky outcropping comprising knolls, overhangs and caves (Porteners, 1998).

The geology comprises Pilliga Sandstone of Jurassic age, containing quartz sandstone, conglomerate and claystone (NSW Dept. Mines, 1967). These sedimentary rocks are chiefly well washed, well sorted quartzose sandstones with occasional conglomerates (Packam, 1969).

The soils within Binnaway and Weetalibah Nature Reserves are sedimentary-based loamy sands, grey brown to dark chocolate brown in colour and higher humus levels in moist situations. In drier areas soils are coarser in texture and skeletal and gravelly on exposed rocky areas (Porteners, 1998).

Native Plants

Vegetation communities within Binnaway and Weetalibah Nature Reserves range structurally from open forest to open woodland. The Reserves are part of only two percent of the original vegetation and habitat of the Southern Brigalow Belt South

Bioregion that is reserved in conservation areas. Sixty-four percent of the Bioregion has been cleared or substantially modified by grazing, forestry activities and altered fire regimes making these Reserves very important remnant forests.

Binnaway Nature Reserve comprises three forest communities dominated by: Redgum *Eucalyptus blakelyi* and Roughbark Apple *Angophora floribunda*; Narrow-leaved Ironbark *E. crebra* and Black Cypress Pine *Callitris endlicheri*; and Red Stringybark *E. macrorhyncha*, Narrow-leaved Ironbark *E. crebra* and Black Cypress Pine *C. endlicheri*. There is also a small Grey Box community in the south eastern corner of the Reserve. Grey Box communities are listed as threatened ecological communities in New South Wales.

As well as being an important remnant of poorly conserved plant communities, Binnaway Nature Reserve contains ten plant species that are considered to be of conservation significance. Regionally restricted plant species include *Macrozamia diplomera*, *Macrozamia heteromera*, *Persoonia cuspidifera*, *Bertya gummifera*. *Allocasuarina diminuta* subsp. *diminuta*, *Grevillea triternata*, *Pterostylis woollsii*, *Phebalium squamulosum* subsp. *gracile*, are at the limit of their geographical distribution whilst, *Leucopogon biflorus*, and *Lomandra glauca* are extensions to their known range within Binnaway Nature Reserve.

Three vegetation communities occur within Weetalibah Nature Reserve: Red Gum *E. blakelyi*, Mugga Ironbark *E. sideroxylon* and Rough-barked Apple *A. floribunda*; Narrow-leaved Ironbark *E. crebra*, Black Cypress Pine *C. endlicheri*; and Red Stringybark *E. macrorhyncha*, Narrow-leaved Ironbark *E. crebra* and Black Cypress Pine *C. endlicheri*. Each of these have a variety of understory types.

A total of twelve plant species recorded within Weetalibah Nature Reserve are considered to be of conservation significance including *Goodenia macbarronii* that is listed as *vulnerable* under the *NSW Threatened Species Conservation Act 1995*. Regionally restricted plant species include: *Macrozamia diplomera*, *Macrozamia heteromera*, *Baeckea cunninghamii*, and *Persoonia cuspidifera*. *Allocasuarina gymnanthera*, *Allocasuarina diminuta* subsp. *diminuta*, *Callistemon pinifolius* and *Grevillea triternata* are at the limit of their geographical range whilst *Daviesia mimosoides* subsp. *mimosoides*, *Leucopogon biflorus*, *Lomandra glauca* are extensions to their known range within Weetalibah Nature Reserve.

Native Animals

Binnaway and Weetalibah Nature Reserves and the surrounding scrubs provide important woodland habitat comprising a varied shrub and ground vegetation, tree hollows, fallen and hollow logs and rocky outcrops and caves that support a variety of animals in an otherwise modified environment.

Despite limited survey work a number of threatened and significant animals have been recorded including Brown Treecreepers *Climacteris picumnus*, Painted Honeyeater *Grantiella picta*, Black-chinned Honeyeater *Melithreptus gularis*, Turquoise Parrot *Neophema pulchella*, Grey-crowned Babbler *Pomatostomus temporalis*, Speckled Warbler *Chthonicola sagittata*, Squirrel Glider *Petaurus norfolcensis* and a resident population of Glossy-black Cockatoos *Calyptorhynchus funereus* in Weetalibah Nature Reserve. University of New England students recorded a Pilliga Mouse *Pseudomys pilligaensis* in Binnaway Nature Reserve in 1998. Based on regional observations,

anecdotal reports, habitat availability and knowledge of species requirements the following species are likely inhabit the Reserves: Koala *Phascolarctos cinereus*, Regent Honeyeater *Xanthomyza phrygia*, Barking Owl *Ninox connivens*, and a number of reptiles, amphibians and invertebrates.

Aboriginal Heritage

Binnaway Nature Reserve lies within the traditional lands of the Kamilaroi Aboriginal people and is covered by the Gilgandra Local Aboriginal Land Council (LALC). There are two known Aboriginal sites within the Reserve. One is a rock engraving site and the other a scarred tree. It is likely that other Aboriginal sites occur within the Reserve but have not been detected due to poor ground surface visibility.

Bordering the Binnaway area are the traditional lands of the Wiradjuri Aboriginal people who are the traditional occupiers of the Weetalibah area that is covered by the Gilgandra Local Aboriginal Land Council. Recent surveys within the reserve found no Aboriginal sites

Non-Aboriginal Heritage

Settlement of the area by pastoralist began in the 1830s. Large areas were cleared and farms established, but the Reserves were not cleared due to poor soils and rocky terrain. They were however, logged and grazed prior to becoming reserves. The only element of heritage that has been identified in the Reserves is an old Cobb and Co route along Box Ridge Road in Binnaway Nature Reserve.

References

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Thackway, R. and Cresswell, W.D., eds., (1995) *An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves, Version 4*, Australian Nature Conservation Agency, Canberra.

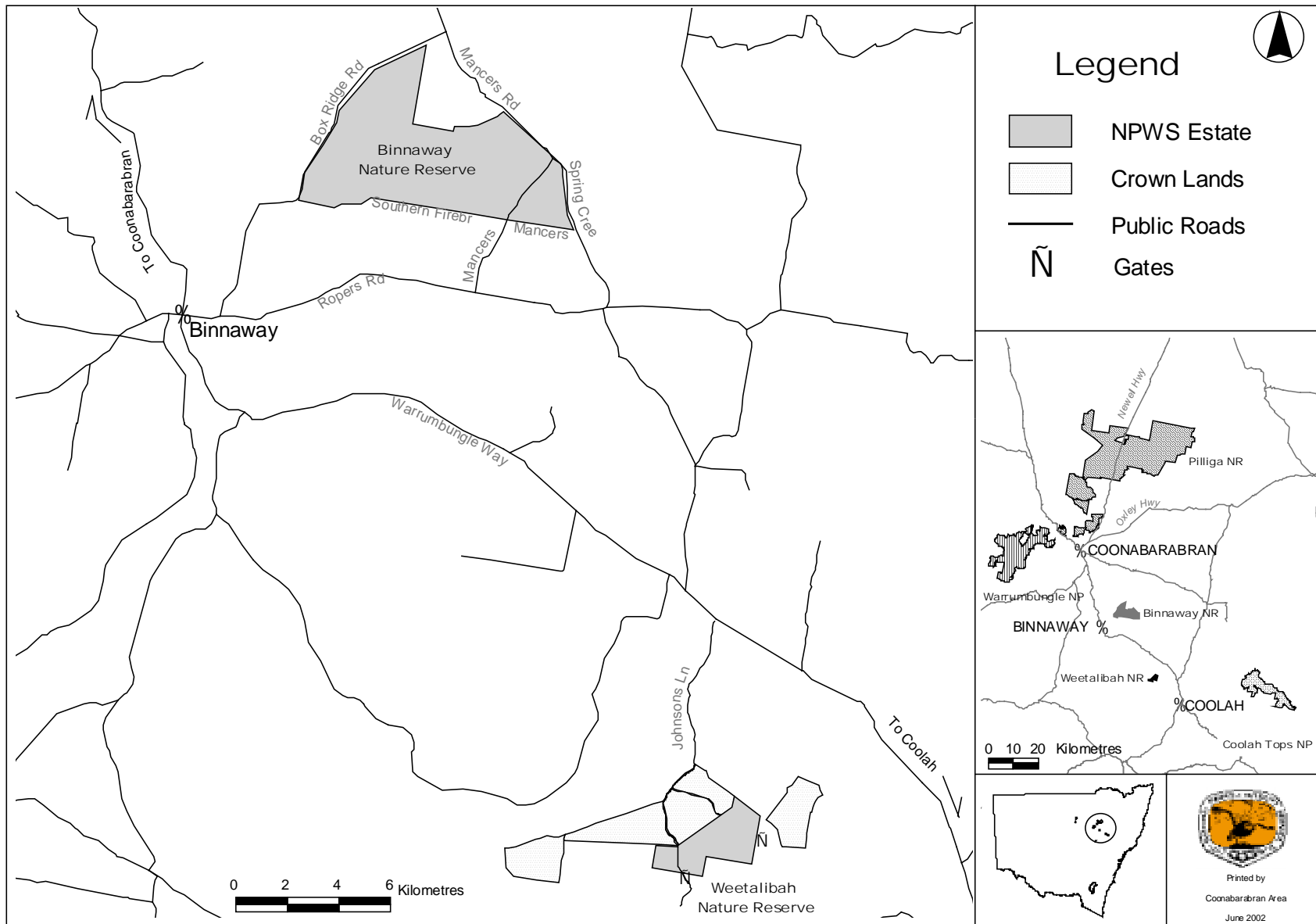


Figure 1: Binnaway and Weetalibah Nature Reserves: Management infrastructure and regional context.

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
Soil Conservation			
There is high potential for soil erosion due to the fragile nature of the soil.	Soil erosion is minimised.	Acknowledge and address the potential for soil erosion for all works.	HIGH
Soil erosion currently occurs on steeper sections of trails, low lying moist areas and where trails have not been formed and lack drainage structures.	Trails and firebreaks are maintained to NPWS standards.	Trails and firebreaks required for management purposes will be maintained to appropriate standards and eroded sections will be repaired.	HIGH
Minor gully erosion exists along some ephemeral watercourses.	Disturbed areas are rehabilitated.	Rehabilitate and monitor gully erosion.	MEDIUM
Native Plant and Animal Conservation			
Vegetation surveys and mapping have been conducted for the Reserves. The Reserves are part of larger remnants of forest and woodland surrounded by cleared agricultural land.	All native plant and animal species and communities are conserved and enhanced where possible.	Implement actions outlined in recovery plans for threatened species occurring within the Reserves.	HIGH
There have been two small survey fauna conducted in Binnaway Nature Reserve one as part of the Western Regional Assessment in 2002 and the other in 1998 by University of New England students. There is potential for a range of threatened fauna to occur within the Reserves.	Increased knowledge of existing flora, fauna and community function.	Promote and encourage the value and conservation of wildlife corridors and remnant vegetation with neighbours, surrounding landholders and the broader community. Encourage and undertake further biodiversity surveys, particularly for threatened fauna and flora.	HIGH MEDIUM/ HIGH

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
Pests Animals and Weeds			
<p>Pest animals identified in the Reserves include pigs, foxes, goats and cats. There is also the potential for deer to become a problem, particularly in Weetalibah Nature Reserve. Abundance and impact of these pest animals on the biodiversity of the Reserves is unknown, however they likely to negatively effect a range of plant and animal species, cultural sites and water quality. Current control programs include regular fox baiting, and pig poisoning and trapping when required.</p> <p>Weeds are not considered to be a major issue in the Reserves. Blue Heliotrope and Spiny Burr grass outbreaks may occur during favourable conditions in disturbed areas such as roadsides and creeks.</p>	<p>Minimise the impact of pest animals and weeds on native species and neighbouring lands.</p> <p>Identify and establish levels of pest and weed problems.</p>	<p>Develop and implement a Pest Control Plan that outlines mechanisms for managing pest animals and weeds.</p> <p>In the interim, implement fox and pig control, roadside herbicide spraying of weed outbreaks, and investigate and respond to any arising pest issues.</p> <p>Encourage and support Reserve neighbours (including State Forest and Rural Lands Protection Boards) to participate in co-operative pest management programs.</p> <p>Provide regular information to neighbours and community land management groups on current pest programs.</p>	<p>HIGH</p> <p>HIGH</p> <p>HIGH</p> <p>HIGH</p>
Fire management			
<p>Fire is a natural feature of the environment of the reserve and is essential to the survival of some plant communities. Frequent or regular fire, however, can cause loss of particular plant and animal species and communities. Fire could also damage cultural features and fences and threaten neighbouring land.</p>	<p>Persons and property are protected from bushfire.</p> <p>Fire regimes are appropriate for conservation of plant and animal communities.</p>	<p>Use prescribed fire to achieve a variety of fire regimes and maintain habitat suitable for species with specific requirements as per fire management plans.</p> <p>Participate in relevant Bush Fire Management Committees. Maintain coordination and cooperation with Rural Fire Service brigades, Fire Control Officers and neighbours with regard to fuel management and fire suppression.</p>	<p>HIGH</p> <p>HIGH</p>

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
<p>Binnaway and Weetalibah have not seen a wildfire for almost 40 years. The ecological thresholds for these community types should not exceed 2 consecutive fires less than 15 years apart or a fire free environment for between 20 and 30 years.</p> <p>A Fire Management Plan has been adopted and is being implemented for Binnaway NR. A Fire Management Plan for Weetalibah Scrub including the Nature Reserve is currently being developed.</p> <p>A program of hazard reduction burns and fire breaks maintenance has been undertaken.</p>	<p>Cultural features are protected from damage by fire.</p>	<p>Encourage further research into the ecological effects of fire in the reserve.</p> <p>Implement the Binnaway Nature Reserve Fire Management Plan including the construction of a low impact access trail through the Reserve linking 'Shirley Vale' and the southern boundary.</p> <p>Prepare and implement a fire management plan for Weetalibah NR that detail life, property and natural and cultural resource protection strategies.</p>	<p>MEDIUM</p> <p>HIGH</p> <p>HIGH</p>
Research			
<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, provides feedback on results of management programs and has minimal environmental impact.</p>	<p>Undertake and encourage research to improve knowledge and management of natural and cultural heritage.</p> <p>Prepare a prospectus to encourage and guide research by educational organisations and others in the reserve.</p> <p>Incorporate monitoring programs into management activities.</p>	<p>HIGH</p> <p>MEDIUM</p> <p>HIGH</p>

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
Cultural Heritage			
<p>There are two known Aboriginal sites within Binnaway Nature Reserve. Threats to these sites include intense wildfire and damage from human interference such as graffiti.</p>	<p>Cultural features are conserved and managed in accordance with their significance.</p>	<p>Implement the Regional Cultural Heritage Strategy.</p>	HIGH
<p>The are no known sites within Weetalibah, however there are known sites in the surrounding area and there is potential for sites within the Reserve.</p>	<p>Greater understanding of the cultural significance of the area and sites.</p>	<p>Precede all ground disturbance work by a check for cultural heritage.</p>	HIGH
<p>The only recorded historic site is the a section of the Cobb & Co. Coach route to Binnaway that is now Box Ridge Road and forms the western boundary of Binnaway Nature Reserve.</p>	<p>Greater involvement of local Aboriginal Elders and Aboriginal community groups in the management and conservation of cultural sites.</p>	<p>Undertake surveys and research into the cultural heritage of the Reserves in consultation with Aboriginal Elders, local community groups, long term residents and local historians. Aboriginal site surveys will be triggered by fire, either hazard reduction or wildfire, to take advantage of greater ground visibility.</p>	MEDIUM
<p>Involve Aboriginal Elders and Local Aboriginal Land Councils in management of Aboriginal sites, places and values of the Reserves</p>	HIGH		
Access and Public Use			
<p>Public access to the Reserves is via Mancers Road and Southern Firebreak in Binnaway Nature Reserve and Johnson's Lane to Weetalibah.</p>	<p>The local community is aware of the significance of the area and of management programs.</p>	<p>Public vehicle access is via public roads only. No public vehicular access on management trails.</p>	HIGH
<p>Use of the Reserves must be carefully managed since they area relatively small and significant areas of remnant vegetation.</p>		<p>Install appropriate boundary and regulatory signage.</p>	HIGH
		<p>Permit organised recreational or educational visits, subject to limits on numbers and other conditions if necessary to minimise impacts.</p>	MEDIUM

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
<p>Illegal activities such as pig hunting, drug growing and firewood collecting regularly occur within the Reserves.</p> <p>Opportunities for recreation are low. Low intensity/impact activities such as bird watching and day bushwalking are appropriate.</p>	<p>Visitor use is nature based and ecologically sustainable.</p>	<p>Consult with neighbours Coonabarabran and Coolah Shire Council in order to determine if the Southern Firebreak in Binnaway Nature Reserve and Johnson Lane in Weetalibah should be reclassified as a NPWS management trails.</p> <p>Prohibit camping, horse riding and trail bike riding.</p> <p>Monitor levels and impacts of use.</p> <p>Establish a community watch program and communication structure to identify illegal activities.</p>	<p>MEDIUM</p> <p>HIGH</p> <p>MEDIUM</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.

For additional information or enquires on any aspect of the plan, contact the Service's Coonabarabran Area Office at 30 Timor Street Coonabarabran, or by phone on (02) 6842 1311.