NSW GOVERNMENT
Environment, Climate Change & Water
National Parks & Wildlife Service

Binjura Nature Reserve

Plan of Management

BINJURA NATURE RESERVE

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment, Climate Change and Water

February 2011

This plan of management was adopted by the Minister for Climate Change and the Environment on 21st February 2011.

Acknowledgments

The NPWS acknowledges that this reserve is within the traditional country of the Ngarigo people.

This plan of management includes substantial information from a Statement of Interim Management Intent prepared by Simon Tozer in 2001, and a report on the proposed Murrumbidgee Gorge Nature Reserve prepared by Liz Dovey in 1984.

Cover photograph of the dry stone wall on the ridge in the Butlers Creek section of the reserve by Andrew Miller, NPWS.

For additional information or any inquiries about Binjura Nature Reserve or this plan of management, contact the NPWS Alpine Area at the Snowy Mountains Region Office, Kosciuszko Road, Jindabyne NSW 2627, or by telephone on (02) 6450 5555.

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FOREWORD

Binjura Nature Reserve was reserved in 2001. It is located adjacent to the town of Cooma in the NSW Snowy Mountains and has an area of 707 hectares.

Binjura Nature Reserve protects three vegetation communities that are under-represented in the reserve system, native tussock grass which is uncommon in the area, and a section of the Murrumbidgee River gorge. It also contains potential habitat for a number of threatened animals.

The New South Wales *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each nature reserve. A draft plan of management for Binjura Nature Reserve was placed on public exhibition from 14th May until 16th August 2010. The submissions received were carefully considered before adopting this plan.

The plan contains a number of actions to achieve the State Plan priority to "Protect native vegetation, biodiversity, land, rivers and coastal waterways", including the protection of native tussock grass, control of introduced plants and animals, implementation of fire management strategies, and construction of boundary fences to exclude stock from the reserve.

This plan of management establishes the scheme of operations for Binjura Nature Reserve. In accordance with section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

Frank Sartor MP
Minister for Climate Change and the Environment

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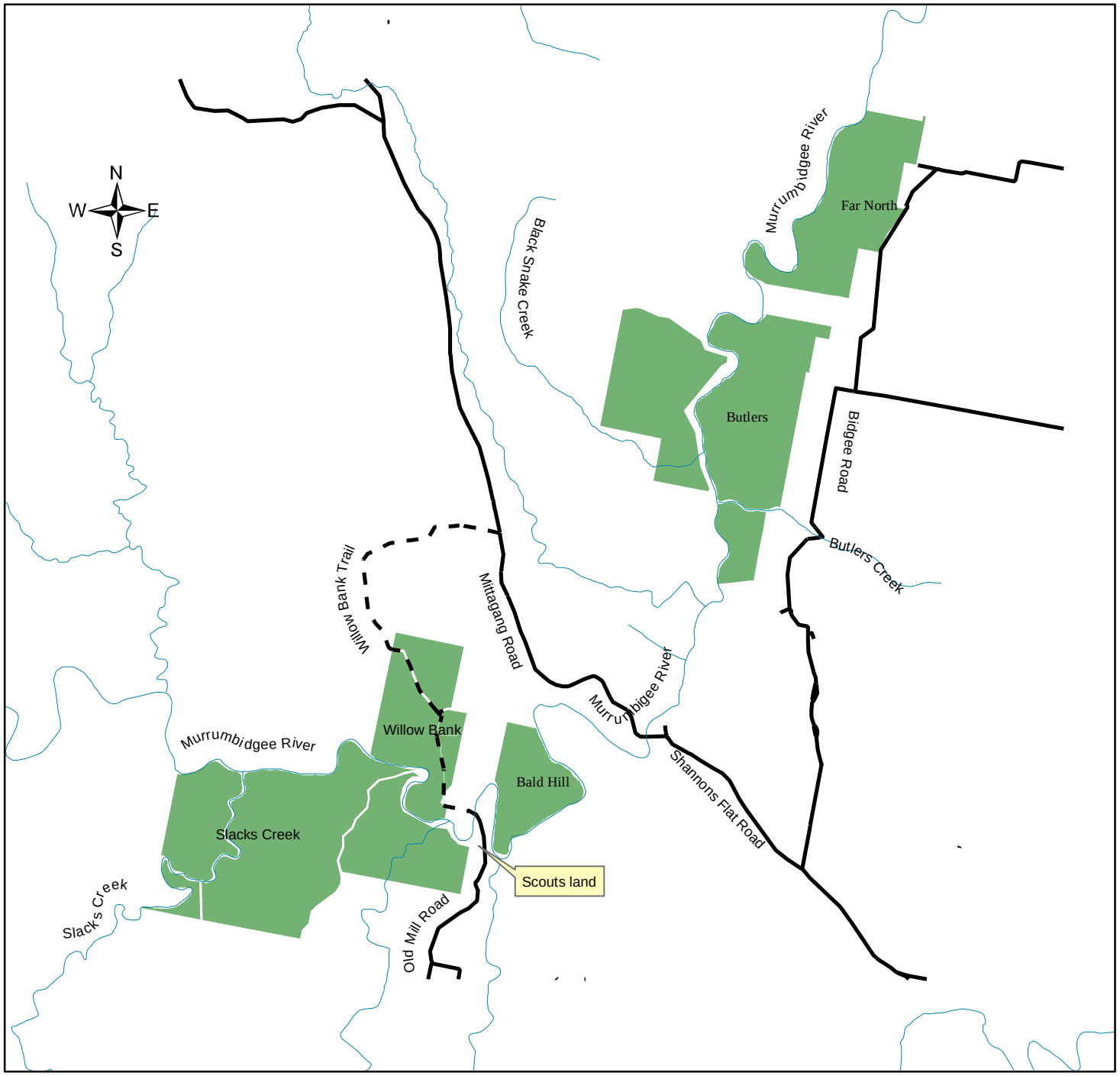

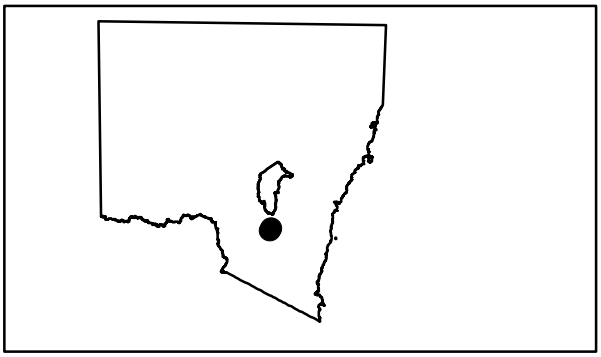

Legend

- Binjura Nature Reserve
- Public roads
- Management Trail/Private Trails
- Rivers and creeks

1. LOCATION GAZETTAL AND REGIONAL CONTEXT

Binjura Nature Reserve is located approximately 8 kilometres north-west of Cooma in the southern tablelands of NSW and covers an area of 707 hectares (refer map, page 3). The reserve is comprised of five disjunct blocks of land (called in this plan the Bald Hill, Willow Bank, Slacks Creek, Butlers Creek and Far North sections) which are located on both banks of the Murrumbidgee River.

Binjura Nature Reserve was reserved on 31st March 2001 over vacant Crown land as a result of the Southern Regional Forest Agreement. The Southern Regional Forest Agreement provided for major additions to the reserve system, including the establishment of this nature reserve, following assessment of the natural, cultural, economic and social values of forests. The assessment identified that this area contained three vegetation communities that were under-represented in the existing reserve system. These were:

- Eastern Tablelands Dry Shrub / Grass Forest;
- South East Tablelands Dry Shrub / Tussock Grass Forest; and
- South Eastern Tablelands Dry Shrub / Grass / Herb Forest.

As well as Binjura Nature Reserve, this plan covers two roads in the Willow Bank section which are vested in the Minister for Climate Change and the Environment for the purposes of Part 11 of the NPW Act. These Ministerial roads were established to ensure a continuation of access arrangements to neighbouring private land (refer map).

Binjura Nature Reserve is located within a landscape that has been largely cleared for pastoral use. The steepness of the Murrumbidgee River gorge and associated ridges resulted in the area that is now Binjura Nature Reserve remaining in a vegetated state. The Far North section of the nature reserve was, before reservation, a reserve for public recreation held under a Permissive Occupancy by the Bunyan Recreation Reserve Trust. There were no facilities on the recreation reserve and its main use was for fishing.

The Boy Scouts Association of NSW owns an area between two of the portions of nature reserve (see map). This land is mainly used by the First Cooma Scouts as a camping area and by others for picnics. There is no permanent infrastructure on this land except for a pump and pipeline which is used to irrigate the nearby Cooma golf course.

There are no other reserved lands located close to Binjura Nature Reserve. Coonatha Nature Reserve lies approximately 10 kilometres to the east of the reserve and Kosciuszko National Park lies approximately 40 kilometres to the west.

Most of Binjura Nature Reserve lies within the Cooma-Monaro Local Government Area (LGA), with the small portion to the west of Slacks Creek being within Snowy River LGA. It is within the boundaries of the Merrimans Local Aboriginal Land Council, and within the area of the Murrumbidgee Catchment Management Authority.

2. MANAGEMENT CONTEXT

2.1 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* (NPW Act), the National Parks and Wildlife Regulation, the *Threatened Species Conservation Act 1995* and the policies of the National Parks and Wildlife Service (NPWS). Section 72AA of the NPW Act lists the matters to be considered in the preparation of a plan of management. The policies arise from the legislative background and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic heritage conservation, recreation, commercial use, research and communication.

Other legislation, international agreements and charters may also apply to management of the area. In particular, the *Environmental Planning and Assessment Act 1979* may require the assessment and mitigation of the environmental impacts of works proposed in this plan.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted this plan, no operations may be undertaken within Binjura Nature Reserve except in accordance with the plan. This plan will also apply to any future additions to Binjura Nature Reserve. Should management strategies or works be proposed for the reserve or any additions that are not consistent with the plan, an amendment to the plan will be required.

2.2 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 (section 30J), 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.

2.3 STATEMENT OF SIGNIFICANCE

Binjura Nature Reserve is considered to be of significance for:

- Landscape/Catchment Values: The reserve contains steep gorges and ridges along both banks of a section of the Murrumbidgee River. The forested river gorges of the reserve form a striking contrast to the undulating sparsely vegetated tablelands of the Monaro region.

- Biological Values: The reserve contains a native tussock grass (*Poa sieberiana var. cyanophylla)* which is uncommon in the area. The reserve also contains South East Tablelands Dry Shrub/Tussock Grass Forest, Eastern Tablelands Dry Shrub/Grass Forest and South Eastern Tablelands Dry Shrub/Grass/Herb Forest, as well as potential habitat for a number of threatened animals.

2.4 MANAGEMENT DIRECTIONS

In addition to the general principles for the management nature reserves (refer section 2.2), the following specific management directions apply to the management of Binjura Nature Reserve:

- Protection of the three vegetation communities for which the reserve was declared, and in particular the native tussock grass that is represented in all three communities;

- Control of pest plants and animals; and

- Protection of the reserve from fire and illegal activities.

3. VALUES

The location, landforms and plant and animal communities of an area have determined how it has been used and valued. Both Aboriginal and non-Aboriginal people place values on natural areas, including aesthetic, social, spiritual and recreational values. These 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 heritage, cultural heritage, threats and on-going use are dealt with individually, but their inter-relationships are recognised.

3.1 GEOLOGY, LANDSCAPE AND HYDROLOGY

Binjura Nature Reserve is located on the upper reaches of the Murrumbidgee River, which flows in an easterly and north-easterly direction through the reserve. It is composed of sections of gorge on one or both sides of the river and the associated hills. The hills, which run parallel to the river, are deeply incised by creeks flowing into the Murrumbidgee River. The most significant of these is Slacks Creek, which is one of the larger sub-catchments of the Murrumbidgee River in the Cooma area. Other tributaries include Spring Creek and Butlers Creek. While these latter creeks are within Binjura Nature Reserve, the Murrumbidgee River and Slacks Creek are not part of the nature reserve.

The reserve ranges in altitude from around 700 metres at the river, with the sides of the gorges rising steeply to hill tops of over 900 metres. The forested river gorges of the reserve form a striking contrast to the undulating sparsely vegetated tablelands of the Monaro region.

Binjura Nature Reserve lies predominantly on Cooma Metamorphics, which consist mainly of Ordovician schists, gneisses and granites. Along the edges of the gorge the hill slopes are very steep (>56%) with a large amount of rock outcrops. Away from the gorge are steep to rolling hills which are also of high erosion potential.

3.2 NATIVE PLANTS AND ANIMALS

Most of Binjura Nature Reserve (approximately 80%) supports South East Tablelands Dry Shrub / Tussock Grass Forest. This community consists of a medium forest up to 15 metres high, dominated by scribbly gum *(Eucalyptus rossii*), together with brittle gum *(E. mannifera)* and occasional broad-leaved peppermint *(E. dives).* The understorey consists of a sparse cover of tall shrubs, while the ground cover is tussock grass *(Chionochloa pallida)*.

Approximately 13% of the reserve is Eastern Tablelands Dry Shrub / Grass Forest, which is a medium open forest up to 15 metres tall dominated by white sallee *(E. pauciflora)* and manna gum *(E. viminalis)*. This community is found along the Murrumbidgee gorge in the two northern sections of the reserve, along Butlers Creek and in the north-eastern corner of the Willow Bank section of the reserve.

South Eastern Tablelands Dry Shrub / Grass / Herb Forest is found on only 7% of the reserve. It is a medium open forest up to 20 metres tall, co-dominated by apple box (*E. bridgesiana*), white sallee and broad-leaved peppermint. This community is found along the Murrumbidgee gorge in the Bald Hill and Willow Bank sections of the reserve.

The poa tussock *Poa sieberiana var. cyanophylla* is a significant species in the reserve. This species, which is found in all three communities, is uncommon in the area and has a similar appearance to the introduced serrated tussock.

Only one fauna survey has been undertaken in the vicinity of Binjura Nature Reserve (by Dovey in August 1981), and this caught no animals which was thought to be due to the very cold weather and the fact that the survey only sampled ridge tops. Native mammals seen in the reserve include eastern grey kangaroos (*Macropus giganteus)*, swamp wallabies (*Wallabia bicolor)*, wallaroos (*Macropus robustus*), wombats (*Vombatus ursinus)* and brushtail possums (*Trichosurus vulpecula)*. The CRA predicted that koalas (*Phascolarctos cinereus),* which are listed as vulnerable under the Threatened Species Conservation Act, may be present as may the threatened spotted-tailed quoll (*Dasyurus maculatus)*, eastern little mastiff-bat (*Mormopterus norfolkensis)*, and a number of other threatened species for which the reserve contains suitable habitat.

Birds recorded in Binjura Nature Reserve include the superb lyrebird (*Menura novaehollandiae)*, brown falcon (*Falco berigora)*, noisy miner (*Manorina melanocephala)*, Australian raven (*Corvus coronoides)*, galah (*Eolophus roseicapillus)*, crimson rosella (*Platycerus elegans)*, grey butcherbird (*Cracticus torquatus)*, grey shrike-thrush (*Colluricincla harmonica)*, flame robin (*Petroica phoenicea)* and white-throated treecreeper (*Cormobates leucophaea)*.

3.3 ABORIGINAL HERITAGE

Aboriginal communities have an association and connection to the land. The land and water 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, kinship systems and strengthening social bonds. Aboriginal heritage and connection to nature are inseparable from each other and need to be managed in an integrated manner across the landscape.

Binjura Nature Reserve is within the Monaro area which was the home of the Ngarigo people. Today Binjura Nature Reserve is within the area of the Merrimans Local Aboriginal Land Council.

There have been no cultural heritage surveys of Binjura Nature Reserve and no sites have been recorded. The Murrumbidgee River would have been a source of food for Aboriginal people, but the steep terrain and gorges probably limited use of the reserve area.

3.4 HISTORIC HERITAGE

The northern sections of Binjura Nature Reserve were previously a reserve for public recreation, and parts of the reserve have been used for limited grazing.

There is a dry stone wall on the top of the ridge in the Butlers Creek section of the reserve about 250 metres from the reserve boundary. This is a low wall which runs in an east-west direction and was probably a boundary marker of some kind. Associated with this, on the western side of the ridge, are the remains of a high wire fence which appears to have enclosed a small area. There are remains of a lower wire fence joining this running down to the Murrumbidgee River.

The Bunyan Recreation Reserve Trust had a Permissive Occupancy for the purposes of public recreation over the reserve from at least 1970. Officers of the Trust were also members of the Monaro Acclimatisation Society, so it is likely that the main use of the area during this time was for fishing, and that introduced fish finglings were released into the this section of the Murrumbidgee River.

In 1984 a larger area that includes the current Binjura Nature Reserve was proposed for reservation as Murrumbidgee Gorge Nature Reserve, however nothing occurred until reservation of Binjura Nature Reserve in 2001.

3.5 PUBLIC USE

Binjura Nature Reserve has little public use due to it being surrounded by private land, the inaccessibility of much of the section of the Murrumbidgee River within the reserve, the generally low water levels in this section of the river, and the presence of carp that has affected water quality and populations of other fish.

There is no public vehicular access to the reserve. Old Mill Road is a private road once it reaches the land owned by the Scout Association. The Willow Bank Trail crosses private property and is not available for public access.

There are no facilities on the reserve, and only limited use of the river corridor within the reserve for fishing, bushwalking and nature appreciation. This is mainly by locals and generally within the Butlers Creek section or on/near the Scout land.

Picnic facilities are provided by Cooma-Monaro Shire Council on the river immediately downstream of the Shannons Flat Road bridge and pumping station, between the northern and southern parts of the reserve.

4. ISSUES

4.1 WEEDS AND PEST ANIMALS

Weeds within Binjura Nature Reserve are concentrated along the boundaries with farmland and along the river. A Pest Management Strategy has been prepared which outlines regional priorities and control methods (NPWS, 2008).

The most significant environmental weeds within the reserve are willows (*Salix* spp.), which are scattered along the length of the Murrumbidgee River and in some tributaries. They include mature basket willows and weeping willows and are most numerous in the southern sections of the reserve.

Other weeds present in Binjura Nature Reserve include viper's bugloss *(Echium vulgare)* and blackberry (*Rubus fruticosus*) which are found in more open areas along the river banks and on the boundaries with farm land, sweet briars (*Rosa rubiginosa*) which are scattered along the river bank (especially downstream of Butlers Creek) and some farm boundaries, and horehound (*Marrubium vulgare*) which is found in localised patches in open areas on the bank of the river in the Willow Bank section of the reserve.

Serrated tussock (*Nassella trichotoma)* occurs along the eastern boundary of the Far North section of the reserve. It is a class 4 weed under the *Noxious Weeds Act 1993* and must be controlled to reduce its effect on the economy, community and environment. Its only known location in the reserve is in the northern part of the reserve adjacent to Bidgee Road. Here it is controlled annually by the NPWS but private landholders as yet have carried out no control programs.

Introduced animals present in the reserve include foxes, goats, pigs and cats. Foxes are present throughout the reserve. Goats are mainly present in the Butlers Creek section. Pigs have not been sighted within the reserve but pigs are known to be present just outside the reserve's boundaries and are likely to be present on the reserve. No information is known on the location of cats in the reserve but it is assumed they are widespread but in low numbers.

4.1 FIRE MANAGEMENT

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes can lead to loss of particular plant and animal species and communities, and high frequency fires have been listed as a key threatening process under the Threatened Species Conservation Act.

The primary fire management objectives of the NPWS are to protect life and property and community assets from the adverse impacts of fire, whilst managing fire regimes to maintain and protect biodiversity and cultural heritage. The NPWS uses a zoning system for bushfire management that is compatible with the zoning used by the

Cooma-Monaro Bush Fire Management Committee (BFMC) in their bushfire risk management plans.

Binjura Nature Reserve contains dry sclerophyll forest in steeply dissected country and is classified as a moderate to low fire risk. There is a greater risk of fires burning into the nature reserve from the surrounding area than there is of fires starting within the reserve itself, although illegal campfires are a potential risk.

A separate fire management strategy has been prepared for Binjura Nature Reserve (NPWS, 2004). Due to the fact that the reserve is not adjacent to built assets which would be exposed to a high level of bushfire risk from the reserve and does not have the history of bushfire ignitions or known areas of high bushfire potential, the majority of the reserve is designated as a Land Management Zone (LMZ). Apart from the over-riding legislative objective of protecting life and property, the primary fire management objectives for a LMZ are to conserve biodiversity and protect cultural heritage.

Three small sections of the reserve have been designated as Strategic Fire Management Zones (SFAZ). These are in the far south eastern corner of the Slacks Creek section, Bald Hill and the southern tip of the Butlers section. Prescribed burning may be undertaken in these areas to give strategic advantage to fire fighters protecting property on the eastern sides of the reserve.

The adaptability of plant species to fire can be grouped on the basis of vegetation communities, and thresholds for fire frequency established as a guide to maintaining species diversity. It has been estimated that the dry sclerophyll forest community represented in the reserve should not generally be burnt more frequently than every 22 years, or less frequently than every 50 years. However, these thresholds are based on life cycles of a limited number of species, and given the lack of knowledge on ecosystem functioning without fire, the upper limits are untested.

4.3 ISOLATION AND FRAGMENTATION

The area surrounding Binjura Nature Reserve has been extensively cleared, which has resulted in a high loss of biodiversity and fragmentation of habitat in the region. Long term conservation of biodiversity depends upon the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands. Nearby vegetated areas contribute to the habitat values of the reserve and provide ecological corridors to other forested areas. Maintaining the integrity of the remaining habitat within the reserve, and where possible linking this to adjacent areas of bushland to facilitate wildlife corridors, is important in ensuring long term viability of the reserves' biological values.

Further subdivision close to Binjura Nature Reserve will increase recreational pressures as well as increasing the risks of fire and pollution. In addition, the disjunct blocks of land comprising the reserve increase the potential for clearing along boundaries and make management of the reserve more difficult.

4.4 CLIMATE CHANGE

Climate change has been listed as a key threatening process under the Threatened Species Conservation Act. Projections of future changes in climate for NSW include higher temperatures, elevated CO_2, more intense but possibly reduced annual average rainfall, increased temperature extremes and higher evaporative demand. These changes are likely to lead to greater intensity and frequency of fires, more severe droughts, reduced river runoff and water availability, regional flooding, increased erosion and ocean acidification.

Climate change may significantly affect biodiversity by changing population size and distribution of species, modifying species composition, and altering the geographical extent of habitats and ecosystems. The potential impact of climate change is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from weeds and feral animals. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

Programs to reduce the pressures arising from other threats, such as habitat fragmentation, invasive species, bushfires, pollution and urban expansion, will help reduce the severity of the effects of climate change.

5. REFERENCES

Costin, A. (1954) *A study of the ecosystems of the Monaro region of New South Wales with reference to soil erosion.* NSW Soil Conservation Service.

NPWS (2001) *Statement of Interim Management Intent, Binjura Nature Reserve*. Unpublished NPWS report.

NPWS (2004) *Binjura Nature Reserve Draft Fire Management Strategy* http://www.environment.nsw.gov.au/resources/parks/FMSDraftBinjuraNR.pdf

NPWS (2008) *Snowy Mountains Region and Resorts Section Pest Management Strategy 2008-2011.* http://www.environment.nsw.gov.au/resources/pestsweeds/PMS_SMR_20082011.pdf

6. IMPLEMENTATION

Current Situation	Desired Outcomes	Management Response	Priority
6.1 On-Park Ecological Conservation			
The soils of the reserve are shallow, stony and highly erodible. In the gorge areas there is potential for rock falls. Erosion hazard is increased if the vegetative understorey is damaged by grazing or fire.	Soil erosion is minimised.	6.1.1 Any earthworks carried out, e.g. during a bushfire, will be rehabilitated as soon as possible.	High
	Landscape and catchment values are protected.	6.1.2 No development of facilities, including toilets, due to the high erosion potential and low absorption capacity of the soils.	High
The reserve protects part of the upper catchment of the Murrumbidgee River but is downstream of rural and residential lands and Tantangara Dam.	Native plant and animal species and communities are conserved.	6.1.3 Ensure that care is taken to protect the native tussock grass, especially during weed control works.	High
		6.1.4 Encourage local ornithologists to undertake surveys in the reserve and report any sightings.	Medium
The vegetation of the reserve consists of mainly dry sclerophyll forest. A native tussock grass found in the reserve has strong similarities to serrated tussock.	The effects of climate change on natural systems are reduced.	6.1.5 Undertake and/or encourage surveys for predicted threatened fauna species.	Medium
The reserve was predicted by the CRA to contain valuable habitat for fauna including threatened species, however there has been inadequate fauna survey to verify this claim.		6.1.6 Liaise with neighbours to encourage the retention and appropriate management of key habitat and corridors adjacent to the reserve.	Medium
The value of the reserve for native fauna will be enhanced by maintaining vegetated links and corridors to other forested areas.		6.1.7 Continue existing fire, pest and weed management programs to increase the reserve's ability to cope with future disturbances, including climate change.	High
Climate change has been identified as a key threatening process under the TSC Act.			

Current Situation	Desired Outcomes	Management Response	Priority
6.2 Cultural heritage			
No Aboriginal sites have been recorded within the reserve, however no surveys have been undertaken and sites may be present.	Aboriginal places and values are identified and protected.	6.2.1 Precede all ground disturbance work by a check for cultural features.	High
The only known historic site is the dry stone wall in the Butlers Creek section of the reserve.	Aboriginal people are involved in management of the Aboriginal cultural values of the reserve.	6.2.2 Consult with the Merrimans Local Aboriginal Land Council and other Aboriginal stakeholders to determine the cultural values of the reserve and involve them in surveys for and management of any Aboriginal sites, places and values relating to the reserve.	Medium
	Understanding of the historic values of the reserve is improved and features are conserved and managed in accordance with their significance.	6.2.3 Ensure that no works undertaken on the reserve impact on the dry stone walls.	Medium
		6.2.4 Investigate the origins and significance of the dry stone wall in the Butlers Creek section of the reserve.	Low
		6.2.5 Liaise with the Cooma Historical Society to determine further information on past use of the reserve.	Low

Current Situation	Desired Outcomes	Management Response	Priority
6.3 Visitor Use and Services Visitor use of the reserve is low due to it being surrounded by private land. The river is fairly inaccessible within the reserve, water levels are low and European carp are present. As a result the reserve is not generally used by members of the public. The reserve is used occasionally for bushwalking and fishing. Some trail bike and 4WD activity has resulted in informal tracks and camping sites which are damaging the reserve. No facilities for visitors are currently provided and none are proposed for the reserve. Picnic facilities on the river are provided by Council adjacent to Shannons Flat Road.	Visitor use is appropriate and ecologically sustainable. Negative impacts of visitors on reserve values are stable or diminishing. The local community is aware of the significance of the reserve and of management programs.	6.3.1 Permit use of the reserve for day walks, nature study, fishing and other water-based recreational activities. No visitor facilities will be provided. 6.3.2 Prohibit driving (including by trail bikes), camping, fires and horse riding in the reserve. 6.3.3 Install signs at points where illegal access and use is an issue. At this stage this is on the river adjacent to the Willow Bank block. 6.3.4 Provide information to neighbours and local schools about the values of the reserve and appropriate uses.	High High High Medium
6.4 Weeds and Pest Animals Weeds occurring in the reserve include willows, viper bugloss, sweet briar, serrated tussock, horehound and blackberry. Goats and foxes are present, and pigs may be present on the reserve. It is likely that cats are also present. A Regional Pest Management Strategy has been prepared to guide control of weeds and pest animals.	Introduced plants and animals are controlled and where possible eliminated. The negative impacts of weeds and pest animals on reserve values are stable or diminishing.	6.4.1 Control introduced plant and animal species. Priority will be given to the control of willows and serrated tussock. 6.4.2 Institute a program to control goats, and pigs if found to be present. 6.4.3 Undertake fox baiting and cat control within the reserve if required for the protection of fauna species.	High High Medium

Current Situation	Desired Outcomes	Management Response	Priority
6.5 Fire management No wildfires have been recorded in the reserve in recent times. A fire management strategy was prepared in 2004. Widespread, high intensity fires have the potential to destroy food, perching and nesting resources in the reserve. High frequency fires have been identified as a key threatening process under the TSC Act. Fire also has the potential to increase erosion by removing leaf litter. Costin (1954) recommended against even light burning in areas such as the reserve. The reserve is within the area covered by the Cooma-Monaro and Snowy River Bush Fire Management Committees, and the Dry Plains, Wambrook and Cooma Rural Fire Service brigades.	Life, property and natural and cultural values are protected from fire. Fire regimes are appropriate for conservation of native plant and animal communities. Negative impacts of fire on natural and cultural heritage values are stable or diminishing.	6.5.1 Implement the fire management strategy for the reserve. 6.5.2 Implement the following fire management guidelines for maintaining the biodiversity and cultural values of the reserve, including: – Containing fires to as small an area as possible, and mitigate fire intensity where possible. – Maintaining as much of the reserve as possible in as old a fire age class as possible. – Considering other forms of hazard reduction apart from prescribed burning due to the tendency of the understorey to scrub up after burning and for erosion to increase. – Protecting the dry stone walls from fire. 6.5.3 Participate in the Cooma-Monaro and Snowy River Bush Fire Management Committees (BFMCs). Undertake any fuel management activities identified for property protection in conjunction with the BFMCs. 6.5.4 Maintain coordination and cooperation with local Rural Fire Service brigades and neighbours with regard to fuel management and fire suppression.	High Medium Medium Medium

Current Situation	Desired Outcomes	Management Response	Priority
6.6 Infrastructure and Maintenance			
There is only one management trail in the reserve, a 900 metre long section of Willow Bank Trail, which is accessed via the Willow Bank property and follows a Crown road reserve. This trail also provides access between different parts of the Willow Bank property. Use of this trail is an issue for the owner of Willow Bank. None of the other road reserves in Binjura Nature Reserve have roads built on them and the terrain makes them unsuitable for development as roads. The boundaries of the reserve are not fenced, and this leads to some incursion of stock. Part of the reserve adjoining portions 89 & 67 appears to be fenced into the neighbouring property.	Management facilities adequately serve management needs and have minimal impact. The reserve is maintained free from encroachment of stock and non-reserve infrastructure.	6.6.1 Use of management trails will be restricted to authorised management purposes only. 6.6.2 Erect a locked gate on the boundary with the Willow Bank property. 6.6.3 Negotiate with the Lands Department to add all the Crown road reserves to Binjura Nature Reserve. 6.6.4 Formulate an agreement with the owners of the Willow Bank property to maintain access to parts of their land through the reserve, and NPWS access to the reserve through their land. 6.6.5 Encourage construction and maintenance of boundary fences to exclude stock from the reserve. Fencing assistance may be provided in accordance with NPWS policy. 6.6.6 Relocate the boundary fence so that it follows the boundary of the reserve.	High High Low High Medium High

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.