

**YAOUK NATURE RESERVE
PLAN OF MANAGEMENT**

NSW National Parks and Wildlife Service

Part of the Department of Environment, Climate Change and Water

August 2009

This plan of management was adopted by the Minister for Climate Change and the Environment on 18th August 2009.

Acknowledgments

The NPWS acknowledges that this reserve is in the traditional country of the Walgalu people.

This plan of management is based on a draft plan prepared by the staff of the South West Slopes Region of the NSW National Parks and Wildlife Service (NPWS), part of the Department of Environment and Climate Change.

Cover photograph of Yaouk Nature Reserve by Jo Caldwell, NPWS.

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ISBN 978 1 74232 423 4

DECCW 2009/594

FOREWORD

Yaouk Nature Reserve is located northeast of Adaminaby, within the sub-alpine and montane regions of New South Wales. The reserve covers an area of 2,924 hectares.

Yaouk Nature Reserve protects Candlebark shrubland, a sub-alpine vegetation community which has a very limited distribution, is not well represented in conservation reserves, and is highly vulnerable to drought and frequent fire regimes. It also has abundant bird life, with 25 species recorded to date.

The reserve also contains Aboriginal sites of considerable interest given the landscape settings and the elevation at which they were found, and was part of a squatter's run selected in 1838.

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 an area will be managed in the years ahead.

A draft plan of management for the Yaouk Nature Reserve was placed on public exhibition from 27th June until 13th October 2008. The submissions received were carefully considered before adopting this plan.

This plan contains a number of actions to achieve "Better environmental outcomes for native vegetation, biodiversity, land, rivers, and coastal waterways" (Priority E4 in the State Plan) including protection of threatened species, communities and populations; control of introduced plants and animals; and fire management.

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

Carmel Tebbutt MP
Deputy Premier
Minister for Climate Change and the Environment

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1. INTRODUCTION

1.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Yaouk Nature Reserve (referred to as “the reserve” in this plan) is located approximately 12 kilometres north-east of Adaminaby and 5 kilometres south-east of the locality of Yaouk, within the subalpine and montane regions of New South Wales. Scabby Range Nature Reserve is located approximately 2 kilometres north-east of the reserve’s northern block, which in turn adjoins Namadgi National Park in the ACT. Kosciuszko National Park is situated 8 kilometres to the west.

The reserve, comprising two separate parcels of land totalling 2,924 hectares, was gazetted in January 2001 as part of the Regional Forest Agreement (RFA) process. The reserve was previously managed as Crown Land. The RFA provided for major additions to the reserve system, including the establishment of Yaouk Nature Reserve, following assessment of the natural, cultural, economic and social values of forests. Yaouk Nature Reserve was gazetted on the basis that it comprised vegetation classes poorly represented in NSW reserves.

The reserve was named for its proximity to Yaouk locality, and because the northern parcel encompasses Yaouk Peak.

The major land use of the region is agriculture, including grazing and some cropping. The Wagonga Local Aboriginal Land Council owns a large parcel of vegetated land between the north and south block.

The reserve is within the geographical area of Cooma-Monaro Shire Council, the Murrumbidgee Catchment Management Authority, South East Livestock Health and Pest Authority, and the Wagonga Local Aboriginal Lands Council.

1.2 LANDSCAPE

Natural and cultural heritage and on-going use are strongly inter-related and together form the landscape of an area. Much of the Australian environment has been influenced by past Aboriginal and non-Aboriginal land use practices and the activities of modern day Australians continue to influence bushland through recreational use, cultural practices, the presence of introduced plants and animals and in some cases air and water pollution.

The geology, landform, climate, plant and animal communities of the area, plus its location, have determined how it has been used by humans. 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. 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 NPW Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). The policies are based on 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.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, no operations may be undertaken within Yaouk Nature Reserve except in accordance with this plan. This plan will also apply to any future additions to Yaouk Nature Reserve. Should management strategies or works be proposed for the nature 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.

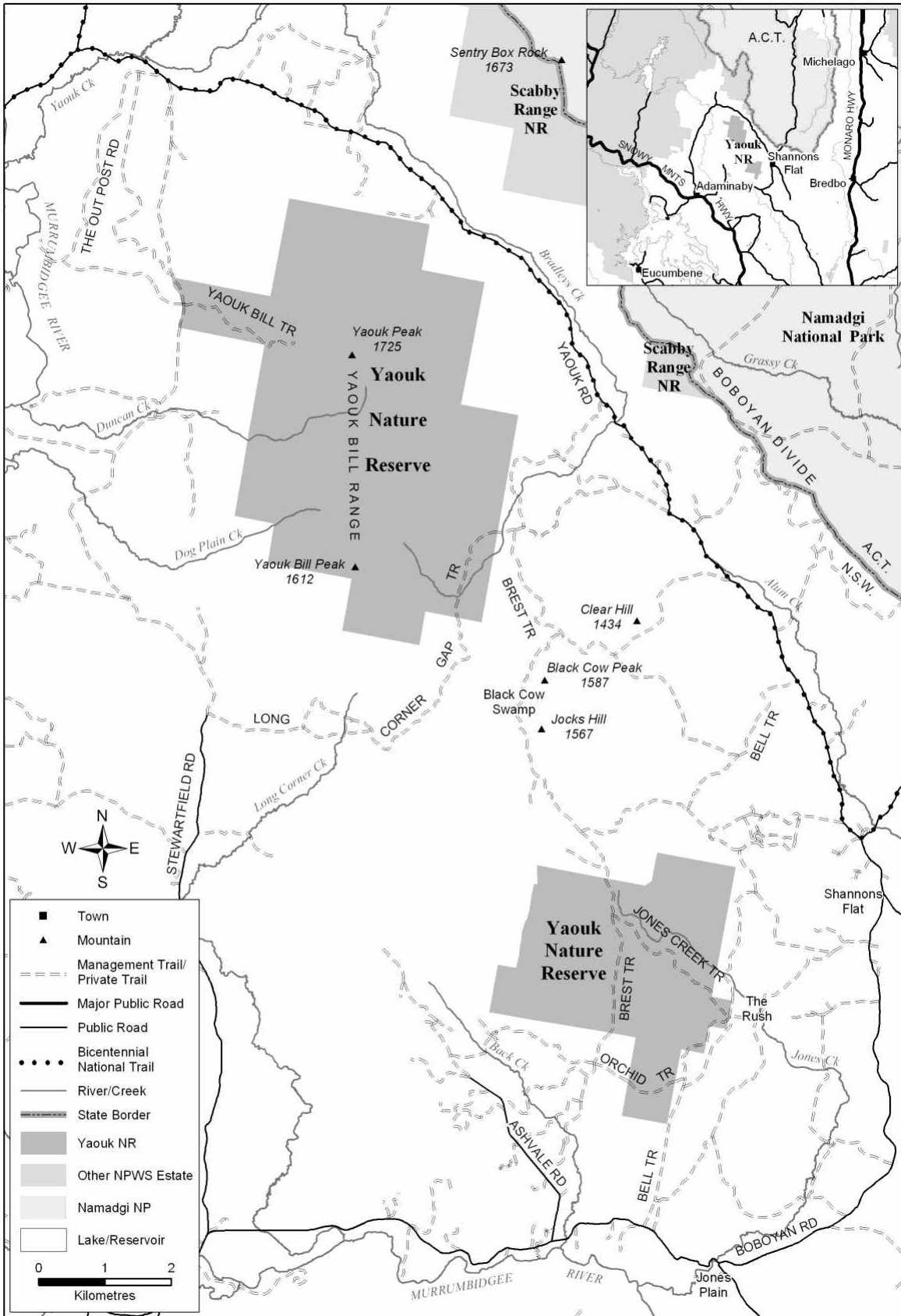
Nature reserves differ from national parks in that the provision for visitor use is not a management principle or purpose.

2.3 REGIONAL FOREST AGREEMENTS

Regional Forest Agreements are one of the principle means of implementing the National Forest Policy Statement of 1992. Under this Statement, Commonwealth, State and Territory governments agree to work towards a shared vision for Australia's forests. This process aims to maintain native forest estate, manage it in

an ecologically sustainable manner and develop sustainable forest-based industries. The Statement (1992) 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.

3. RESERVE MAP



4. NATURAL HERITAGE

4.1 GEOLOGY, HYDROLOGY AND LANDFORM

The two blocks of Yaouk Nature Reserve are separated by Black Cow Peak. The northern block, comprising 2061 hectares, is steep, encompassing a complex of slopes, major spurs and ridgelines connecting with Yaouk Peak at the centre of the block. Elevations range from 1,200 metres at the boundaries of the block to 1,725 metres at Yaouk Peak. Yaouk Peak and the higher parts of the ridge are characterised by extensive granite outcrops.

The southern block of 863 hectares takes in the southern end of the Yaouk Bill Range. It includes two major ridgelines that form the watershed for Back Creek and Jones Creek. Elevations range from 1,100 to 1,420 metres. Jones Creek rises approximately 2 kilometres north-west of the reserve and flows roughly through the centre of the block towards its confluence with the Murrumbidgee River to the south. The valley associated with the creek is a prominent feature in the landscape. Bradleys Creek, Duncan Creek, Long Corner Creek and several other minor ephemeral drainage lines originate within the reserve. Most feed into the Murrumbidgee River to the south of the reserve.

The reserve is underlain by Silurian-Devonian age Yaouk leucogranite, which is dominated by coarse and fine leucogranite and aplite. The soils of the area are variable due to changes in elevation and aspect but are generally moderately deep clay soils on the sheltered slopes of the reserve, and deep organic loams in the valleys where drainage is impeded. Weathered rock fragments are common in the shallow soils of the exposed peaks, and much of this weathered material has moved downhill to form shallow colluvial clay loams on the high elevation exposed slopes of the reserve (Bureau of Mineral Resources 1978).

The *Catchment Management Act 1989* provides a framework for achieving cleaner water, less soil erosion, improved vegetation cover, the maintenance of ecological processes and a balanced and healthier environment. It also provides a focus to balance conservation needs and development pressures and encourages a more aware and involved community. An important means of achieving these aims is the formation and support of catchment management boards at a local level. The reserve is within the area of the Murrumbidgee Catchment Management Authority.

Desired Outcomes

- The landscape values of the park are protected.
- Human induced soil erosion is prevented or arrested and natural soil erosion is minimised where appropriate.
- Water quality and health of reserve streams is improved.

Strategies

- Undertake all works in a manner that protects landscape values.

- Design and undertake all works in a manner that minimises soil erosion and water pollution.
- Monitor erosion on all trails in the reserve and take action if needed to minimise erosion.
- Continue to support the Murrumbidgee Catchment Management Authority to maintain and improve water quality in the catchments.

4.2 NATIVE PLANTS

The vegetation of the reserve is reminiscent of sub-alpine environments in northern Kosciuszko National Park. Very slight changes in soils, aspect and elevation bring about significant changes to the vegetation type (EcoGIS 2002).

The northern block of the reserve is dominated by snow gum woodland that includes mountain gum *E. dalrympleana* and broad-leaved peppermint gum *E. dives*. There is a sparse shrub layer of silver wattle *Acacia dealbata*, shiny cassinia *Cassinia longifolia*, and pink-tip daisy bush *Olearia erubescens*, and an understorey of forbs and grasses such as spiny-headed mat rush *Lomandra longifolia*, variable glycine *Glycine tabacina*, *Pimelea linifolia* ssp *collina* and several *Poa* grass species.

The southern block of the reserve is dominated by an open forest of candlebark *Eucalyptus rubida* ssp *rubida* and broad-leaved peppermint gum *E. dives*. The shrub layer includes silver wattle *Acacia dealbata*, common hovea *Hovea linearis* and prickly broom-heath *Monotoca scoparia*, while the understorey consists of forbs and grasses including spiny-headed mat rush *Lomandra longifolia*, daphne heath *Brachyloma daphnoides*, prickly starwort *Stellaria pungens*, snowgrass *Poa sieberiana* var *hirtella* and *Carex breviculmis*.

Of particular interest is the presence of a candlebark *E. rubida* ssp *rubida* shrubland, which is found on the exposed ridgelines of the reserve. The dense shrub layer is composed of *Kunzea ericoides*, *Kunzea muelleri*, *Leptospermum micromyrtus*, *Leptospermum namadgiensis*, *Phebalium ovatifolium*, *Phebalium squamulosum* ssp *squamulosum*, and *Baeckea latifolia*, while the understorey is very sparse and includes sedges and grasses such as *Poa induta*, *Carex breviculmis*, and *Deyeuxia monticola* var *monticola*. This subalpine community is significant as it has a very limited distribution, is not well represented in conservation reserves, and is highly vulnerable to drought and frequent fire regimes.

No threatened flora species have been recorded within the reserve, however one specimen of shining westringia *Westringia lucida* has been recorded on Long Corner Creek, to the south of the northern block of the reserve. Briggs and Leigh (1996) list this species as a Rare or Threatened Australian Plant (ROTAP) species.

The land around Yaouk Nature Reserve has been extensively cleared for agricultural purposes. The conservation of areas of native vegetation in the vicinity of the reserve is important because it provides links to other reserves in the area such as Scabby Range Nature Reserve, and protects a greater range of habitats for threatened species in the region that are impacted by loss of habitat.

Desired Outcomes

- The full range of native plant species and communities found in the reserve is conserved.
- Structural diversity and habitat values are restored in areas subject to past disturbance.
- The habitat and populations of all significant plant species are protected.
- Park neighbours support conservation of remaining areas of privately owned native vegetation near the reserve.

Strategies

- Encourage surveys for threatened plant species
- Implement relevant strategies in the priorities action statement for threatened species, communities and populations that may occur within the reserve.
- Liaise with neighbours, local Landcare groups, catchment management authorities, and other agencies to encourage retention, and if possible expansion of areas of native vegetation close to the reserve.

4.3 NATIVE ANIMALS

A fauna survey was undertaken in Yaouk Nature Reserve in November 2003. This was not an exhaustive survey, and was intended only to provide a base-line faunal inventory for the reserve (Mills & Reside 2003). A report for the reserve was also generated from the NPWS Atlas of Australian Wildlife. A full fauna list has been included in Appendix 1.

Native mammals recorded in the reserve include the swamp wallaby *Wallabia bicolor*, brushtail possum *Trichosurus vulpecula*, short-beaked echidna *Tachyglossus aculeatus*, and the bush rat *Rattus fuscipes*. Five species of bat have also been recorded in the reserve, including the yellow-bellied sheath-tail bat *Saccolaimus flaviventris*, which was detected from ultrasonic call analysis and is recorded as vulnerable under the *Threatened Species Conservation Act 1995* (TSC Act). In 2003 a fox scat found in the reserve contained remains of an eastern pygmy possum *Cercartetus nanus*. This species is listed as vulnerable under the TSC Act.

The reserve has abundant bird life with 25 species recorded to date, including several species of honeyeater, the superb lyrebird *Menura novaehollandiae*, yellow-tailed black-cockatoo *Calyptorhynchus funereus* and the southern boobook *Ninox boobook*. The powerful owl *Ninox strenua*, which is also listed as vulnerable under the TSC Act, was recorded by call during the fauna survey in 2003.

Two amphibians, the common eastern froglet *Crinia signifera* and Bibron's toadlet *Pseudophryne bibronii*, have been recorded 800 metres north of the southern block of the reserve; however a lack of permanent water sources in the reserve means populations of amphibians within the reserve are unlikely. No reptile searches have

been undertaken in the reserve, however the abundant rock amongst woodland habitat is likely to support good populations of reptiles.

Desired Outcomes

- The full range of native animal species and communities found in the reserve is conserved.
- The habitat and populations of all threatened fauna species and biogeographically significant species are protected and maintained.
- Impacts on native species from feral animals are minimised.
- There is greater understanding of species diversity, distribution and ecological requirements.

Strategies

- Encourage surveys for predicted threatened animal species
- Continue to record the distribution of threatened and significant fauna species.
- Protect the habitats of threatened and biogeographically significant species from the effects of introduced species and inappropriate fire regimes.
- Implement relevant strategies in priorities action statement and recovery plans for threatened species, communities and populations within the reserve.

5. CULTURAL HERITAGE

5.1 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.

Aboriginal artefacts have been located across a broad range of landscapes within the South West Slopes Region. Numerous sites have been recorded in the reserve including three sites in the northern block, and twelve sites in the south. These sites are of two types, artefact scatters and isolated finds.

The sites discovered in the north of the reserve are of considerable interest given the landscape settings and the elevation at which they were found (Navin Officer Heritage Consultants 2004). The discovery of artefact scatters and isolated finds close to Yaouk Peak provide evidence that Aboriginal people made use of the highest parts of the range, including the exposed granite outcrops of the peaks. In the southern block of the reserve, the high number of sites recorded around Jones Creek indicate the importance of the creek as a resource, and possibly as an access corridor (Navin Officer Heritage Consultants 2004).

While the NPWS presently has legal responsibility for the protection of Aboriginal sites and places it acknowledges the right of Aboriginal people to make decisions about their own heritage. It is therefore policy that Aboriginal communities be consulted and involved in the management of Aboriginal sites, places and related issues and the promotion and presentation of Aboriginal culture and history. The reserve is within Walgalu country and falls within the Wagonga Local Aboriginal Land Council area. There may also be other Aboriginal community organisations and individuals with an interest in use and management of the reserve.

Desired Outcomes

- Aboriginal and historic features and values are identified and protected.
- Aboriginal people are involved in management of Aboriginal cultural values in the reserve.
- Understanding of the cultural values of the park is improved.

Strategies

- Precede all new ground disturbance work by an assessment for cultural features.
- Undertake all trail maintenance in a way that minimises damage to cultural features.

- Consult and involve the Wagonga Local Aboriginal Land Council and other relevant Aboriginal community organisations in the management of Aboriginal sites, places and values, including interpretation of places or values.
- Encourage further research into the Aboriginal heritage values of the park in consultation with the Wagonga Local Aboriginal Land Council.

5.2 HISTORIC HERITAGE

Yaouk is named after the Yaouk Run, which was first held as a “squatter’s run” by Henry Hall in 1838. After a severe drought in 1837, Hall, who resided on a land grant at what is now called the suburb of Hall in the ACT, moved his cattle to Yaouk accompanied by overseer James Blake. In 1839 Blake was running 600 head of cattle on the land, and had 10 acres of land under cultivation. At that time the run consisted of 4,096 hectares (Dearling 2003).

In 1856 Yaouk Run was transferred to an Occupational lease of 14,800 hectares. Hall made the decision to sell the run in 1864 because it was so remote from his other holdings. Archibald Crawford purchased the property in partnership with Lachlan Cochran, however a drop in cattle prices and sickness among the herds meant Crawford withdrew from the partnership soon after, leaving Cochran as the sole owner. Some of the original Yaouk Run remains in the ownership of the Cochran family.

The northern block of Yaouk Nature Reserve was originally part of the Yaouk Run. In 1893 the area was set aside for auction or sale but the sale did not go ahead. In 1897 the Yaouk Peak Trig was proclaimed, and in 1917 the area east of the trig was set aside as a Forest Reserve.

The southern block of the reserve started as part of the Bullanamang Run held by John Cosgrove. In 1939 most of the land was reserved from sale, and Thomas Venables held the remainder as a conditional lease until 1920. This small section was then held as a special lease during the 1950s, and in 2001 Yaouk Nature Reserve was established.

The only identified historic structures within the reserve are the Trig stations on Yaouk Peak and Yaouk Bill Peak, the old boundary fence lines, and an unidentified pile of palings 350 metres southeast of Yaouk Peak.

Desired Outcomes

- Historic features are appropriately conserved and managed.

Strategies

- Manage historic places and features in accordance with the *Burra Charter*.
- Retain and record the trigs, boundary fences, palings pile and any other historical features found on the reserve.

6. THREATS TO RESERVE VALUES

6.1 CLIMATE CHANGE

Climate change has been listed as a key threatening process under the Threatened Species Conservation Act 1995. Projections of future changes in climate for NSW include higher temperatures, elevated CO₂, 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, and increased erosion.

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. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

Adjusting our management of the environment through 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.

Desired Outcomes

- The effects of climate change on the reserve are better understood.
- The impacts of climate change on natural systems are reduced.

Strategies

- Continue existing fire, pest and weed management programs to increase the ability of native flora and fauna to cope with future disturbances, including climate change.
- Liaise with neighbours, local Landcare groups, catchment management authorities, and other agencies to encourage retention, and if possible expansion, of areas of native vegetation close to the reserve.
- Encourage research into appropriate indicator species within the reserve to monitor the effects of climate change.

6.2 INTRODUCED PLANTS

An introduced species is defined in this plan as any plant species not endemic to the reserve. Introduced species within the reserve and on adjoining land are of concern, because they have the potential to have detrimental effects on ecological values and can spread to and from neighbouring land. The *Noxious Weeds Act 1993* places an obligation upon public authorities to control noxious weeds on land that they occupy to the extent necessary to prevent such weeds spreading to adjoining lands.

The NPWS South West Slopes Region Pest Management Strategy (NPWS, 2006) identifies priority pest species and programs for action. Prioritisation considers such issues as the control of weeds in endangered ecological communities, significant remnant vegetation association, threatened/endangered species habitat and areas of community/neighbour concern.

The reserve is relatively weed free, with some small infestations of twiggly mullein *Verbascum virgatum* around access points to the reserve. Some introduced plants that exist in the broader landscape and may become a problem in the reserve in the future are serrated tussock *Nassella trichotoma*, Chilean needle grass *Nassella neesiana*, sweet vernal grass *Anthoxanthum odoratum*, St John's wort *Hypericum perforatum* and English broom *Cytisus scoparius*.

To date there have been no weed control programs in the reserve due to the low level of weeds present.

Desired Outcomes

- The impact of introduced plant species on native plants and animals is minimised.
- Introduced plants are controlled and where possible eliminated.
- Pest control programs are undertaken in consultation with neighbours

Strategies

- Manage introduced plant species in accordance with the Regional Pest Management Strategy.
- Monitor noxious and significant environmental weeds. Treat any new outbreaks where possible.
- Avoid unnecessary environmental disturbances. Where disturbance is inevitable or is planned, consider the likely impact of the activity in terms of introduced species and put in place controls or programs to reduce any such impact.
- Seek the cooperation of neighbours in implementing weed control programs. Undertake control in cooperation with Cooma-Monaro Shire Council.

6.3 INTRODUCED ANIMALS

An introduced (or feral) animal is defined in this plan as any animal species not native to the reserve. Species of feral animal known to occur in Yaouk Nature Reserve include foxes, wild dogs, cats and rabbits.

Wild dogs exist in the reserve in low to very low numbers. The reserve is included in the Yaouk/Adaminaby Cooperative Wild Dog Plan and a wild dog control program runs year round, including trapping, ground baiting and aerial baiting. This program is run in conjunction with neighbours, Parks ACT and the South-East Livestock Health and Pest Authority as part of the cooperative wild dog plan.

There are low numbers of foxes within the reserve. There is currently no specific program for control of foxes in the reserve as the dog baiting/trapping program has also had an impact on fox numbers.

Although rabbits do occur in and around the reserve, they exist in low numbers. It is thought that a combination of myxomatosis, rabbit calicivirus and regular baiting and removal programs has controlled populations. The rabbit populations will be monitored and programs undertaken in conjunction with neighbouring landholders when required, to ensure that rabbit populations do not impact upon the reserve and surrounding properties.

Desired Outcomes

- The impact of introduced animal species on native plants and animals is minimised.
- Introduced animals are controlled and where possible eliminated.
- Pest control programs are undertaken in consultation with neighbours and the RLPB.

Strategies

- Manage introduced animal species in accordance with the Regional Pest Management Strategy.
- Seek the cooperation of neighbours in implementing pest animal control programs. Undertake control in cooperation with the South-East Livestock Health and Pest Authority.

6.4 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 TSC Act.

There has been one recorded ignition within the reserve, in 1995. The cause of the ignition is unknown. There have been no prescribed burns implemented in the reserve since its transferral to NPWS in 2001.

There have been no recorded wildfires within the reserve, however is likely that fire affected the reserve prior to records being taken. There are indications that the reserve has experienced at least one fire event in the past 40 years. Research to determine the year, size and type of fire is critical as the frequency and interval between fires has important implications relevant to biodiversity and fire management.

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 (NPWS, 2005). The NPWS uses a zoning system for bushfire management that is compatible with the zoning used by the Monaro Team Bush Fire Management Committee (BFMC) in its bushfire risk management plan.

In regard to Yaouk Nature Reserve, a separate fire management strategy has been prepared. Annual hazard reduction programs, which may include mechanical fuel reduction techniques, prescribed burning and trail works, are submitted to the BFMC.

Desired Outcomes

- Life, property and natural and cultural values are protected from fire.
- Fire regimes are appropriate for conservation of native plant and animal communities.

Strategies

- Participate in the Monaro Bush Fire Management Committee. Maintain coordination and cooperation with Rural Fire Service officers, local volunteer brigades and neighbours with regard to fuel management and fire suppression.
- Manage the nature reserve to protect biodiversity in accordance with the identified fire interval guidelines for vegetation communities.
- Manage fire in accordance with the fire management strategy and operations plan.
- Encourage research into the fire history of the area, and the ecological effects of fire in the reserve, particularly the fire response of significant plant species.

7. VISITOR OPPORTUNITIES AND EDUCATION

7.1 INFORMATION PROVISION

Reserve facilities and services provide opportunities to enjoy, appreciate and understand the value of our natural and cultural heritage. Only areas that can sustain use are promoted in this way. Information provision at such places and about the area in general assists the protection of natural and cultural heritage, promotes support for conservation and increases the enjoyment and satisfaction of visitors.

7.2 EDUCATION AND USE

The primary purposes of nature reserves are conservation of wildlife, natural environments and significant cultural features, and scientific research into these. Educational use is appropriate where it does not conflict with conservation.

Recreational activities not consistent with the study of nature and natural environments are generally considered inappropriate uses of nature reserves. Yaouk Nature Reserve receives very low levels of use for activities such as walking and bird watching.

All access to the reserve is currently through private land, and public vehicular access is not permitted. There are no visitor facilities within the reserve. Reserve identification signs are located at the main entrance points.

The Bicentennial National Trail (BNT) passes very close to the eastern side of Yaouk Nature Reserve on its journey along the Great Dividing Range. The BNT is available for trekkers using various forms of non-motorised transport including walkers, horse riders and cyclists. Horse riding is not permitted in the reserve.

Vehicle-based camping is not allowed in the reserve. Bush camping by small groups will be allowed but no facilities will be provided and no fires will be permitted in the reserve.

Organised group activities such as school visits and bird watching groups will be permitted in the reserve subject to consent from NPWS to carry out these activities. This consent process will assist NPWS in minimising impacts and managing user conflict and safety. Access to the reserve will be at the discretion of neighbouring landholders.

Desired Outcomes

- The local community is aware of the significance of the area and of management programs.
- Visitor use is appropriate and ecologically sustainable.
- Visitor use encourages appreciation of the reserve's values.

Strategies

- Provide information on appropriate use of the reserve at all access points.
- Inform any potential visitors wishing to use the reserve of the need to seek permission from neighbours to cross their land, and advise on permitted activities.
- Exclude public vehicular access except for essential management requirements of the reserve.
- Permit day bushwalks, informal picnics, and bush camping (no facilities will be provided).
- Prohibit vehicle-based camping, trail bike riding, four wheel driving, orienteering, cycling and horse riding.
- Permit organised group and educational visits, subject to limits on numbers and other conditions.
- Monitor levels of illegal use and access and take action when required.

8. NPWS MANAGEMENT FACILITIES AND OPERATIONS

Yaouk Nature Reserve is surrounded by private land and there is no public vehicular access within the reserve. Management access to the southern block is gained via Brest Trail, which bisects this block of the reserve, and is joined by Jones Creek Trail, which runs to the east. Bell Trail and Orchid Trail provide access to the southeast corner of the block. The Rush Trail, which is currently under construction, provides an off-park link from Jones Creek Trail to Orchid Trail. It is proposed that following completion of this trail the section of Bell Trail running from Jones Creek Trail to Orchid Trail will no longer be maintained and will remain as a dormant trail.

There are three roads in the reserve currently vested in the Minister for the Environment, which must ultimately be added to or excluded from the park. The *National Parks Estate Act (2000)* states that the Minister cannot close any roads that provide the only means of practical access to a private land holding. The NPWS will consult with neighbours to determine the existing use of these roads and appropriate legal agreements for continued access and future maintenance. NPWS is not under any obligation to maintain Part 11 roads but may enter into maintenance agreements with the users.

The northern block of the reserve has limited access, with Long Corner Gap Trail crossing the southeastern corner, and Yaouk Bill Trail giving access to the northwestern corner.

The boundary of the reserve is not enclosed, although boundary fences do exist in some places. At present there is no evidence of grazing by domestic stock on the reserve, and improving fencing as required will help to prevent this from occurring in the future.

Desired Outcomes

- Management facilities adequately serve the needs of park management and have acceptable environmental impact.
- Domestic stock do not enter the reserve.
- A good relationship is maintained with reserve neighbours.

Strategies

- Maintain all management trails as shown on the map.
- Maintain close liaison with park neighbours to deal with matters of mutual concern.
- In consultation with neighbours, formulate fencing agreements to ensure that replacement fences are constructed to a stock proof standard where necessary.
- Allow the section of Bell Trail between Jones Creek Trail and Orchid Trail to become dormant.
- Signpost management trails to restrict unauthorised access.

9. PLAN IMPLEMENTATION

This plan of management establishes a scheme of operations for the nature reserve. The plan is part of a system of management developed by the National Parks and Wildlife Service. The system includes the National Parks and Wildlife Act, management policies, established conservation and recreation philosophies, and strategic planning at corporate, directorate and regional levels. The latter may include development of related plans such as regional recreation plans, species recovery plans, fire management plans and conservation plans.

Section 81 of the Act requires that this plan of management shall be carried out and given effect to, and that no operations shall be undertaken in relation to Yaouk Nature Reserve unless they are in accordance with the plan.

Implementation of this plan will be undertaken within the annual programs of the NPWS South West Slopes Region. The actions identified in the plan are those to which priority will be given in the foreseeable future. Other management actions may be developed consistent with the plan objectives and strategies.

Relative priorities for identified activities are set out in the table on the following pages. These priorities are determined in the context of directorate and regional strategic planning, and are subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister. The implementation of the plan will be monitored and its success in achieving the identified objectives will be assessed.

The environmental impact of proposed activities will be assessed at all stages in accordance with established environmental assessment procedures. Where impacts are found to be unacceptable, activities will be modified in accordance with the plan policies.

This plan of management does not have a specific term and will stay in force until amended or replaced in accordance with section 73B of the Act. The plan applies both to the land currently reserved and to any future additions. Where management strategies or works are proposed for additions (or the existing area) that are not consistent with the plan, an amendment to the plan will be required.

Strategies

- Undertaken an annual review of progress in implementing this plan of management.
- Undertake an assessment after 5 years of the effectiveness of managing the nature reserve in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes.

Implementation Table

Section	Strategy	Priority
4.1	Geology, Hydrology and Landform	
	4.1.1 Undertake all works in a manner that protects landscape values.	High
	4.1.2 Design and undertake all works in a manner that minimises soil erosion and water pollution.	High
	4.1.3 Monitor erosion on all trails in the reserve and take action if needed to minimise erosion.	Medium
4.2	Native Plants	
	4.2.1 Encourage surveys for threatened plant species	Low
	4.2.2 Implement relevant strategies in the priorities action statement for threatened plant species, communities and populations that may occur within the reserve.	Medium
	4.2.3 Liaise with neighbours, local Landcare groups, catchment management authorities, and other agencies to encourage retention, and if possible expansion of areas of native vegetation close to the reserve.	Low
4.3	Native Animals	
	4.3.1 Encourage surveys for predicted threatened animal species	Low
	4.3.2 Continue to record the distribution of threatened and significant fauna species.	Medium
	4.3.3 Protect the habitats of threatened and biogeographically significant species from the effects of introduced species and inappropriate fire regimes.	High
	4.3.4 Implement relevant strategies in priorities action statement and recovery plans for threatened animal species, communities and populations within the reserve.	Medium
5.1	Aboriginal Heritage	
	5.1.1 Precede all new ground disturbance work by an assessment for cultural features.	High
	5.1.2 Undertake all trail maintenance in a way that minimises damage to cultural features.	High
	5.1.3 Consult and involve the Wagonga Local Aboriginal Land Council and other relevant Aboriginal community organisations in the management of Aboriginal sites, places and values, including interpretation of places or values.	High

Section	Strategy	Priority
	5.1.4 Encourage further research into the Aboriginal heritage values of the park in consultation with the Wagonga Local Aboriginal Land Council.	Low
5.2	Historic Heritage	
	5.2.1 Manage historic places and features in accordance with the Regional Cultural Heritage Management Strategy.	High
	5.2.2 Retain and record the trigs, boundary fences, palings pile and any other historical features found on the reserve.	High
6.1	Climate Change	
	6.1.1 Continue existing fire, pest and weed management programs to increase the ability of native flora and fauna to cope with future disturbances, including climate change.	High
	6.1.2 Liaise with neighbours, local Landcare groups, catchment management authorities, and other agencies to encourage retention, and if possible expansion of areas of native vegetation close to the reserve.	Low
	6.1.3 Encourage research into appropriate indicator species within the reserve to monitor the effects of climate change.	Low
6.2	Introduced Plants	
	6.2.1 Manage introduced plant species in accordance with the Regional Pest Management Strategy.	High
	6.2.2 Monitor noxious and significant environmental weeds. Treat any new outbreaks where possible.	High
	6.2.3 Seek the cooperation of neighbours in implementing weed control programs. Undertake control in cooperation with Cooma-Monaro Shire Council.	Medium
6.3	Introduced Animals	
	6.3.1 Manage introduced animal species in accordance with the Regional Pest Management Strategy.	High
	6.3.2 Seek the cooperation of neighbours and relevant authorities in implementing joint pest animal control programs.	Medium

Section	Strategy	Priority
6.4	Fire Management	
	6.4.1 Participate in the Monaro Bush Fire Management Committee. Maintain coordination and cooperation with Rural Fire Service officers, local volunteer brigades and neighbours with regard to fuel management and fire suppression.	High
	6.4.2 Manage the nature reserve to protect biodiversity in accordance with the identified fire interval guidelines for vegetation communities.	High
	6.4.3 Manage fire in accordance with the fire management strategy and operations plan.	High
	6.4.4 Encourage research into the fire history of the area, and the ecological effects of fire in the reserve, particularly the fire response of significant plant species.	Low
7	Visitor Opportunities and Education	
	7.1 Provide information on appropriate use of the reserve at all access points.	Medium
	7.2 Inform any potential visitors wishing to use the reserve of the need to seek permission from neighbours to cross their land, and advise on permitted activities.	High
	7.3 Exclude public vehicular access except for essential management requirements of the reserve.	High
	7.4 Permit day bushwalks, informal picnics, and bush camping (no facilities will be provided).	High
	7.5 Prohibit vehicle-based camping, trail bike riding, four wheel driving, orienteering, cycling and horse riding.	High
	7.6 Permit organised group and educational visits, subject to limits on numbers and other conditions.	Medium
	7.7 Monitor levels of illegal use and access and take action when required.	Medium
8	NPWS Management Facilities and Operations	
	8.1 Maintain all management trails as shown on the map.	High
	8.2 Maintain close liaison with park neighbours to deal with matters of mutual concern.	Medium
	8.3 In consultation with neighbours, formulate fencing agreements to ensure that replacement fences are constructed to a stock proof standard where necessary.	Medium
	8.4 Allow the section of Bell Trail between Jones Creek Trail and Orchid Trail to become dormant.	Low
	8.5 Signpost management trails to restrict unauthorised access.	Medium

Section	Strategy	Priority
9	Plan Implementation	
	9.1 Undertake an assessment after 5 years of the effectiveness of managing the nature reserve in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes.	High

Legend:

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.

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- NPWS 2005, *Fire Management Manual*. NSW National Parks and Wildlife Service, Hurstville.
- NPWS 2006, *South West Slopes Region Pest Management Strategy*. NSW National Parks and Wildlife Service.

APPENDIX 1 - FAUNA LIST

Scientific Name	Common Name	Status
Birds		
<i>Acanthiza lineata</i>	Striated Thornbill	Protected
<i>Acanthiza pusilla</i>	Brown Thornbill	Protected
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar	Protected
<i>Antechinus agilis*</i>	Agile Antechinus	Protected
<i>Anthochaera carunculata</i>	Red Wattlebird	Protected
<i>Artamus cyanopterus</i>	Dusky Woodswallow	Protected
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo	Protected
<i>Colluricincla harmonica</i>	Grey Shrike-thrush	Protected
<i>Cormobates leucophaeus</i>	White-throated Treecreeper	Protected
<i>Corvus coronoides</i>	Australian Raven	Protected
<i>Dacelo novaeguineae</i>	Laughing Kookaburra	Protected
<i>Eopsaltria australis</i>	Eastern Yellow Robin	Protected
<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater	Protected
<i>Lichenostomus leucotis</i>	White-eared Honeyeater	Protected
<i>Melithreptis lunatus</i>	White-naped Honeyeater	Protected
<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater	Protected
<i>Menura novaehollandiae</i>	Superb Lyrebird	Protected
<i>Ninox boobook</i>	Southern Boobook	Protected
<i>Ninox Strenua*</i>	Powerful Owl	Vulnerable
<i>Pachycephala pectoralis</i>	Golden Whistler	Protected
<i>Pardalotus punctatus</i>	Spotted Pardalote	Protected
<i>Phylidonyris pyrrhoptera</i>	Crescent Honeyeater	Protected
<i>Platycercus elegans</i>	Crimson Rosella	Protected
<i>Sericornis frontalis</i>	White-browed Scrubwren	Protected
<i>Zosterops lateralis</i>	Silvereeye	Protected
Mammals		
<i>Cercatetus nanus*</i>	Eastern Pygmy Possum	Vulnerable
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat	Protected
<i>Chalinolobus morio</i>	Chocolate Wattled Bat	Protected
<i>Rattus fuscipes</i>	Bush Rat	Protected
<i>Saccolaimus flaviventris*</i>	Yellow-Bellied Sheath-tail-Bat	Vulnerable

Scientific Name	Common Name	Status
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna	Protected
<i>Tadarida australis</i>	White-striped Freetail-bat	Protected
<i>Trichosurus caninus</i>	Mountain Brushtail Possum	Protected
<i>Trichosurus sp.</i>	Brushtail Possum	Protected
<i>Trichosurus vulpecula</i>	Common Brushtail Possum	Protected
<i>Vespadelus darlingtoni</i>	Large Forest Bat	Protected
<i>Vespadelus vulturnus</i>	Little Forest Bat	Protected
<i>Wallabia bicolor</i>	Swamp Wallaby	Protected
Amphibians		
<i>Crinia signifera</i> *	Eastern Common Froglet	Protected
<i>Pseudophryne bibronii</i> *	Bibron's Toadlet	Protected

Key:

All species listed here were recorded both by Mills & Reside (2003) during fauna surveys and in the NSW Wildlife Atlas. Species marked by an asterisk (*) were recorded only by Mills & Reside.