DUVAL NATURE RESERVE

PLAN OF MANAGEMENT

National Parks and Wildlife Service

November 2003

This plan of management was adopted by the Minister for the Environment on 17th November 2003.

Inquiries about this draft plan of management of Duval Nature Reserve should be directed to the Ranger at the Armidale Area Office, 85 Faulkner Street, Armidale, or by telephone on 02 6776 0000.

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FOREWORD

Duval Nature Reserve is located on the central New England Tablelands, approximately 15 km north of Armidale. The reserve encompasses the eastern section of the summit plateau and steep southerly and easterly slopes of Mount Duval, which is a prominent landscape feature in the area.

The reserve protects a small but significant remnant area of Tablelands dry open forest, and is capped by a moist, tall open eucalypt forest more typical of the sub-coastal mountain forests found further to the east. Several newly described and rare orchids occur within the reserve. It also provides habitat for a diverse range of native fauna.

Surrounding the majority of Duval Nature Reserve is Newholme field laboratory, a research and extension facility of the University of New England. Since 1988 most of the Newholme land adjacent to the reserve has been managed by the University for native vegetation regeneration, wildlife conservation and study purposes. The University regularly conducts undergraduate and postgraduate research and tertiary education training within the reserve. This research provides information relevant to management of the reserve.

The New South Wales *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each nature reserve. A plan of management is a legal document that outlines how a reserve will be managed in the years ahead.

A draft plan of management for Duval Nature Reserve was placed on public exhibition for three months from 13th September until 2nd December 2002. 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 establishes the scheme of operations for Duval Nature Reserve. In accordance with section 76 of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

BOB DEBUS
Minister for the Environment

1. NATURE RESERVES IN NEW SOUTH WALES

1.1 LEGISLATIVE AND POLICY FRAMEWORK

The management of nature reserves in New South Wales (NSW) is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the NPW Land Management Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) 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 *NSW Environmental Planning and Assessment Act 1979* requires the assessment and mitigation of environmental impacts of any works proposed in this plan.

Nature reserves are reserved under the NPW Act to protect and conserve areas containing outstanding, unique or representative ecosystems, species, communities or natural phenomena.

Under the Act, nature reserves are managed to:

- conserve biodiversity, maintain ecosystem functions, and protect geological and geomorphological features and natural phenomena;
- conserve places, objects, features and landscapes of cultural value;
- promote public appreciation, enjoyment and understanding of the reserve's natural and cultural values; and
- provide for appropriate research and monitoring.

Nature reserves differ from national parks in that they do not have as a management principle to provide for visitor use.

1.2 LANDSCAPE CONTEXT

Natural and cultural heritage and on-going use are strongly inter-related and together form the landscape of an area. Much of the Australian environment has been influenced by past Aboriginal and non-Aboriginal land use practices, and the activities of modern day Australians continue to influence 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 and 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. DUVAL NATURE RESERVE

2.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Duval Nature Reserve (referred to herein as 'the reserve') is located on the central New England Tablelands approximately 15 km north of Armidale. The location of the reserve, nearby NPWS estate and towns are shown in figure 1. The reserve is one of 12 small, isolated reserves in the south of the New England Tablelands bioregion (an area defined by a combination of repeated biological and geographic criteria, rather than geopolitical considerations). These reserves were gazetted to conserve remnants of previously widespread Tablelands vegetation communities as part of the Regional Forest Agreement (RFA) process.

The reserve has an area of approximately 243 ha and was dedicated in two stages in 1999. Mount Duval, which is within the western boundary of the reserve, is important to the Armidale community as a prominent landscape feature. The reserve was a state forest prior to becoming a nature reserve. The reserve lies within Armidale Dumaresq Shire.

Surrounding the majority of the reserve is Newholme field laboratory, a research and extension facility of the University of New England (UNE) (see figure 1). Since 1988 most of the Newholme land adjacent to the reserve has been managed by the UNE for native vegetation regeneration, wildlife conservation and study purposes. Other major land uses in the area include grazing and other rural activities.

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

2.2 NATURAL AND CULTURAL HERITAGE

Landform, Geology and Soils

The reserve encompasses the eastern section of the summit plateau and steep southerly and easterly slopes of Mount Duval, with slopes ranging from 5-40%. Elevations range from approximately 1040 m to 1400 m above sea level. Drainage in the reserve flows into Sandy Creek to the south and Duval Creek in the north and east. These creeks flow into Commissioners Waters, a tributary of the Gara River, which flows over the escarpment into the upper Macleay River.

Mount Duval is a prominent land feature primarily composed of Duval adamellite, a component of a granitic geological formation known as the New England Batholith. The New England Batholith has an area of over 30 000 km^2, stretching from south of Uralla to the Queensland border. A small section in the north-eastern corner of the reserve is of sedimentary origin, on Dummy Creek conglomerate. This section comprises gentle to undulating hills with broad valleys and open drainage depressions.

Soils associated with the Duval adamellite are characterised by red and grey brown podzolics on the higher slopes, grading into brown to brown-yellow earth intergrades on the steep mid slopes and siliceous sands in lower, flatter gullies (van Roessel, 1995). Easterly portions of the reserve have areas of grey-brown and yellow podzolics. Soils associated with the Dummy Creek conglomerates are yellow podzolics and alluvials. The yellow podzolics are generally shallow and very stony, occupying the upper and mid-slope areas. The alluvial soils are associated with drainage depressions. Topsoils are generally sandy, with soil profile development increasing down slope and along drainage lines (Bean, 1995).

The Mount Duval area has a moister and cooler climate than surrounding lands and other nature reserves in the area. Average annual rainfall varies from approximately 850 mm on the lower slopes to over 1000 mm on the summit of Mount Duval (van Roessel, 1995).

Native Flora

The reserve forms part of the southern boundary of a corridor of contiguous forest and woodland stretching approximately 7km north, east and west. The reserve protects a small but significant remnant area of Tablelands dry open forest and moist, tall open eucalypt forest close to Armidale, contributing to this protection across the New England Tableland bioregion. Since European settlement, 60% of land within the bioregion has been cleared of original vegetation (Pressey et al., 2000). Only 18% of the remaining original vegetation is protected within conservation reserves within the bioregion. Nationally agreed criteria specify that for vegetation communities that have sustained a reduction in area of 50% or more since European settlement, 30% of the remaining area should be reserved within the conservation estate to minimise loss of biodiversity (Commonwealth of Australia, 1995).

The reserve is capped by a moist, tall open eucalypt forest more typical of the sub-coastal mountain forests found further to the east. Moist, tall open eucalypt forest comprises a number of vegetation communities. For example, messmate (*Eucalyptus obliqua*) and forest ribbon gum (*E. nobilis*) is one of the vegetation communities that dominates this tall open forest. Only 6% of this community is protected within the conservation reserves in the bioregion (Pressey et al, 2000).

The reserve contains many species of orchids. Several newly described and rare orchids occur within the reserve, including the helmet orchid (*Corybas hispidus*), *Pterostylis aff. alata, Pterostylis aff. obtusa* (*Mt Duval*) and *Chiloglottis platyptera*.

Youman's stringybark (*Eucalyptus youmanii*), a rare species of eucalypt with a limited distribution, has been recorded on Newholme and may occur in isolated patches within the reserve (van Roessel, 1995).

The reserve has not been grazed since 1982, and has experienced a very low fire frequency. Despite this, there is a distinct lack of a well developed shrub layer within the reserve.

Native Fauna

The reserve and adjacent Newholme field laboratory support diverse fauna. Surveys within the reserve and Newholme field laboratory have identified 83 bird, 31 mammal, 10 frog and 27 reptile species (Anonymous, 1993). Staff and students of the UNE Newholme field laboratory regularly collect data on the fauna of Newholme and the western portion of the reserve.

The forested corridor, of which the reserve is a part, begins near Black Mountain, approximately 10 km to the north. This essentially continuous forested area covers an area of approximately 10 000 ha. Many of the large vertebrate species recorded in the reserve rely on this continuous area of forest for habitat and food resources. Because of the small size of the reserve, maintaining this corridor is important to protect and enhance native vertebrate populations.

The koala (*Phascolarctos cinereus*), which is listed as vulnerable under the *Threatened Species Conservation Act 1995*, has been regularly recorded in the reserve and surrounding area. It is likely that the vulnerable barking owl (*Ninox connivens*), which has been recorded in the adjoining 'Newholme' property (Stephen Debus, pers. com.), also occurs in the reserve. Other vulnerable species known to occur in the area surrounding the reserve and likely to utilise the reserve include the brown treecreeper (*Climacteris picumnus*), speckled warbler (*Pyrrholaemus saggitata*), eastern false pipistrelle (*Falsistrellus tasmaniensis*), greater broad nosed bat (*Scoteananx rueppellii*) and the square-tailed kite (*Lophoictinia isura*).

The reserve also forms a valuable nectar source for common swordgrass brown butterflies when the grass tree (*Xanthorrhoea australis)* is in flower. Peaks such as Mount Duval can provide valuable breeding areas for butterflies.

Aboriginal Heritage

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

The reserve lies within what is believed to be the territory of the Anaiwain people. The Anaiwain are associated with land surrounding Armidale and south towards Tamworth and Walcha (Tindale 1974).

Prior to European arrival, it is believed that the Tablelands provided resources for year-round occupation, with groups undertaking a series of short journeys, principally within the Tablelands, coupled with seasonal long journeys between the Tablelands and western slopes. Resource use in the Tablelands is believed to have focussed on woodlands, native grasslands and swamplands (Sullivan, undated).

Aboriginal artefacts have been located across a broad range of landscapes in the region. There has been no study or research to determine the Aboriginal heritage values of the reserve.

Although little is known about past Aboriginal association with the reserve, there is substantial evidence of Aboriginal occupation in close proximity to the reserve. Four open camp sites are known within 3 km of the reserve and artefact scatters have also been located along Sandy Creek, 1 km to the south of the reserve.

The reserve falls within the area of the Armidale Local Aboriginal Land Council.

History since European Occupation

The first European to visit the New England region was John Oxley in 1818, and Europeans squatters began to occupy land in the early 1830's. Between 1835 and 1860, the area of the reserve was part of the Tilbuster run operated by Captain William Dumaresq that stretched from Armidale to Guyra (Ferry, 1991). The name 'Duval' was derived from John Duval, a convict and servant of William Dumaresq who worked in the area around the mountain (Ferry, 1991). The area containing the western portion of the reserve was set aside for the preservation and growth of timber in 1897 and 1880, and gazetted as Duval State Forest in 1917, with extension No. 1 (the present western portion of the reserve) gazetted in 1928 (New South Wales Government, 1917 and 1928).

In general, harvesting of hardwoods in New England was sporadic because of the unsuitability of the timber and the consequent difficulty in marketing New England timbers. A small amount of logging has occurred in the reserve area. Remains of bullock yards and saw pits have been noted on the adjacent Newholme land and old logging tracks have also been found within and around the reserve. Timber from Mount Duval was used in the construction of at least one significant local building, St Nicholas Church at Saumarez Ponds, which was built in 1864 (Ferry, 1991). There are no known features of historic significance within the reserve.

Grazing by domestic stock occurred over the reserve under previous tenures. In 1982, the UNE fenced and removed stock from an area of over 220 ha on Mount Duval, including the western portion of the present reserve, for native vegetation regeneration, wildlife conservation and academic purposes. This area, which is known as the mountain paddock, was managed by the UNE as part of Newholme Field Laboratory from 1982 until 1999.

2.3 RESEARCH AND EDUCATION

The UNE owns much of the surrounding land, and regularly conducts undergraduate and postgraduate research and tertiary education training within the reserve. This research provides information relevant to management of the reserve. The entire field laboratory and western section of the reserve is covered by a 200 m by 200 m grid of star posts bound with reflective tape and marked with map coordinates, installed in 1982 to aid research.

2.4 VISITOR USE

There are no visitor facilities within the reserve. Extensive visitor facilities exist in Warrabah National Park, and within Oxley Wild Rivers National Park at Dangars Falls, Wollomombi Falls, Gara Gorge and Long Point. A reserve identification sign is located on the Duval management trail within the reserve boundary.

Recreation within the reserve is limited as access is across private lands. Access to the reserve is generally through Newholme and the Newholme reserved area, which surrounds the mountain area of the nature reserve. Permission is required from UNE for any access through Newholme to the reserve.

2.5 THREATS TO RESERVE VALUES

Introduced Plants

Blackberry (*Rubus fruticosus*), sweet briar (*Rosa rubiginosa*), castor oil plant (*Ricinus communis*) and several pasture weeds have been found within the reserve. These species can competitively exclude native plant species and provide habitat for feral animals. Annual control programs have decreased the distribution and occurrence of blackberry. Sweet briar and castor oil plant are known from small isolated occurrences.

Introduced Animals

Foxes (*Vulpes vulpes*), feral goats (*Capra hircus*), feral cats (*Felis catus*), hares (*Lepus capensis*), black rats (*Rattus rattus*) and rabbits (*Oryctolagus cuniculus*) are found in the reserve in small numbers. Signs of deer have recently been observed within the reserve. Feral pigs (*Sus scrofa*) may occur within the reserve. Introduced animals can impact on native wildlife through competition for resources, predation, disturbance and transmission of diseases.

Fire

The effects of fire on the biota of the reserve remain unclear. An inappropriate burning regime or wildfire may contribute to a loss of biodiversity within the reserve. Fire could also damage fences and threaten neighbouring land. Fires may occur within the reserve due to natural causes, and may also spread into the reserve from neighbouring land.

Fire has not been recorded within the reserve for more than 35 years.

Isolation and fragmentation

Clearing of vegetation within the bioregion has resulted in high loss of biodiversity and fragmentation of habitat. Long term conservation of biodiversity both within the bioregion and reserve depends upon the protection, enhancement and connection of remaining habitat across the landscape, involving vegetation remnants on both public and private lands.

The reserve is small in size. It is important therefore to consider the reserve in the context of surrounding remnant vegetation. Nearby vegetated areas consolidate the habitat values of the reserve and provide ecological corridors to other surrounding forested areas.

Considerable potential exists for an integrated approach and partnership with the UNE regarding management activities on the Newholme field laboratory and ongoing conservation of natural and cultural values on Mount Duval and the reserve.

2.6 MANAGEMENT OPERATIONS

Access to the reserve is through land owned by the UNE. To facilitate access to the reserve for NPWS management purposes, a Memorandum of Understanding (MoU) between the UNE and NPWS is being developed which will encompass access to the reserve and UNE management trails, fire management, trail maintenance, pest management, fencing and research issues.

Vehicle access within the reserve is along a management trail in the north west of the reserve which connects with a fire trail on Newholme field laboratory.

Fencing along the boundary of the eastern portion of the reserve is not considered adequate in some places to exclude stock. The western portion of the reserve is unfenced, but is surrounded by an internal Newholme fence, off the reserve boundary, that is adequate to exclude stock and is maintained by the UNE.

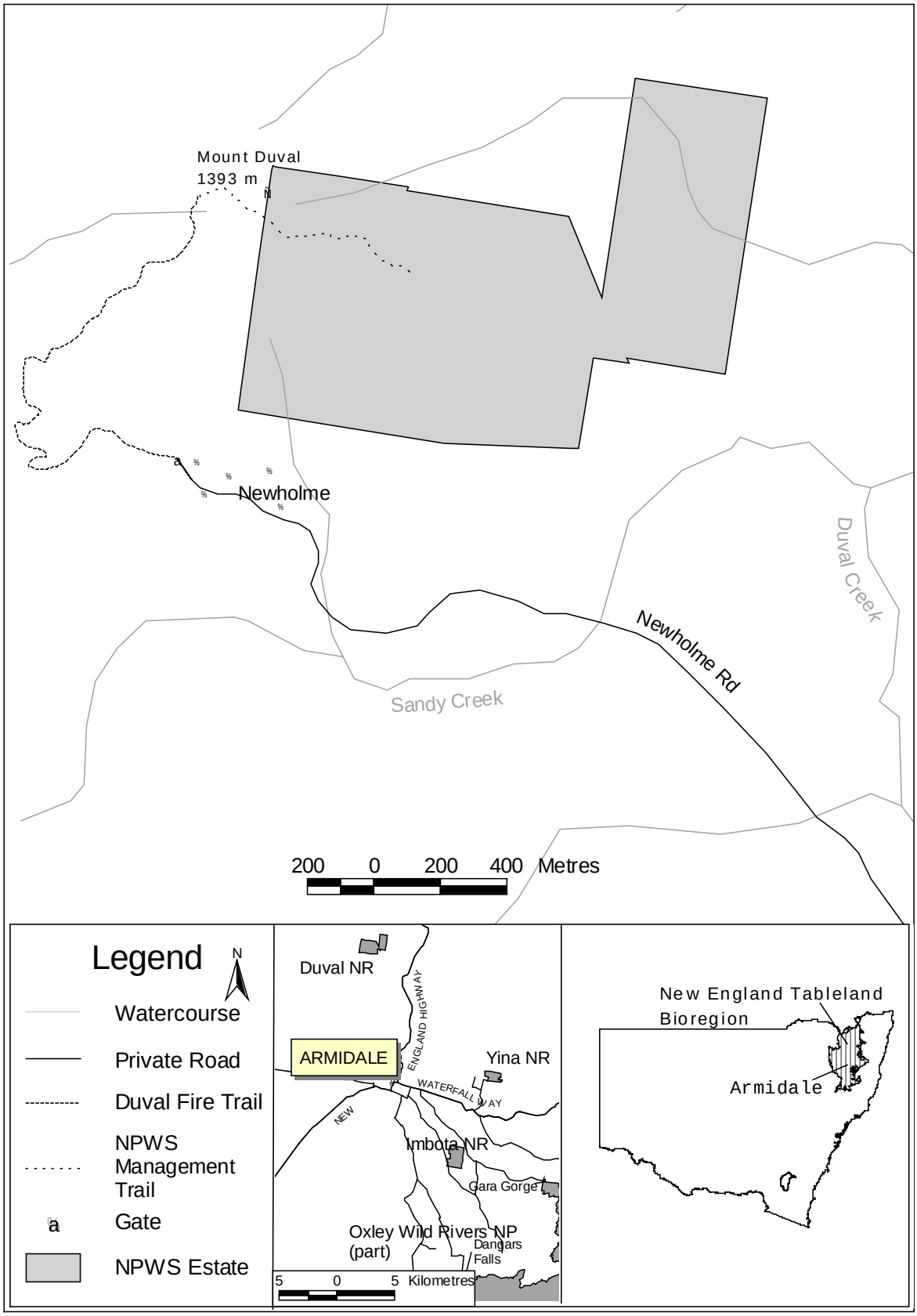

Figure 1: Duval Nature Reserve management infrastructure and regional context

3. MANAGEMENT ISSUES AND STRATEGIES

Current Situation	Desired Outcomes	Strategies	Priority
Soil conservation			
Soils in the reserve are easily eroded when disturbed. Management trails are specific areas where soil erosion can be a problem.	• Soil erosion is minimised.	• Management trails will be maintained to appropriate standards (refer to *Management Operations*). • Ensure any ground disturbance works are undertaken in a manner that minimises erosion and water pollution. • Continue to liaise with UNE about maintenance of private access trail (refer to *Management Operations*).	High High Medium

Current Situation	Desired Outcomes	Strategies	Priority
Native Plant And Animal Conservation			
Considerable knowledge of the flora and fauna of the reserve exists due to extensive research conducted by the UNE. The reserve is one of the few conserved areas on the New England Tablelands that provide resources and habitat for woodland fauna species in a landscape of otherwise substantially cleared grazing land. Long term conservation of the reserve's plant and animal species depends upon retention of remaining vegetation on neighbouring properties.	• All native plant and animal species and communities are conserved and enhanced where possible.	• Work with relevant neighbours, Landcare groups, local citizens' wildlife corridors groups, vegetation management committees and others to encourage conservation of remnant native vegetation in the vicinity of the reserve and to identify potential wildlife/ habitat corridors to link to other remnant native vegetation areas. • Encourage and assist the development of voluntary conservation agreements for protection of conservation values on surrounding properties. • Encourage further surveys for rare or threatened plant and animal species, including reptiles, frogs and turtles. • Liaise with UNE for access to past research on flora and fauna in the reserve.	High High Medium Low

Current Situation	Desired Outcomes	Strategies	Priority
Introduced species			
Three weed species have been identified, but are not widespread. These are blackberry, sweet briar and castor oil plant which are subject to ongoing control programs in accordance with the regional Pest Management Strategy and individual pest management control plans. A survey for other weeds in the reserve has not been undertaken. The small size of the reserve and proximity to other areas with introduced plants allows weed species the opportunity for ongoing invasion. Foxes, rabbits, feral cats, goats and hares occur in the reserve. Signs of presence of deer species have recently been recorded. Pigs may also occur.	• Introduced species are controlled and where possible eradicated.	• Control and where possible eradicate introduced plants and animals from the reserve. • Develop and implement a program to monitor the distribution of introduced species in the reserve. • Undertake integrated weed control programs in liaison with the New England Weeds Authority. • Undertake regular integrated feral animal control programs with Armidale Rural Lands Protection Board, Landcare groups, neighbours and others.	High High Medium Medium

Current Situation	Desired Outcomes	Strategies	Priority
Fire management			
A fire management strategy is yet to be prepared for the reserve. The effects of fire on the biota of the reserve remain unclear. However, frequent or regular fire can cause loss of particular plant and animal species and communities. Fire can also damage cultural features and fences and threaten neighbouring land. Past history suggests that the reserve poses a low fire risk to persons and property adjacent to the reserve. No fires have been recorded within the reserve since gazettal in1999 and have not been known to have occurred for at least 35 years.	• Persons and property are protected from bushfire. • Fire regimes are appropriate for conservation of plant and animal species and communities. • Identified cultural heritage features are protected from fire. • Unscheduled fires leaving or entering the reserve are controlled. • All of the reserve is not burnt in a single wildfire event.	• Prepare and implement a fire management strategy for the reserve. • Participate in district Bush Fire Management Committees. • Maintain coordination and cooperation with Rural Fire Service brigades, Council fire control officers and neighbours with regard to fuel management and fire suppression. • As far as possible, a fire free interval of at least 10 to 15 years will be maintained in all dry sclerophyll forest types within the reserve. • Prepare agreements with neighbours for access to water sources during fire emergencies, in particular with UNE. • Prohibit camp fires and other open fires to remove potential ignition sources for fires (refer to *Public Use* below). • Encourage further research into appropriate fire regimes for the reserve. • Prescribed fire will only be used to achieve fire regimes appropriate for maintenance of habitat in accordance with the fire management strategy.	High High High High High High Medium Medium

Current Situation	Desired Outcomes	Strategies	Priority
Cultural heritage			
Although substantial evidence of Aboriginal occupation has been found in close proximity to the reserve, no sites are known in the reserve and little is known about traditional Aboriginal use and values. Little is known about the European history of the reserve other than that it was a state forest. Mt Duval is of importance to the local community as a prominent landscape feature.	• Cultural heritage values of the reserve are identified and protected. • Awareness of cultural heritage values of Mount Duval is increased.	• Consult the local Aboriginal community, traditional groups and the Armidale Local Aboriginal Land Council about Aboriginal sites, places and other values in the reserve. • Precede all ground disturbance work with a check for cultural features. • Involve the local Aboriginal community in any works affecting Aboriginal sites and in any interpretation of Aboriginal values. • Encourage surveys and research into the cultural heritage values of the reserve. • Work with UNE to encourage greater public understanding of the natural and cultural values of Mount Duval.	High Medium Medium Low Low

Current Situation	Desired Outcomes	Strategies	Priority
Public use			
Access to the reserve is through the UNE Newholme field laboratory and requires prior approval of UNE. No facilities exist within the reserve and general recreational use is not promoted. Other areas of NPWS estate nearby provide visitor facilities and recreation opportunities. The reserve receives low levels of visitation mainly for walking, birdwatching and nature study. Use of the reserve must be carefully managed, as it is a relatively small and significant area of remnant vegetation.	• Formal agreements are developed with UNE about public access through Newholme to the reserve. • The local community is aware of the values of the reserve and of management programs. • Visitor use remains low, and is self-reliant and ecologically sustainable.	• Liaise with UNE to determine formal access arrangements for public access through Newholme to the reserve. • Promote community understanding and appreciation of the conservation values of the reserve through contact with neighbours, community organisations and media releases, NPWS *Discovery* programs and interpretive material as necessary. • Recreational use of the reserve will not be promoted. • Vehicles will only be permitted to access the reserve for authorised management purposes. Public vehicle use for recreational activities will not be permitted. Horse riding, cycling, cadet exercises, orienteering and camping will not be permitted in the reserve. • Allow (with prior neighbour approval for access) self-reliant and nature appreciation activities such as bushwalking, bird watching and nature study within the reserve. • Monitor levels and impact of visitor use.	High Medium Medium Medium Medium Medium

Current Situation	Desired Outcomes	Strategies	Priority
Research			
The UNE has conducted extensive research in and around the reserve. The UNE wishes to continue to utilise the reserve for research and extension purposes and has a field laboratory located adjacent to the reserve at Newholme. Research will improve understanding of the natural and cultural heritage values of the reserve, threatening processes and the requirements for management of significant plant and animal assemblages and species. Few studies have been conducted in the eastern portion of the reserve.	• Research assists management of the reserve and has minimal impact.	• Liaise with the UNE and other tertiary education providers about priorities for research in the reserve. • Develop protocols for access to the reserve, installation of temporary or permanent research equipment in the reserve and sharing of research information. • Encourage research to improve knowledge and management of natural and cultural heritage, in particular in the eastern portion of the reserve.	Medium Medium High High

Current Situation	Desired Outcomes	Strategies	Priority
Management operations			
Access to the reserve through Newholme for NPWS management purposes has been negotiated with the UNE as part of a draft MoU. The draft MoU also covers boundary maintenance, pest species issues, fire suppression and research activities. Fencing along the reserve boundary is inadequate in some places to exclude stock. The reserve area is zoned 1(f) (Forests Zone) under the Dumaresq Shire Council Local Environment Plan.	• NPWS and UNE continue to work collaboratively in the management and access of Duval Nature Reserve and Newholme mountain paddock. • Domestic stock do not enter the reserve. • The reserve is zoned 8(a) under the relevant local environment plan.	• Liaise with UNE to finalise the MoU between UNE and NPWS, in particular to ensure continued access by NPWS to the reserve. • In conjunction with neighbours, maintain fences and determine strategies to exclude stock in areas where construction of boundary fences is difficult. • Enforce NPWS policy prohibiting domestic animals within the reserve, with the exception of assistance animals under the *Disability Discrimination Act 1992*. • Liaise with neighbours to detect illegal activities. • Only authorised vehicles are permitted to access the reserve. Any vehicles accessing the reserve must remain on the management trails to the extent possible. Figure 1 shows the trails that will be maintained in the reserve for management purposes. • Liaise with Armidale Dumaresq Council to amend the local environment plans to zone the reserve 8(a) (Existing parks and nature reserves).	High High High Medium Medium Low

Legend for priorities:
High priority strategies are those that are imperative to the achievement of management objectives and desired outcomes. They must be undertaken in the near future to avoid significant degradation of the natural, cultural or management resources of the reserve.
Medium priority strategies are those that are necessary to achieve management objectives and desired outcomes but will be implemented as resources become available because the time frame for their implementation is not urgent.
Low priority strategies are desirable to achieve management objectives and desired outcomes but can wait until resources become available.

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