

ABERCROMBIE RIVER NATIONAL PARK
PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment and Conservation (NSW)

February 2006

This plan of management was adopted by the Minister for the Environment on 16 February 2006.

Acknowledgments: This plan of management is based on a draft plan prepared by staff of the Oberon Office of the Blue Mountains Region of the National Parks and Wildlife Service with the assistance of other Service staff. Special acknowledgment is made to the National Parks Association for their support and research of the area.

Cover photograph of the Retreat River near Macks Flat by Jules Bros, NPWS.

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FOREWORD

Abercrombie River National Park covers approximately 19,000 hectares and is located 40 kilometres south-west of Oberon and 60 kilometres north of Goulburn. The park includes the catchments of Silent Creek and the Retreat River, as well as a 42 kilometre section of the Abercrombie River.

Abercrombie River National Park protects an important area of remnant bushland within the south-western Central Tablelands of NSW. It contains a diversity of vegetation communities characteristic of montane and tableland species as well as of the western slopes of New South Wales. The park makes an important contribution to nature conservation in the Central West by providing habitat for a number of animal species with large home range requirements and low domestic densities.

The park provides opportunities for vehicle touring, bushwalking, swimming, fishing, picnicking and camping amid spectacular scenery. It also provides a pleasant natural break in the landscape between vast areas of cleared grazing land and large areas of pine plantations.

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

A draft plan of management for Abercrombie River National Park was placed on public exhibition from 22 August 2003 until 14 November 2003. The exhibition of the plan of management attracted 14 submissions that raised 10 issues. All submissions received were carefully considered before adopting this plan of management.

This plan of management establishes the scheme of operations for Abercrombie River National Park. In accordance with Section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

Bob Debus

Minister for the Environment

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1. INTRODUCTION

The *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each national park. A plan of management is a legal document that outlines how the area will be managed in the years ahead.

The management of national parks in NSW is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974*, the National Parks and Wildlife Regulation, the *Threatened Species Conservation Act 1995* and the policies of the National Parks and Wildlife Service. 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* 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 National Parks and Wildlife Act. Once the Minister has adopted a plan, no operations may be undertaken within Abercrombie River National Park except in accordance with the plan. The plan will also apply to any future additions to Abercrombie River National Park. Where management strategies or works are proposed for the national park or any additions that are not consistent with the plan, an amendment to the plan will be required.

2. MANAGEMENT CONTEXT

2.1. National Parks in New South Wales

National parks are reserved under the National Parks and Wildlife Act to protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor use.

Under the Act, national parks are managed to:

- conserve biodiversity, maintain ecosystem functions, protect geological and geomorphological features and natural phenomena and maintain natural landscapes;
- conserve places, objects, features and landscapes of cultural value;
- protect the ecological integrity of one or more ecosystems for present and future generations;
- promote public appreciation and understanding of the park's natural and cultural values;
- provide for sustainable visitor use and enjoyment that is compatible with conservation of natural and cultural values;
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of natural and cultural values; and
- provide for appropriate research and monitoring.

2.2. Abercrombie River National Park.

2.2.1. Location and Regional Context

Abercrombie River National Park was gazetted on 22nd December 1995. It is approximately 19,000 hectares in size and is located 40 kilometres south-west of Oberon and 60 kilometres north of Goulburn.

The main section of the park is approximately 15,000 hectares and is located mainly on the northern side of the Abercrombie River. Public access into this section of the park is from the Arkstone Road and the Felled Timber/ Brass Walls Road. A separate 4,000 hectare section of the park is located west of the main section of the park, downstream, mainly on the southern side of the Abercrombie River. A third section of the park lies to the south of the main section and covers 200 hectares. Bummaroo Ford camping area is located in this section of the park beside the Abercrombie River on the Abercrombie Road. The park includes the catchments of Silent Creek and the Retreat River as well as a 42 kilometre section of the Abercrombie River.

Abercrombie River National Park was established over Crown Land and State Forest. It is located within the Oberon, Upper Lachlan and Greater Bathurst Region Local Government Areas. It is primarily surrounded by grazing lands and pine plantations.

In addition to the park, there are two nature reserves within the catchment of the Abercrombie River: Razorback Nature Reserve (2,595 hectares) and Copperhannia Nature Reserve (3,494 hectares). These, together with the Mt Werong area of the Blue Mountains National Park which covers the headwaters of the Abercrombie River, assist in conserving the natural features of the area and protecting the water quality of the Abercrombie River.

2.2.2. Significance of Abercrombie River National Park

Abercrombie River National Park protects an important area of remnant bushland within the south-western Central Tablelands of NSW. It contains a diversity of vegetation communities characteristic of montane and tableland species as well as of the western slopes of New South Wales.

Included in Abercrombie National Park are Silent Creek, Retreat River, and a 42 km stretch of the Abercrombie River. These waterways form part of the Abercrombie River catchment (which is, in turn, part of the Lachlan River catchment). The park therefore contributes to the protection of one of the main river systems within the Central West of NSW. Within the Abercrombie catchment is an extensive amount of remnant riparian vegetation which is extremely important in maintaining water quality and habitat for threatened aquatic ecosystems.

Much of the Central West has been converted to agricultural or forestry use. The Department of Land and Water Conservation estimates that 162,233 hectares or 41% of the Abercrombie River catchment has a cover of native timber (NPA ABS:1995). The park makes an important contribution to nature conservation in the Central West by providing habitat for a number of animal species with large home range requirements and low domestic densities.

The park provides opportunities for four-wheel drive touring, bushwalking, swimming, fishing, picnicking and camping amid spectacular scenery. It also provides a pleasant natural break in the landscape between vast areas of cleared grazing land and large areas of pine plantations.

3. OBJECTIVES FOR MANAGEMENT

3.1. Specific Objectives for Abercrombie River National Park

In addition to the general principles for management of national parks (refer section 2.1.), the following specific objectives also apply to the management of Abercrombie River National Park:

- To manage Abercrombie River National Park as part of the system of protected lands within the Central South Western Area to conserve the natural biodiversity and to maintain natural processes, as far as possible;
- Protection of the catchment values in the area, especially riparian communities and dependant ecosystems;
- To increase opportunities for visitors to learn about the natural and cultural heritage of the park and the importance of remnant bushland in conserving native plant and animal communities within the central south western slopes;
- Management of recreation and tourism within the park to minimise the impacts on the park's natural and cultural features and maintain opportunities for a diverse range of recreational experiences consistent with environmental protection.

3.2. Overall Strategy

The overall strategy for management of Abercrombie National Park is to:

- Provide and maintain visitor facilities at those sites most popularly used for camping and day use activities. This will effectively protect the natural and cultural heritage values of the remainder of the park.
- Maintain opportunities for public vehicular access into the park along appropriate trails, including access for 4WD vehicles at two entrances and 2WD access to Bummaroo Ford Camping Area. No public vehicular access will be permitted in the western section of the park.
- Provide opportunities for the survey and monitoring of the park's natural heritage to contribute to better understanding of the biodiversity of the area and to assist in the development of management programs.
- Provide opportunities for survey and research into the park's Aboriginal and historical heritage to assist in the management of cultural places and provide an understanding into the past use of the area.

- Encourage protection of the catchment values and natural views by liaison with adjoining landholders, Lachlan/ Murray Total Catchment Management Committee, local Councils and other appropriate authorities regarding the protection of adjacent naturally vegetated ridge tops and catchment management strategies.
- Develop a reserve fire management strategy to assist in protecting the neighbouring pine plantations and private properties as well as promoting regeneration and maintaining the biodiversity of the Abercrombie River National Park.
- Develop a co-operative program with the local community, particularly neighbours of the park and local landcare groups to raise awareness of the importance of management programs and increase the effectiveness of programs for the control of fire, weeds and introduced animals
- Conserve populations of threatened and vulnerable species and the habitat values of the park by implementation of appropriate fire management practices.
- Minimise the impact of illegal grazing by working with adjacent landholders.

The remainder of this plan outlines detailed strategies required to achieve the above objectives and the overall strategy for the park.

4. FRAMEWORK AND POLICIES FOR MANAGEMENT

This section contains the desired outcomes and strategies for management of Abercrombie River National Park together with relevant background information. Outcomes and strategies are summarised under the following headings:

- Conservation of Natural Heritage;
- Conservation of Cultural Heritage; and
- Use of the Park.

The objectives and strategies established in this plan of management provide the framework for management consistent with anticipated resources available to the Service for the next 5 to 10 years. Management of the park will also be in accordance with general Service policies which are not repeated in this plan.

4.1. CONSERVATION OF NATURAL HERITAGE

4.1.1. Geology, Landforms and Catchment Values

Abercrombie River National Park is centred on an area of deeply incised gully systems, in conjunction with prominent ridges and spurs. There is a large altitudinal difference in the park, from 1,128 metres in the Felled Timber Creek catchment in the north-east to 500 metres at the Abercrombie River in the south-west.

There is a progression of older to younger rock sequences from east to west through the park. There is a gradual change from Ordovician metasediments typical of the Southern Tablelands in the eastern part of the park, to Ordovician-Silurian metasediments on the western edge which are typical of the Central Western Slopes. The sediments include silty sandstones, siltstones, phyllites, shales, quartzite and minor porphyry.

The north-eastern parts of the park contain small areas of tertiary dolerites and some basalts.

The soils in the main section are skeletal, highly so on some western ridges and less on the slopes (ie. gravel and coarse sands). Consistent with the significant altitude difference over the park, there is a graduation of soil types from ridges to the gullies.

Localised alluvial soils occur along major drainage lines such as the Silent Creek, Felled Timber Creek and Retreat River. Larger (often temporary) alluvial areas occur along the Abercrombie River.

Other important soil types within the area include:

- Orange loam soils, which occur at about 1000m in the north-eastern section of the park within the felled Timber Creek and Silent Creek catchments. They correspond to the highest altitudes and comprise the western areas of much larger areas to the north and the north-east of the park, which have been cleared for grazing and the development of pine plantations.
- Heavier loam soils often mixed with floating rock material which is found on ridges and slopes in the south-west area of the park. These are often consolidated into very hard layers. These soils support Eucalypts common on the Western Slopes of NSW.

The deeply entrenched Abercrombie River flows to the north-west along the southern edge of the main section of the park. The Abercrombie River rises in Blue Mountains National Park near Mt Werong and flows into the Lachlan/Murray system.

The river's pattern of meanders has been influenced by the geographical structures, although the river cuts across the strike of folded metasediments (NPA ABS: 1995). The lands at the southern end of the park as well as those south of the Abercrombie River outside the park are not extensive, but form a natural viewshed parallel to the Abercrombie River.

Two drainage systems empty into the Abercrombie River within the park, from Silent Creek and Retreat River. The catchment of Silent Creek is mostly contained within the park. Retreat River, which originates north of the park, has two main tributaries, Licking Hole Creek whose catchment is wholly contained within the park and Felled Timber Creek.

The Abercrombie River is generally acknowledged as containing the highest quality water flowing into the Lachlan River system. This is attributed to the large amount of native vegetation in the catchment and particularly the extensive areas of riparian vegetation dominated by River Oak (*Casuarina cunninghamiana*). However, the Abercrombie River does suffer from heavy sediment loads during times of high rainfall. This is partly due to natural processes but is also a result of forestry clearing practices and farming practices in the areas around Abercrombie River National Park. Agricultural activities in areas surrounding the park also have an impact on water quality in those sections of the river where there is no natural vegetation to act as a buffer (NPA ABS:1995). The Phosphorus Action Plan presently being undertaken by Mulwaree Shire Council is a good example of how water quality can be improved.

Desired Outcomes

- Geological and geomorphological features and processes are protected and human-induced disturbance of landforms and soils is minimised.
- The scenic values of the park are protected from visual intrusions.

- Disturbed sites are rehabilitated.
- Catchment values, water quality and the health of the waterways in the park are maintained or improved

Strategies

- Erosion is recognised as a naturally occurring process within Abercrombie River National Park. Where erosion has been accelerated by human activity or is threatening significant habitats or other values, appropriate control measures will be undertaken.
- Tracks made by off road driving/ motor bike riding will be closed and rehabilitated to prevent further erosion.
- All management activities in the park will, where relevant, be guided by soil erosion and sedimentation control principles and practices developed by the Department of Sustainable Natural Resources.
- The Service will progressively replace the current toilets located at the camping areas with environmentally friendly systems, such as pump out or composting toilets.
- The design and construction of any new access roads across creeks/waterways will be undertaken in accordance with the NSW Fisheries Policy and Guidelines for bridges, roads, causeways, culverts and similar structures.
- Liaison will be undertaken with adjoining landholders, local Councils, the local catchment management board (Lachlan/Murray Total Catchment Management Committee Inc.) and other appropriate authorities regarding the protection of the park's catchment, including protection of adjacent naturally-vegetated ridge tops and the natural corridor along this part of the Abercrombie River and tributaries, and control of phosphorus run-off from land within the catchment.

4.1.2. Native Plants

Abercrombie River National Park conserves a diversity of vegetation communities typical of montane areas, tableland areas and western slopes. It contains the largest remaining intact patch of vegetation typical of the drier parts of the tablelands in the region and hence is very significant in species conservation within the area. Generally, species diversity increases in areas where there is a large range in geology types and altitude. For example, slopes in the Governor's Flat area of the park possess a greater species diversity than in the Silent Creek area.

In 1995 the National Parks Association undertook a biodiversity survey of the area which included a detailed vegetation survey. This survey highlighted high levels of species richness, particularly for bryophytes and liverworts, in a comparatively dry area. It has been suggested that there may be some correlation between this feature and a

limestone influence in the soil. In 1998 a vegetation survey of the whole park was carried out by the NPWS and consultants as part of a Comprehensive Regional Assessment of the region. These surveys identified sixteen distinct plant communities that exist within the park (see Appendix 1).

These plant communities can be divided into three groups based on their regional significance:

Group 1: Vegetation typical of wet, high altitude sites. These vegetation types are significant because suitable conditions for their occurrence are limited, hence they only occupy a small area within the park. Examples include; Northern Plateau moist fern/herb/grass forest found above 1000m occurs in only 0.14% of the park, dominated by Brown Barrel (*E. fastigata*), Mountain Gum (*E. dalrympleana*), *Daviesia ulicifolia* and Bracken (*Pteridium esculentum*). These vegetation communities have been much reduced in the area since the establishment of extensive areas of pine plantations and grazing.

Group 2 : Vegetation limited in occurrence due to a lack of suitable conditions. Examples include; riparian *Acacia*/ shrub/ grass/ herb forest dominated by River Oak (*Casuarina cunninghamiana*) is limited to alluvial soils along permanent watercourses. Western Slopes Dry Grass Forest, typified by Blakelys Red Gum (*E. blakelyi*)- Yellow Box (*E. melliodora*) – *Danthonia racemosa*- *Austrostipa scabra*, is limited to relatively fertile soils and falls within the White Box/ Yellow Box / Blakelys Red Gum community, which is listed as an endangered ecological community (EEC).

Group 3: These communities are typically widespread in the drier parts of the tablelands but have been reasonably extensively cleared (34-66%). The park is one of the main areas where these communities are conserved. Studies such as the Southern Comprehensive Regional Assessment (CRA) have shown that without the Abercrombie River National Park many of these vegetation communities would be substantially below the reservation target of 15%.

Species of Conservation Significance

No plant species listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) have been recorded to date in the park, however, there are a number of plant species currently listed as ROTAP (rare or threatened) species or have special conservation significance. These include *Leptospermum blakelyi*, *Acacia furfuracea*, *Acacia chalkeri* and *Pomaderris prunifolia*.

Other species that are of regional importance include:

- Tiny Pennywort (*Hydrocotyle callicarpa*) - A small annual herb which generally grows in valleys in gravelly or loamy soils.
- Annual Fern (*Anogramma leptophylla*) - A small delicate fern found in protected sites, often under rocks. Recorded previously from the Northern and Southern Tablelands and Slopes. This record therefore provides a link between these areas.

- Greenhood Orchid (*Pterostylis hamata*) - A terrestrial orchid which grows among rocks in open forest. Previously recorded from the Slopes, North Coast and Northern Tablelands.
- *Enthosthodon subnudus* var. *gracilis* - A moss species previously recorded from the Coast, the Northern Tablelands and South-Western Slopes.
- Argyle Apple (*Eucalyptus cinerea*), the distribution of this eucalypt is extremely patchy.
- *Enthosthodon subnudus* var. *gracilis*, a moss that grows on rocks in moist areas around the north-east of park (Hooseberry Swamp)
- *Isolepis gaudichaudiana*, a small tufted annual sedge that grows in moist, open habitats. This population is the most westerly occurrence in the Central Tablelands.
- *Oreomyrrhis eriopoda*, a perennial herb that occurs in open forest on better soils above 1100m in park. This is a new record for the Central Tablelands.

Other significant species likely to occur within Abercrombie River National Park are *Olearia myrsinoides*, *Solenogyne gunnii* and *Bossiaea bracteosa*.

Desired Outcomes

- The native vegetation of Abercrombie River National Park is managed to ensure the conservation of all indigenous plant species, communities and structural types.
- Disturbance of bushland, particularly in riparian zones, is kept to a minimum.
- Species and communities of conservation significance are protected.
- Habitat on neighbouring lands is managed in a compatible way through cooperative agreements.

Strategies

- All new work will avoid undisturbed plant communities, especially in riparian areas.
- Public authorities and private contractors undertaking work in the park will be required to minimise disturbance to native vegetation, to avoid introducing and facilitating the distribution of exotic species and to rehabilitate to the Service's satisfaction any damage resulting from the activity.
- Where possible fire will be prevented in those areas that are fire sensitive. These include the riparian zones along the Abercrombie River and its tributaries.
- All new planting undertaken within the park, including planting associated with the development of camping areas, will use locally indigenous species.
- Development of voluntary conservation agreements for areas of bushland adjacent to the park will be encouraged.

- Feral animal and weed control will be undertaken to prevent further damage to native vegetation.
- Future surveys will be undertaken to locate any further significant plant species, particularly in the north-eastern sector of park and along the Abercrombie River.

4.1.3 Native Animals

Several fauna surveys have been undertaken in the park - by Charles Sturt University students, the National Parks Association and the NPWS. These surveys have concluded that there is a wide range of native fauna inhabiting the Abercrombie River National Park (see Appendix 2). The park provides habitat for at least 15 animal species that are listed under the TSC Act as either endangered or threatened and for eight regionally significant species.

Fourteen bat species have been recorded within the park, three of which are listed as vulnerable under the TSC Act. These are the Eastern False Pipistrelle (*Falsistrellus tasmaniensis*), Greater Broad-nosed Bat (*Scoteanax rueppellii*) and Common Bent-wing Bat (*Miniopterus schreibersii*).

The Platypus (*Ornithorhynchus anatinus*) is regularly recorded in the Abercrombie River and its tributaries. Although common through much of its range, the Platypus must be considered vulnerable due to its reliance on river systems for survival.

There are two mammal species which are listed under the TSC Act which have been recorded in the surrounding area in the past. They are the Koala (*Phascolarctos cinereus*) and the Spotted-tail Quoll (*Dasyurus maculatus*). Priority should be given in future surveys to locating these species. If they are still found in the area all efforts should be made ensure their protection and conservation of their habitat.

Over 30 species of reptiles have been recorded within Abercrombie River National Park. Species of significance include Rosenberg's Goanna (*Varanus rosenbergi*) which is listed as threatened under the TSC Act and was not previously known in this area, the Diamond Python (*Morelia spilota ssp. spilota*) which is at the edge of its currently known range in the park, and the Gippsland Water Dragon (*Physignathus leseuerii ssp. howitti*) the finding of which may indicate a slight extension of its current range.

The downstream section of Abercrombie River National Park appears to be the limit of range for a number of reptile species.

Eight frog species have been recorded in the park. A species of great significance that has been recorded in the area is the Booroolong Frog (*Litoria booroolongensis*). This frog is confined to mountain streams of the Great Dividing Range (Cogger:1992). Once common in rocky streams above 300 metres in the Northern Tablelands, it has almost disappeared from this region. The Booroolong Frog is listed as endangered under the TSC Act. The continued presence of the Booroolong frog in the Abercrombie and Retreat Rivers, despite the apparent decline in its range, is of conservation significance.

The area is also important habitat for at least 90 native bird species. Many of these species are migratory or nomadic and are unlikely to be in the area during mid winter.

The Powerful Owl (*Ninox strenua*) and Glossy Black-Cockatoo (*Calyptorhynchus lathamii*) have both been recorded during surveys of the Abercrombie River National Park and are currently listed as vulnerable under the TSC Act. Other species which have been recorded in the area and which are of particular conservation concern include the Grey Goshawk (*Accipiter novaehollandiae*), and the Peregrine Falcon (*Falco peregrinus*) which is considered endangered in the Central West. The Noisy Friarbird (*Philemon corniculatus*) has been identified as a species of particular conservation concern due to the clearance of eucalypt forest and woodland habitat of this species.

Vulnerable species that may occur in the area include the Australasian Bittern (*Botaurus poiciloptilus*), Masked Owl (*Tyto novaehollandiae*), Black Bittern (*Ixobrychus flavicollis*), Pink Robin (*Petroica rodinogaster*), Square-Tailed Kite (*Lophoictinia isura*), Swift Parrot (*Lathamus discolor*) and the Turquoise Parrot (*Neophema pulchella*).

The Abercrombie River and its tributaries provides habitat for three threatened fish species listed under the *Fisheries Management Act 1994*: the endangered Trout Cod (*Maccullochella macquariensis*); and the vulnerable Silver Perch (*Bidanuss bidyanus*) and Macquarie Perch (*Macquaria australasica*). Another fish species and a crustacean which are considered regionally rare are also found within the park. These are the River Blackfish (*Gadopsis marmoratus*) and Murray Cray (*Euastacus armatus*). The taking of all threatened species is prohibited in NSW waters under NSW Fisheries legislation. Bag and size limits apply to all other native freshwater fish species within NSW.

The degradation of native riparian vegetation has been identified as a key threatening process under the *Fisheries Management Act 1994*. A Threat Abatement Plan will be prepared by NSW Fisheries to address this threatening process and recovery plans will be prepared for threatened fish species.

Desired Outcomes

- Native animal species are conserved, including the habitat and populations of threatened species.
- Native fish species are conserved in cooperation with NSW Fisheries.

Strategies

- Species recovery plans will be implemented where prepared for native animal species which are listed under the TSC Act.

- Specific conservation programs will be developed as required for native animals that are:
 - threatened with extinction, destruction or loss of diversity (but not necessarily listed under the TSC Act);
 - at the limits of their geographical range;
 - of particular scientific interest;
 - of other specific conservation value; and
 - subject to specific impacts or disturbances.
- Liaison will be undertaken with local councils and other authorities to minimise the impact of potentially threatening processes on native species and communities.
- Liaison will be undertaken with NSW Fisheries to protect the aquatic communities of the park and to undertake a survey to determine the status of the regionally rare River Blackfish.
- Information will be made available for park visitors regarding the fishing regulations of NSW, in the form of brochures and interpretation signs. This will be undertaken in co-operation with NSW Fisheries.
- Appropriate actions in recovery plans for native fish species listed under the *Fisheries Management Act 1994* and in Threat Abatement Plans will be implemented where consistent with this plan.
- Support and involvement with university and special interest groups will be continued to facilitate further survey and research into the distribution and habitat requirements of native animals, with priority to species that are threatened, regionally significant or expected to occur but presently remain unrecorded.
- Further survey work will be sought for mapping and monitoring the occurrence of the endangered Booroolong Frog and Rosenberg's Goanna within the park and for the occurrence of the endangered Koala and Spotted-tail quoll which have been recorded close to the park.

4.1.4 Introduced Plants and Animals

Introduced plants and animals are those species which are not endemic to Abercrombie River National Park. Some of these species are detrimental to Abercrombie River National Park because they are invasive and/or directly compete with or prey upon native species. Introduced species may also affect soil and water systems and the recreational, cultural, aesthetic and scientific values of the park.

Introduced plants

Currently there are four major introduced plant species of concern within Abercrombie National Park. High densities of introduced plants are generally found along water

courses, in areas which have been previously cleared, along boundaries with grazing or agricultural land, and in areas subjected to intense activity by introduced animals.

Serrated Tussock - Large portions of the western section of the park, and areas along boundaries, river banks and access roads are affected by Serrated Tussock (*Nassella trichotoma*). In the past most of these areas have been subjected to intensive clearing for grazing. Invasion from neighbouring properties is also occurring. Serrated Tussock is listed as a noxious weed in both Crookwell Council and Upper Macquarie County Council areas. Co-operative weed control programs with these councils have been successful in controlling Serrated Tussock throughout the park using aerial spraying methods, although continued liaison with neighbours and a co-operative approach to weed management is needed to control invasion from neighbouring properties. Monitoring for future outbreaks will continue.

Blackberry (*Rubus fruticosus*) occurs along most of the major creek lines and river systems within the park. The main causes of infestation are seeds carried by birds and water and spreading from neighbouring properties. Control has occurred by the use of chemical spraying. This needs to be continued with the support of local landholders and councils.

Willow species are known to occur along the Retreat River, Licking Hole Creek and Felled Timber Creek in the north-eastern section of the park as well as along the Abercrombie River. Control has begun using stem injection of herbicide.

Pine wildings from the nearby State Forest pine plantations and a small privately owned plantation at Mac's Flat, which was burnt in the 1999 fire, have the potential to be a problem within the park. A small experimental pine plantation in the north-east section of the park can be eradicated by stem injection and /or felling.

Introduced animals

Introduced grazing animals are a major concern within Abercrombie River National Park. These animals impair the regeneration of native vegetation, accelerate soil erosion, create environments favourable for colonisation by introduced plants and aid in their spread. The impacts of introduced fish are poorly researched. The Service does not have legislative control over fish within the park but can work with NSW Fisheries to control introduced fish.

Feral goats have been recorded in approximately 70% of the park and pose a significant threat to the natural values of the park. It is estimated that between 300-400 goats occur within the boundaries of the park (as at Jan 2003). The most effective method of controlling goats within Abercrombie River National Park is via helicopter culling. This is being undertaken by the Service, Goulburn Rural Lands Protection Board and the Central West Rural Lands Protection Board

Pigs occur in low numbers throughout the northern sector of park. The preferred control methods are trapping and baiting. This will also be done in conjunction with the park neighbours who experience a feral pig problem and in known areas of high pig activity.

Wild dogs are known to occur in the park and surrounding areas in very low numbers. 1080 baiting is undertaken when necessary in conjunction with property owners along the boundaries of the park. This is done in conjunction with the Goulburn Rural Lands Protection Board and the Central West Rural Lands Protection Board.

Foxes, cats and rabbits all occur in small numbers within the park. A greater emphasis will be placed on the recording of the distribution and abundance of these species and the impacts these species are having within the park. A fox control strategy is implemented in conjunction with neighbours of the park.

Stock wander into the park from neighbouring properties when the Abercrombie River is low or when boundary fences are not maintained. Stock cause erosion and affect water quality in the rivers, in addition to damaging vegetation in the park.

Introduced fish - The European carp is an introduced species that has invaded freshwater streams to such an extent that in parts of south-eastern Australia some aquatic ecosystems have been irretrievably destroyed. Carp are found in the Abercrombie River and its tributaries. Brown Trout (*Salmo trutta*), Rainbow Trout (*Salmo gairdnerii*) and Mosquito Fish (*Gambusia affinis*) are also present in the Abercrombie River and its tributaries.

Desired Outcome

- Introduced species are eliminated or kept to levels that have minimal impact on native plants and animals.

Strategies

- Introduced terrestrial species will be eradicated from the park wherever possible. Where eradication is not possible or practical, introduced species will be contained or controlled to minimise their impacts on the park and neighbouring land uses.
- High priority will be given to the control of introduced plants and animal species which:
 - are a risk to threatened species, critical habitat or significant plant communities;
 - are having a detrimental impact on Aboriginal or historic places or recreational areas;
 - are species for which current neighbouring control programs are in place or for which threat abatement plans have been prepared;
 - are declared noxious;
 - have a high capacity for dispersal; and/or
 - are new isolated occurrences.

- All control programs will be regularly reviewed to monitor their effectiveness. Further survey work will be carried out to determine population dynamics, densities and distribution.
- Where possible, pest management programs will be developed and implemented in cooperation with other land management agencies, members of the community and community groups.
- A Regional Pest Species Management Plan will be prepared which will include future priorities and control programs for Abercrombie River National Park
- Pending preparation of the Pest Species Management Plan, the following control programs will be undertaken as a priority:
 - Serrated tussock: continue aerial spray programs in co-operation with the local Councils and landholders. Priority areas for spraying will be along vehicle access tracks, ridge tops, river banks and near camping areas.
 - Blackberry: spray large infestations and new growth, particularly along creek banks (above high water mark) and at camping areas.
 - Willows: control willows along Retreat River, Licking Hole Creek and Felled Timber Creek.
 - Pine wildings: control within and adjacent to plantation within park by stem injection and/or felling.
 - Feral goats: implement aerial culling in conjunction with the Central West Rural Lands Protection Board and local landholders. All neighbours will be notified at least 7 days before an operation takes place.
 - Wild Dogs: implement 1080 programs along the perimeter of the park and along major trails in conjunction with neighbours if there are dog attacks on properties close to the park.
- Liaison will be undertaken with NSW Fisheries to limit, and minimise the impact of, introduced fish.
- The Service will continue to liaise with landholders to prevent stock entering the park and will remove stock from the park.

4.1.5 Fire Management

Under the *Rural Fires Act 1997* the National Parks and Wildlife Service is both a fire authority and a public authority. The Service is responsible for the prevention and control of fires within Service areas and to adopt and carry into effect the district bush fire risk management plans (Oberon and Crookwell) covering the park.

Fire is a natural feature of Abercrombie River National Park and essential to the survival of some plant and animal communities. Fire frequency, intensity season of occurrence and spatial distribution of fires are major factors affecting the distribution and abundance of the flora and fauna in the park. They also affect the nutrient cycles, erosion patterns and hydrological flows in the park. Regular fire can cause loss of particular plant and

animal species and communities. Fire can also damage Aboriginal sites, historic sites and recreation facilities, and can threaten visitors and neighbouring lands.

The Abercrombie River National Park Draft Fire Management Strategy is in preparation and will be released for public comment before being finalised. The Reserve Fire Management Strategy will detail the fire regimes for each area of the park and the criteria used to develop the regimes.

Little recorded information is available on the occurrence of fire within the park 10-25 years ago. The most recent wildfire event in the area was the 'Cooksvale' wildfire in February 1999 which impacted on 9,872 hectares of the park (52% of the parks vegetation being affected). Prior to gazettal of the park, the majority of prescribed burns were by local landholders and State Forests with a regime of around 4 to 5 years to reduce the potential threat to nearby properties and pine plantations. This has led to a lack of understorey vegetation and reduced biodiversity in certain areas. One of the primary aims of the Reserve Fire Management Strategy will be to restore plant diversity. Another focus of the plan will be to ensure, where possible, the protection of nearby State Forest pine plantations and neighbouring assets. Co-operative fire management between NSW State Forests and the Service will continue through the district bush fire management committee.

The Service also assists with the control and suppression of fires adjacent to Service reserves where necessary. The Service regards co-operative fire management as critical to the protection of both life and property as well as to achieving the natural resource management objectives for the park. The Service's participation in district bush fire management committees is an important aspect of achieving fire management goals and objectives for the park.

Desired Outcomes

- Fire regimes are appropriate for long-term maintenance of the park's plant and animal communities.
- Human caused bushfires (unplanned) are prevented.
- The potential for spread of bushfires on, from, or into the park is minimised.
- Persons and property within, or immediately adjacent to, the park are protected from bushfires.
- Aboriginal sites, historic places and culturally significant features are protected from damage by bushfires.

Strategies

- A Reserve Fire Management Strategy for the park will be exhibited and finalised.

- Fire management within the park will be in accordance with the Reserve Fire Management Strategy and will be fully integrated with other park management programs.
- Fire management practices will utilise effective fire suppression methods which have the least adverse environmental impacts.
- The Service will continue, in accordance with Section 52(1) of the Rural Fires Act and through the district bush fire management committees, to plan and implement fuel reduction programs and other measures aimed at protecting life and property and natural resources along the perimeter areas of the park and in other areas where there is an identified or potentially high fire risk.
- As far as possible prescribed burning will be implemented in autumn and managed to minimise the impacts on small mammals such as antechinus and birds which breed in spring and summer and are vulnerable to fire during this critical period.
- Bushfires will be prescribed to enhance specific vegetation communities and biodiversity.
- Research into fire behaviour in the local area and into the effects of fire on individual plant and animal species, vegetation communities and biodiversity will be encouraged and where appropriate the results of the research will be incorporated into the park's fire management programs.
- The Service will maintain the existing trails in the park to a standard suitable for fire fighting access. No new permanent trails will be constructed within the park.
- Temporary tracks and firebreaks associated with fire suppression within the park will be rehabilitated as soon as possible after use.
- Information concerning the fire management within the park, including strategies to reduce unplanned ignitions, will be incorporated where appropriate in park information and interpretation material.
- Open campfires will only be permitted in designated fireplaces and fire rings located within the formed camping areas. The use of fuel stoves will be encouraged, and where fire rings or designated fireplaces are not provided only fuel stoves may be used.
- During periods of high to extreme fire danger, or when bushfires are burning within the park:
 - appropriate risk management strategies such as Park Fire Bans may be initiated;
 - all or parts of the park may be closed to recreational use to minimise further risk to visitor safety; and
 - co-operative arrangements with neighbours and other fire authorities for bushfire detection and monitoring may be implemented.

- Unless otherwise specified within an adopted species recovery plan, species conservation plan, reserve fire management strategy or Section 52 plan, fire will be excluded if possible from:
 - rare, endangered, regionally significant species habitat;
 - riparian communities;
 - areas of low fire risk;
 - areas of naturally low fuel loads; and
 - areas with high soil erosion potential. A large percentage of the park is over 18 degree slope and therefore the retention of the natural timber and ground cover is essential for reducing soil erosion and the effects of increased run-off throughout the catchment.

- A fire danger/ park closure public warning system will be developed and implemented.

- The Service will introduce a common lock policy for access into neighbouring properties.

4.2. CONSERVATION OF CULTURAL HERITAGE

The conservation of objects, places and features of cultural value is a requirement of the *National Parks and Wildlife Act 1974*. The Service is guided by the provisions of the Australian ICOMOS Charter for the conservation of places of cultural significance (the Burra Charter, revised 1999) in its management of cultural heritage within the park.

Effective management of cultural heritage requires knowledge of the nature and distribution of sites and places; an understanding of their cultural significance and their conservation requirements; and the implementation of effective management strategies, including physical protection and interpretation as well as an understanding of the processes which threaten their survival.

4.2.1. Aboriginal Heritage

The Abercrombie River area was used and continues to be used by the Gundungurra and/or Wiradguri Aboriginal people. Patterns from a recent survey of the Retreat River/Licking Hole Creek area and the main camping areas, and previous Aboriginal archaeological surveys in similar landscapes, show that the rivers and creeklines are rich in sites. This is due to the richness of the natural resources in these areas, especially in areas close to the Abercrombie and Retreat Rivers which are permanent water bodies and support a wide range of organisms from which the Aboriginal community could sustain themselves. These areas also provide shelter from the harsher weather conditions. A number of reports state that the surrounding area potentially supports hearth sites, scarred trees, and artwork (NPA ABS:1995).

Desired Outcomes

- Aboriginal sites, places and features are protected from damage by human activities.
- Aboriginal people are involved in management of Aboriginal cultural values in the park.

Strategies

- Site surveys and predictive research for Aboriginal sites will be encouraged.
- Activities with the potential to damage Aboriginal sites will be preceded by a site survey. Works will be modified or relocated to protect sites.
- The Service will seek to involve the Aboriginal community in management of the park's Aboriginal heritage, including site surveys, significance assessment, conservation planning, protection and interpretation.
- Conservation programs will be prepared and implemented for significant sites found to be under threat, with priority to those at greatest risk.

- Further site surveys will be undertaken of the area around Mac's Flat, near the Abercrombie River and Retreat River junction, due to the potential impacts of the adjacent inholding and recreational pursuits on Aboriginal sites in the area.
- Information on the park's Aboriginal heritage will be made available to the public through visitor information displays and brochures.

4.2.2. Historic Heritage

The first European explorer known to have visited the Abercrombie River area was Dr Charles Throsby who, guided by local Aborigines, crossed the then unnamed Abercrombie River in May 1819. The following year the river was named by John Thomas Bigge, who was travelling with the explorer John Oxley. From 1820 onwards, Europeans began to move into the Abercrombie region with cattle and sheep.

In June 1851 the Commissioner of Crown Lands, Edward Hargreaves, visited the Abercrombie district to investigate reports of gold. By August that year a small amount of gold had begun to trickle into Goulburn from the Abercrombie area, and by September approximately one hundred diggers were camped at the junction of the Abercrombie and Isabella Rivers washing for alluvial gold. Mining activity at several sites, and mining and exploration titles, existed in the area until quite recently.

Up until approximately 1990 the area was mostly Vacant Crown Land and for the past 100 years the area has primarily been used for sheep grazing. It has been estimated that the area supported up to 3,000 sheep at times. A number of Permissive Occupancies for grazing were granted in the area which is now park, and one freehold area was granted in the 1970's (from a miners claim in February 1964) at the junction of the Retreat River and Licking Hole Creek.

The National Parks Association (NPA) began campaigning for a national park after surveying the area in 1965. In 1982 the NSW National Parks and Wildlife Service expressed an interest in making the area a nature reserve whilst the NSW State Forests (formerly NSW Forestry Commission) opposing the inclusion of a reserve instead wanting to keep the area as a fire control buffer for the nearby pine plantation. In 1985, the NPA conducted a second survey of the Silent Creek area for inclusion in a park proposal that was sent to the State Government and NPWS. In 1990 an assessment of the area's natural resources was undertaken by the Department of Lands. This resulted in the area being designated as the Silent Creek Heritage Lands in 1992 under the management of a Trust for the purpose of public recreation and environmental protection. The Trust included representatives of the State Forestry Commission and Department of Conservation and Land Management, various lease holders, and landholders with a special interest in the area.

Following detailed environmental surveys by the National Parks Association, support was obtained to reserve the area as a national park. On 22nd December 1995, an area

incorporating both Crown Land and previous State Forest land was gazetted by as the Abercrombie River National Park under the NSW National Parks and Wildlife Act.

Historical sites/ structures that remain in the park include;

- Stock yards and a tin hut at Licking Hole
- Two huts associated with past recreational use (Retreat River Hut and Wattle and Daub Hut)
- Mine workings (including a disused tunnel to divert the course of the Retreat River)
- Water races along the main creeks
- Remains of miners dwellings.
- Exotic ornamental and fruit trees on the river flats at Licking Hole where a dwelling once stood.

Desired Outcomes

- All significant historic features are appropriately conserved and information about others is recorded.

Strategies

- An assessment of all historic places will be carried out and strategies for their future management developed, based on their historic value and risk to the safety of park visitors. Management options will include recording and removal (where dangerous or where retention conflicts with other park values e.g. exotic trees that are spreading), passive management and periodic monitoring, stabilisation, adaptation, restoration, interpretation or other use. Natural decay or passive management to allow natural restoration processes to take effect will generally be preferred to removal, except where there is no practical alternative for reasons of public safety or environmental impact.
- Historic places will be protected from natural threatening processes where possible, and from impacts arising from management and use of the park, until their significance has been assessed.
- Rubbish and other waste materials around historic structures that may pose a health and/or safety risk to park visitors or wildlife will be collected and disposed of by the Service.
- Appropriate information on historic heritage of the park will be incorporated into visitor information displays and brochures.
- Management activities that have the potential to damage historic places will be preceded by site survey and heritage impact assessment. Works will be modified or relocated to protect sites of cultural significance.
- Further research into the historical heritage of the area will be encouraged, particularly recording the oral history of the area.

4.3. USE OF THE PARK

The major categories of use that may be appropriate in Service areas are:

- education and information on the area, the Service and the conservation of natural and cultural heritage;
- recreation in a natural setting;
- scientific research; and
- management operations by the Service and other authorities.

The extent to which these categories of use will be provided for in Abercrombie River National Park is indicated in the following sections of this plan.

4.3.1. Information and Education

Abercrombie River National Park is a relatively new park being officially gazetted on 22nd December, 1995.

Visitor information displays have been developed at the main visitor use areas of the park and the park entrances. Trail name signs and trail condition signs will be placed at appropriate locations within the park.

A revised brochure for the park is available to visitors. Information within this brochure concentrates on promotion of the park's qualities and some regulations, as well as a map and contact number to the appropriate NPWS office. These brochures are available from the National Parks Office throughout the Blue Mountains Region, at the Oberon Information Centre at the council offices and other tourist outlets/ information centres.

Desired Outcomes

- There is widespread community understanding and appreciation of the park's natural and cultural values.
- Visitors are aware of the park's recreation opportunities and can easily find their way to park facilities.
- The park is a useful educational resource for local schools and community organisations.

Strategies

- Emphasis in the information, promotion and understanding of the park will be placed on:
 - the pristine qualities of the riparian environments which are within the park;
 - the parks regional importance in conservation; and

- regionally significant flora and fauna species.
- Visitor information and interpretive displays will be located at the Bummaroo Ford camping area, The Sink camping area, the two public access entrances to the park, and at the National Parks information bay in Oberon.
- Information and interpretive displays may also be placed at special areas of interest eg. historic places or popular fishing spots.
- A park brochure will be prepared and made available to the public. Information will include access, special features of the park, regulations, camping areas and methods of minimal impact recreation use.

4.3.2. Recreation Opportunities

The Abercrombie River area has been used for recreation for many years but there are no statistics on the numbers or use levels. Recreational activities undertaken in Abercrombie River National Park include fishing, canoeing, camping, swimming and vehicle touring. In developing strategies for future recreational use of Abercrombie River National Park emphasis has been placed on the maintenance of existing visitor facilities, such as vehicle roads, camping areas, picnic areas and scenic sites, where this is compatible with the other values of the national park and with the requirements of providing for public health and safety.

Access to the main section of the park is via the Arkstone Road, which traverses private property and the Brass Walls Road (off Felled Timber Road). Trails within this section of the park are only accessible to four-wheel drive vehicles. The Brass Walls entrance is located in the basalt soils of the higher north-eastern sector of the main park. In wet weather this trail and the associated Link Road and Little Bald Hill Trail are impassable. Use of boundary trails constructed for bushfire protection has led to visitors entering into private property, which has become an issue with some neighbouring property owners.

Abercrombie River National Park also includes a small area of 200 hectares along the Goulburn/ Oberon Road. The Bummaroo Ford camping area has been established here and is accessible to both two-wheel drive and four-wheel drive vehicles.

The western portion of the park consisting of approximately 4,000 hectares has no public vehicular access.

In the past camping was unregulated throughout the park. Vehicle-based camping will be retained at the following locations (which were previously used for camping):

- Bummaroo Ford, where the Goulburn-Oberon Road crosses the Abercrombie River;
- Silent Creek;
- The Beach, on the Abercrombie River; and
- The Sink, on the Retreat River.

Facilities at these sites will include pit toilets (established at least 50 metres away from any natural watercourse), barbecues/fire rings, information/interpretative displays at Bummaroo Ford and The Sink, and barriers to protect the natural qualities of the area.

An area near Wattle and Daub Hut on the Retreat River may be formalised as a day-use picnic area once an assessment of significance has been developed on the hut and its future management determined.

Currently there are no formal walking tracks within Abercrombie River National Park although bushwalking is permitted throughout the park. Bush camping will be permitted in areas away from roads/fire trails. The most popular walking routes are along the Abercrombie River and its tributaries. Fishing, swimming and other water-based recreational activities such as canoeing are also popular in the park's waterways.

Horse riding occurs in low numbers and hence the impact from the activity is not significant. A significant increase in horse riding activities in the park could increase the potential for weed dispersal, soil erosion, damage to riparian vegetation and conflicts with other users, particularly four-wheel drivers.

Cycling also occurs at low levels. The trails within the park are moderately suitable for the use of mountain bikes.

The majority of fishing in the park is in pursuit of two non-native species: the Brown Trout and the Rainbow Trout. As stated earlier (see section 4.1.3 Native Animals), NSW Fisheries regulations prohibits the taking of certain native fish from rivers within the park. Also as stated earlier (see section 4.1.4 Introduced Plants and Animals), the Service will work with NSW Fisheries to assess and reduce the impacts of non-native fish on the natural heritage values of the park.

Desired Outcomes

- A variety of visitor opportunities are available that encourage appreciation of, and are consistent with the protection of the natural and cultural resources of the park.
- Facilities are designed and managed to minimise impacts, particularly on the riparian environment, and protect public safety through the provision of appropriate structures, visitor information and/or signposting consistent with the recreational setting.
- Visitor use is compatible with the purposes of national parks and is ecologically sustainable.

Strategies

- Public vehicle access within the park will be permitted on the fire trails/public roads shown on the map (centre pages) by dotted line. Management trails (also marked on

map) will be for authorised management purposes only. Two-wheel drive access will be provided to the Bummaroo Ford camping area. All other fire trails/roads will be maintained to four-wheel drive standard.

- Alternative access to the north-eastern sector of park will be investigated to provide all-weather access by 4WD vehicles.
- Recreational vehicle users will be encouraged to follow minimal impact driving codes within the park. Vehicles are not permitted within the river or on the river banks where no fire trails/roads exist.
- The maximum group size for vehicle touring within the park will be limited to 8 vehicles in total unless otherwise approved by the NPWS Regional Manager.
- Facilities will be provide as follows:

- **Bummaroo Ford:** To provide an established day use and camping area for both 2 wheel and 4 wheel drive vehicles. Two unisex toilets will be provided at this site, as well as fire rings, interpretative/ informative visitor displays and fencing. Fencing will be established at the area to protect the camping areas from degradation associated with vehicular traffic. This area is located along the Goulburn / Oberon Road and is beside the Abercrombie River. Recreational pursuits include fishing, swimming and canoeing.

- **The Sink :** This area will be established as both a day use area and camping area. This areas is located along the Retreat River and the pursuit of associated recreational activities is easy. It is accessible to 4 wheel drives from the Arkstone entrance of the park. Pit toilets and interpretative/ informative displays will also be established in the area with particular conservation information relating to the *Eucalyptus cinerea* 'Argyle Apple' which is located near the area. This area will also be fenced to maintain the camping area in a natural state and to prevent vehicular traffic directly accessing the river. Bushwalking is possible along the river banks and the river provides a number of swimming holes.

- **Silent Creek.** A camping area has been established along Silent Creek for both day and camping use. This area will only be accessible to 4 wheel drive vehicles. A pit toilet and fire rings have been installed on the camping flats. Information signs and bollards/ fencing have been erected to protect the steep slopes from off road driving. The creek does not have a permanent flow so water must be supplied by campers. A short bushwalk along the creek allows visitors to access the Abercrombie River.

- **The Beach.** This area has been established for both day and camping use. It is only accessible by 4 wheel drive vehicles. A pit toilet and fire rings have been provided with some visitor information. There is currently no access through private land across the Abercrombie River. Recreational pursuits include; swimming, fishing, canoeing and bushwalking.

- Walk-in bush camping (ie. away from developed sites) will be permitted more than 200m from any fire trail/road or any other facility and 50m from watercourses. Campers will be encouraged to follow minimal impact bush camping codes.
- Walking tracks may be formalised in areas where there is high usage and impact.
- Visitors will be required to remove all their rubbish from camping and picnic sites.
- Visitors will be encouraged to minimise their impact on the park by removing their own rubbish, using barbecues and fire rings provided, bringing their own wood/fuel, and other minimal impact practices.
- Information boards will be erected at camping areas within the park which will include information on minimal impact practices, appropriate recreational activities and areas of high conservation significance.
- Access to and future recreational use of Wattle and Daub Hut, Retreat River Hut and the Licking Hole Hut will be determined once their conservation value and any threatening processes have been determined.
- Special conditions may be imposed on recreational use of the park during periods of high fire danger (see also section 4.1.5 Fire Management), or in the event of bushfires, heavy rain or snow.
- Horse riding will be permitted on public trails only. Horse riding will not be permitted in the western section of the park.
- Prior approval from the NPWS Regional Manager will be required for:
 - competitive horse riding events;
 - group activities involving > 8 horses; and
 - overnight camping with horses.
- Horses may not be held in any one place in the park for more than two consecutive nights/ days.
- The Horse Riding Minimal Impact Code will be promoted to horse riders, clubs and other related horse-riding organisations.
- Cycling will only be permitted along the public access trails within the park.
- The Service will promote minimal impact cycling within the park.
- The Service will seek the cooperation of NSW Fisheries to provide information on fishing regulations and to reduce the impacts of non-native fish on the natural heritage values of the Park.

- Consent of the Area Manager will be required for the following activities:
 - military exercises;
 - competitive activities; and
 - school and educational activities.
- Visitor numbers, activities and impacts will be monitored.

4.3.3. Guided Tours and Commercial Recreation

Presently there are a small number of guided tours and commercial recreational companies operating within Abercrombie River National Park. The most common form of guided tours is the tag along tour for four wheel drive vehicles. Examples of potential commercial activities include guided walks, wildlife viewing, fishing and canoeing. Tours and guided activities increase the opportunity for public participation in nature-based activities and provide opportunities for professional instruction in the safety and minimal impact aspects of various recreational pursuits. Guided activities also have the potential to interpret and promote the natural and cultural values of the park.

On the negative side, commercial recreation can contribute to unacceptable levels of impact at certain sites. Commercial recreation may also conflict with other recreational uses of the park and increase crowding at some sites. Commercial recreation needs to be managed as a component of all recreation in the park to ensure that it is carried out in a suitable manner and that all impacts are within acceptable limits. Commercial activities in the park are required by legislation to be licensed. Licensing provides the mechanism for ensuring that activities, levels of use and behaviour are appropriate for the park and specific locations are compatible with general recreational use.

Desired Outcome

- To ensure that any commercial activities are in accordance with the objectives of this plan and do not threaten park values or conflict with existing park users.

Strategies

- Guided activities, commercial recreational and environmental education activities will only be allowed to operate in the park where:
 - the operator and guides demonstrate skills, knowledge and experience which are appropriate to the activity, the park and the needs of clients;
 - the activity promotes natural and/or cultural heritage conservation and has minimal impact on the park; and
 - the activity is consistent with the objectives and strategies for management of the park as outlined in other sections of this plan.
- All guided activities and commercial recreation in the park must have a licence from the Service. Licences may prescribe the approved activities, location and frequency of activities, maximum group sizes and minimum guide ratios for each activity, guide

standards, appropriate behaviour, fees and other special provisions. This would be done to ensure that the low-key recreation setting in the park is retained, and use is not in conflict with other users and is ecologically sustainable.

- Guided activities and commercial recreation will not be granted any rights of access which are exclusive of the public or which exceed normal public rights within the term of this plan.
- Some commercial activities which might normally be regarded as appropriate in a national park setting but which have a high impact will be excluded from the park where there are alternative venues available outside the park.

4.3.4. Research

The primary function of research in the park is to assist in the understanding of its natural and cultural resources and to provide information which will contribute to effective management. A considerable amount of survey and research work has been undertaken in the park over recent years. One of the primary reasons for this work has been to provide information to justify gazetting the area as a national park, for biodiversity protection and conservation. The majority of this work has been done by tertiary institutions, the National Parks Association and the NPWS. Recently both flora and fauna surveys have been carried out as part of a Comprehensive Regional Assessment.

The Service has limited staff and financial resources for research and efforts must be directed towards the areas of greatest need. Research by other organisations and students which provides valuable information for management will be supported. Suggestions for further research include: the effect of fire on fauna and flora species of the park, the effect of phosphorus run-off on the park's riparian environment, monitoring populations of native aquatic fauna and the impacts of introduced species upon them, endangered or threatened species distribution, regionally important plant and animal communities and surveys for cultural heritage sites within the park.

Desired Outcome

- To facilitate research which contributes to improved understanding of the natural and cultural values of the park and/or threats to those values and/or improved management of the park.

Strategies

- Research will be licensed in accordance with Service policies and procedures.
- A prospectus of recommended research projects will be prepared.

4.3.5. Facilities for Management and Other Uses

Abercrombie River National Park is managed from the Kanangra Area office (Oberon) of the National Parks and Wildlife Service as part of the Blue Mountains Region. The park currently contains a system of trails but no other NPWS management facilities.

The Marulan to Mt Piper 330kV Transmission Line Structure No. 221 is located within the north-eastern edge of park. Access by Transgrid (and contractors) is from the Abercrombie Road through private property. The lines and tower can also be accessed along a management trail (Cat Hill Trail) off the Brass Walls Trail.

There is one apiarist licensed to keep bees in the park. This licence applies to the western sector of the park.

Desired Outcomes

- Park management facilities adequately serve the needs of park management and have acceptable environmental impact.
- Commercial and other non-park uses have minimal environmental impact.

Strategies

- A system of vehicle trails for public use and for management purposes, as shown on the map included in this plan, will be maintained. Other trails will be closed and rehabilitated.
- The Service will investigate possible future acquisition of vacant Crown lands and available private lands within and adjoining park.
- The Service will licence landlocked property holders requiring access along management trails within the park in accordance with section 153C of the National Parks and Wildlife Act.
- All works, facilities and operations by other organisations will be covered by an appropriate authorisation, lease or licence, easement or agreement.
- The existing beekeeping operation will be managed in accordance with Service policies and licence conditions. No further apiary licenses will be issued within the park.
- Non-Service utilities will be kept under review, with the aim of closure or relocation where feasible.

5. PLAN IMPLEMENTATION

Plans of management are part of a system of planning employed by the Service to direct the management of national parks throughout the State. This plan is placed in a hierarchy of planning instruments used to guide the management of Abercrombie River National Park. Other planning instruments include Service-wide policy documents, conservation plans, species recovery plans, and Section 52 fire plans.

The implementation of this plan will be undertaken within the annual programs of Blue Mountains Region. Priorities, determined in the context of regional strategic planning, will be subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister. Area programs are subject to on-going review, within which works and other activities carried out within the park are evaluated in relation to the objectives laid out in this plan.

Activities undertaken in the park by the Service are required to be assessed under Part 5 of the Environmental Planning and Assessment Act. The Service requires that a review of environmental factors (REF) be prepared for all activities likely to impact on the park.

Plans of management are statutory documents and therefore have special significance. In accordance with Section 81(4) of the *National Parks and Wildlife Act, 1974*, and notwithstanding anything in that Act or any other Act or in any instrument made under that or any other Act, no operations can be undertaken within Abercrombie River National Park except in accordance with this plan.

This plan will be implemented over a five to ten year period. If, after adequate investigation, operations not included in this plan are found to be justified, either for the purpose of conserving the park's resources or for their use, this plan will be amended in accordance with Section 75B of the Act.

Other lands may be added to the park during the currency of this plan. Such lands will be managed to be consistent with this plan. If other lands acquired are proposed to be managed for a purpose inconsistent with this plan, such proposals will be placed on public exhibition as an amendment to the plan.

As a guide to the orderly implementation of this plan, relative priorities for identified activities are summarised below. These priorities have been assigned as follows;

High	Imperative to achieve the Plan's stated objectives.
Medium	Very important to achieve the Plan's stated objectives but subject to the availability of resources.
Low	Desirable but will be undertaken only if the necessary resources are available.

Activity	Plan Ref
High Priority	
Close and rehabilitate unsuitable tracks	4.1.1, 4.3.5
Liaise with councils, the catchment management committee and neighbours re catchment protection	4.1.1
Implement appropriate actions in species recovery plans and threat abatement plans	4.1.2, 4.1.3
Survey and map the distribution of threatened/significant species and potential habitat	4.1.2, 4.1.3
Develop annual pest species management programs in cooperation with landholders and local government	4.1.3, 4.1.4
Carry out control of blackberry and serrated tussock	4.1.3
Carry out control on goats within the park	4.1.4
Carry out dog control programs along the park boundary	4.1.4
Liaise with land holders to prevent stock entering the park	4.1.4
Finalise and exhibit the reserve fire management strategy	4.1.5
Attend bushfire committee meetings and contribute to S. 52 plans	4.1.5
Undertake Aboriginal site survey around Macs Flat	4.2.1
Remove rubbish from around historic places	4.2.2
Carry out assessments of all historic sites and develop management strategies	4.2.2
Maintain fire trails/roads and management trails to appropriate trafficable standards (mostly for 4WD)	4.3.5
Ensure all trails are signposted	4.3.3
Develop licence agreements for access, facilities, etc	4.3.5

Medium priorities

Replace current toilets with environmentally friendly systems	4.1.1
Provide information on fishing regulations	4.1.3
Liaise with NSW Fisheries to limit, and minimise the impact of, introduced fish	4.1.4
Develop and implement a park closure warning system	4.1.5
Undertake ongoing liaison with park neighbours on co-operative fire management	4.1.5
Ensure a common RFS lock is on all locked gates	4.1.5
Determine future use for the three huts	4.2.2
Erect interpretive displays at Bummaroo Ford, The Sink, park entrances and Oberon	4.3.1
Prepare park brochure	4.3.1
Promote minimum impact cycling and horse riding	4.3.1
Maintain and upgrade (when necessary) camping areas	4.3.2
Monitor visitor numbers	4.3.2
Investigate alternative access to park from north-east	4.3.2

Low Priority

Develop conservation agreements for areas of bushland adjacent to the park	4.1.2
Survey for native fish	4.1.3
Encourage research into introduced fish	4.1.3
Encourage Aboriginal site surveys and oral histories	4.2.1,.4.2.2
Prepare prospectus for survey and research projects	4.3.4
Review non-park facilities with a view to removal	4.3.5
Investigate possible acquisition of land adjoining park	4.3.5

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APPENDIX 1

Vegetation Communities within Abercrombie River National Park

- Riparian Acacia/Shrub/Grass/Herb Forest contains predominantly River Oak (*Casuarina cunninghamiana*) in areas of permanent watercourses at lower altitudes (1.2% of park)
- Tablelands Shrub/Grass/Moist Forest occurs in only 0.24% of the park in sheltered areas at high altitudes (>850m) along the northern boundary of park. Species found in this area are Narrow-leaved Peppermint (*Eucalyptus radiata*), Mountain Gum (*E. dalrympleana*), Gorse Bitter-pea (*Daviesia ulicifolia*) and the grass *Poa sieberiana*.
- Northern Plateau Moist Fern/Herb/Grass Forest is found in sheltered riparian areas above 1000m, dominated by Brown Barrel (*E. fastigata*), Mountain Gum (*E. dalrympleana*), *Daviesia ulicifolia* and Bracken (*Pteridium esculentum*) (0.14%)
- North East Tablelands Shrub/Herb/Grass Forest (0.18%) occurs in the south-east aspects above 850m around Little Bald Hill. Dominant in this area are Narrow – leaved Peppermint (*E. radiata*), Ribbon Gum (*E. viminalis*) and Mat-rush (*Lomandra longifolia*).
- Eastern Tablelands Acacia/Herb/Grass Forest (4.49%) occurs in high altitude riparian areas above 650m. Species found here are Mountain Gum (*E. dalrympleana*), Ribbon Gum (*E. viminalis*), Blackwood (*Acacia melanoxylon*) and the herb *Stellaria pungens*.
- Northern Tablelands Acacia/Herb/Grass Dry Forest (9.16%) are found in the poorer quality riparian areas in the western sector of park on the younger loam soils. Dominant species here are Apple Box (*E. bridgesiana*), Silver Wattle (*Acacia dealbata*) and the herb *Hydrocotyle laxiflora*.
- Tableland Tussock Grass/Herb Forest exists in a small area (0.11%) in the sheltered SE aspect above 1000m and in the NE of the park in the Hackets Gully area. Species include Snow Gum (*E. pauciflora*), Mountain Gum (*E. dalrympleana*) and *Poa sieberiana*.
- Tablelands Dry Shrub/Tussock Grass Forest occurs in 19.21% of the park on slope areas above 600m in the eastern areas of older loam soils. Species dominant are Broad-leaved Peppermint (*E. dives*), Brittle Gum (*E. mannifera*), Stringybark (*E. macrorhyncha*), *Hibbertia obtusifolia* and *Chionochloa pallida*.
- Eastern Tablelands Dry Shrub Forest occurs in the older loam soils to the east but in ridge area above 600m (19.2%). Silvertop Ash (*E. sieberi*), Broad-leaved Peppermint (*E. dives*), *Brachyloma daphnoides* and *Poa sieberiana* dominate.
- North East Tablelands Dry Shrub/Grass Forest occurs only in 0.03% of the park on ridges above 800m above Chain O Ponds Creek. *E. mannifera*, *E. dives*, *Brachyloma daphnoides* and *Dianella revoluta* dominate.
- Tablelands Dry Shrub/Tussock Grass Forest is the common community covering 35.71% of the park, found on the gravel and coarse sandy ridges and slopes on the younger loam soils of the SW area. *E. macrorhyncha*, Scribbly Gum (*E. rossii*), Bundy (*E. goniocalyx*), *Chionochloa pallida* characterise the community.

- Western Slopes Grass/Herb Dry Forest is common (21.24%) on the gravel and course sandy ridges. Community is characterised by *E. macrorhyncha*, *E. goniocalyx*, *Gonocarpus tetragynus* and *Poa sieberiana*.
- Northern Tablelands Shrub/Tussock Grass Forest is found on the ridges above 100m in the NE of the park. *E. dalrympleana* characterises this community found in only 0.25% of the park
- Northern Slopes Dry Grass Woodland is found in the west of park on the steep slopes with alluvial soils. Blakelys Red Gum (*E. blakelyi*), Apple Box (*E. bridgesiana*), Yellow Box (*E. melliodora*) and *Aristida ramosa* occur.
- Northern Slopes Dry Grass Woodland occurs at lower altitude slopes around the Mac's Flat area (0.24%). *E. blakelyi*, *E. melliodora*, *Danthonia racemosa* and *Austrostipa scabra* spp *falcata* occur.
- Northern Tablelands Grass Forest on Basalt occurs in only 0.81% of the park on the dry low altitude ridge within the western section of park. Red Box (*E. polyanthemus*) is the dominant species.

APPENDIX 2

Native animals recorded within Abercrombie River National Park

Mammals recorded in the park include the Wombat (*Vombatus ursinus*), Eastern Grey Kangaroo (*Macropus giganteus*), Swamp Wallaby (*Wallabia bicolor*), Sugar Glider (*Petaurus breviceps*), Greater Glider (*Petauroides volans*), Bush Rat (*Ratus fuscipes*), Short-beaked Echidna (*Tachyglossus aculeatus*), Wallaroo (*Macropus robustus*), Red-necked Wallaby (*Macropus rufogriseus*), Platypus (*Ornithorhynchus anatinus*), Brush-Tailed Possum (*Trichosurus vulpecula*), Yellow Footed Antechinus (*Antechinus flavipes*), Brown Antechinus (*Antechinus stuartii*), the Ring-Tailed Possum (*Pseudocheirus peregrinus*), Little Mastiff-Bat (*Mormopterus planiceps*), Eastern Horseshoe-Bat (*Rhinolophus megaphyllus*), Lesser Long-Eared Bat (*Nyctophilus geoffroyi*) and the Eastern False Pipistrelle Bat (*Falsistrellus tasmaniensis*).

Species which are expected to occur in the lower part of Abercrombie River National Park but as yet have not been recorded include the Common Dunnart (*Sminthopsis murina*) and the Eastern Pygmy Possum (*Cercartetus nanus*).

These include; Leaf Green Tree Frog (*Litoria phyllochroa*), Verreaux's Tree Frog (*Litoria verreauxi*), Banjo Frog (*Limnodynastes dumerilii*), Peron's Tree Frog (*Limnodynastes peronii*), Rocky River Frog (*Litoria wilcoxii*), Eastern Sign-bearing froglet (*Crinia parinsignifera*) and the Common Eastern Froglet (*Crinia signifera*). Spotted Marsh Frog (*Limnodynastes tasmaniensis*) and Smooth Toadlet (*Uperoleia laevigata*) have been recorded in nearby farm dams.

Species that are expected to occur in the Abercrombie River catchment but as yet have not been found include the Green Tree Frog (*Litoria caerulea*) and the Bleating Tree Frog (*Litoria dentata*).