

YELLOMUNDEE REGIONAL PARK

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of Department of Environment and Climate Change NSW

May 2009

This plan of management was adopted by the Minister for Climate Change and the Environment on 17th May 2009.

Acknowledgments

This plan of management is based on a draft plan prepared by consultant Ian Brown and staff of the Blue Mountains Region of NPWS.

Valuable information and comments were provided by Service specialists, the Regional Advisory Committee and members of the public.

Several subsidiary reports were prepared to provide input to the preparation of this plan of management. A principal source of information was the Yellomundee Regional Park Resource Summary (August 2002).

Cover photograph by Paul Glass, NPWS.

© Department of Environment and Climate Change NSW 2009:

Use permitted with appropriate acknowledgment.

ISBN 978 1 74232 380 0

DECC 2009/510

For additional information or enquiries about any aspect of the plan, contact the Service's Blue Mountains Region Office at PO Box 552, Katoomba 2780 or by phone on (02) 4784 7300.

FOREWORD

Yellomundee Regional Park is located eight kilometres north-west of Penrith on the eastern escarpment of the Blue Mountains. It extends for 8.6 kilometres along the western side of the Nepean River and is up to one kilometre in width.

Yellomundee Regional Park protects an area of bushland along a section of the Blue Mountains escarpment and regionally significant alluvial vegetation communities adjacent to the Nepean River. It contains threatened ecological communities, threatened species and locally significant species and their habitats.

The park is also of importance to the Aboriginal community and contributes to an understanding of Aboriginal life and use of the area, while the Shaws Farm precinct contains structures illustrating past European land use.

Yellomundee Regional Park contains important scenic lookouts and a mountain bike course.

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

A draft plan of management for Yellomundee Regional Park was placed on public exhibition from 8th December 2006 until 12th March 2007. The submissions received were carefully considered before adopting this plan of management.

This plan contains a number of actions to achieve “Better environmental outcomes for native vegetation, biodiversity, land, rivers, and coastal waterways” (Priority E4 in the State Plan) including implementation of recovery plans for threatened species, rehabilitation and sediment control works, and weed control works. The plan also contains a number of actions to help achieve Priority E8 in the State Plan, “More people using parks, sporting and recreational facilities, and participating in the arts and cultural activity”, such as construction of a lookout and tracks at Yellow Rock Lookout, the development of agreements for the extension and management of the mountain bike track, and construction of a new entrance road, parking and picnic/barbecue area.

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



Carmel Tebbutt MP

Deputy Premier

Minister for Climate Change and the Environment

CONTENTS

| | page |
|--|--------------|
| 1. INTRODUCTION | |
| 1.1 Location, Gazettal and Regional Setting | 1 |
| 1.2 Landscape | 1 |
| 2. MANAGEMENT CONTEXT | |
| 2.1 Legislative and Policy Framework | 3 |
| 2.2 Management Objectives | 3 |
| 3. KEY VALUES AND MANAGEMENT DIRECTIONS | |
| 3.1 Values of the Park | 4 |
| 3.2 Management Directions | 5 |
| 4. CONSERVATION OF NATURAL AND CULTURAL HERITAGE | |
| 4.1 Geology and Landforms | 7 |
| 4.2 Native Plants | 8 |
| 4.3 Native Animals | 12 |
| 4.4 Aboriginal Heritage | 14 |
| 4.5 Historic Heritage | 16 |
| 5. PARK PROTECTION | |
| 5.1 Soil Erosion | 18 |
| 5.2 Water Quality and Catchment Management | 19 |
| 5.3 Introduced Species | 19 |
| 5.4 Fire Management | 21 |
| 6. VISITOR OPPORTUNITIES AND EDUCATION | |
| 6.1 Provision of Information | 26 |
| 6.2 Recreation Opportunities | 27 |
| 7. RESEARCH AND MONITORING | 38 |
| 8. OTHER USES | 39 |
| 9. NPWS MANAGEMENT FACILITIES AND OPERATIONS | 41 |
| 10. PLAN IMPLEMENTATION | 42 |
| SELECTED REFERENCES | 46 |
| MAPS | |
| Visitor Use Proposals | 25 |
| Yellomundee Regional Park | centre pages |

1. INTRODUCTION

1.1 LOCATION, GAZETTAL AND REGIONAL SETTING

The first stage of the 485 hectare Yellomundee Regional Park was gazetted on 25 August 2000. It took in the former Reserve for Public Recreation 52660 (Yellow Rock Reserve), previously managed by Blue Mountains City Council. The second stage of the park was gazetted on 3 May 2002.

The park is located eight kilometres north-west of Penrith on the eastern escarpment of the Blue Mountains, on the western side of the Nepean River (See Figure 1). It extends for 8.6 kilometres in a north-south direction from Yarramundi to Mount Riverview and Emu Heights and is up to one kilometre in width.

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

The park's name recognises the Aboriginal cultural significance of the area. Yellomundee (also spelt Yarramundi) was a 'clever man' and a leader of the Darug people in the early days of European settlement.

The park is within the Hawkesbury, Blue Mountains and Penrith local government areas. Urban residential areas lie to the south and north-west of the park, with the rest of the surrounding area taken up by rural, conservation and Aboriginal lands which are predominantly undeveloped bushland.

Yellomundee Regional Park is ecologically contiguous with Blue Mountains National Park which lies immediately to the west. The park is part of a system of conservation reserves within the Sydney sandstone bioregion. It is separated from the adjacent developing recreational precinct of Penrith Lakes by the Nepean River, and from the Grose Wilderness and Blue Mountains National Park by the Springwood-Hawkesbury road and associated residential development. The regional park forms a transition between these two adjacent recreational environments.

1.2 LANDSCAPE

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

Yellomundee Regional Park protects an area of dissected sandstone plateau, alluvial and riverine landforms. Within the regional landscape, the park occupies a visually prominent position on the geologically significant Blue Mountains escarpment, protecting a natural scenic backdrop for parts of western Sydney. About a fifth of the park's vegetation has been significantly modified by past land uses, while the remainder forms a largely natural landscape.

The geology, landform, climate, plant and animal communities of the park, plus its location, have determined how it has been used by humans. The Nepean River and associated forest environments were used extensively by Aboriginal people. The river gravels were an important source of working stone, and the same gravels have been exploited by European extractive industry from the late 20th century.

Alluvial land in the Shaws Farm area was first settled by Europeans between 1830 and 1860 and has been used almost continuously since, whereas the more rugged and infertile sandstone escarpment lands have seen little human activity until relatively recently. Growing appreciation for aesthetic, scenic and natural values, together with the topographic position above the Nepean River and plains, have led to scenic viewing and other environment-based recreational uses.

This plan of management aims to conserve both natural and cultural values while providing opportunities for appropriate recreation. For reasons of document clarity and usefulness natural and cultural heritage, non-human threats and on-going use are dealt with individually, but their inter-relationships are recognised.

2. MANAGEMENT CONTEXT

2.1 LEGISLATIVE AND POLICY FRAMEWORK

The management of regional parks in NSW is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the NPW Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). 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. The Regional Parks Policy statement (1997) highlights the primary focus of regional parks being for cultural, recreational and social objectives with the secondary focus on the protection of nature conservation values.

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

2.2 MANAGEMENT OBJECTIVES

Regional parks are reserved under the NPW Act to protect and conserve areas in a natural or modified landscape that are suitable for public recreation and enjoyment.

In accordance with the NPW Act (section 30H), Yellomundee Regional Park will be managed to:

- provide opportunities for recreation and enjoyment;
- identify, interpret, manage and conserve the park so as to maintain and enhance significant landscape values;
- conserve natural and cultural values;
- 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; and
- 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.

3. KEY VALUES AND MANAGEMENT DIRECTIONS

3.1 VALUES OF THE PARK

The park is of state significance for Aboriginal cultural heritage and of regional significance for its non-indigenous cultural heritage, biological, landscape and recreational values.

Key **natural values** include:

- the protection of a large section of the Blue Mountains escarpment and Lapstone Monocline, forming a major geological and topographical feature which is part of the Great Escarpment and therefore associated with the uplift of Australia's Eastern Highlands;
- an area of largely natural bushland and some modified but regionally significant alluvial vegetation communities adjacent to the Nepean River;
- the presence of threatened ecological communities, threatened species and locally significant species and their habitats;
- supply of high quality water and minimal sediment to the inner catchment of the stressed Nepean River.

Significant **scenic values** include:

- the visually prominent escarpment which forms a naturally vegetated scenic backdrop from western Sydney;
- steep scenic gorges draining eastward to the Nepean River;
- colourful sandstone cliffs and outcrops;
- vistas over the Nepean River and western Sydney;
- a significant area of undisturbed bushland with aesthetic importance.

The key **cultural heritage values** comprise:

- the importance to the Aboriginal community of specific archaeological areas and the park as an indigenous landscape;
- the contribution of specific sites, within an archaeological precinct of state significance, to an understanding of Aboriginal life and use of the area;
- the local and regionally significant Shaws Farm precinct, illustrating an extended period of European land use;
- the post-contact history of the area as a shared heritage between Aboriginal and non-Aboriginal people;
- the special value of the park to local residential communities.

Major **recreation and tourism values** include:

- important scenic lookouts;
- regionally significant recreational opportunities for mountain biking and abseiling;
- potential for cultural tourism.

Key **research and educational values** are:

- the park's potential for educating the indigenous and wider communities about Aboriginal culture;

- sites of established scientific importance to Aboriginal archaeology;
- the potential for research and education on the history of indigenous and non-indigenous use of the Shaws Farm precinct;
- the presence of natural bushland with threatened communities and species in close proximity to a number of educational institutions.

3.2 MANAGEMENT DIRECTIONS

Management of the Yellomundee Regional Park will be based upon:

- the purpose of its establishment
- its most important values; and
- its regional context.

The park is small in area, but the inclusion of both modified landscapes and natural bushland provides the opportunity to provide for conservation and recreation without compromising significant values. Management emphasis will be given to conserving the park's natural and cultural values in the areas where they are dominant and providing opportunities for recreation and enjoyment in modified environments where impacts will be minimal. The recreational emphasis will be primarily on day use.

The presence of both modified landscapes and natural bushland within the park provides the opportunity for sustainable recreational activities without compromising significant natural and cultural values. Management emphasis will be on providing recreational opportunities for regional communities whilst ensuring that the park's significant natural and cultural values are conserved.

The overall management of Yellomundee Regional Park will be directed towards the following vision:

While giving special recognition to the area's importance to the Aboriginal community and ensuring long term protection for significant natural, cultural and scenic values, and with the support and assistance of local communities, Yellomundee Regional Park will provide a range of opportunities for recreation, education and enjoyment which can be supported both environmentally and financially into the future and which complement and enhance the opportunities available elsewhere in the region.

This vision will be pursued by implementing the following strategies:

- provide a range of well-maintained recreational opportunities in modified environments which will extend and complement existing opportunities in the region;
- conserve natural and cultural values as part of the system of protected lands in the Sydney Basin bioregion;
- protect the park landscape as part of the scenically and geologically significant Blue Mountains escarpment and Great Escarpment and as a visually prominent part of Sydney's western backdrop;
- promote consistency in conservation programs and complementarity of recreation management with the adjacent Blue Mountains National Park;

- protect land stability and water quality as part of the lower Hawkesbury-Nepean catchment;
- protect and restore native plant and animal communities with emphasis on threatened and significant communities and species;
- promote and protect all components of indigenous cultural heritage in partnership with the Aboriginal community;
- protect significant European cultural heritage;
- promote public awareness, understanding and appreciation of the park's values, present the park's recreational opportunities and encourage local community stewardship of the park;
- promote co-operative management programs with agencies and organisations with an interest in the park and adjoining lands.

The map (centre pages) and Figure 1 (page 25) show the location and principal features of Yellomundee Regional Park, including visitor use proposals outlined in Section 6 of this plan.

4. CONSERVATION OF NATURAL AND CULTURAL HERITAGE

4.1 GEOLOGY AND LANDFORMS

The geology of the park is made up of four sedimentary formations within the massive geological structure of the Sydney Basin. Triassic age Hawkesbury Sandstone is the dominant rock type. It is a coarse-grained quartz sandstone with some thin layers of mudstone, and gives rise to mostly infertile sandy soils of high permeability and erodibility. The younger Triassic age Mittagong Formation overlies the Hawkesbury Sandstone in places as a residual ridge-capping up to ten metres thick. It contains alternating bands of dark shale and fine-grained sandstone. The Tertiary age conglomerate of the Rickabys Creek Gravel occurs in small areas, and there is a narrow strip of Quaternary alluvium along the western bank of the Nepean River.

The lithology of the park may be unremarkable, but the geological structure is significant. The western part of the Sydney Basin was uplifted relative to the eastern part through crustal movements still subject to scientific debate, warping the layers of rock to raise the Blue Mountains plateau. At its eastern edge the plateau falls abruptly as an escarpment along the strongly folded Lapstone Structural Complex, consisting of the north-south Lapstone Monocline and a series of associated structures.

The Blue Mountains escarpment is one of the most obvious and accessible parts of a much larger landscape feature extending along the entire east coast of Australia: the Great Escarpment (Ollier, 1982). The Blue Mountains and the Great Escarpment have been formed by the same processes associated with the uplift of Australia's eastern highlands and the creation of the Great Divide.

The eastern escarpment of the Blue Mountains separates the higher plateau to the west from the low-altitude Cumberland Plain on the east. The escarpment rises abruptly within the park from near sea level on the Nepean River to about 250 metres altitude on the plateau in just over a kilometre. The plateau then falls slightly to the west, due to down-faulting, before continuing to rise more gently to the higher Blue Mountains.

The Blue Mountains escarpment is a prominent feature in the regional landscape, especially when viewed from the Cumberland Plain. This prominence is highlighted by the lower ground immediately to the west. The park protects part of this scenic, natural backdrop for a large and growing western Sydney population, and provides viewpoints with extensive vistas back over the Nepean River and Cumberland Plain.

The escarpment in the park is cut by several deeply entrenched streams draining north-east to the Nepean River. Between these streams lie three major ridge systems: Hawkesbury Ridge, Singles Ridge and Winmalee Ridge. The gentle slopes of these ridge-tops grade into very steep slopes of the stream valleys and somewhat less steep slopes of the main eastern escarpment. Rock outcrops and small cliffs are frequent features of the park's steep slopes.

The Hawkesbury Sandstone beds are close to horizontal over much of the park, but on the escarpment dip to the east slightly to steeply due to the downfolding of the Lapstone Monocline. This dip can be seen on the hairpin bends of the Springwood-Hawkesbury road, at Yellow Rock Lookout and along the Burrawang and Coreena Bridle Trails.

In the northern end of the park the Nepean River diverges to the east away from the escarpment, leaving an area of lower topography which has been influenced by flooding. Here alluvium has contributed to a more fertile environment which has been used for agriculture. Sandstone overhangs in this area and river stones from the Quaternary alluvium and Rickabys Creek Gravel were important resources exploited by Aboriginal people.

Desired Outcomes

- Significant geological and geomorphological features are protected, including the Blue Mountains escarpment and inclined beds of Hawkesbury Sandstone.
- The scenic values of the park and in particular the scenic integrity of the escarpment are protected.

Strategies

- *Locate and design management and visitor facilities to minimise their visual impact from public access roads, lookouts and other vantage points.*
- *Liaise with neighbours and authorities to minimise the impact of adjacent land use on the scenic values of key locations in the park.*
- *Prohibit the extraction of sand, clay, rock, gravel or any like substance except for an essential management work where no practical/prudent alternative is available and where environmental impact is acceptable.*

4.2 NATIVE PLANTS

Eucalypt-dominated forests and woodlands make up 97% of the area, comprised of communities typical of the lower Blue Mountains and riparian communities found on the banks of the Nepean River. Six main vegetation communities are found in the park (Benson, 1992), as shown in Table 1.

The dominant vegetation community is Sydney Sandstone Ridgetop Woodland, which occurs as two structural sub-types over much of the park's plateau and slopes. The only non-eucalypt vegetation community mapped for the area is closed forest dominated by coachwood, occurring as a component of the Sydney Sandstone Gully Forest community which is found in narrow bands along several of the creek gorges.

Table 1. Vegetation Communities of Yellomundee Regional Park

| Community | Characteristic canopy species |
|---|---|
| <ul style="list-style-type: none"> Sydney Sandstone Ridgetop Woodland: <ul style="list-style-type: none"> - Woodland/Open Woodland - Open-forest/Woodland | <i>Corymbia eximia</i> & <i>C. gummifera</i> , plus <i>Syncarpia glomulifera</i> & <i>Eucalyptus punctata</i> in Of/W |
| <ul style="list-style-type: none"> Shale/Sandstone Transition Forest | <i>E. tereticornis</i> |
| <ul style="list-style-type: none"> Ironbark Open-forest | <i>E. crebra</i> , <i>E. fibrosa</i> , <i>E. punctata</i> |
| <ul style="list-style-type: none"> Cooks River/Castlereagh Ironbark Forest | <i>E. crebra</i> , <i>E. punctata</i> |
| <ul style="list-style-type: none"> Sydney Sandstone Gully Forest | <i>Ceratopetalum apetalum</i> , <i>Angophora costata</i> , <i>S. glomulifera</i> |
| <ul style="list-style-type: none"> Sydney Coastal River-Flat Forest | <i>E. tereticornis</i> , <i>E. punctata</i> |

Modified from Benson (1992)

Four of these communities are of special conservation interest. Shale/Sandstone Transition Forest (SSTF) and Sydney Coastal River-Flat Forest (SCRFF) are listed as Endangered Ecological Communities under the *Threatened Species Conservation Act 1995* (TSC Act). Both communities occur in the Shaws Creek area (Wotherspoon 2001; Douglas & Bell 2001), where they approach the western limit of their distribution.

SCRFF occurs on the bank of the Nepean River south of Shaws Creek and SSTF is found on both sides of Shaws Creek. Both communities are associated with alluvium-enriched soils and occur in small remnant and degraded pockets, often invaded with weeds. Other, more intact occurrences of SSTF have been identified in the Hawkesbury Lookout area and in an area adjacent to the Nepean River north of Fitzgeralds Creek. SSTF is poorly represented in conservation reserves and SCRFF is limited to scattered remnants across its range (NSW Scientific Committee 1998).

Cooks River/Castlereagh Ironbark Forest (CR/CIF) and Ironbark Open-forest (which may also be CR/CIF) have been mapped over small areas in the Shaws Creek precinct (Benson 1992; Wotherspoon 2001), again on the better lowland soils. CR/CIF is listed as an Endangered Ecological Community under the TSC Act, is severely depleted across its range and is poorly represented in conservation reserves (NSW Scientific Committee 2001).

No plants listed as threatened under the TSC Act have been found in the park, although it has not been thoroughly surveyed. The Native Cranberry *Lissanthe sapida* has been recorded at one location in the park. This plant is listed as a Rare or Threatened Australian Plant (ROTAP) by Briggs & Leigh (1995), who classified it as rare over its known range with a total population of less than 100.

Several other plants known to occur in the park, including Scaly Bark *Eucalyptus squamosa* and *Grevillea arenaria*, may be of regional significance.

Seven other rare or threatened plants listed under the TSC Act and/or the Commonwealth's *Environmental Protection and Biodiversity Act 1999* (EPBC Act) and/or ROTAP have a low potential to occur in Yellomundee Regional Park, based on their known distribution and habitat preferences. They are listed in Table 2.

Table 2. Rare and Threatened Plant Species Occurring and Potentially Occurring in Yellomundee Regional Park.

| Species | Common Name | Occurrence | Listing |
|--|------------------|------------|-----------|
| <i>Lissanthe sapida</i> | Native Cranberry | Yes | ROTAP |
| <i>Eucalyptus benthamii</i> | Camden White Gum | Potential | TSC, EPBC |
| <i>Dillwynia tenuifolia</i> | Parrot-pea | Potential | TSC, EPBC |
| <i>Pultenaea parviflora</i> | | Potential | TSC, EPBC |
| <i>Allocasuarina glariicola</i> | | Potential | TSC, EPBC |
| <i>Persoonia nutans</i> | | Potential | TSC, EPBC |
| <i>Grevillea juniperina</i> ssp <i>juniperina</i> | | Potential | TSC, EPBC |
| <i>Micromyrtus minutiflora</i> | | Potential | TSC,EPBC |

ROTAP = Rare or Threatened Australian Plant (Briggs & Leigh, 1995)

TSC = Threatened Species Conservation Act 1995 (NSW)

EPBC = Environmental Protection & Biodiversity Conservation Act 1999 (Commonwealth)

Under the provisions of the TSC Act, a Priorities Action Statement is being prepared that identifies strategies and actions to promote the recovery of threatened species, populations and ecological communities and manage key threatening processes, including the preparation of recovery plans. These are progressively being prepared and will be used to guide management of any threatened species found in the park.

Despite proximity to urban development and other active land uses, the natural vegetation of the park is in a largely intact condition on most of the ridge-tops and slopes and along the smaller creek valleys. Small areas have been cleared or disturbed for visitor facilities at Yellow Rock Lookout and Hawkesbury Lookout. A major area of disturbance occurs in the northern sixth of the park in the Shaws Creek–Nepean River precinct, associated with alluvium-enriched soils and gentle topography which has encouraged clearing for agriculture and other uses. Natural vegetation here is highly fragmented and invaded with weeds. This area supports most of the vegetation communities in the park which have high conservation values.

Disturbed vegetation extends southwards along the Nepean River, where weed incursion has been encouraged by past disturbances, the presence of alluvial bank deposits and the supply of weed propagules from the river. Disturbances include electricity transmission line construction, roading and recreational vehicle use. Frasers Creek, Fitzgeralds Creek and the (unnamed) creek draining from the Winmalee sewage treatment plant are similarly weed-affected due to nutrient enrichment and transport of weed propagules from upstream urban areas.

Weed control, environmental protection and fire management are the major tools for conserving the park's vegetation. Fire has been a factor in vegetation development in the area for millennia, but the impact of recent fire history is unclear. Most of the park was burnt to varying intensity during December 2001–January 2002. Fire management is covered in detail in section 5.4 Fire Management.

The park is part of a larger area of contiguous native vegetation which extends to the west through land owned by Deerubbin Local Aboriginal Land Council and private lands in the Fitzgeralds Creek valley and south into Knapsack Park Reserve. The very extensive Blue Mountains National Park lies to the north-west and north, separated from the regional park only by the Springwood-Hawkesbury road and associated development.

There are important natural remnants across the Nepean River in the Castlereagh area of the Cumberland Plain, including Agnes Banks Nature Reserve. Yellomundee Regional Park forms an actual and potential link and wildlife corridor with all these areas and therefore the continuity of the park's vegetation contributes significantly to biodiversity conservation in the region.

Desired Outcomes

- The full range of native plant species found in the park is conserved.
- Vegetation structural diversity and habitat values are conserved, and are restored where subject to past disturbance.
- Knowledge of significant native plant species and vegetation communities in the park continues to improve.
- The significant and restricted Shale Sandstone Transition Forest, Sydney Coastal River Flat Forest, Cooks River/Castlereagh Ironbark Forest and Ironbark Open-forest communities are conserved and rehabilitated.
- The habitat and populations of all significant plant species are protected.
- Park neighbours support conservation of areas of native vegetation adjoining the park.
- The continuity of the park's vegetation is protected and enhanced to provide an ecological link with nearby conservation reserves and native vegetation on other lands.

Strategies

- *Ensure that management facilities and visitor facilities do not impact upon significant plant species or restricted plant communities.*
- *Promote regeneration of past cleared areas, except where maintenance of visitor facilities and significant cultural landscapes is required.*
- *Liaise with neighbours, Landcare, vegetation management committees and land use authorities to encourage retention and rehabilitation of areas of native vegetation close to the park, and to minimise the incursion of introduced plants into the park.*

Specific Activities

- *Implement priority actions and recovery plans for threatened plant species when they have been prepared.*
- *Facilitate the establishment of a community-based bushcare group to assist in the rehabilitation of endangered and restricted plant communities in the park (see also 5.3).*
- *Actively rehabilitate disturbed areas of endangered and restricted communities in the north of the park through weed control, bush regeneration and replanting programs.*

- *Undertake additional vegetation surveys, with priority on significant species and plant communities in alluvial environments adjacent to the Nepean River.*
- *Introduce a program to monitor the status of the significant communities and threatened plant species and to evaluate the success of management programs.*

4.3 NATIVE ANIMALS

The park provides extensive habitats for native animals in its varied vegetation communities as well as rock ledges/overhangs, hollows, fallen timber, permanent water and extensive tree and ground cover. No comprehensive fauna surveys have been carried out in the park, with all records coming from informal observations and localised surveys. All records of native animals (and plants) are collected and stored on the NSW Wildlife Atlas, a state-wide database established by the Service. Information is built up about locality, habitat and breeding records and used to assist management of native wildlife.

Species so far found in the park are broadly typical of similar environments in the lower Blue Mountains and on the Nepean River. Eight frogs, eleven reptiles, seven mammals and 68 birds have been recorded. Only one species definitely known from the park is listed under the TSC Act: the Turquoise Parrot. Based on habitat and known distributions, many more native species can be expected to occur in the park, including a number of threatened species that have been recorded nearby. Threatened animals which occur or potentially occur in the park are listed in Table 3 (next page).

The Broad-headed Snake is very likely to occur in the park and is threatened by the theft of bushrock and associated habitat disturbance.

Under the provisions of the TSC Act, a Priorities Action Statement is being prepared that identifies strategies and actions to promote the recovery of threatened species, populations and ecological communities and manage key threatening processes, including the preparation of recovery plans. These are progressively being prepared and will be used to guide management of any threatened species in the park. There is a need to improve knowledge of fauna in the park to ensure that significant species receive appropriate protection.

Desired Outcomes

- The full range of native animal species found in the park is conserved.
- Knowledge of native animals in the park continues to improve.
- The habitat and populations of all threatened fauna species and biogeographically significant species are protected and maintained.

Table 3. Threatened Fauna Species Recorded for Yellomundee Regional Park or Potentially Occurring in the Park

| Species | Common Name | Record or Potential | TSC Act Listing |
|----------------------------------|---------------------------|----------------------------|------------------------|
| <i>Heleioporus australiacus</i> | Giant Burrowing Frog | Potential | Vulnerable |
| <i>Pseudophryne australis</i> | Red-Crowned Toadlet | Potential | Vulnerable |
| <i>Hoplocephalus bungaroides</i> | Broad-headed Snake | Potential | Endangered |
| <i>Varanus rosenbergi</i> | Heath Monitor | Potential | Vulnerable |
| <i>Calyptorhynchus lathami</i> | Glossy Black-Cockatoo | Potential | Vulnerable |
| <i>Neophema pulchella</i> | Turquoise Parrot | Record | Vulnerable |
| <i>Ninox connivens</i> | Barking Owl | Potential | Vulnerable |
| <i>Ninox strenua</i> | Powerful Owl | Potential | Vulnerable |
| <i>Petroica rodinogaster</i> | Pink Robin | Potential | Vulnerable |
| <i>Tyto novaehollandiae</i> | Masked Owl | Potential | Vulnerable |
| <i>Tyto tenebricosa</i> | Sooty Owl | Potential | Vulnerable |
| <i>Xanthomyza phrygia</i> | Regent Honeyeater | Potential | Endangered |
| <i>Dasyurus maculatus</i> | Spotted-tailed Quoll | Potential | Vulnerable |
| <i>Miniopterus schreibersii</i> | Common Bent-wing Bat | Potential | Vulnerable |
| <i>Petrogale penicillata</i> | Brush-tailed Rock Wallaby | Potential | Vulnerable |
| <i>Phascolarctos cinereus</i> | Koala | Potential | Vulnerable |

Strategies

- *Ensure that the protection of the habitat of threatened and biogeographically significant fauna species is given a high priority in introduced species control and fire management programs, provision of visitor facilities and other management activities.*
- *Control bushrock theft by maintaining closure of management trails to public vehicles and monitoring illegal activity.*

Specific Activities

- *Implement priority actions and recovery plans for threatened animal species when they have been prepared.*
- *Carry out enforcement programs when bushrock theft is detected.*
- *Continue to record the distribution of threatened and significant fauna species and encourage reporting of fauna records by visitors and local groups.*
- *Undertake additional fauna surveys with priority on threatened species and within endangered ecological communities.*

4.4 ABORIGINAL HERITAGE

The strong attachment of Aboriginal people to the land is acknowledged. Local Aboriginal people have cultural links with the whole landscape of Yellomundee Regional Park and its environs. Individual places of significance in the park and adjacent areas include living places, art sites, spiritual places and contact sites. Aboriginal sites and places are also important to non-Aboriginal people and provide information about past human lifestyles. Aboriginal heritage values extend from pre-contact times to the shared history of the post-contact period.

While the Service presently has legal responsibility for the protection of Aboriginal sites and places it acknowledges the right of Aboriginal people to make decisions about their own heritage. It is therefore policy that Aboriginal communities be consulted and involved in the management of Aboriginal sites, places and related issues and the promotion and presentation of Aboriginal culture and history.

It is generally accepted that the park lies within the traditional territory of the Boorooberongal clan of the Darug people. Five local Aboriginal organisations have specific interests in the park:

- The park is in the area of the Deerubbin Aboriginal Land Council which also owns a large area of land adjoining the western side of the park.
- The Darug Custodian Aboriginal Corporation and the Darug Tribal Aboriginal Corporation represent traditional owners of the area, including descendants of Yellomundee.
- The Darug Peoples Advisory Committee is a representative body working with the NPWS to implement the Darug Memorandum of Understanding.
- The Muru Mittigar Aboriginal cultural centre at Penrith Lakes, which later in the development of the scheme may be moved further north, closer to Yellomundee Regional Park.

Other Aboriginal community organisations and individuals also have an interest in use and management of the park.

The five local Aboriginal organisations all have a strong interest in the Aboriginal heritage of the park, and in its potential for maintaining their culture and educating the wider community.

Although there has been no comprehensive survey or assessment of the Aboriginal heritage of the park, a number of important Aboriginal sites are known from within the park and adjacent lands. Some of these sites have already suffered disturbance from recent human activity and all require protection. The park represents a relatively undisturbed portion of a larger, more modified cultural precinct based around the Nepean River-Castlereagh that has extensive evidence of Aboriginal use. This area has been subject to scientific research for over fifty years and has contributed significantly to the understanding of indigenous life in south-eastern Australia. A rock shelter in the park has revealed occupation dating back 15,000 years.

The part of the park around the Nepean River and Shaws Creek, together with adjoining lowland areas, provided access to rock shelters, abundant lithic material for tool manufacture from the gravel beds and a variety of food resources in a range of

environments. These aspects of the landscape were key factors in Aboriginal occupation and it is likely that the riverine area supported a larger Aboriginal population than either the mountains on one side or the plains on the other. This regional context is integral to the total Aboriginal heritage value of the area, which is comprised of the physical evidence in its landscape setting, historic and cultural associations, and scientific, educational and community value.

The three local Aboriginal organisations all have a strong interest in the Aboriginal heritage of the park, and in its potential for maintaining their culture and educating the wider community. The area is already being used in the education of younger Aboriginal people and there is active interest in continuing and expanding cultural and teaching activities in the park, especially in the Shaws Creek area. Cultural activities are appropriate as long as they comply with the policies of this plan of management and have minimal environmental impact. The Service supports these activities and will work with the community to establish agreements for such access.

Desired Outcomes

- Aboriginal sites and places are protected from damage by human activities.
- The broader Aboriginal heritage values of the park are recognised and promoted.
- Aboriginal people have an integral role in management of Aboriginal cultural values in the park.
- Knowledge of Aboriginal sites and Aboriginal heritage values of the park continues to improve.
- Park visitors and the community understand and accept the importance of the Aboriginal heritage of the park and its significance to Aboriginal people.

Strategies

- *Manage Aboriginal heritage in consultation with local Aboriginal community organisations.*
- *Continue to liaise with the Aboriginal community on opportunities for supporting and promoting Aboriginal heritage and culture in the park through educational and interpretive programs.*
- *Ensure that visitor facilities and visitor use do not impact on significant Aboriginal sites and places.*
- *Undertake an archaeological survey and cultural assessment prior to all works with the potential to impact on Aboriginal sites and places.*
- *Do not publicise the location of Aboriginal sites and places except where the agreement of relevant Aboriginal community organisations has been obtained.*
- *Prior to any promotion of a site or place, prepare a conservation study and undertake any management work necessary to protect the site or place.*

Specific Activities

- *Continue to record new Aboriginal sites when they are located.*
- *In consultation with local Aboriginal community organisations, support additional targeted surveys for Aboriginal sites and places in consultation with local Aboriginal groups.*
- *In consultation with local Aboriginal community organisations, prepare and implement a conservation management plan for Aboriginal sites and artefacts in the Shaws Creek precinct, the mountain bike course south of Shaws Creek, and the access road and parking areas.*
- *Where the agreement of relevant Aboriginal community organisations has been obtained, promote and interpret the park's Aboriginal heritage values at the proposed new picnic area at Shaws Creek, at other visitor sites and in park information.*
- *Encourage Aboriginal people to carry out activities in the park related to cultural education and maintenance of traditional links to country. Any such activities must comply with this plan of management and have minimal environmental impact.*

4.5 HISTORIC HERITAGE

Historic heritage includes both Aboriginal and non-Aboriginal heritage values of the post-contact period. Aboriginal people continued to use the park and its environs in historic times. Although this aspect of history is not well researched, there is some evidence to suggest that living areas, burials and conflict sites may have featured in the park and environs.

The Shaws Farm area in the north of the park was first used by Europeans between 1830 and 1860, when it was farmed by an ex-convict, Matthew Clarke. Clarke was granted 50 acres in 1835 and another 40 acres in 1840. An archaeological survey of the site has not found any material relics from this early period.

The property changed hands many times between 1883 and 1925. Shaw owned the land in 1900-1901, and there is a 'C. SHAW 1890' engraved on a sandstone rock on the site.

From 1926 to 1954 the property was owned by the Perkins family, who built the existing residence, apparently as a holiday house. The form and style of the house closely resembles the English Domestic Revival Style of the 1920s and 1930s and probably dates from the 1930s.

From 1954 to 1986 the land belonged to commercial developers and gravel extractors who also managed a public picnic ground to the south. An ablutions block dates from this period, but little remains of the picnic area. The land has been in public ownership since 1986, and was transferred to the Service in 1992 to be gazetted as part of a reserve. This occurred in 2000 with the creation of Yellomundee Regional Park.

The condition and heritage value of the surviving structures and planted vegetation at Shaws Farm have been assessed in detail (Cremin & Mountford 2000; Cserhalmi

& Partners 2000; Beaver 2000). Several peripheral elements have been identified as significant and worthy of conservation: the grotto/seat and attached shed, a number of introduced trees and other plants, and possibly the stables. The residence has been assessed as of local significance, suitable for adaptive reuse. However it is in poor condition and the costs of repair, adaptation and ongoing maintenance would be very high.

The main cultural heritage significance of Shaws Farm relates not to individual elements, but to the precinct as an example of a rural site with changing uses over nearly two centuries. This significance can be protected and interpreted whilst conserving significant elements, recording and removing the remaining elements and opening the site for public enjoyment and appreciation.

Hawkesbury Lookout and Yellow Rock Lookout possess cultural values and structures related to their use as leisure sites. None of the structures are likely to be of individual significance due to their recent origin, but it is appropriate to conserve existing elements and features at both sites where possible. A sandstone ruin in the south of the park is of unknown origin.

Desired Outcomes

- Significant historic features are appropriately conserved and/or interpreted and managed.
- Park visitors and the community understand and appreciate the historic heritage of the park.

Strategies

- *Retain existing planted vegetation at Shaws Farm except where it conflicts with redevelopment plans.*
- *Protect and maintain existing structures at Hawkesbury Lookout and Yellow Rock Lookout according to their heritage significance and the ongoing needs of visitor use.*
- *Progressively record any other historic places found in the park and assess their significance and management requirements, including the identification of long term conservation and management outcomes.*

Specific Activities

- *Prepare and implement a conservation management plan for the Shaws Farm precinct.*
- *Record and remove all structures and objects of non-indigenous origin from the Shaws Farm precinct other than the grotto/seat and attached shed, stables, electricity infrastructure and the residence and outbuilding. Record these structures, assess their feasibility for adaptation and remove them if adaptive reuse for a staff/caretaker residence or an education/research facility or an Aboriginal cultural centre cannot be achieved within the safe life of the structures.*

5. PARK PROTECTION

5.1 SOIL EROSION

The park's soils have been broadly mapped as part of a regional survey (Bannerman & Hazelton 1990). They reflect the predominantly sandy substrate and are generally thin to skeletal, highly permeable, highly erodible and of low to very low fertility. More restricted soils of higher clay content are associated with mudstone and shale layers within the sedimentary sequence. They tend to be deeper and of slightly higher fertility, stability and water-holding capacity. Alluvium adjacent to the Nepean River supports the most productive and least erodible soils in the park, but with associated problems of weed incursion.

Erosion is a natural process but accelerated erosion occurs in areas of the park where the vegetation has been recently disturbed or the ground surface is bare. Erosion problems exist at Yellow Rock Lookout, Hawkesbury Lookout, the Shaws Creek area and along roads, management trails, electricity transmission lines and bike tracks. Erosion is increased by vehicular activity both on and off tracks.

Erosion can be accelerated when fire occurs too frequently, or where intensive recreational activity occurs. Temporary erosion can result from earthworks associated with the development of visitor facilities or other park works. Accelerated erosion threatens some Aboriginal sites and biological productivity. The transport of sediment from eroded areas diminishes water quality and downstream sediment deposition contributes to weed incursion.

Management needs to aim for the rehabilitation of existing sites of accelerated erosion, for the control of activities which promote erosion and to minimise the impacts of future disturbance.

Desired Outcomes

- Human induced soil erosion in the park is minimised.

Strategies

- *Design and undertake all works in a manner that minimises soil erosion and restores a natural level of stability as soon as possible.*
- *Control unauthorised vehicle activity.*
- *Continue to assess management trails and ensure they are appropriately constructed and maintained to minimise erosion.*
- *Consider the risk of accelerated soil erosion in planning all fire management works and activities.*

Specific Activities

- *Undertake rehabilitation and sediment control works adjacent to the vehicle turning circle at Yellow Rock Lookout.*

- *Undertake rehabilitation and sediment control works in the Hawkesbury Lookout area.*
- *Minimise and effectively control erosion associated with the mountain bike course south of Shaw's Creek, in co-operation with user groups (see 6.2.4).*

5.2 WATER QUALITY AND CATCHMENT MANAGEMENT

Much of the water in the park arises off-park. The upstream catchments of Frasers Creek, the unnamed creek to the north and Fitzgeralds Creek are all subject to a number of water quality impacts, including urban runoff, a major sewage treatment plant and sedimentation. The catchment of Shaws Creek is in better condition, but none of the major streams can be considered to be potable.

The Winmalee Sewage Treatment Plant on the unnamed creek is operated by Sydney Water Corporation and services most of the Blue Mountains. Effluent is treated to tertiary level. The plant is licensed by the Environment Protection Authority for an average dry weather discharge of 16 to 18 megalitres per day, which completely subsumes the natural background flow of the creek and contributes substantial nutrient enrichment.

Conversely, relatively clean runoff from the natural lands and minor streams of the park is a positive contribution to the stressed Nepean River.

Desired Outcomes

- The park's catchment values and the water quality and health of park streams are maintained, and improved where possible.

Strategies

- *Design and undertake all works in a manner that minimises water pollution.*
- *Liaise with local government, Sydney Water Corporation and other authorities as needed to maintain and improve the water quality of the park's streams and the stability of the park's catchments.*

5.3 INTRODUCED SPECIES

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

Although no survey of introduced animals has been undertaken in the park, several species are known to occur. Rabbits, feral bees and feral pigeons have been recorded, and foxes and feral cats are likely to be widespread. Low numbers of feral pigs and goats may also occur, as they are known from nearby areas. All of these species have significant direct and indirect negative effects on native fauna and

native plants. Cats and foxes in particular have been implicated in the decline of numerous small native animals. Dogs are also an introduced animal and can affect native species. Dogs will be excluded from core bushland areas of the Park, however, leashed dog walking will be permitted at Yellow Rock and Hawkesbury Lookouts, on the Coreena and Burrawang bridle trails and on the Transgrid management trail along the Nepean River.

Introduced plants are common in the park, especially in degraded areas that have previously been cleared or are subject to runoff from roads or urban areas. These are mainly in the northern part of the park in the Shaws Farm area where the natural vegetation has been cleared or highly modified, along the margin of the Nepean River on alluvium-enriched soils and along major creeklines that arise in urban areas to the west of the park. In some of these areas invasive weeds dominate the vegetation and present a major rehabilitation challenge. Much of the park's plateau and slope country is relatively free of weeds.

Introduced plants have been surveyed in the Shaws Farm-Nepean River precinct, with at least 91 species of weed being recorded. These include large areas of lantana (*Lantana camara*), balloon vine (*Cardiospermum grandiflorum*) and privet (*Ligustrum spp.*). These weeds are inhibiting the rehabilitation of the endangered and significant ecological communities of this precinct (see 4.2 Native Plants). Aquatic species such as alligator weed (*Alternanthera philoxeroides*) and water hyacinth (*Eichhornia crassipes*) are a major concern on the Nepean River, which adjoins but is not part of the park.

The NPWS Pest Species Management Plan for Blue Mountains Region provides priorities and guidelines for controlling pests throughout the protected areas of the region in an orderly and integrated manner, including in Yellomundee Regional Park.

Desired Outcomes

- The impact of introduced species on native plants and animals is minimised.
- The spread of introduced species both within the park and onto neighbouring lands is prevented.
- Control of introduced species on the park is achieved as part of a wider, co-operative control effort.

Strategies

- *Control introduced plants and animals and eradicate them where practicable, to ensure biodiversity impacts are minimised.*
- *Give priority for the control of introduced species to those species that:*
 - *are declared noxious or for which a national emergency control program has been declared or are known to be an important problem in other parks or states;*
 - *have a significant environmental impact, including damage to threatened species, catchment values and recreation values;*
 - *may affect neighbouring lands or are considered of high priority by the community;*

- *where management is needed to maintain benefits gained from previous control programs or to allow another high priority management program to be effective; or*
- *where a window of opportunity occurs.*
- *Undertake weed and pest animal control programs wherever possible in cooperation with neighbours and local rural lands protection boards.*
- *Liaise with neighbours to minimise the incursion of weeds from outside the park, especially those transported along watercourses from weed-affected upstream areas.*
- *Allow leashed dog walking on the Coreena and Burrawang bridle trails and on the Transgrid management trail along the Nepean River.*
- *Monitor the impacts of dog walking, introduce further restrictions as deemed necessary.*
- *Avoid unnecessary environmental disturbances. Where disturbance is unavoidable or is planned, consider the likely impact of the activity in terms of introduced species and put in place controls or programs to reduce any such impact.*

Specific Activities

- *As a priority, control the suite of introduced plants that are impacting on the endangered and significant ecological communities in the Shaws Farm precinct.*
- *Facilitate the establishment of a community-based bushcare group to assist in the management of weeds on the park (see also 4.2).*

5.4 FIRE MANAGEMENT

Fire is a natural feature of the environment and is essential to the survival of some plant and animal communities. Inappropriate fire, however, can damage natural and cultural heritage and endanger park visitors and neighbours. Management of bushfire in the park is a complex issue. Management must aim to achieve both long-term conservation of native plant and animal communities and ongoing protection of life and property within and adjacent to the park.

Ecological requirements

Bushfire regimes are a major determinant of the distribution and abundance of plants and animals in the park. They also affect nutrient cycles, erosion patterns and hydrological regimes. The dry sclerophyll woodlands and forests that occupy most of the park are vegetation communities with a tolerance for fire. Ecological research suggests the following requirements for biodiversity conservation:

- variability of fire intervals and area burnt is important to conserve floristic diversity and provide diversity of habitat for animals; fire at regular or too frequent intervals will lead to loss of species;

- most plant species and communities require infrequent fires of moderate to high intensity to achieve regeneration but patchy burns are better for fauna as they retain shelter and food refuges;
- fires during the breeding season are the most damaging to fauna communities because of direct killing of young and increased exposure;
- a fire frequency of between five and 30 years is generally appropriate for the park's vegetation communities; species decline is predicted if successive fires occur less than five years apart or there are no fires for more than 30 years.

Frequent fire is listed as a threatening process under the TSC Act. Fire can also damage some types of Aboriginal sites and historic places. Features such as scarred trees, old buildings and farming implements can be permanently damaged or lost by wildfire. Other sites and plant and animal communities can be damaged by use of heavy machinery for fire suppression activities.

Fire history and fire threats

The fire history of the park has been only partially recorded. The area has been subject to a series of wildfires and planned fires of varying size and intensity. Most recently, much of the park was burnt with varying intensity in the wildfires and associated backburns of December 2001–January 2002.

Most wildfire ignitions within the park and local area are from human causes such as arson and accident. Wildfires therefore may occur in any area and travel in any direction under the influence of the wind. However the most severe fires typically burn from west to east under conditions of strong westerly winds, high temperatures and low humidity. The park is therefore threatened by fire coming from beyond the boundary more often than adjoining lands are threatened by fire originating within the park.

Fires running to the east through the park tend to naturally reduce in intensity as they run downhill to be met by the natural firebreak of the Nepean River. However such fires do have the potential to spot across the river into the predominantly grassland environments beyond. Fires in this area may also threaten an important electricity transmission line and private property (at present undeveloped) between the park and the river.

The park is bordered by the Springwood-Hawkesbury road to the north-west and by privately-owned bushland on most of its long western boundary. Urban developed lands join two small sections of the park's western boundary, and the short northern boundary joins a private rural/recreational property. These three areas are a priority for protection from fires on the park. Fire management on the park and on the adjoining bushland needs to be integrated to maximise effectiveness.

The park is threatened by significant ignition risks from the urban lands to the west and south and from the arson of dumped cars along the Yellow Rock and Springwood-Hawkesbury roads and the electricity transmission line access road along the Nepean River. The latter is recognised as a significant historical fire source, and also as a valuable access trail for fire management. There are no other management trails in the park with a useful fire management role.

Strategies and cooperative arrangements

Under the *Rural Fires Act 1997* the Service is a fire authority and is responsible for controlling fires on the national park and ensuring that they do not cause damage to other land or property. An important part of the Service's fire management is participation in local co-operative fire management arrangements, including implementation of Bush Fire Risk Management Plans developed by District Bush Fire Management Committees. The Service is a member of the Blue Mountains, Hawkesbury and Penrith Bush Fire Management Committees, all of which have an interest in fire management within Yellomundee Regional Park.

A fire management plan will be prepared for the park. In the interim, fire management will be consistent with the draft fire management plan for the adjacent Blue Mountains National Park which includes similar environments. The Yellomundee Regional Park fire management plan will identify the bushfire threat, requirements for the conservation of native plants and animals and community protection measures in areas where it is identified that fire is a threat to property. In particular, it will set out fire management guidelines for threatened fauna species recorded or predicted to occur in the park.

Management will aim to maintain biodiversity by restricting fires to only part of the distribution of a vegetation community at any one time and ensuring that the identified thresholds for fire frequency and intensity are not exceeded.

A variety of fire management strategies will be applied including fuel management, access management, detection, suppression, risk management and co-operative arrangements. Some, or at times all, of these will be applied where appropriate to best protect life, property and natural and cultural assets. Close to boundary areas, fuel reduction programs will be designed and implemented in cooperation with neighbours.

Desired Outcomes

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

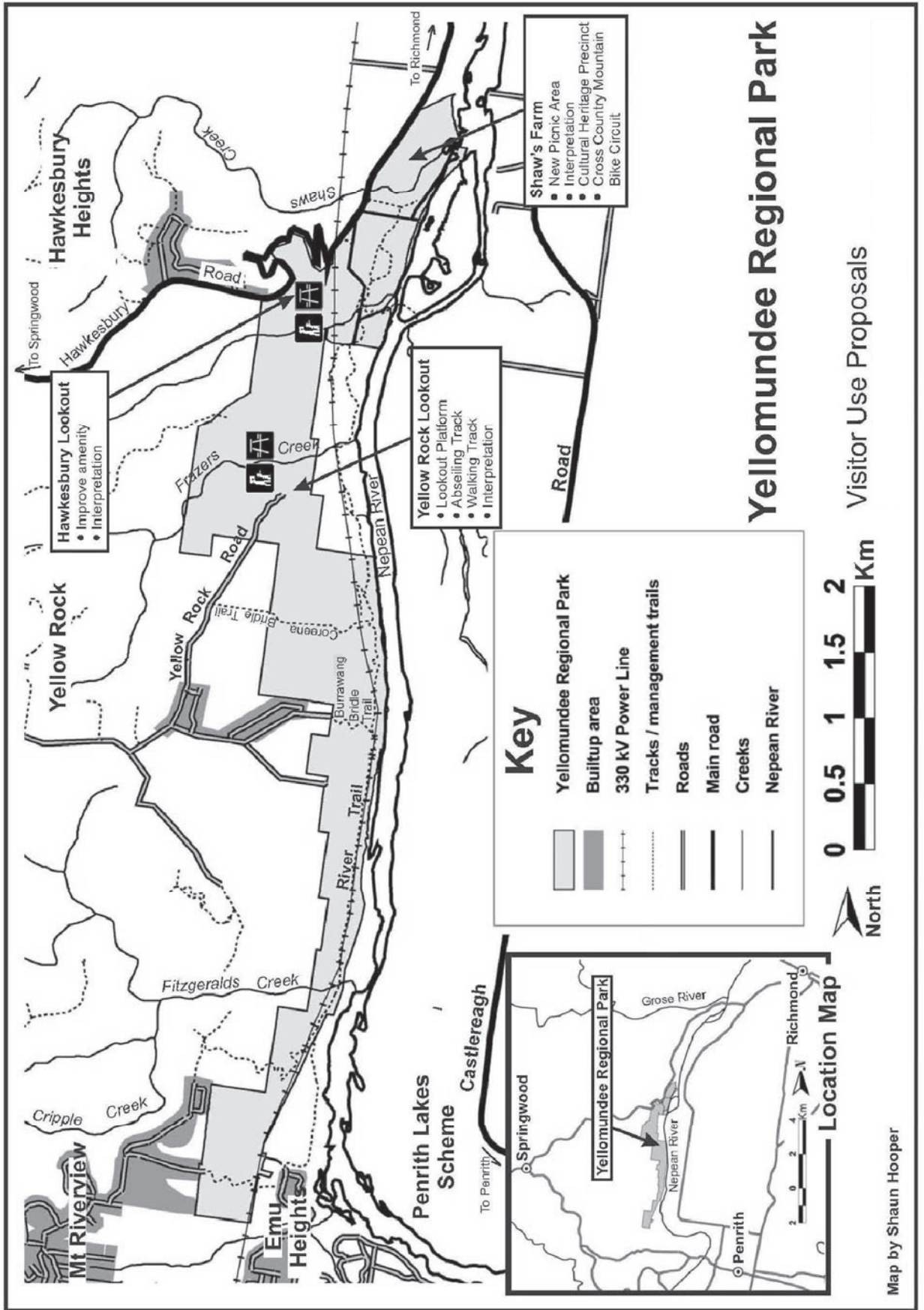
Strategies

- *Use prescribed fire to achieve a variety of fire regimes and a diversity of vegetation ages which maintain fire thresholds for each vegetation community in accordance with the Fire Management Plan.*
- *Seek to avoid use of heavy machinery for fire suppression in areas of rare plants, Aboriginal sites and historic places.*

- *Rehabilitate areas disturbed by fire suppression operations as soon as practical after the fire.*
- *Encourage research into the ecological effects of fire in the park, particularly the fire response of significant plant species and the fire requirements of endangered and significant ecological communities.*
- *Continue to actively participate in the local bush fire management committees. Maintain close contact and cooperation with the Rural Fire Service.*
- *Carry out fuel management in cooperation with neighbours for mutual protection, with priority on protecting private developments on the western and northern park boundaries.*
- *Seek to integrate fire management on the park with fire management on privately-owned bushland on the western park boundary.*
- *Effectively manage the fire risk associated with public use of visitor sites by excluding cooking fires and managing adjacent fuels.*
- *Close the park to visitors when fire danger or active fire poses a threat to the public.*
- *Exclude the construction of any further permanent trails for fire management purposes.*

Specific Activities

- *Prepare, publicly exhibit and finalise a Fire Management Strategy for the park.*
- *In cooperation with TransGrid and local bush fire management committees, maintain the electricity transmission access road along the Nepean River as a management trail and close it to public vehicles, except as described in section 6.2.*



6. VISITOR OPPORTUNITIES AND EDUCATION

6.1 PROVISION OF INFORMATION

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

The park has a number of natural and cultural features of interest to visitors, including Aboriginal heritage, the Blue Mountains escarpment and the Shaws Farm European heritage precinct. The park is used by the Aboriginal community for cultural education programs. Features of visitor interest will be promoted and interpreted to visitors in a manner which protects their special values and encourages appropriate use. Provision of facilities in those locations which can sustain such use is discussed in section 6.2 while this section discusses provision of information.

The provision of information about Yellomundee Regional Park will be integrated with and complement information on the adjacent Blue Mountains National Park, which is much larger, more diverse and better known.

Provision of information about the park will involve three levels:

- promotion to increase community awareness of the existence of the park, its conservation importance and visitor opportunities;
- orientation and regulatory signage to enable visitors to find their way around the park, introduce them to its features and advise them about use restrictions; and
- interpretation of individual components of the park's environment in order to increase visitor understanding of the park's values and of the environment in general, and provision of minimal impact use information.

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, tertiary institutions and community organisations.

Strategies

- *Emphasise the following themes in promotion programs:*
 - *Yellomundee Regional Park as an alternative to Blue Mountains National Park for experiencing, learning about and enjoying environments of the lower Blue Mountains and western Sydney;*
 - *the park's important natural and cultural values;*
 - *visitor opportunities.*

- *Emphasise the following themes in interpretive signage and programs:*
 - *Aboriginal cultural heritage;*
 - *geological and landscape significance, especially with regard to the Great Escarpment and the structure of the Sydney Basin;*
 - *threatened species and communities;*
 - *history of non-indigenous use.*
- *Involve the local Aboriginal community in development of material for interpretation of Aboriginal culture.*
- *Encourage and support the local Aboriginal community in expanding cultural interpretive and educational programs on the park, with an emphasis on Aboriginal-led field activities.*
- *Support and assist educational use of the park by schools, tertiary institutions community groups and individuals through provision of information.*

Specific Activities

- *Produce media releases and attend meetings with neighbours and community organisations to promote community understanding of park values and management strategies.*
- *Develop a park brochure and distribute it to tourist information centres and other appropriate locations, and update the brochure as needed.*
- *Develop and install orientation/interpretive signs at Yellow Rock Lookout, Hawkesbury Lookout and the proposed picnic area at Shaws Farm.*

6.2 RECREATION OPPORTUNITIES

Regional parks may provide opportunities for sustainable recreation activities that do not damage significant natural or cultural values. Recreational uses which are ecologically sustainable and which directly contribute to visitor understanding and appreciation of the park are considered the most appropriate.

Although Yellomundee Regional Park is readily accessible to a large local population, it is not widely known as a visitor destination. It is primarily a low key natural area with limited visitor facilities. The major visitor focus is Hawkesbury Lookout on the main Springwood-Hawkesbury road, and to a lesser extent the more remote Yellow Rock Lookout. Hawkesbury Lookout receives some tourist visitation because of its location on a major regional route. In recent years several commercial tour operators have also begun to use Yellow Rock Lookout. The majority of visitors to other parts of the park are from the local area and surrounding region. Local communities value the park highly for activities such as sightseeing, bicycling, dog exercising and entertaining visitors (refer to section 5.3 for permitted dog walking areas and conditions). The park is also used to access the river for recreational fishing.

Basic facilities have been provided for many years at the two lookouts to support sightseeing and other low key recreation. Some improvements have been carried out at these sites since the park was gazetted, aimed at increasing visitor amenity

and reducing impacts. The lookouts have potential for further improvements, including providing for additional activities at Yellow Rock Lookout.

The Coreena and Burrawang trails form a circuit from Yellow Rock, provided use is made of suburban streets. They were established during the 1980s as bridle trails, but now receive a low level of use by both horse riders and walkers.

The park hosts a range of other dispersed and more intensive recreational activities, some of which occur at sites without appropriate facilities. Mountain biking, four wheel driving, motor cycling and abseiling are causing significant but localised environmental impacts.

Providing for visitor use of the park needs to be considered in a regional context. The park is located close to growing population centres in the lower Blue Mountains, far western Sydney and south-western Hawkesbury. The demand for open space and active recreation is therefore likely to grow within the park's visitor catchment. The park has the potential to meet some of this demand without compromising significant natural and cultural values.

The park occupies a place in the open space recreational spectrum between the natural and wilderness settings of Blue Mountains National Park to the west and south and the more intensive urban and semi-urban opportunities of western Sydney to the east. This is also where it is located geographically. Development of the Penrith Lakes precinct will create another link in the regional spectrum, by providing opportunities which span from the urban environment to semi-natural settings.

The objective of recreational management will be to maintain this regional role for the park. The park will be managed primarily for day use. Landscape-based activities, dependent upon the natural environment and cultural heritage, will be encouraged. Most intensive or high impact activities are inappropriate due to the park's natural values and small size.

To be ecologically sustainable, visitor use needs to be managed. Well designed facilities in appropriate locations and promotion of positive visitor behaviour will ensure that impacts remain within acceptable limits. The costs of facility maintenance and visitor management also need to be kept to a financially sustainable level.

Public vehicle access is available along public roads to only two facilities in the park – Yellow Rock Lookout and Hawkesbury Lookout. Public vehicle access also reaches the park boundary at the Burrawang trail (end of Illingworth Road, Yellow Rock), Riverside Road (north of Emu Heights) and Emu Plains Road (Mount Riverview).

Unauthorised 4WD and motor cycle recreation has been occurring on and adjacent to the electricity transmission line access road along the Nepean River, causing erosion, conflict with more passive recreations and loss of amenity. These activities are opposed by the electricity supply company and adjoining owners of private land through which the road passes. A policy of excluding vehicles from this area through physical barriers and enforcement will be continued.

The Shaws Farm precinct has not been available to the public in the past. An additional vehicle entry point to the park will be provided off the Springwood-Hawkesbury Road to this precinct as part of the proposed development of a new picnic area.

The provisions below are designed to maintain the low key, scenic, natural settings which characterise the park and to provide for future use in a manner which protects ecological integrity and cultural heritage values. The development of a limited range of new or improved facilities has been provided for, should funding be available. These additional facilities are intended to meet demonstrated demand and to supplement other recreation opportunities on public land within the region.

Desired Outcomes

- A variety of low key opportunities for sightseeing and picnicking are available that encourage appreciation of the natural and cultural environment.
- Opportunities are provided for more active recreation at appropriate sites.
- Facilities are designed and managed to provide a satisfying visitor experience and minimise impacts.
- Visitor use is compatible with the purposes of regional parks and the protection of ecological integrity and cultural heritage values.
- Recreation opportunities provided in the park are based on recreation demand research, landscape assessment and master planning.

Strategies

- *Provide visitor facilities only at existing visitor sites or in areas where the natural vegetation cover has been disturbed, and only as provided for in this plan.*
- *Continue to provide horse riding and bushwalking opportunities on that part of the Burrawang-Coreena trail circuit with the park. Monitor trail conditions and erosion and undertake corrective action if necessary (see 6.2.5).*
- *Continue to allow access for recreational fishing including, subject to application and low environmental impacts, vehicle access on the Transgrid management trail for the biannual Bass Catch fishing competition. Vehicle access will not be allowed at other times and vehicle numbers and access points may be restricted to minimise impacts.*
- *Encourage visitors to follow appropriate recreation practices and minimise their impact through information signs and other means.*
- *Permit commercial group tours and activities by licence and subject to limits on group sizes and frequency of use if necessary to minimise environmental impacts and conflicts with other park users.*
- *Continue to exclude motor vehicle oriented recreation including 4WDing and motor cycling because of unacceptable impacts on the park and neighbours.*
- *Undertake further research and planning for recreational opportunities that are of popular demand and appropriate for the environment as appropriate.*

Specific Activities

- *Provide high quality opportunities for scenic viewing by further improving facilities at the main lookouts (see 6.2.1 and 6.2.2).*

- *Provide additional facilities subject to available funding for those activities that are of most popular demand, and can be implemented while meeting conservation concerns (see 6.2.2 , 6.2.3 and 6.2.4).*
- *Monitor visitor levels by making spot checks to record numbers using picnic areas and lookouts. Monitor the condition of visitor areas.*

6.2.1 Hawkesbury Lookout

Hawkesbury Lookout on the Springwood-Hawkesbury road is the most visited site in the park, providing extensive views over the Nepean River and Cumberland Plain. Safety fences and a large landscaped area with lawns, paths, and several picnic tables make up the site. A parking area for about twenty vehicles is provided beside the roadway. Toilets and more extensive picnic facilities are provided in an area across the road managed by Blue Mountains City Council. Visitor safety issues arise from this split facility.

Desired Outcomes

- Hawkesbury Lookout continues to provide an enjoyable, safe viewpoint and stopover with a high level of amenity for large numbers of visitors.
- Visitor experience is enhanced through on-site interpretation of the park and its wider environment.
- Facilities are clean and well maintained.
- The site is fully integrated with facilities on the other side of the Springwood-Hawkesbury road.

Strategies

- *Continue to manage the lookout for short duration sightseeing and stopovers, integrated with picnic and toilet facilities across the road.*
- *Provide no new facilities.*

Specific Activities

- *Install signage to interpret the geological and landscape setting and cultural heritage of the park.*
- *Maintain the viewscape by managing vegetation below the lookout.*
- *Undertake further planting within the landscaped area to improve amenity without impacting on visibility.*
- *Investigate options for improving pedestrian safety with the road authority.*
- *Assess the Blue Mountains City Council landholding on the western side of Hawkesbury Road at Hawkesbury Lookout for potential addition to Yellomundee Regional Park.*

6.2.2 Yellow Rock Lookout

Yellow Rock Lookout is located on the cliff-top above the Fraser Creek gorge, with a large picnic shelter and several picnic tables. A short loop off the end of Yellow Rock Road provides access with parking space for about six vehicles. Visitation is low but increasing. The site is highly valued by local residents and receives regular use by organised groups for abseiling instruction and occasional tour groups.

The site has a number of existing problems, including erosion and public safety issues associated with the cliff edge and bush fire. Existing uses need to be managed more effectively to improve visitor experiences and protect the environment. The site offers one of the few convenient natural venues for abseil instruction in the region, and can help relieve pressure on sites in Blue Mountains National Park. The impacts of abseiling and potential conflicts with other users need to be managed. There is potential for providing a short and easy bushwalking opportunity on a new, low impact track through gentle terrain.

Desired Outcomes

- Yellow Rock Lookout continues to provide a quiet viewpoint and picnic spot for a range of visitors.
- Visitor experience is enhanced through on-site interpretation of the park and its wider environment.
- Visitor safety is improved.
- Environmental impacts are reduced and effectively controlled.
- Abseiling is effectively managed as part of a regional approach to this activity.
- An opportunity for a short, easy and low impact bushwalk is provided.
- Facilities are clean and well maintained.

Strategies

- *Continue to manage the lookout for low key, short duration sightseeing and picnicking.*
- *Provide no facilities for open fires or rubbish disposal. Collect litter on a regular basis.*

Specific Activities

- *Install signage to explain the exclusion of open fires and the 'no bins' policy and to encourage compliance.*
- *Install signage to interpret the geological and biological environment.*
- *Remove dumped rubbish from below the lookout.*
- *Repair eroded areas adjacent to the loop road by replanting and installing drainage structures.*
- *Construct a viewing platform at the main lookout to improve visitor safety.*

- *Formalise abseil anchors and construct abseil access tracks along existing informal routes in consultation with users. Install signage to discourage the use of the tracks by other visitors. Monitor impacts and visitor safety.*
- *Subject to detailed planning, design and environmental assessment, construct a short loop walking track about one kilometre in length from the lookout to a viewpoint on the Fraser Creek escarpment to the west. Manage visitor safety at the viewpoint through design and signage in preference to structures. Consider installing interpretive signage.*
- *Monitor night time behaviour at Yellow Rock Lookout and, if deemed necessary, close the lookout to vehicular access from sunset to sunrise or at other times to limit antisocial activities.*
- *Keep under review the need for, costs and benefits of other actions such as the installation of a gate on the access road for night security and public safety, sealing of the access road and the installation of free gas BBQs.*

6.2.3 Shaws Farm

Shaws Farm is a highly modified environment adjacent to Shaws Creek, the Springwood-Hawkesbury Road and the Nepean River. The precinct has important natural and cultural values which are addressed in other sections of this plan, as well as a variety of features with visitor appeal. These include Aboriginal heritage, historic heritage and features, open grassy areas and shaded sites for picnics and games, opportunities for passive enjoyment of Shaws Creek and open forests rich in birdlife and opportunities for more active recreation such as mountain biking (see 6.2.4). Electricity supply exists to the farm residence. It should be noted that the adjacent reach of the Nepean River is of limited appeal for boating, swimming or passive enjoyment, although it may be of some interest to anglers.

There is potential to establish a new picnic area with low key facilities on disturbed areas without significantly affecting the site's natural and cultural values. This would provide for public use of this important precinct for a range of activities.

Vehicle-based camping is not considered to be an appropriate use at this location because of the high level of supervision and security required to ensure public safety. A small, low key, walk-in campsite may be appropriate some time in the future to support the Great River Walk (see 6.2.6) or for use in conjunction with Aboriginal heritage educational activities.

Desired Outcomes

- The values of the Shaws Farm precinct are enhanced by providing opportunities for public appreciation.
- A new facility at Shaws Farm is developed to provide for public access, picnicking, appreciation of the local natural and cultural heritage and mountain biking.
- Visitor experience is enhanced through on-site interpretation of local natural and cultural heritage.

- New facilities are high quality, do not impact on significant natural and cultural values and allow for ongoing rehabilitation of the local environment and endangered ecological communities.
- The option is retained for including a basic low use camping site, with access for walkers and cyclists only, if considered appropriate in the future.
- Facilities are clean and well maintained.

Strategies

- *Consult with the Aboriginal community, mountain bike groups and other interested groups on detailed planning for the site.*
- *Ensure that access to Aboriginal sites is only provided if supported by the Aboriginal community.*
- *Incorporate protection of heritage and endangered ecological communities, sensitive creek environments and cultural features in the design of the site. Provide for ongoing rehabilitation of weed-infested and other disturbed areas.*
- *Exclude motorised vehicle recreation from the precinct to minimise impacts and conflict between recreational activities.*

Specific Activities

- *Subject to detailed planning, design and environmental assessment including an Aboriginal heritage survey, construct a picnic area in the vicinity of the old trotting track. Provide a new access road from the Springwood-Hawkesbury road, parking for about fifty vehicles on the existing car parking site (including provision for horse floats), horse riding access from the parking area to the riding trails, toilets, water supply, picnic tables/shelters, gas or electric BBQs, additional plantings and open grassed areas.*
- *Link the picnic area to the Shaws Farm buildings and the mountain bike circuit by walking access.*
- *Emphasise interpretation as a major public use for the site. Include interpretive signage which focuses on the precinct's past indigenous and non-indigenous uses, highlighting the continuity of human activity and connected to visible cultural features where possible.*
- *Apply day use fees if collection can be practical and secure.*

6.2.4 Mountain Biking

An area south of Shaws Farm has been used since 1989 for mountain biking (see Figure 2). This has included competitive events at club, state and national level organised by the Western Sydney Mountain Bike Club, as well as general riding and training. The course is not well known to the general public. The course comprises a network of narrow bike tracks and wider vehicle trails and roads over an area of about fifty hectares. A course extension to the north as far as the trotting track is used for some longer championship events.

Limited use was made at one stage of a downhill track from Hawkesbury Lookout. This track is now rehabilitating, and such a use is considered inappropriate due to the difficulty of locating and managing a low-erosion route in this environment.

Most of the bike tracks are located on gentle slopes of alluvial soil associated with the Nepean River floodplain/terrace, extending up onto the footslopes of the sandstone escarpment in places. The alluvial soils are relatively stable compared to the highly erodible sandstone soils. Sections of track are closed and re-routed from time to time.

The area of the mountain bike course is a modified natural land where natural forest cover is regenerating after extensive past disturbance from clearing and other activities. Much of this forest is Shale/Sandstone Transition Forest or Sydney Coastal River Flat Forest which have been classified as endangered ecological communities (see 4.2). There is widespread weed invasion. The area was burnt by wildfire in December 2001.

Sections of track may impact on unrecorded Aboriginal sites. Some track sections display significant erosion, principally the wider vehicle trails on steeper slopes towards the escarpment. Some of this erosion has been caused by motor vehicle activity. Parts of the trail network are also used occasionally by walkers and horse riders. Organised mountain bike events require substantial car-parking space as well as temporary toilets.

The course is highly valued by the competitive mountain bike community, who regard it as of state significance for events and training. Sites of similar quality are of very limited availability. There is potential for providing a high standard competitive mountain bike course which would also be available to the general public, provided impacts can be kept within acceptable limits and issues of access, public liability and infrastructure can be resolved. Integration with a new picnic area at Shaws Farm (see 6.2.3) may help to solve some of these issues.

Desired Outcomes

- Mountain biking, including competitions, is permitted on a well-managed course and on management trails provided it has low environmental impacts.
- The mountain bike course does not impact on significant natural and cultural values, or interfere with their maintenance and rehabilitation.
- Appropriate support facilities are provided and issues of public safety are adequately addressed.
- The mountain biking community contributes significantly to the funding, provision and maintenance of mountain biking facilities.
- The impacts of mountain bike activity are monitored and any necessary corrective action is taken.

Strategies

- *Develop a mountain bike course south of Shaws Farm.*
- *Provide no facilities for downhill mountain biking.*

- *Allow the mountain bike course to be used for cycling by the general public and also for organised mountain bike events.*
- *Allow walkers to use the course tracks when events are not in progress provided issues of safety can be resolved by signage and other means.*
- *Exclude equestrian and motor vehicle use of the course.*
- *Ensure all access to the course is from the new picnic area at Shaws Farm. The picnic area will provide support facilities including toilets and parking, and be used as the base for events. Permit overflow parking in specified areas during major events.*
- *Limit or close public access to the mountain bike course and possibly the picnic area during events. Vehicle access onto the course will be restricted to park and event management purposes.*

Specific Activities

- *In consultation with the mountain bike community, prepare a detailed plan, environmental assessment and management proposal for the mountain bike course.*
- *Include in the assessment process: consideration of options for funding and maintenance; vegetation and archaeological surveys of the precinct; mapping of existing trails; identification of erosion hazard areas; identification of core tracks and alternatives for spelling; rehabilitation of other tracks; public safety assessment and close consultation with interest groups.*
- *Develop a formal agreement with mountain bike groups for the operation of the course and events. The area of the course may be licensed to mountain bike groups under Section 151B of the NPW Act for specific events and such licences may include exclusive use for the duration of events only.*
- *Seek a significant partnership contribution from the mountain bike community for the funding, planning, establishment, management, monitoring and ongoing maintenance of the mountain bike course and associated facilities.*
- *Install signage in parking area(s) advising details of upcoming mountain bike events. These signs will be maintained and updated by the mountain bikers.*
- *Monitor the impacts of mountain biking and take corrective action as necessary.*

6.2.5 Horse Riding

Low levels of horse riding occur in the park. The most used routes are the Coreena-Burrawang trail and the Transgrid management road along the Nepean River. Both are short rides and therefore of limited interest. Erosion could become a concern on the Coreena-Burrawang trail if use levels increase. There is limited scope for additional opportunities because of the small size of the park and the generally high erodibility of the soils. Other horse riding opportunities exist on public land within the region.

Desired Outcomes

- Current opportunities for horse riding in the park are maintained.
- The impacts of horse riding are monitored and any necessary corrective action is taken.

Strategies

- *Continue to permit horse riding in the park only on the Coreena and Burrawang trails and the Transgrid management trail along the Nepean River.*
- *Provide no new facilities in the park for horse riding.*

Specific Activities

- *Install low-key horse riding symbol signs at trailheads for the Coreena Trail, Burrawang Trail and the Transgrid management trail along the river.*
- *Monitor the impacts of horse riding and take corrective action as necessary.*

6.2.6 Walking

Walking is a minor use of the park. The Coreena-Burrawang Bridle Trail is the only designated trail suitable for walking, with other opportunities limited to management trails and roads such as Yellow Rock Road. Proposals for a short walking track near Yellow Rock Lookout (see 6.2.2) and use of the mountain bike course (see 6.2.4) will expand the opportunities.

There is also a community-based proposal to construct a long distance multi-purpose recreational track along the length of the Hawkesbury-Nepean River. Some sections of the track would be open to cyclists and possibly horse riders as well as walkers. One route option being considered is to traverse Yellomundee Regional Park. This option would need to address the issue of private property, and a low-key campsite for walkers may be sought on the park.

Subject to detailed planning and assessment, such a walk and campsite with access for walkers and cyclists only are regarded as potentially appropriate within the park.

Desired Outcomes

- Current walking opportunities in the park are maintained.
- Options for a long distance walking track to utilise the park are retained.
- The Service is fully informed and involved in any consideration of such options by the walk proponents.

Strategies

- *Manage the Coreena-Burrawang trail for both horse riding and walking.*
- *Seek ongoing liaison with the proponents of the long distance walking track along the Hawkesbury-Nepean River.*
- *Consider approval for a long distance walking/cycling/horse riding trail to be routed through the park, subject to detailed planning and environmental assessment, and satisfactory agreement on the ongoing management and maintenance of on-park facilities for the trail.*

7. RESEARCH AND MONITORING

The purpose of scientific study in the park is to improve understanding of its natural and cultural heritage and the processes which affect them. Research also helps to establish the requirements for management of particular species and communities.

Service research efforts must be directed towards the areas of greatest need and will concentrate on archaeological, fauna and vegetation surveys and impact monitoring.

Research by other organisations and students may provide valuable information for management. The park is easily accessible and well located in close proximity to several tertiary institutions and provides ideal opportunities for researching natural and cultural heritage and human impacts. Members of the Aboriginal community are involved in researching their heritage in the park. Other park visitors and local community members may have useful observations or knowledge to contribute, especially in relation to fauna sightings.

Desired Outcomes

- Research is undertaken that enhances the information base and assists management of the park.
- Research causes minimal environmental damage.
- Monitoring programs are in place to detect any changes in the status of park resources.

Strategies

- *Undertake research to provide information about the park's natural and cultural heritage and human use in order to facilitate management.*
- *Permit appropriate research by other organisations and individuals.*

Specific Actions

- *Prepare a prospectus as a guide to preferred research projects in the park. Priority topics will be those of direct relevance to management and will include: Aboriginal heritage; threatened plants and animals; human impacts; visitor use.*
- *Encourage bird watchers or similar groups to pass on information gathered in the park.*

8. OTHER USES

Several organisations and individuals are occupying or using lands reserved as Yellomundee Regional Park for public or private purposes which are unrelated to the purpose of reservation of the park. These other uses were already in existence when the park was gazetted and impact on its natural and cultural values.

A 330 kV electricity transmission line with steel stanchions traverses the northern and southern sectors of the park for approximately 6.2 kilometres. Between these sectors it is located on private land. The powerline is operated by TransGrid as a major feeder to the NSW grid. An access road follows the powerline with a number of short branch roads leading to stanchions. There is no legal access on this road but it has been in use for many years by recreational vehicles. There is no easement or legal agreement covering this powerline and road across the park.

Four portions of private land are landlocked between the park and the Nepean River. These lands have no constructed legal vehicle access and they meet the criteria under Section 153C of the NPW Act for the granting of access licences over the park in that no alternative means of access is available. The owners use the northern section of the 330 kV powerline access road.

There is a private agricultural pump extracting water from the Nepean River on the eastern park boundary. A pipeline traverses the park for about 500 metres from the pump site to the western park boundary beside the Springwood-Hawkesbury road. A timber-poled powerline which services the pump and an associated vehicle trail also traverse the park. No easement or legal agreement is in place to cover this use of the park.

All these uses require formal agreements to ensure impacts on the park are minimised and there is appropriate apportionment of maintenance and impact management costs.

Desired Outcomes

- Non-essential non-park uses are excluded from the park.
- Commercial and other non-park uses which do exist have minimal environmental impact.
- Non-park uses contribute appropriately to ongoing impact management and infrastructure maintenance.

Strategies

- *Keep non-Service utilities under review, with the aim of closure or relocation where feasible.*
- *Exclude from the park any new works, facilities or operations proposed by any organisation or individual unless they are consistent with the purpose of reservation of the park and the provisions of this plan.*

Specific Activities

- *Negotiate formal agreements for the existing non-park uses (electricity transmission line, water pump and electricity supply, access) to cover conditions of access and use, maintenance standards and responsibilities and fees. Access to the four private blocks landlocked between the park and the Nepean River will be licensed under Section 153C of the NPW Act.*

9. NPWS MANAGEMENT FACILITIES AND OPERATIONS

The only management facilities within Yellomundee Regional Park are the management trails for vehicle access in the Shaws Farm precinct and along the 330 kV electricity transmission line. These trails will continue to be maintained for management purposes. The stables at Shaws Farm (see 4.5) will be considered for adaptive reuse for management purposes such as storage, and the proposed new picnic area at Shaws Creek (see 6.2.3) may incorporate minor facilities for maintenance. Major management facilities such as workshops or offices are considered inappropriate for this small park.

Desired Outcomes

- Management facilities adequately serve the needs of park management and have acceptable environmental impact.
- No new workshops or offices are constructed in the park.

Strategies

- *Maintain management trails to a good standard of stability and access and closed to the public.*
- *Exclude the construction of management workshops or offices from the park.*
- *Maintain close liaison with park neighbours to deal with matters of mutual concern.*

10. PLAN IMPLEMENTATION

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

Section 81 of the Act requires that this plan of management shall be carried out and given effect to, and that no operations shall be undertaken in relation to Yellomundee Regional Park unless they are in accordance with the plan. Implementation of this plan will be undertaken within the annual programs of the Service's Blue Mountains Region. The actions identified in the plan are those to which priority will be given in the foreseeable future. Other management actions may be developed consistent with the plan's objectives and strategies.

The strategies detailed in the body of this plan are not repeated here, but provide fundamental management guidance for both listed activities and for new issues which may arise during the life of the plan. Relative priorities for significant developmental or progressive actions identified in this plan are set out in the table below. Processes and management activities of a routine nature such as liaison and maintenance are not listed. Actual priorities will be determined in the context of directorate and regional strategic planning, and are subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister. The implementation of the plan will be monitored and its success in achieving the identified objectives will be assessed.

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

This plan of management does not have a specific term and will stay in force until amended or replaced in accordance with section 75A(6) of the NPW Act. The plan applies both to the land currently reserved and to any future additions. Where management strategies or works are proposed for additions (or the existing area) that are not consistent with the plan, an amendment to the plan will be required.

Strategies

- *Undertake an annual review of progress in implementing this plan of management.*
- *Undertake an assessment after five years of the effectiveness of managing the park in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes. Base the evaluation on the monitoring programs set out in this plan and any others that may be developed.*

Summary Implementation Table

- for details of each activity refer to the relevant plan section
- refer also to the Strategies listed in the body of this plan

| Priority | Activity | Plan reference |
|---|--|----------------|
| High | Implement priority actions and recovery plans for threatened plant and animal species | 4.2, 4.3 |
| | Facilitate the establishment of a community-based bushcare group to assist in rehabilitation of endangered and restricted plant communities in the park | 4.2, 5.3 |
| | In consultation with local Aboriginal community organisations, prepare & implement a conservation management plan for Aboriginal sites and artefacts in the Shaws Creek precinct, the mountain bike course south of Shaws Creek, and the access road and parking areas | 4.4 |
| | Continue to record new Aboriginal sites when they are located | 4.4 |
| | Where the agreement of relevant Aboriginal community organisations has been obtained, promote and interpret the park's Aboriginal heritage values at the proposed new picnic area at Shaws Creek, at other visitor sites and in park information | 4.4 |
| | Encourage Aboriginal people to carry out activities in the park related to cultural education and maintenance of traditional links to country. Any such activities must comply with this plan of management and have minimal environmental impact | 4.4 |
| | In consultation with local Aboriginal community organisations, support additional targeted Aboriginal site & place surveys | 4.4 |
| | Prepare & implement a conservation management plan for Shaws Farm precinct | 4.5 |
| | Undertake rehabilitation & sediment control works at Yellow Rock Lookout | 5.1, 6.2.2 |
| | Undertake rehabilitation & sediment control works in the Hawkesbury Lookout area | 5.1 |
| | Control introduced plants that are impacting on the endangered and significant ecological communities in the Shaws Farm precinct | 5.3 |
| | Prepare, exhibit and finalise a Fire Management Strategy for the park | 5.4 |
| | Rehabilitate areas disturbed by fire suppression | 5.4 |
| | In cooperation with TransGrid and local bush fire management committees, maintain the electricity transmission access road along the Nepean River as a management trail and close it to the public vehicles, except as described in section 6.2 | 5.4, 6.2 |
| Develop a park brochure and distribute it to tourist information centres and other appropriate locations, and update the brochure as needed | 6.1 | |

| | | |
|----------------|--|-------------------------------|
| High (cont) | Install information & interpretive signs at Yellow Rock Lookout, Hawkesbury Lookout and the proposed picnic area at Shaws Farm | 6.1, 6.2, 6.2.1, 6.2.2, 6.2.3 |
| | Maintain the viewscape at Hawkesbury Lookout by managing vegetation below the lookout | 6.2.1 |
| | Assess the Blue Mountains City Council landholding on the western side of Hawkesbury Road at Hawkesbury Lookout for potential addition to Yellomundee Regional Park | 6.2.1 |
| | Monitor night time behaviour at Yellow Rock Lookout and, if deemed necessary, close the lookout to vehicular access from sunset to sunrise or at other times to limit antisocial activities | 6.2.2 |
| | Formalise abseil anchors and construct abseil access tracks along existing informal routes at Yellow Rock Lookout in consultation with users. Install signage to discourage the use of the tracks by other visitors. Monitor impacts and visitor safety | 6.2.2 |
| | Develop a formal agreement with mountain bike groups for the operation of the mountain bike course and events | 6.2.4 |
| | Monitor and correct the impacts of mountain biking & horseriding | 6.2.4, 6.2.5 |
| | Seek a significant partnership contribution from the mountain bike community for the funding, planning, establishment, management, monitoring and ongoing maintenance of the mountain bike course and associated facilities | 6.2.4 |
| | Install low-key horse riding symbol signs at trailheads for the Coreena Track, Burrawang Track and the Transgrid management trail along the river | 6.2.5 |
| | Negotiate formal agreements for the existing non-park uses (electricity transmission line, water pump and electricity supply, access) to cover conditions of access and use, maintenance standards and responsibilities and fees. Access to the four private blocks landlocked between the park and the Nepean River will licensed under Section 153C of the NPW Act | 8 |
| Medium | Actively rehabilitate disturbed areas of endangered and restricted communities in the north of the park through weed control, bush regeneration and replanting programs | 4.2 |
| | Undertake additional vegetation surveys, with priority on significant species and plant communities in alluvial environments adjacent to the Nepean River | 4.2 |
| | Introduce a program to monitor the status of the significant communities and threatened plant species and to evaluate the success of management programs | 4.2 |
| | Continue to record the distribution of threatened and significant fauna species and encourage reporting of fauna records by visitors and local groups | 4.3 |
| | Undertake additional fauna surveys with priority on threatened species and within endangered ecological communities | 4.3 |
| | Carry out bushrock theft enforcement programs | 4.3 |

| | | |
|------------------|---|---------------|
| Medium (cont) | Record and remove all structures and objects of non-indigenous origin from the Shaws Farm precinct other than the grotto/seat and attached shed, stables, electricity infrastructure and the residence and outbuilding. Record these structures, assess their feasibility for adaptation and remove them if adaptive re-use for a staff/caretaker residence or an education/research facility or an Aboriginal cultural centre cannot be achieved within the safe life of the structures | 4.5 |
| | Minimise and effectively control erosion associated with the mountain bike course south of Shaw's Creek, in co-operation with user groups | 5.1, 6.2.4 |
| | Monitor visitor levels by making spot checks to record numbers using picnic areas and lookouts. Monitor the condition of visitor areas | 6.2 |
| | Undertake further planting within the landscaped area at Hawkesbury Lookout to improve amenity without impacting on visibility | 6.2.1 |
| | Investigate options for improving pedestrian safety at Hawkesbury Lookout | 6.2.1 |
| | Remove rubbish below Yellow Rock Lookout | 6.2.2 |
| | Repair eroded areas adjacent to the Yellow Rock loop road by replanting and installing drainage structures | 6.2.2 |
| | Subject to detailed planning, design and environmental assessment including an Aboriginal heritage survey, construct a picnic area in the vicinity of the old trotting track. Provide a new access road from the Springwood-Hawkesbury road, parking for about fifty vehicles on the existing car parking site (including provision for horse floats), horse riding access from the parking area to the riding trails, toilets, water supply, picnic tables/shelters, gas or electric BBQs, additional plantings and open grassed areas | 6.2.3 |
| | Install signage in parking area(s) advising details of upcoming mountain bike events. These signs will be maintained and updated by the mountain bikers. | 6.2.4 |
| | Prepare a detailed plan, environmental assessment & management proposal for a mountain bike course south of Shaws Farm | 6.2.4 |
| | Monitor the impacts of horse riding and take corrective action as necessary | 6.2.5 |
| Low | Undertake additional priority vegetation surveys | 4.2 |
| | Produce media releases and attend meetings with neighbours and community organisations to promote community understanding of park values and management strategies | 6.1 |
| | Install signage at Yellow Rock Lookout to explain the exclusion of open fires and the 'no bins' policy and to encourage compliance | 6.2.2 |

| | | |
|---------------|---|-------|
| Low (cont) | Subject to detailed planning, design and environmental assessment, construct a short loop walking track about one kilometre in length from Yellow Rock Lookout to a viewpoint on the Fraser Creek escarpment to the west. Manage visitor safety at the viewpoint through design and signage in preference to structures. Consider installing interpretive signage | 6.2.2 |
| | Keep under review the need for, costs and benefits of other actions such as the installation of a gate on the access road for night security and public safety, sealing of the access road and the installation of free gas BBQs at Yellow Rock Lookout | 6.2.2 |
| | Link the picnic area to the Shaws Farm buildings and the mountain bike course by walking access | 6.2.3 |
| | Consider applying day use fees at Shaws Farm picnic area | 6.2.3 |
| | Prepare a prospectus as a guide to preferred research projects in the park. Priority topics will be those of direct relevance to management and will include: Aboriginal heritage; threatened plants and animals; human impacts; visitor use | 7 |
| | Encourage bird watchers or similar groups to pass on information gathered in the park | 7 |

Legend

High priority activities are those imperative to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.

Medium priority activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.

Low priority activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.

SELECTED REFERENCES

- Bannerman, S.M. and Hazelton, P.A. (1990) *Soil Landscapes of the Penrith 1:100,000 Sheet*. Soil Conservation Service of NSW, Sydney.
- Beaver, D. (2000) *Shaw's Farm, Yellomundee Regional Park: Draft Landscape Heritage Assessment*. Unpub. report to NSW National Parks and Wildlife Service, Richmond.
- Benson, D.H. (1992) 'The Natural vegetation of the Penrith 1:100,000 map sheet'. *Cunninghamia* Vol 2 (4):541-596.
- Briggs, J.D. & Leigh, J.H. (1995) *Rare or Threatened Australian Plants*. CSIRO, Canberra.
- Brown, I. (2002) *Yellomundee Regional Park Resource Summary*. Unpub. report for NSW National Parks and Wildlife Service, Blue Mountains Region, Katoomba.
- Clark, N.R. and Jones, D.C. (1991) *Penrith 1:100,000 Geological Sheet 9030*. NSW Geological Survey, Sydney.
- Cremin, A. and Mountford, R. (2000) *Heritage Assessment: Shaw's Farm Buildings, Yellomundee Regional Park*. Unpub. report to NSW National Parks and Wildlife Service, Richmond.
- Cserhalmi, O. & Partners (2000) *Shaw's Farm, Yellomundi National Park (sic): Existing Condition Survey, Proposed Adaptive Re-use*. Unpub. report to NSW National Parks and Wildlife Service, Richmond.
- Douglas, S. & Bell, S. (2001) *Unpub. vegetation surveys for Blue Mountains City Council*.
- IUCN (1994) *Guidelines for Protected Area Management*. International Union for the Conservation of Nature and Natural Resources.
- ICOMOS (1998) *The Australian ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter)*. Australia ICOMOS (International Council on Monuments and Sites).
- Keith, D.A. & Benson, D.H. (1998) 'The Natural Vegetation of the Katoomba 1:100,000 map sheet'. *Cunninghamia* 2(1):107:143.
- Kohen, J.L. (1986) *Prehistoric Settlement in the Western Cumberland Plain: resources, environment and technology*. Unpub. PhD thesis, Macquarie University.
- Mountford, R. (2001) *Archaeological Survey of Shaw's Farm, Portions 65 & 59, Yellomundie Regional Park (sic)*. Unpub. report to NSW National Parks and Wildlife Service, Richmond.
- NSW National Parks and Wildlife Service (1997) *Native Flora of Western Sydney, Urban Bushland Biodiversity Survey*. NSW National Parks and Wildlife Service, Hurstville.

- NSW Scientific Committee (1998-2001) *Final Determinations for Shale/Sandstone Transition Forest, Sydney Coastal River-Flat Forest and Cooks River/Castlereagh Ironbark Forest under Threatened Species Conservation Act 1995*. NSW National Parks and Wildlife Service, Hurstville.
- Ollier, C.D. (1982) 'The Great Escarpment of eastern Australia: tectonic and geomorphic significance'. *Journal of the Geological Society of Australia*, 29, 13-23.
- Picket, J.W. and Alder, J.D. (1997) *Layers of Time: The Blue Mountains and Their Geology*. NSW Dept. Mineral Resources, Sydney.
- Rosen, S. (1995) *Losing Ground: An Environmental History of the Hawkesbury-Nepean River Catchment*. Hale & Ironmonger, Sydney.
- Smith, J. & Smith, P. (1990) *Fauna of the Blue Mountains*. Kangaroo Press.
- Smith, P. & Smith, J. (1995) *Flora and Fauna Study for Blue Mountains Environmental Management Plan. Study Area 4: Faulconbridge to Hawkesbury Heights*. Blue Mountains City Council, Katoomba.
- Stockton, E. (1993) 'Archaeology of the Blue Mountains'. In E. Stockton (ed.), *Blue Mountains Dreaming*. Three Sisters, Winmalee.
- Wotherspoon, D. (2001) *Flora and Fauna Report for a Review of Environmental Factors for Bush Fire Hazard Reduction Activities*. Unpub. report to NSW National Parks and Wildlife Service, Blue Mountains Region, Blackheath.

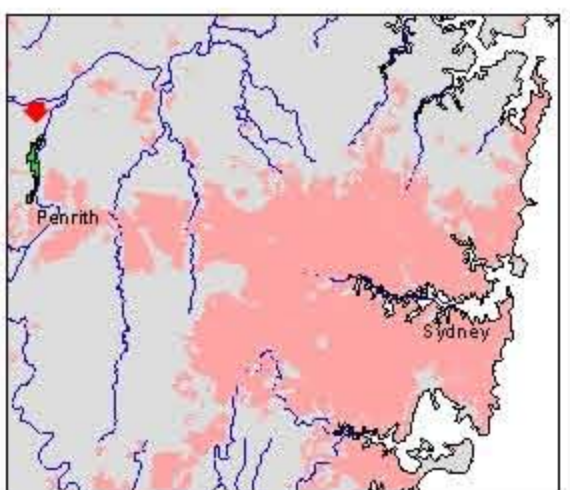
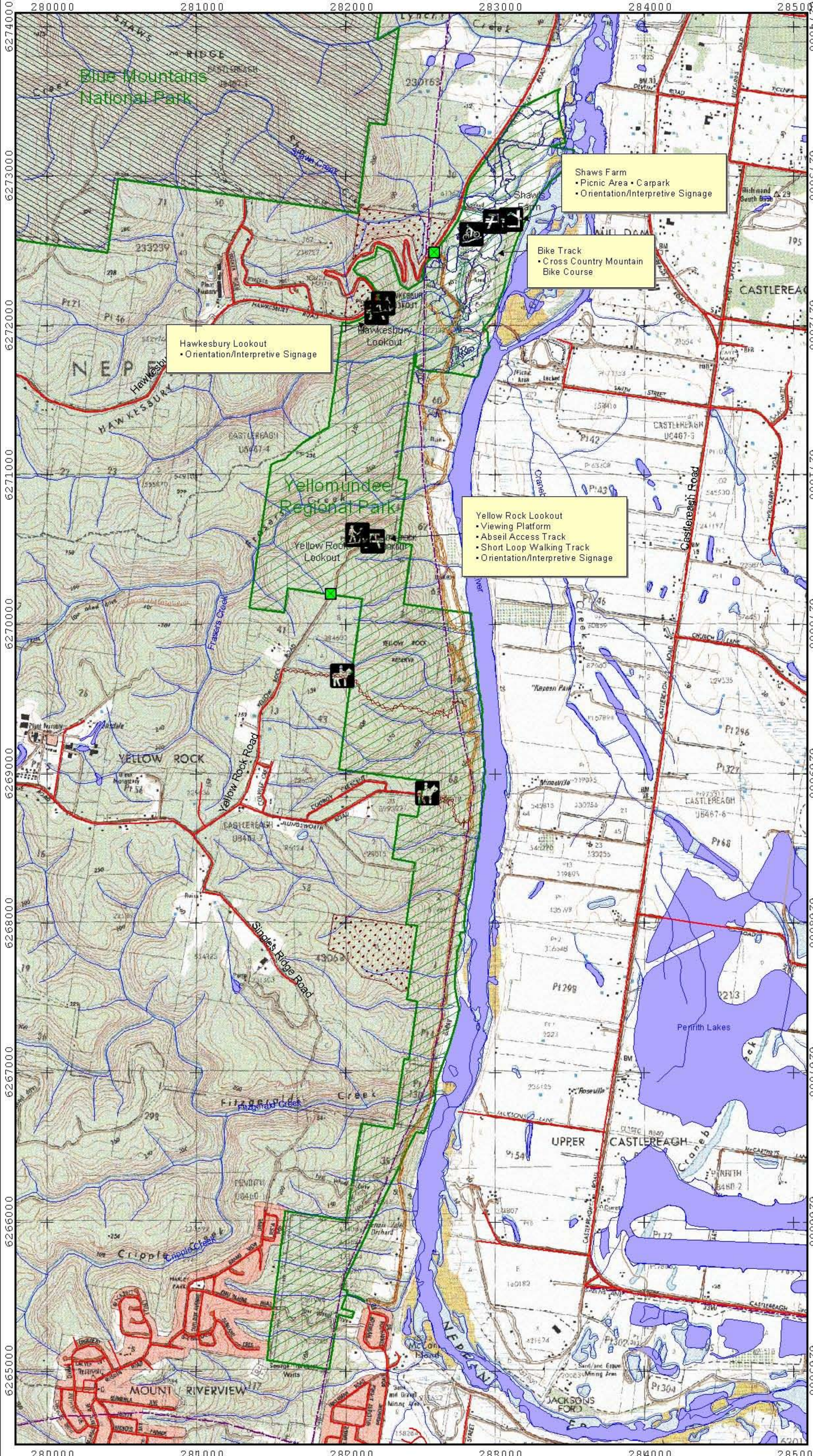


Figure 1
Yellomundee
Regional Park
483 ha

- Yellomundee RP
- World Heritage Area
- Other NPWS Estate
- Public Lands Rationalisation Process
- public access
- road paved
- road unpaved
- walking track
- bike trail
- bridle trail
- TransGrid management trail
- management trail
- 330 kV power line
- quarry
- creek
- river/lake

Scale 1:25 000

Copyright NSW National Parks and Wildlife Service January 2008
 This map is not guaranteed to be free from error or omission.
 The NSW National Parks and Wildlife Service and its employees
 disclaim liability for any act or omission in the information in the
 map and any consequences of such act or omission.
 The NPWS is now part of the Department
 of Environment and Climate Change (DECC)



Map prepared by PaCS, Central Branch,
 PWG, January 2008.