

**OXLEY WILD RIVERS NATIONAL PARK,  
OXLEY WILD RIVERS STATE CONSERVATION AREA,  
CUNNAWARRA NATIONAL PARK AND  
GEORGES CREEK NATURE RESERVE**

**PLAN OF MANAGEMENT**

**NSW National Parks and Wildlife Service**

**Part of the Department of Environment and Conservation (NSW)**

June 2005

**This plan of management was adopted by the Minister for the Environment on 27 June 2005.**

**Acknowledgments:**

This plan is based on a draft plan prepared by staff of the Northern Tablelands Region Office of the NSW National Parks and Wildlife Service, with the assistance from Head Office and Northern Directorate Planning Group staff.

Cover photograph: Kunderang Brook by Roger Mills, NPWS.

Valuable information and comments were provided by the Northern Tablelands Region Advisory Committee and other organisations and individuals during community consultation and review of the draft.

The planning process leading to the development of this plan involved the collection and use of information, which for reasons of document size has not been included in the plan. For additional information or inquiries on any aspect of the plan, contact the NPWS Northern Tablelands Region Office at 87 Faulkner Street (P.O. Box 402), Armidale 2350, or by phone at (02) 6776 0000.

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## FOREWORD

Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and Georges Creek Nature Reserve are located on the eastern edge of the Northern Tablelands of NSW, 350km north of Sydney and 15km south-east of Armidale. Kempsey, Port Macquarie and Tamworth are all within 140km. Oxley Wild Rivers National Park is part of the Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Area. The park also contains the Macleay Gorges Wilderness and the Kunderang Wilderness.

These four parks are significant because they contain diverse plant communities, including rainforests, eucalypt forests and woodlands, heath and swamps; a large number of threatened fauna species and rare and threatened plant species; spectacular gorges, cliff lines and deep, steep sided valleys illustrating on-going geomorphological processes associated with the Great Escarpment; a range of Aboriginal sites with traditional and contemporary values; the historical Kunderang East homestead; and the remains of Australia's first commercial hydro-electric scheme.

Recreation facilities in the parks include easily accessible lookouts and other facilities at spectacular escarpment locations; an extensive network of gorges, rivers and wilderness areas; and extended horse riding, bicycling and walking on the Bicentennial National Trail.

Primary management emphasis will continue to be given to the conservation of the natural and cultural heritage of the areas, and in particular the World Heritage values. This will involve protection of significant vegetation communities, threatened and biogeographically significant plant and animal species, Aboriginal and historic heritage, and geomorphological features. Opportunities for ecologically sustainable recreation, tourism and educational use will continue to be provided, including use of the existing gorge rim locations on the edges of Oxley Wild Rivers National Park, the Bicentennial National Trail and Kunderang East homestead. All facilities will be designed to promote enjoyment and understanding of the special features of the parks and reserve, with emphasis on appreciation of the World Heritage values.

This plan of management establishes the scheme of operations for Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and Georges Creek Nature Reserve. In accordance with Section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

**Bob Debus**

**Minister for the Environment**

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# 1. INTRODUCTION

## 1.1 LOCATION, GAZETTAL AND REGIONAL SETTING

Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and Georges Creek Nature Reserve (collectively referred to as "the planning area) are located on the eastern edge of the Northern Tablelands of NSW, 350km north of Sydney. The city of Armidale lies 15km to the north-west of the nearest section of the planning area, while Kempsey, Port Macquarie and Tamworth are all within 140km. The planning area lies within the local government areas of Armidale-Dumaresq and Walcha shires.

The planning area is part of a broad contiguous belt of relatively undisturbed forested land along the Great Escarpment, adjoining New England National Park to the north-east, The Castles Nature Reserve, Carrai and Willi Willi National Parks to the east and Werrikimbe National Park to the south (see figure 1, page 3). Adjacent lands on the tablelands have largely been cleared for grazing but there are large areas of native vegetation to the east, in both public and private ownership.

**Oxley Wild Rivers National Park** was established through the amalgamation of several smaller existing reserves in 1986 and, with recent additions, the gazetted area of the park is 119,280 hectares. A further 7,847 ha of land on the western side of the park has been purchased by the National Parks and Wildlife Service (NPWS) but is yet to be gazetted. This land will be managed, and is treated in this plan, as though it was incorporated into the park. The park, including the areas not yet gazetted, is comprised of 12 separate blocks of land interspersed with private land (see figure 2). The main section of the park is large but with a long and convoluted boundary, while some areas are very small.

Although legal, a Crown lease in perpetuity (for 100 years) in the Styx River portion of Oxley Wild Rivers National Park was inadvertently declared as part of the park in 1988 (see figure 2, "Gazetted but not purchased"). The future of this parcel of land remains to be determined (refer to part 8).

The park lies within the catchment of the Macleay River and consists largely of gorges and deep river valleys on the upper reaches of the river and its tributaries, with relatively small areas of peripheral and residual tableland. Spectacular gorges and waterfalls are prominent features of the park. Large parts have been declared wilderness and the majority of the park has been inscribed on the World Heritage list as the Central Eastern Rainforest Reserves of Australia (CERRA) (see figure 3).

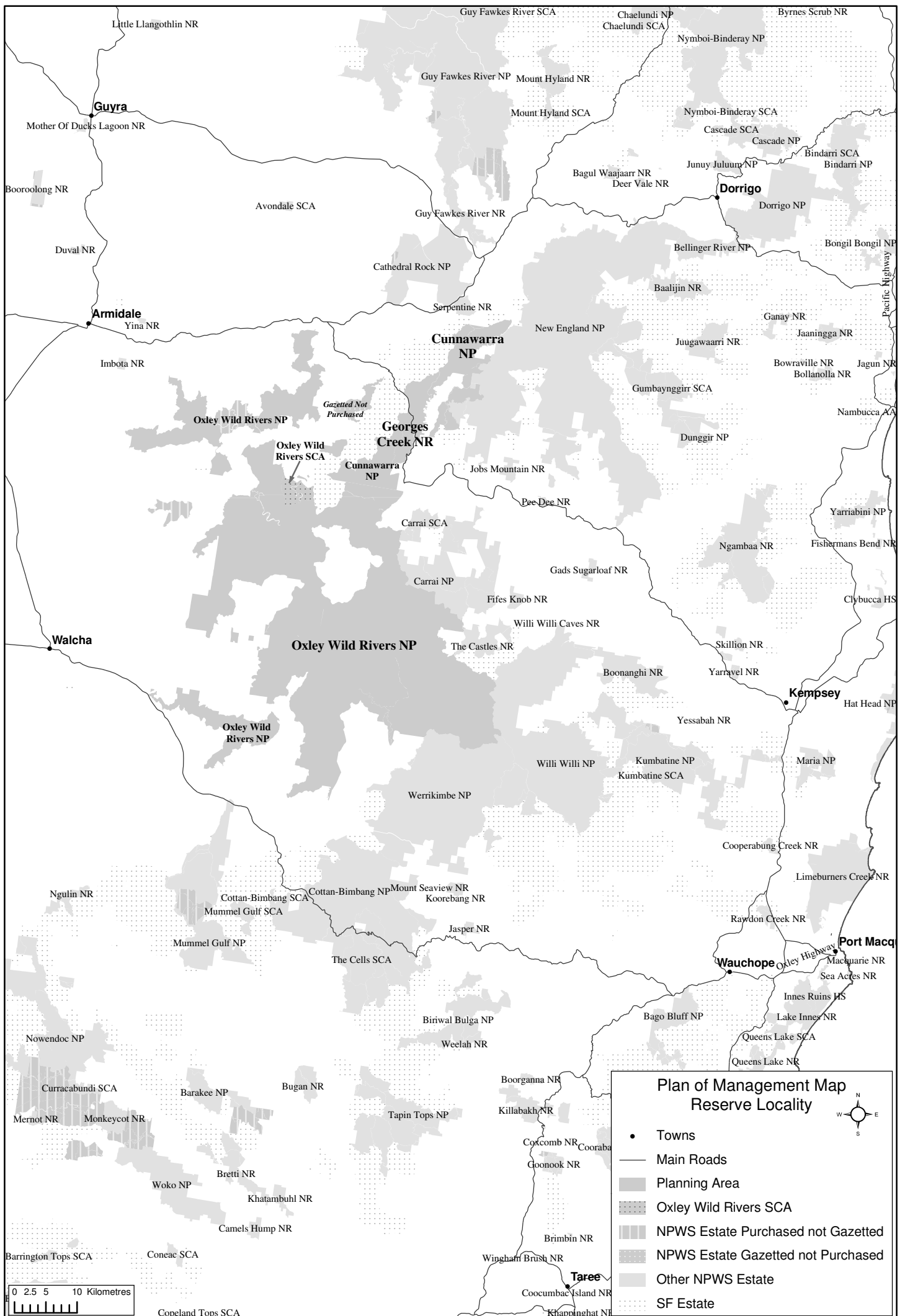
**Oxley Wild Rivers State Conservation Area (SCA)** occupies an area of 1,439 ha, and was gazetted on January 1, 2003 in an area adjoining Oxley Wild Rivers National Park on the Chandler River upstream of the junction with the Macleay River (see figure 2). The SCA is part of the Macleay Gorges identified wilderness area.

**Cunnawarra National Park** is contiguous with the main section of Oxley Wild Rivers National Park. It was dedicated in 1999 and has an area of 15,751 ha. The park was formed from part of the Lower Creek and Styx River State

Forests, including two flora reserves. It covers part of the Cunnawarra Range and the steep slopes of the Georges and Sunday Creek valleys. The former Cunnawarra Flora Reserve, situated in the north east corner of the park, is also included in the Central Eastern Rainforest Reserves of Australia World Heritage Area.

**Georges Creek Nature Reserve** lies adjacent to the south-eastern boundary of Cunnawarra National Park. It was dedicated in 1967 over a previous flora and fauna reserve, and has an area of 1,263 hectares. The reserve protects deeply dissected country on the western side of Georges Creek.

Consideration is being given to incorporating the nature reserve and that part of Cunnawarra National Park south of the Armidale-Kempsey Road into Oxley Wild Rivers National Park. The northern section of Cunnawarra may be reserved separately or incorporated into New England National Park. Should these changes take place, the plan of management may need to be amended to reflect the new situation.



## 2. MANAGEMENT CONTEXT

### 2.1 LEGISLATIVE AND POLICY FRAMEWORK

The management of national parks and nature reserves in NSW is in the context of the legislative and policy framework, primarily the *National Parks and Wildlife Act 1974*, the *Threatened Species Conservation Act 1995* (TSC Act), the *Wilderness Act 1987* and the NPWS Field Management Policies. The Field Management Policies are a compilation of policies arising from the legislative background, the corporate goals of the NPWS and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic site conservation, recreation, commercial use, research and communication. Other legislation, international agreements and charters also apply to management of the area.

Regional Forest Agreements are one of the principle means of implementing the National Forest Policy Statement of 1992. Under this Statement Commonwealth, State and Territory governments agreed to work towards a shared vision for Australia's forests. This aimed to maintain native forest estate, manage it in an ecologically sustainable manner and develop sustainable forest-based industries. The Statement provided for joint comprehensive assessments of the natural, cultural, economic and social values of forests. These assessments formed the basis for negotiation of Regional Forest Agreements that provide, amongst other things, for Ecologically Sustainable Forest Management.

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

Under the Act, national parks are managed to:

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



**State conservation areas in New South Wales** are reserved under the NPW Act to protect and conserve areas that contain significant or representative ecosystems, landforms or natural phenomena or places of cultural significance; that are capable of providing opportunities for sustainable visitor use and enjoyment, the sustainable use of buildings and structures or research; and that are capable of providing opportunities for uses permitted under other provisions of the Act.

Under the Act, state conservation areas are managed to:

- conserve biodiversity, maintain ecosystem functions, protect natural phenomena and maintain natural landscapes;
- conserve places, objects and features of cultural value;
- provide for the undertaking of exploration and mining, having regard to the conservation of the natural and cultural values of the state conservation area;
- provide for sustainable visitor use and enjoyment that is compatible with conservation of the area's natural and cultural values and with uses permitted in the area;
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of the area's natural and cultural values and with other uses permitted in the area; and
- provide for appropriate research and monitoring.

The Act also requires review of the classification of SCAs every 5 years to determine whether they should receive either a national park or nature reserve classification. The classification review for SCAs is described in section 47M of the Act and is undertaken in consultation with the Minister administering the *Mining Act 1992*.

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

Under the Act, nature reserves are managed to:

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

## 2.2 OBJECTIVES FOR WORLD HERITAGE AND WILDERNESS AREAS

### World Heritage

The International Convention for the Protection of the World Cultural and Natural Heritage was adopted by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in 1972, and ratified by Australia in 1974. The Convention provides a framework for international cooperation and the collective protection of cultural and natural heritage of outstanding universal value.

Oxley Wild Rivers National Park and the former Cunnawarra Flora Reserve were inscribed on the World Heritage list as part of the Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Area in 1994 (see figure 3). CERRA comprises about 40 individual protected areas between Barrington Tops (north-west of Newcastle) and the Mistake Mountains section of Main Range National Park (east of Toowoomba). Other major national parks also inscribed as part of this listing include Werrikimbe, New England, Dorrigo, Washpool, Gibraltar Range, Border Ranges, Mt Warning, Lamington and Springbrook.

In 1994, the areas in NSW nominated for inclusion as part of the Central Eastern Rainforest Reserves of Australia were restricted to formal protected areas and reserves. Recent additions to Oxley Wild Rivers NP and the creation of Cunnawarra National Park have provided an opportunity to review the areas included in CERRA because of the presence of World Heritage values in these additional areas. It may also be appropriate to include Georges Creek NR in CERRA as it would then be contiguous with other parts of the World Heritage area and has similar values to other sections of the CERRA property.

The primary purpose of management of a declared World Heritage property is, in accordance with Australia's obligations under the World Heritage Convention, to identify, protect, conserve, present and transmit to future generations, the World Heritage values of the property. Australian World Heritage Management Principles, set out in regulations to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, have been developed from these obligations, and these are given in Appendix 4.

These principles place an obligation on NPWS for long-term care and stewardship of Oxley Wild Rivers NP and other listed areas to ensure that their values are identified, protected, conserved, presented and, if necessary, rehabilitated, and that individual or cumulative actions do not degrade their values over time. There are also specific principles regarding management planning, environmental impact assessment and public involvement in the management of World Heritage Areas.

Broad strategies to achieve the obligations of the World Heritage convention for the Central Eastern Rainforest Reserves of Australia are provided in the *Strategic Overview* (CERRA 2000).

### Wilderness

Two areas within Oxley Wild Rivers National Park, totalling over 81,000 ha, have been declared wilderness under the *Wilderness Act* (see figure 3). Wilderness areas are large natural areas of land that, together with their native

plant and animal communities, are essentially unchanged by human activity. Wilderness areas contribute to the long-term protection of biological diversity and serve as scientific reference areas. An important purpose of wilderness areas is also to provide opportunities for solitude and appropriate self-reliant recreation.

Declared in April 1996, the Macleay Gorges Wilderness (59,338 ha) covers the majority of the core area of the park. This includes an extensive area of the remote middle and upper Macleay River catchment.

The Kunderang Wilderness (21,937 ha), declared in November 1998, lies to the east of the Macleay Gorges Wilderness. This wilderness area covers much of the eastern and south-eastern section of the Kunderang Brook catchment.

Much of Cunnawarra National Park has been identified, but not yet declared, as wilderness, while additional areas of Oxley Wild Rivers National Park may also be assessed for wilderness value if further gorge lands are added to the park.

Management of natural and cultural heritage and of introduced species and fire is carried out in wilderness areas in the same manner as other parts of the park, with special attention to minimising impacts on wilderness values.

The following general principles apply to the management of wilderness areas in NSW:

- restoration (if applicable) and protection of the unmodified state of the area and its plant and animal communities, while managing cultural heritage in a manner appropriate to its significance;
- preservation of the capacity of the area to evolve in the absence of significant human interference; and
- provision of opportunities for solitude and appropriate self-reliant recreation.

### 3. KEY VALUES AND MANAGEMENT DIRECTIONS

#### 3.1 STATEMENT OF SIGNIFICANCE

The planning area protects an area of international and national significance for its biological and landscape values and of regional significance for cultural heritage and recreation.

As stated in section 2.1, parts of Oxley Wild Rivers NP and Cunnawarra NP are included on the World Heritage List as part of the Central Eastern Rainforest Reserves of Australia (CERRA) World Heritage Area. CERRA was inscribed on the World Heritage List in 1986, and extended in 1994, because it satisfies three of the four criteria for natural values of outstanding universal significance. It contains:

- \* outstanding examples of the major stages of the Earth's evolutionary history (*criterion I*), including rainforest ecosystems and relict plant and animal species dating from Gondwana;
- \* outstanding examples of significant ongoing geological processes and biological evolution (*criterion II*), including centres of endemism where ongoing evolution is taking place and taxa showing evidence of relatively recent evolution; and
- \* significant habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation still survive (*criterion IV*), including rainforest, wet sclerophyll and rocky outcrop habitats containing threatened and rare plant and animal species.

The natural values of the area, many of which form part of its World Heritage value, are summarised below, along with cultural and other values.

#### Key **natural values**:

- diverse plant communities including rainforests, eucalypt forests and woodlands, heath and swamps, some of which are rare and/or restricted;
- examples of dry, subtropical, warm temperate and cool temperate rainforest types, including an unparalleled sample of the transition of dry rainforest along gradients of moisture, exposure and soil depth;
- significant areas of old growth including well developed moist forests that contain some of the tallest trees in NSW;
- areas of tall moist tablelands forest, most of which has been cleared in surrounding lands;
- a large number of threatened fauna species and rare and threatened plant species, the centre of distribution of several restricted and threatened species and limits of distribution of several species;
- endemic invertebrate species in the Kunderang Brook Karst System (and probably in the rainforest areas).

**Significant landscape values:**

- spectacular gorges, cliff lines and deep, steep sided valleys illustrating on-going geomorphological processes associated with the Great Escarpment;
- numerous high waterfalls;
- panoramic views from locations along the escarpment edge;
- attractive tall moist forests and rainforests and diverse vegetation types across the landscape.

**Key cultural heritage values:**

- a range of Aboriginal archaeological sites and sites with traditional and contemporary values, for example burial sites at Kunderang East, the landscape of the upper Apsley Gorge and massacre sites at Kunderang Brook;
- an historic homestead of national significance at Kunderang East;
- nationally significant remains of Australia's first commercial hydro-electric scheme;
- a range of other historic features including huts, a woolshed, a slate quarry and forestry sites.

**Recreation and tourism opportunities:**

- easily accessible lookouts and associated facilities at spectacular escarpment locations;
- a range of short to long day and overnight walks;
- self-reliant recreation in the extensive network of gorges and wilderness areas;
- swimming, canoeing, rafting and liloing along the creeks and rivers;
- extended horse riding, bicycling and walking on the Bicentennial National Trail.

**Research and educational values:**

- geological processes, diverse and significant plant and animal communities, cultural features and a variety of management issues in the planning area provides numerous opportunities for research;
- the spectacular landscapes, biodiversity, World Heritage values, interesting cultural features and ready access to a variety of locations provide outstanding opportunities for community education.

**3.2 MANAGEMENT DIRECTIONS**

Primary management emphasis will be given to the conservation of the natural and cultural heritage of the areas, and in particular the World Heritage values. This will require NPWS to:

- protect significant vegetation communities, threatened and biogeographically significant plant and animal species and geomorphological features from inappropriate use and works;

- implement recovery plans for threatened species;
- control pest plants and animals in cooperation with neighbours and relevant authorities in accordance with the Regional Pest Management Strategy;
- management of fire to maintain plant and animal communities, where possible, expand the extent of rainforest communities, and provide for the special requirements of threatened species;
- encourage the retention and compatible management of areas of native vegetation on neighbouring lands that link sections of the park to other large naturally vegetated areas;
- survey for Aboriginal sites in areas where there is the potential for disturbance and prepare management strategies in cooperation with the Aboriginal community;
- record, maintain and, where appropriate, allow for on-going use of historic features; and
- research and monitor to improve knowledge of the area's resources and to evaluate and adapt management programs.

Opportunities for ecologically sustainable recreation, tourism and educational use will continue to be provided. These will be designed to promote enjoyment and understanding of the special features of the parks and reserve, with emphasis on appreciation of the World Heritage values. The planning area will be promoted as part of an important conservation network of conservation reserves along the Great Escarpment and as part of the CERRA World Heritage Area. Interpretive information will be reviewed and extended where necessary.

Visitor facilities will be concentrated at existing gorge rim locations on the edges of Oxley Wild Rivers National Park. Some existing facilities will be modified, either by removing features that receive minimal use or by redesigning and in some cases upgrading areas that are substandard. Visitor facilities will be designed to retain their natural settings and relatively undeveloped character.

Opportunities for activities such as extended walking, canoeing, cycling and horse riding will continue to be provided in appropriate locations and will be managed to minimise environmental impacts.

The core areas of Oxley Wild Rivers National Park and the southern and north-eastern parts of Cunnawarra National Park will be largely managed as wilderness or remote areas.

## 4. CONSERVATION OF NATURAL AND CULTURAL HERITAGE

### 4.1. GEOLOGY AND LANDSCAPE

#### Geology

The planning area lies within two major structural subdivisions of the New England Foldbelt, being the:

- Tablelands Complex, which outcrops in the western parts of Oxley Wild Rivers National Park and is composed of metamorphosed sediments and volcanics; and
- Nambucca Slate Belt, a series of often intensively deformed metamorphosed sandstones, siltstones, conglomerates and tuffs exposed in the eastern sections and in the gorges.

Each of these structural subdivisions is bounded by major faults and intruded by granites of the New England Batholith and numerous small associated batholiths that caused contact metamorphism of the original sediments and volcanics. An interesting geological feature, the Carrai adamellite, occurs as a large dome structure within the Nambucca Slate Belt on the eastern margins of Oxley Wild Rivers National Park.

Small isolated patches remaining from former basalt flows cover some areas, but most of the significant occurrences of this geological type lie outside the protected areas and have been cleared for agriculture.

Limestone deposits within the Kunderang Brook catchment have given rise to a number of relatively small caves and other features, referred to as the Kunderang Brook Karst System. Little is known of the extent and values of the karst system and associated landscape. A total of 17 caves have been recorded. The caves are poorly decorated and remote, and most are infrequently visited.

#### Landforms

The New England Fold Belt has been subject to intermittent uplifts interspersed with fluvial erosion, resulting in the deeply dissected landscape of the areas. Landscapes include:

- the eastern margins of the large flat to undulating New England Tablelands, only relatively small areas of which have been included in the parks, mostly as a small rim of tableland around the western boundaries;
- remnant, isolated sections of the former eastward extent of the tablelands, including the Front Tableland, Paradise Tablelands and Carrai Plateau;
- the Great Escarpment, a spectacular landform feature along the eastern edge of the tablelands that extends from northern Queensland to southern Victoria. Westward erosion of the tablelands by the Macleay River system has created the spectacular gorges of the Oxley Wild Rivers National Park area. Depth of the gorges approach 600 metres in several places. Waterfalls or cascades are characteristic of many of the streams as they plunge over the Great Escarpment. Drops exceeding 100 metres are common and the largest single drop is 240 metres at Wollomombi Falls;

- steep hillslopes and deep valleys with a complex drainage pattern cover most of the area east of the Great Escarpment. Small areas of alluvial landforms occur along the valley floors but are uncommon until the Macleay River flows out of the upper gorges.

Elevation ranges from 200m above sea level at Georges Creek to 1,294m at Baynes Mountain. This gradient exerts a major influence on climate and therefore on plant and animal communities.

The planning area features spectacular landscapes and offers extensive views from a number of locations along the escarpment.

Because of the convoluted boundaries with private land and the often narrow rim of tablelands country in Oxley Wild Rivers National Park, land management and development on adjacent land can significantly affect natural and scenic values.

A derelict open cut gold and antimony mine outside Oxley Wild Rivers National Park on the steep sides of the Chandler River valley at Halls Peak has a major visual impact from a number of places within the core area of the park, detracting from its recreational and aesthetic values.

### **Desired Outcomes**

- Features of geological and geomorphic interest are protected, including the Great Escarpment and its associated waterfalls and gorges, significant granite outcrops and the Kunderang Brook Karst System.
- The scenic value of the planning area is maintained.

### **Strategies**

- *Encourage research into the nature and extent of the Kunderang Brook Karst system and its associated values.*
- *Use of the Kunderang Brook karst system will require a permit from the Service.*
- *The karst system will be managed in accordance with the Australian Speleological Federation's Ethics and Conservation Codes.*
- *Users of the karst system will, as a condition of their permit, be required to monitor and report on use and condition of the karst system informing the NPWS of any noticeable impacts or concerns.*
- *Cooperation of relevant authorities will be sought to have the Halls Peak mine site rehabilitated in order to lessen its visual impact and to prevent erosion and siltation in the planning area.*
- *Liaise with neighbours and authorities to minimise the impact of adjacent land use on the scenic values at key locations in the planning area.*
- *Locate and design management and visitor facilities to minimise their visual impact from other locations both within and outside the planning area.*



## 4.2. NATIVE PLANTS

The planning area supports a diverse assemblage of plant communities; their distribution strongly influenced by the marked climatic gradients, the varied terrain and to a lesser extent differences in geology. Over 900 native plant species have so far been recorded in the upper Macleay River gorges. This species richness represents both coastal and tablelands influences as well as a small but significant element of the drier western slopes flora.

The relatively dry environments of much of Oxley Wild Rivers National Park have given rise to the extensive development of woodland on steep slopes with north to westerly aspects and to grassy open forest on sheltered aspects. Grassy open forests also extend onto the plateau and along river terraces. Dry rainforest is widely dispersed on slopes and gullies, while shrublands occur along cliff edges where the soil is too shallow and unstable for trees. The significance of the dry rainforest within Oxley Wild Rivers National Park is the principal reason the park was incorporated into the CERRA World Heritage property in 1994. Shrublands are particularly well developed in gorge head areas and on the outcropping granites of the Carrai plateau.

Much of Cunnawarra National Park, Georges Creek NR and areas of higher rainfall at the northern-eastern and south-eastern extremities of Oxley Wild Rivers National Park support tall open forests and small areas of subtropical and warm temperate rainforest.

The main groupings of plant communities are set out below:

- **Dry rainforest** is the main form of rainforest found in the planning area. It occurs on concave slopes and gullies in Oxley Wild Rivers NP, ranging from extensive areas of medium forest in Kunderang Brook to small stands of vine thicket on steep slopes rocky scree slopes. The area supports an unparalleled sample of dry rainforest on gradients of moisture, exposure and soil depth. Small areas also occur in Cunnawarra NP in juxtaposition with other rainforest types.
- **Subtropical rainforest** has only a limited distribution within the planning area, in moist sheltered gullies with deep soils. The complete absence of figs (*Ficus* spp.) is considered unusual as they are generally very common in subtropical rainforests.
- **Warm temperate rainforest** occurs in small patches often uphill of subtropical rainforest, in some tributaries of Kunderang Brook, in Cunnawarra NP and the nature reserve. Much of this rainforest has been logged and has suffered from dieback. Little remains of this rainforest type in an undisturbed state within the entire catchment of the Macleay River.
- **Cool temperate rainforest** occurs in a very small section of Oxley Wild Rivers NP (in the upper reaches of Pinnacle Creek) and in Cunnawarra NP.
- **Tall moist eucalypt forests** occur in sheltered situations in the higher rainfall eastern areas, particularly within Cunnawarra National Park, often with a rainforest understorey. A stand of Mountain Manna Gum (*Eucalypt nobilis*) in the northern part of Cunnawarra NP contains some of the tallest recorded trees in NSW (National Parks Association, 1998).

- **Plateau remnant vegetation**, an intricate mosaic of both moist sclerophyll and dry sclerophyll communities, occurs on the plateau areas, due to wide variations in geology, aspect, soils and moisture. A large proportion of these communities has been cleared away from the escarpment edge.
- **Plant communities of the gorge rim** have to contend with the continual and rapid loss of water, soils and nutrients down slope. They show the following special vegetation features: a considerable structural and floristic diversity; the presence of a number of unusual plant communities, most of which are restricted to gorge rim areas; and a large number of plants that are rare, threatened or have unusual distributions.
- **Plant communities of the slopes** make up over 50% of the area. This land system is dominated by one community, a forest red gum (*E. tereticornis*) - silvertop stringybark (*E. laevopinea*) - yellow box (*E. melliodora*)- rough-barked apple (*Angophora floribunda*) association.
- **Valley floors** support a woodland community dominated by rough-barked apple and forest red gum, with river oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) and black paperbark (*Melaleuca bracteata*) along the riverbanks.

### Land use impacts

The planning area contains extensive stands of old growth forest. Cunnawarra National Park and Georges Creek Nature Reserve are particularly significant for their old growth wet forests. Parts of Cunnawarra National Park were formerly flora reserves under the Forestry Act 1916. Flora reserves were established to preserve special ecological values or representative forest types. This reservation has assisted in the development of well developed, structurally diverse forests within the planning area.

Small areas of Cunnawarra National Park and some recent additions in the southern part of Oxley Wild Rivers National Park were selectively logged during the 1990s. These areas have dense stands of regenerating trees and shrubs but are expected to fully recover in coming decades. Intermittent grazing in former state forest areas may have affected the ground cover flora but impacts have not been researched.

Extensive areas of Oxley Wild Rivers National Park along the Macleay River and Kunderang Brook were cleared for grazing prior to the park's reservation. Natural regeneration is slowly occurring in most places.

The most significant future determinants of vegetation structure and health, and of habitat value, will be fire, pest species and recreation use. These are dealt with in later sections of the plan.

As Oxley Wild Rivers National Park is composed of twelve separate areas, private lands between the park sections are important for movement of wildlife and genetic material. Land uses or development that significantly reduces vegetation cover could have significant impacts on the viability of plant and animal communities in the park. Neighbours will be encouraged to manage their lands to retain, enhance and connect remnant vegetation and habitat.

## Significant communities and species

The dry rainforests of Oxley Wild Rivers National Park are of high natural significance and a primary factor in inclusion of the park in the World Heritage Area. The dry rainforests are predominantly found in sheltered locations and are susceptible to fire and weed invasion. Management of these threats will be undertaken as part of wider control programs.

The cool temperate rainforest and the tall open forests of the former Cunnawarra Flora Reserve prompted the inclusion of this area on the World Heritage List.

Three communities are highly restricted in distribution and therefore of conservation significance:

- low open forest and low open woodland of Hillgrove spotted gum (*E. michaeliana*). Hillgrove spotted gum is a rare species with a sporadic distribution in New South Wales and is most common in the Macleay Gorges. Oxley Wild River National Park is a key reserve for its conservation.
- *Acacia ingramii* - *Cassinia quinquefaria* - *Notelaea microcarpa* open shrubland. The only conserved population of this gorge rim community occurs within Oxley Wild Rivers NP. *Acacia ingramii* is a rare species with a limited distribution. The community also contains threatened species such as *Hakea fraseri*, *Bertya ingramii* and *Grevillea granulifera*.
- low woodland of New England stringybark (*E. caliginosa*) and Bendemeer white gum (*E. elliptica*). Bendemeer white gum is locally abundant but restricted to higher altitudes on the northern tablelands.

Some 34 plant species found in the planning area are classified as rare or threatened (Briggs and Leigh, 1995). Four of these species are also listed as Schedule 1 (Endangered) and seven as Schedule 2 (Vulnerable) under the *Threatened Species Conservation Act* (TSC Act) (see Appendix 1).

Under the provisions of the TSC Act, recovery plans may be prepared for threatened species. As these are prepared they will be used to guide management of threatened species in the planning area.

## Desired Outcomes

- The full range of native plant communities and species found in the planning area is conserved and populations of all significant communities and species are protected from threatening processes.
- Vegetation structural diversity and habitat values are conserved, and are restored where affected by past logging and grazing.
- Park neighbours retain, enhance and connect remnant vegetation and habitat on privately owned land.

## Strategies

- *Protect the habitats of rare or threatened native plant species from human disturbance, particularly in gorge rim areas close to visitor facilities.*
- *Pay special attention to protection of dry rainforest and other significant communities when designing and undertaking management programs, especially those relating to fire and introduced plants.*

- *Monitor natural revegetation of cleared areas within the planning area and take necessary steps to assist revegetation where needed.*
- *Work with landholders and key groups and agencies such as Landcare and Greening Australia to encourage retention, enhancement and connection of remnant vegetation and habitat on both Crown and private land, using where appropriate such means as whole farm planning, native vegetation management programs, Land for Wildlife and voluntary conservation agreements.*

### 4.3. NATIVE ANIMALS

The expansive area, large altitudinal range, varied topography and intricate mosaic of vegetation in the areas provides diverse habitat for a large number of native animal species. Fauna surveys have been carried out as part of the North-east Forests Biodiversity Study (NPWS 1994) and in CRA surveys. Over 170 bird species, 55 native mammal species, 38 reptile species, 19 amphibian species and 14 native fish species are known or likely to occur. Records of native animals (and plants) are stored on the Atlas of NSW Wildlife, a state-wide database established by the NPWS to assist management of wildlife. These have been used to model predictive distributions of key species throughout the planning area.

Many species found in the area, such as the eastern water skink (*Sphenomorphus tympanum*) and flame robin (*Petrocia phoenicea*) occur only on the tablelands. Other species such as the snake-eyed skink (*Morethia boulengeri*), little bent-wing bat (*Miniopterus australis*) and weebill (*Smicrornis brevirostris*) are recorded only from the lower altitudes in the gorges.

The river flats have high species richness, particularly for birds. In addition, the Macleay and Apsley Rivers (and their tributaries) are known to contain at least 14 native species of freshwater fish. More species are present below the escarpment than on the tablelands. Diadromous fish such as the Australian bass (*Macquaria novemaculeata*) and freshwater mullet (*Myxus petardi*) are only found in lowland streams as they are unable to ascend the cascades and waterfalls of the escarpment.

A large number of species reach the limits of their distribution in the area. Species at their southernmost limit of distribution include the little bent-wing bat and the Torresian crow (*Corvus orru*).

A number of animals typical of the tablelands and/or inland NSW are at their eastern limits of distribution. These include the white-eared honeyeater (*Lichenostomus leucotis*), little button-quail (*Turnix velox*) and the copperhead snake (*Austrelaps ramsayi*).

The dry rainforests of the gorges contain a distinctive fauna as well as flora, particularly amongst birds. A number of rainforest species including the white-headed pigeon (*Colomba leucomela*) and green catbird (*Ailuroedus crassirostris*) reach the western limit of their distribution in these areas.

The fawn-footed melomys (*Melomys cervinipes*), mountain brushtail possum (*Trichosurus caninus*), the great barred frog (*Mixophyes fasciolatus*) and red-backed toadlet (*Pseudophryne coriacea*) also reach western distribution limits in the area.

Twenty-five fauna species listed as threatened under the TSC Act have been recorded from the areas (see Appendix 2). Many of these depend on old growth forest, particularly moist eucalypt forests and rainforest. For some species, such as the rufous scrub-bird (*Atrichornis rufescens*), the area provides key habitat. The brush-tailed rock wallaby (*Petrogale penicillata*) is found on rocky outcrops, including gorge rim areas. It is important that visitor facilities in these locations do not disturb key habitat and populations. As for threatened plants, recovery plans are progressively being prepared for threatened animal species and will be used to guide their management in the areas.

Limited survey has been undertaken of invertebrates in the Kunderang Brook karst system. A total of 16 species have been identified to date including lice, beetles, isopods, a mite, spiders and snails. Some of the species are endemic to the Kunderang Brook area and include a new genus and several new species, plus an unnamed snail (A. Spate, pers. comm.).

The NPWS recognises pure-bred dingoes as a native species and the value of viable, high quality dingoes as a high order predator in enhancing ecological function, regulating other abundant species and displacing foxes. The planning area is considered to contain high quality dingo habitat and has been declared "controlled land" for the purposes of the control of dingoes under the Rural Lands Protection Act 1998 (RLP Act) for the conservation of dingoes ("Dingo Management Area"). Wild dogs on areas of public land identified as significant habitat for dingoes will be managed with the dual objectives of complying with the requirements of the RLP Act while at the same time conserving dingoes. Wild dogs emanating from the park are controlled using appropriate management (refer to section 5.3, Introduced animals).

### **Desired Outcomes**

- The full range of native animal species found in the parks and reserve is conserved.
- The habitat and populations of all threatened fauna species, biogeographically significant species and endemic invertebrate species are protected and maintained.

### **Strategies**

- *Protect the habitats of threatened and biogeographically significant fauna species from visitor impact, the effects of introduced species and inappropriate fire regimes.*
- *Continue to record the distribution of threatened and significant fauna species.*
- *Maintain liaison with caving organisations regarding protection of bats and invertebrate populations in the Kunderang Brook caves.*

#### 4.4 ABORIGINAL HERITAGE

The planning area lies primarily within the area of the Dunghutti Aboriginal people, whose territory is thought to have extended over the entire Macleay River valley. The Dunghutti were comprised of six to eight dialect groups, two of which, the Nulla-Nulla and the Conderang, occupied the upper catchment of the Macleay River system. Above the river valleys, the Anaiwain tribal group occupied the Tablelands.

Archaeological excavations have established that Aboriginal people occupied the New England Tablelands for at least 4,200 years. A burial in the Kunderang section of Oxley Wild Rivers National Park has been dated at 420 years before present (Godwin, 1985).

Occupation of the escarpment area by Aboriginal people is not well understood but it appears likely that the gorges were occupied for at least part if not all of the year. Contact between coastal and tablelands groups is believed to have been limited. This is supported by archaeological and linguistic evidence in the form of differences in regional distribution of stone-axe raw materials, rock-art styles, language and kinship systems.

It is reported that the route of the Georges Creek Fire Trail, which runs from Georges Creek to Styx River Forest Way in Cunnawarra National Park, was used as a traditional access route from the Macleay River valley to the tablelands.

Some 15 different food resources, both aquatic and terrestrial, are understood to have been used by Aborigines in the area and rainforest communities were particularly important. Along with a range of food resources, the Dunghutti would have possessed a diverse material culture including weapons, tools, skin cloaks, huts and ceremonial items.

In 1818, the explorer John Oxley was the first European known to have visited the New England Tableland and Macleay gorges. When cedar loggers and settlers moved into the area during the 1830s, violent confrontations ensued with the local Aboriginal people. Massacres are known to have taken place in the Kunderang and Apsley Falls areas. The rugged 'falls country' at the head of the Macleay provided a final refuge for the local Aboriginal people. The Falls were the centre of Aboriginal resistance until the late 1850s. By the late 1860s, stock grazing had become well established and Aborigines were employed as station hands and shepherds, including at Kunderang East Pastoral Station.

Despite the decimation of the population, the Dunghutti have survived and have retained their cultural identity. Aboriginal people have a strong attachment through spiritual and cultural links with the whole landscape, and specific locations within the planning area. Individual places of significance may include archaeological sites, mythological sites, ceremonial sites and contact sites. Kunderang East is known to be particularly important to Aboriginal people because of its association with pre-European occupation as well as its contact history.

Only limited survey for archaeological sites has taken place in the planning area. Within the gorge lands, sites appear to be focussed along creeks but on the tablelands, low-density artefact occurrences have been located across a

broad range of toposequence elements. Recorded sites include artefact scatters, scarred trees, axe grinding grooves, a stone arrangement and a burial.

A total of 20 stone artefact scatters, ranging from over 300 implements in two sites to minor sites of only a few implements, was identified in a survey of the Apsley River between its confluence with the Tia River and its junction with the Macleay some 80km downstream (Godwin, 1985). The artefacts recorded include pebble choppers, hammer stones, geometric microliths, backed blades, cores and waste flakes. All but two of these sites were situated on the river terraces. Outcrops of chert, a favoured material for manufacturing stone implements, and the incidence of cores and waste flakes at these sites, suggest the existence of a stone tool making industry.

All known Aboriginal sites within the planning area are recorded in the NPWS Sites Register. Recent surveys have found artefact scatters in some of the visitor facility areas on the escarpment edge. Disturbance to these areas has already taken place but works and management will be designed to avoid further damage.

While the NPWS presently has legal responsibility for the protection of Aboriginal sites, 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 and related issues and in the promotion and presentation of Aboriginal culture and history. The planning area lies within the areas of the Northern Tablelands Regional Lands Council and the Armidale-Dunghutti Local Aboriginal Land Council.

### **Desired Outcomes**

- Aboriginal sites are protected from damage by human activities.
- Aboriginal people are involved in management of Aboriginal cultural values.

### **Strategies**

- *As far as practicable, conserve all known Aboriginal sites and manage Aboriginal heritage, including any post contact sites, in consultation with the local Land Council or other relevant Aboriginal community organisations.*
- *Precede all new works, with the potential to impact on Aboriginal sites, with a site survey.*
- *The location of Aboriginal sites will not be publicised except with the agreement of relevant Aboriginal community organisations. Prior to any promotion of a site, a conservation study will be prepared to determine any management work necessary to protect the site.*
- *Progressively survey for Aboriginal sites, with priority being in areas where sites could be disturbed (eg. at recreation nodes). Such surveys will be undertaken in cooperation with the Aboriginal community.*
- *Aboriginal community proposals to undertake interpretation of Aboriginal culture in the area will be supported.*

## 4.5 HISTORIC HERITAGE

John Oxley was the first European to visit the New England region. He passed near the southern edge of what is now Oxley Wild Rivers NP in September 1818 whilst returning from an expedition along the Macquarie River in inland NSW. The park was named in recognition of Oxley's association with the European discovery of the upper Macleay River system and in particular his appreciation of the wild and rugged scenery of the region.

European squatters occupied land on the New England Tablelands and Macleay Valley in the early 1830s, and squatting leases were formalised in 1839. Cattle were run through the gorges but occupation was by absentee owners until Kunderang East Pastoral Station came into the possession of Joe Fitzgerald and Alex McDonell in 1889, although it had been a separate station since 1854. Kunderang East Pastoral Station is significant for its historic structures and demonstration of European occupation of the north coast and pioneer life on an isolated pastoral station.

Construction of the current Kunderang East homestead began in 1892, with extensions and conversions up until 1967. The most culturally significant parts of the existing building are the northern and central sections constructed of cedar. These sections have been restored and the most recent sections removed in accordance with a conservation plan. The conservation plan is currently the subject of review.

Other features of the precinct include a hayshed, forge and homestead paddock stockyards, a grave, fences, a large range of artefacts, several exotic trees and extensive clearings.

There are extensive cleared areas at Kunderang East. The rural setting is important for protection of the homestead's cultural significance but maintenance of a large clearing conflict with restoration of natural heritage values. It is intended to define an area around the homestead precinct that will be kept cleared by slashing. The remainder of the cleared country of the former pastoral station will be allowed to revegetate naturally.

The Cedar Creek homestead complex, on the south-eastern boundary of Oxley Wild Rivers National Park, was originally built in the 1940's by Allan Youdale and is of local significance. It was part of an extended pastoral run which included the head of Kunderang Brook and the Green Gully catchment to the south. Extant fabric includes a timber cottage built in the 1940s, the main house (prefabricated steel) built in the 1970s, and associated yards and sheds of varying ages. The main house has been refurbished to provide temporary accommodation for staff involved in field operations. The cottage and sheds are in need of restoration. They will be used for NPWS storage and other management purposes. The yards are in poor condition and will be managed as a ruin.

Several stockmen's huts and yards, in various condition, are located throughout Oxley Wild Rivers NP. These include Left Hand, Sunderlands (or Middle Yard) and Youdales Huts on Kunderang Brook and Front Tableland all in the south east of the park, and Bark and Salt Huts near Tabletop Mountain. Most date from the 1960s, with only Bark and Youdales Huts constructed in the 1930s. Other features remaining from past agricultural use include a woolshed and



ruined stockyards at Sunnyside, and numerous small stock dams and fences. The huts and woolshed are in fair condition. Some of the dams have value as water sources for fire management purposes (section 5.4). The dingo fence on the western boundary of the park contains small sections of both the original manually laced and split paling construction.

Old forestry huts, used by timber workers, also occur at Lower Hut in Cunnawarra National Park.

Cedar growing on the banks of the Macleay attracted timber getters to the area in the early 1800s. By 1841, there were 200 men engaged in the local logging activities. However, the following year, the industry declined sharply as accessible stands were depleted. A flying fox used to collect cedar can be found in the Rowleys Creek area.

The extensive timber resources of the Styx River area were recognised during the late 19<sup>th</sup> century by the notification of three Forest Reserves in 1884 (subsequently dedicated as State Forest in 1917). It was not until the early 20<sup>th</sup> Century however, following construction of the Armidale-Kempsey and Point Lookout Roads, that the logging of eucalypt forests and rainforests commenced. Accessible parts of Cunnawarra NP and areas of Oxley Wild Rivers NP which were previously state forest (Enmore, Winterbourne and Carrai State Forests) have been selectively logged. Surveys for sites associated with the more recent timber harvesting have not been undertaken.

An old slate quarry exists in the Apsley Gorge just downstream of Apsley Falls. The slate was used in construction of a number of significant buildings in Walcha.

The remains of Australia's first commercial hydro-electric scheme, constructed at Gara Gorge in 1893-94 to power the town and gold mines of nearby Hillgrove, are of national cultural significance. The scheme was plagued by floods and droughts but continued operating until 1920 when Hillgrove had become too small for the scheme to be economically viable. Remaining structures include abutments of the storage dam wall, a concrete diversion weir, concrete flume, contoured banks, stone footings and scattered timber along the routes of two timber flumes, a section of penstock (pressure pipe) and the remains of a cottage and workshop (Jackson, 1984). The conservation plan prepared for the scheme is currently subject to review.

The remains of another hydro-electric scheme built in 1907 on the Styx River are partially within Oxley Wild Rivers NP and consist of a concrete diversion weir and parts of the flume line, including a tunnel.

The scenic splendour of the Macleay gorges has been well known to the people of the New England for 150 years and presumably to the Aboriginal inhabitants before this date. Lookouts constructed to view the gorges form part of the historic heritage of the tablelands, although most physical evidence of the early facilities has been removed as sites have been upgraded over the years. There remain two stone walled viewing areas at Dangars Falls, built during the 1930's depression.

### **Desired Outcomes**

- Significant historic features are protected and interpreted where necessary.

## Strategies

- *Manage the Kunderang East homestead, hayshed, forge, yards, stockman's hut, adjacent fences and setting in accordance with the revised conservation plan.*
- *Further buildings, leasing to a commercial operator and/or development of a camping area at Kunderang East will require an amendment to this plan of management.*
- *Investigate the extent of the remains of the Styx River hydro-electric scheme in cooperation with State Forests of NSW to determine the location and land tenure of the site.*
- *Manage Front Tablelands Hut, Left Hand Hut, Sunderlands Hut, Salt Hut, Bark Hut, Sunnyside woolshed and stockyards, and Youdales Hut in accordance with recommendations in relevant conservation plans.*
- *Manage Cedar Creek homestead, Sunnyside woolshed and stockyards in accordance with recommendations in relevant conservation plans.*
- *Retain sections of fencing assessed to be historically significant.*
- *Encourage further research and survey with regard to the pastoral, mining and forestry history of the area.*
- *The historic significance of the huts at Lower Creek in Cunnawarra National Park will be assessed. The huts will be demolished if not found to be historically significant. If the huts are significant they will be appropriately recorded but not maintained. Measures will be taken to limit vandalism, ensure public safety and control accelerated deterioration of the structures. The huts will not be used for public purposes but they may form part of the interpretation of the park.*

## 5. PARK AND RESERVE PROTECTION

### 5.1 SOIL EROSION

Erosion is a natural feature of the environment of the planning area but can be accelerated as a result of human activity.

The area's soils vary greatly according to parent material and landform. Lithosols occupy the steepest slopes and occur as shallow stony soils with little structural development apart from accumulation of organic matter at the surface. Colluvial material is plentiful and deep mantles have developed on lower slopes due to high rates of weathering and hill slope movement. Alluvial sediments occur along the lower river stretches.

Most of the soils have low to moderate erodibility in their undisturbed state, although granite-based soils are easily eroded. Erosion occurs on steep slopes and in areas where vegetation cover has been affected by grazing prior to park dedication or by heavy recreation use. Rehabilitation of erosion at visitor facilities is included in works set out in section 6.2.

#### Desired Outcomes

- Human induced soil erosion is minimised.

#### Strategies

- *Incorporate soil erosion management principles and practices into all management activities and facility design.*
- *Undertake rehabilitation works on eroded areas where needed.*

### 5.2 CATCHMENT PROTECTION

Apart from some small tributaries, Kunderang Brook and much of the Georges Creek catchment, the headwaters of the Macleay River Catchment are located outside the planning area. Recent water quality monitoring has found poor water quality to be characteristic of streams such as the Gara, Wollomombi and Apsley Rivers on the tablelands upstream of Oxley Wild Rivers National Park. These same rivers, however, were much cleaner downstream of the park, indicating that the relatively undisturbed environments of the park contributed to removal of excess nutrients. As well as excess nutrient levels, streams within the Macleay River system are often heavily laden with sediment from erosion of tableland agricultural and grazing land.

The New England Highway, Oxley Highway and Waterfall Way cross the headwaters of most of the major streams that flow into Oxley Wild Rivers National Park at points close to the park boundaries. A vehicle accident involving a chemical or fuel spill would pose a major threat to water quality.

The *Catchment Management Act 1989* provides an umbrella framework to aim for, amongst other matters, cleaner water, less soil erosion, improved vegetation cover, the maintenance of ecological processes and a balanced and healthier environment. It also provides a focus to balance conservation needs and development pressures and encourages a more aware and involved community. An important means of achieving these aims is the formation and

support of catchment management boards at a local level. The planning area is within the area of the Mid North Coast Catchment Management Board.

Recent amendments to the NPW Act provide for the declaration of “Wild Rivers”. Some streams in the planning area may meet the criteria for Wild Rivers under the Act and, if so, they should be investigated for declaration.

### Desired Outcomes

- The planning area’s catchment values are maintained and the water quality and health of park streams is as high as possible.

### Strategies

- *Liaise with local government, other authorities and landowners to maintain and, where possible, improve water quality.*
- *Continue to participate in and support the Mid North Coast Catchment Management Board.*
- *Liaise with appropriate authorities regarding preparation of contingency plans for accidents that have the potential to result in water pollution in the planning area.*
- *Options to declare streams or sections of streams in the planning area as Wild Rivers under the NPW Act will be investigated and declaration may occur if the streams meet necessary criteria.*

## 5.3 INTRODUCED SPECIES

Introduced species are those plant and animal species not native to an area. Introduced species within the planning area and on adjoining land are of concern because they have the potential for serious detrimental effects on ecological values. They may also have an economic impact for NPWS and neighbours.

The following table lists those introduced species known to occur in the area that are a priority for control.

### Priority introduced plant and animal species

Introduced Plant Species		Introduced Animal Species	
Common Name	Scientific Name	Common Name	Scientific Name
Blackberry <sup>*A</sup>	<i>Rubus fruticosus</i> species aggregate	Feral pig <sup>^</sup>	<i>Sus scrofa</i>
Lantana <sup>**A</sup>	<i>Lantana camara</i>	Feral goat	<i>Capra hircus</i>
Giant Parramatta Grass <sup>*</sup>	<i>Sporobolus indicus</i> var. <i>major</i>	European red fox	<i>Vulpes vulpes</i>
Xanthium spp. <sup>*</sup>	<i>Xanthium</i> spp.	European rabbit <sup>^</sup>	<i>Oryctolagus cuniculus</i>
Prickly pear <sup>*</sup>	<i>Opuntia</i> spp.	Brown hare	<i>Lepus capensis</i>
Sweet briar <sup>*</sup>	<i>Rosa rubiginosa</i>	Feral horse	<i>Equus caballus</i>
Whisky grass	<i>Andropogon virginicus</i>	Feral cat	<i>Felis catus</i>

Dodder	<i>Cuscuta</i> spp.	Wild dog <sup>^</sup>	<i>Canis familiaris</i>
Willow	<i>Salix</i> spp	Deer	<i>Cervidae</i>
Crofton Weed <sup>*</sup>	<i>Ageratina adenophora</i>	Cattle	<i>Bos taurus</i>

Legend for table above:

\* declared noxious under *Noxious Weeds Act 1993*

+ only red flowering form of *Lantana* is declared noxious

<sup>^</sup> declared noxious under *Rural Lands Protection Act 1989*

<sup>A</sup> declared weed of national significance

A pest species management plan has been prepared for the Oxley Wild Rivers National Park that sets out priorities, strategies and techniques. Other reserves in the planning area do not yet have a pest species management plan. The main points arising from the Oxley Wild Rivers National Park pest species management plan are:

### Introduced Plants

Over 60 introduced plant species have been recorded in the park. They are usually associated with disturbed sites, particularly those areas of park adjacent to cultivated pastures on the tablelands and grazed river flats on the valley floors, and areas of park that were cleared in the past.

The most significant introduced plants in the park are lantana and blackberry. Lantana is widely distributed in the area. It invades rainforest thickets and therefore can impact on World Heritage values. Research into effective biological control of lantana is ongoing. In the interim, the focus is on developing effective herbicide control techniques to suppress the spread of lantana.

Blackberry occurs in isolated patches on disturbed sites. It is controlled by the use of herbicides. Whilst results achieved during spraying programs are encouraging, it is imperative that follow-up spraying be completed to ensure a long-term result.

Giant Parramatta grass, an aggressive pasture weed of coastal areas, was recently introduced to Oxley Wild Rivers National Park by vehicles. It is currently only known to occur in two very small infestations in Oxley Wild Rivers National Park and along the road through Georges Creek NR. Because of the very limited distribution giant Parramatta grass is a high priority weed for monitoring and eradication. Control techniques include herbicide application, manual removal and fencing to reduce seed dispersal by motor vehicles.

*Xanthium* spp. is found on many of the river flats and banks and associated tributaries. Owing to the difficulty of access, control is limited to areas of higher public visitation.

Crofton Weed has only been recorded in one small area of Oxley Wild Rivers National Park, along the Douralie Fire Trail. An ongoing control program, utilising herbicide application and hand pulling, is aimed at eradicating this weed from the park.

Sweet briar is widely distributed at very low densities throughout Oxley Wild Rivers National Park, often growing in association with blackberry. Control,

utilising herbicide application techniques, is usually carried out in conjunction with blackberry spraying.

Whisky grass successfully competes with native grasses and has the potential to alter the fire regime of the Kunderang Brook area where it occurs. Research to develop control techniques that will remove whisky grass without impacting on native species has commenced.

Prickly pear is widely distributed throughout Oxley Wild Rivers National Park and on adjoining private property but generally at very low densities. Significant heavier infestations occur on the river flats and gorge sides along sections of the Macleay and Apsley Rivers and Rusdens Creek. Biological control of this weed has been facilitated by the release of *Cactoblastis* within the park and on adjoining private land in cooperation with landholders.

Weeping willow (*Salix babylonica*) is transported by streams and dispersed vegetatively. It has spread into the gorges of the upper Macleay system from cleared tableland properties and is likely to be an on-going problem for park management.

### **Introduced Animals**

Feral goats are generally confined to the upper Chandler, Styx, Oaky, Warnes and Apsley River gorge areas. Ground and aerial shooting, in conjunction with neighbouring landowners, has reduced these populations to low levels, however there is an ongoing problem with re-infestation from adjoining properties where boundary fencing is inadequate. Competition by feral goats is considered a Key Threatening Process under the TSC Act and the Commonwealth *Environmental Protection and Biodiversity Conservation Act* (EPBC Act).

Feral pigs are of particular concern along the Macleay and Apsley Rivers, Kunderang Brook and tributaries. Predation, habitat degradation, competition and disease transmission by feral pigs is listed as a Key Threatening Process under the EPBC Act. Feral pigs are controlled by a combination of trapping, poisoning and both ground and aerial shooting.

Predation by the European red fox is considered a Key Threatening Process under Schedule 3 of the TSC Act and under the EPBC Act. Foxes only occur in limited numbers in the parks and reserve. Their control is not practical unless undertaken over a wide area in conjunction with neighbours.

Feral cats occur in moderate numbers and may be having a significant impact on native animals. Predation by feral cats is listed as a key threatening process under the EPBC Act and TSC Act, and a threat abatement plan for feral cats is being prepared.

Rabbits and hares are found in very low numbers in cleared areas along the river flats and in boundary areas on the tablelands. Control programs are undertaken as needed.

Feral horses occur in the gorges of Oxley Wild Rivers National Park and adjoining leasehold properties, primarily along river flats but also on adjoining gullies and ridges. Feral horses pose a threat to biodiversity, water quality and public safety. Development of effective strategies is needed to remove horses from the park.

Wild dogs occur in the planning area. They can be categorised into three groups; dingoes, hybrids with domestic dogs, and feral dogs. The NPWS considers dingoes to be a part of the native fauna of NSW that it has a responsibility to conserve. It recognises, however, that wild dogs emanating from NPWS estate may prey upon livestock on adjacent properties and accepts the need to minimise attacks. Control is currently achieved by a cooperative fencing assistance program, concentrating on the alignment of the historic dingo fence and by targeted aerial and ground baiting programs

Both 'scrubber' (wild) cattle and straying stock from neighbouring properties are present in some locations and pose a threat to many values including rainforest areas, by opening the canopy and allowing invasion by lantana. This is further discussed in section 8.

Deer are an emerging problem with several sightings within Oxley Wild Rivers and Cunnawarra National Parks over recent years. The deer, principally fallow deer (*Dama dama*) or, to a lesser extent, red deer (*Cervus elaphus*), originated from failed deer farming ventures or from releases by hunters attempting to establish wild herds. An effective strategy needs to be developed to prevent deer becoming established within the park and to address potential issues associated with herds on adjoining private land.

Brown trout (*Salmo trutta*), rainbow trout (*Oncorhynchus mykiss*) and mosquito fish (or plague minnow) (*Gambusia holbrooki*) are known to occur in the rivers and streams of the planning area. Predation by mosquito fish is listed as a key threatening process under the TSC Act and EPBC Act. It can have a significant impact on native fauna, particularly frogs. A draft threat abatement plan for predation by the mosquito fish has been prepared, outlining planned control strategies.

### **Desired Outcomes**

- Numbers of introduced plants and animals and their impacts on conservation values are reduced and do not pose a significant threat to the natural values of the planning area.
- Prevent the introduction and establishment of new pest species.

### **Strategies**

- *Control introduced species, and where practicable, eradicate them.*
- *Priority will be given for the control of introduced 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;*
  - *that have a significant environmental impact, including damage to threatened species, World Heritage values, catchment values and recreation values;*
  - *that 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.*

- *Where environmental disturbance is unavoidable, consideration will be given to the methods by which works will minimise the potential for the encroachment of introduced species.*
- *Continue to support research programs into effective biological control of Lantana. In the interim, develop effective herbicide control techniques to suppress the further spread of Lantana, with priority to rainforest areas.*
- *Continue to treat blackberry with the aim of eventual eradication, progressing from the head of catchments.*
- *Continue to treat other weeds in accordance with the pest species management plan.*
- *Continue to give priority to the control, and where possible eradication, of feral pigs, goats and deer.*
- *Undertake control programs for wild dogs along boundary areas where there is significant economic loss resulting from wild dog attack, consistent with NPWS policy and in consultation with affected land holders and Wild Dog Control Associations.*
- *Develop and implement effective strategies for control and eventual removal of cattle and feral horses from the planning area.*
- *Carry out pest species control programs in conjunction with the Rural Lands Protection Board, Noxious Plants County Councils and adjoining landholders where appropriate.*
- *Permit domestic animals and stock only under the following circumstances:*
  - *use of horses and dogs for park management purposes; specifically, the rounding up of strayed stock from neighbouring properties and management of pest animals, with the written approval of the Regional Manager;*
  - *recreational horse riding on park roads and trails outside declared wilderness areas (refer to section 6.2).*
- *Monitor areas currently free of introduced species that are potentially susceptible to invasion.*

#### **5.4 FIRE MANAGEMENT**

Management of fire in the planning area must aim to achieve long term conservation of native plant and animal communities while providing ongoing protection of life and property within and adjacent to the planning area. Fire frequency, intensity and season of occurrence (collectively known as the fire regime) are major factors influencing the distribution and composition of plant and animal communities. A particular fire regime is important for the continued success of some plant and animal species or communities, while fire can be damaging to other plant communities, such as the dry rainforests of Oxley Wild Rivers National Park.

As well as affecting plant and animal communities, fire can damage some types of Aboriginal sites and historic places. Features such as scarred trees and old buildings can be permanently damaged or lost by wildfire. Other sites can be damaged by use of heavy machinery for fire suppression activities.



Bushfires are most severe in the region during late spring and summer. The major sources of fires in the planning area are fires escaping from neighbouring lands and lightning strikes. Although park visitors are not considered a significant source of fire escapes, promotion of minimal impact recreation practices is important, as is observance of total fire bans.

Under the *Rural Fires Act 1997* the NPWS is a fire authority and is responsible for controlling fires in the parks and reserve and ensuring they do not cause damage to other land or property. This responsibility includes the implementation of fuel management programs. The NPWS may also assist with the control and suppression of fires adjacent to its reserves.

Draft fire management plans have been prepared detailing fire management principles and strategies for Oxley Wild Rivers National Park and Georges Creek NR. The Oxley Wild Rivers National Park draft fire management plan pre-dates several major additions to the park and requires revision. The draft fire management plans contain ecological fire thresholds for the vegetation communities of the parks. Protection of areas of old growth, moist forest and the dry rainforests will be major considerations. The plans also provide fire management guidelines for the rare or threatened plant and animal species. Application of these thresholds and guidelines will be modified in response to research and monitoring.

Fire management strategies covered in the fire management plans include fuel management, fire trails, detection and cooperative arrangements. Some, or at times all, of these are applied where appropriate to best protect life, property and natural and cultural assets within and adjacent to the planning area. Fuel reduction programs and fire trail maintenance systems are designed and implemented in cooperation with neighbours in areas near the boundaries.

An important part of NPWS fire management is participation in local cooperative fire management arrangements, including implementation of Bush Fire Risk Management Plans developed by District Bush Fire Management Committees. NPWS is a member of the Walcha, Uralla and Armidale-Dumaresq Bush Fire Committees.

Outside the planning area, fire management is performed by landholders and local bush fire brigades. The NPWS will continue to promote a cooperative approach to fire management for the protection of property and of the natural resources and cultural heritage of the planning area.

### **Desired Outcomes**

- Fire regimes are appropriate for the long-term maintenance of native plant and animal communities, and protection of world heritage, old growth and wilderness values.
- Unplanned bushfires of human origin are minimised.
- The potential for spread of bushfires on, from, or into the planning area is minimised.
- Persons and property on, or immediately adjacent to, the planning area are protected from bushfires.
- Aboriginal sites, historic places and culturally significant features are protected from damage by bushfires.

- Fire doesn't threaten the rainforest values of the planning area.

### **Strategies**

- *Prepare and implement detailed fire management strategies for the parks and reserve within the planning area as a high priority.*
- *Use prescribed fire to achieve a variety of fire regimes that maintain fire thresholds for appropriate vegetation communities in accordance with the fire management plans, and to assist management of fire for asset protection.*
- *Implement fire management and suppression techniques in a manner that minimises its ecological impact and enhances conservation outcomes. Special attention will be paid to the protection of dry rainforest areas.*
- *Continue to participate in district bush fire committees. Liaise with and develop cooperative strategic plans with bushfire brigades, local government and neighbours, to ensure coordination of fire management in the reserves and adjoining lands.*
- *Maintain former farm dams that have fire management value and rehabilitate those deemed unnecessary for management purposes.*

## 6. PUBLIC USE OF THE PARKS AND RESERVE

### 6.1 INFORMATION AND PROMOTION

The planning area has many natural and cultural features of interest to visitors; particularly the deep gorges, rivers and waterfalls, rainforests, areas of old growth moist forest, the Kunderang East homestead and the Gara Gorge hydro-electric scheme. These features will be promoted and interpreted to visitors in a manner that protects their special values and encourages appropriate use. Special emphasis will be placed on promotion of World Heritage values. Presentation of World Heritage values is an obligation under the World Heritage Convention.

The planning area is promoted through brochures available at NPWS offices and tourist information centres, while park boundaries, visitor destinations and walking tracks are signposted. Promotional information is directed to New England residents and visitors to both the tablelands and coastal tourist centres.

Interpretive signs are provided at visitor facilities, at the Kunderang East Homestead complex and along some walking tracks. NPWS staff also conduct interpretation as part of Discovery Ranger programs. Improvement and extension of interpretive information is needed in some locations.

The values of the area are promoted within the local community, particularly to neighbours. This includes promoting the importance and purpose of management programs relating to the protection of the natural and the cultural heritage, the control of introduced species and fire management.

Educational institutions in the region utilise the planning area for research and as a teaching resource.

#### Desired Outcomes

- Visitors and the local community understand and appreciate the area's natural and cultural values and World Heritage status, and their responsibilities for minimal impact use.
- There is widespread community understanding and cooperation with management programs such as fire management and introduced species control.
- Visitors are aware of the planning area's recreation opportunities and can easily find their way to facilities and features.
- There is increased use of the planning area as an educational resource by educational institutions and community organisations.

#### Strategies

- *The following themes will be emphasised in promotion and interpretation programs:*
  - *World Heritage values (particularly dry rainforest in Oxley Wild Rivers National Park);*
  - *wilderness and wild and scenic rivers values;*
  - *geological history, the Macleay River system, Great Escarpment and spectacular scenery;*
  - *biodiversity and importance of the planning area for threatened species;*

- *the history of Aboriginal and European use of the area;*
  - *the importance of catchment management in the Macleay River system; and*
  - *readily accessible recreation facilities at the lookouts and waterfalls along the Great Escarpment and self-reliant recreation elsewhere in the planning area.*
- *Continue to provide information and interpretative displays at the gorge rim visitor facilities, and at Riverside, Youdales Hut and Kunderang East Homestead. Progressively update or extend information, with special attention to ensuring that World Heritage values are presented.*
  - *Involve Aboriginal community members in interpretation of Aboriginal heritage values.*
  - *Maintain up to date park brochures and educational material for distribution to tourist information outlets, user groups, Councils and from NPWS offices and shops.*
  - *Encourage cooperative information strategies with State Forests of NSW, Councils and tourism organisations.*
  - *Continue to promote the importance and purpose of management programs relating to natural and cultural heritage protection, fire management and control of introduced species within the local community, particularly neighbours.*
  - *Promote minimal impact recreation practices through such means as track head signs and leaflets.*

## **6.2 RECREATION OPPORTUNITIES**

The planning area offers a wide range of recreation opportunities, from wilderness walking to picnicking and camping at developed locations. Four major categories of recreational features have been identified:

- cliffs, waterfalls and gorges of the Great Escarpment;
- river systems;
- extensive areas of wilderness and natural lands in the core area of Oxley Wild Rivers National Park; and
- tall moist forests in Cunnawarra National Park and Georges Creek Nature Reserve (although recreation is not encouraged in nature reserves).

Public use of the area has historically been at sites along the Great Escarpment, where access is easy and spectacular views can be seen of the waterfalls and deep rugged gorges of the upper Macleay system. Recreational facilities in the form of picnic areas, camping sites, walking tracks and lookouts have been provided by various authorities at these sites over the last 90 years. Visitor use of other locations is much lower and facilities are less developed.

### **Access**

Access to the planning area is via the New England Highway, Oxley Highway and Waterfall Way (see figure 1). Short roads from the highways lead to the main visitor facilities, most of which are near the park boundaries. Most roads

within the planning area are unsealed. Raspberry Road and Styx Forest Way provide 2WD access through Cunnawarra National Park. All roads to visitor facilities are 2WD standard except for 4WD tracks to Marys View Riverside, Youdales Hut, and Kunderang East in Oxley Wild Rivers National Park. Permits are required to gain vehicle access to Riverside, Youdales Hut, and Kunderang East because the road conditions are unsuitable for conventional vehicles. 4WD tracks (Warricks Road, Carrai Road, Coachwood Road and Racecourse Trail) also provide public vehicle access to the eastern and southeastern boundary of Oxley Wild Rivers National Park and to adjacent national parks.

Vehicular access to Steep Drop Falls in Oxley Wild Rivers National Park is currently not available because it traverses private land. There are a broad range of management considerations including legal access, public safety, recreational opportunities and demand that need to be investigated prior to any decision to formally open the area for public use.

4WD access is gained to Mary's View, east of Kunderang East, and Hoppy's Lookout, west of Spokes Trail, where views of the Macleay and Kunderang Brook gorges are available. The tracks end at narrow, steep promontories where damage resulting from vehicle access is evident. There is a need for some minor site hardening and safety rails to prevent further degradation of the area and to be provided for the safety of the public.

### **Day use and camping facilities**

Facilities for car based camping, picnicking and sightseeing are provided at several locations as set out in table 1.

Given the range of destinations in the two national parks and the existing levels of use, it is considered that there are sufficient visitor facilities for the period of this plan. No additional facilities are currently planned, apart from the addressing of safety and environmental degradation issues at Mary's View and a proposed Kunderang walking track (see below) but improvement of some older areas will be undertaken. No visitor facilities are proposed for Georges River Nature Reserve.

The most popular and developed locations are Wollomombi Falls, Dangars Falls and Apsley Falls. These draw significant numbers of tourists as well as locals and use is expected to increase slowly over time. Facilities at each of these sites have been recently redesigned and upgraded. Minor improvements are needed as set out in the strategies below, including dealing with safety concerns associated with the walking track to Mihi Falls.

Gara Gorge is a popular picnicking area for Armidale residents and the existing facilities are often full. Redevelopment of this area is in progress to improve safety and amenity, increase capacity and control erosion from unauthorised vehicle use. New sections of walking track may be constructed to provide access to waterholes if visitor impact warrants such works. Some existing walking tracks could be upgraded to improve wheelchair access.

Long Point provides day use and low key camping facilities as well as walking tracks. This area provides the easiest access to dry rainforest in the Park.

Tia Falls provides a different experience to the other tablelands facilities since it has a smaller capacity, a creek-side location and a longer walk to the falls.

Relocation of camping to reduce impacts and improvement of the day use area is needed. The walking track will be realigned to improve access to the main viewing area.

Beech Lookout is an easily accessible viewing point over the headwaters of Georges Creek in Cunnawarra National Park and complements the expansive views available at nearby New England National Park. Beech Lookout, adjacent to Styx River Forest Way, has minimal visitor facilities. Some redesign and improvements are needed to control vehicle movements. In Styx River State Forest, which adjoins Cunnawarra National Park, State Forests of NSW manages a basic camping and picnic area at Wattle Flat beside the Styx River.

It is intended to progressively replace wood barbecues at the gorge rim day use areas in Oxley Wild Rivers National Park with gas to minimise the impacts of wood gathering. Wood will be supplied to the camping facilities at these locations.

The Budds Mare camping area receives little use and the current area available is not required. This camping area will be scaled down in size.

As stated earlier, a permit is required to gain access to Riverside and Youdales Hut. These facilities are located in valley floor locations, in the heart of what is otherwise wilderness. Development and use are therefore limited, to protect the remote setting and visitor experience.

Armidale-Dumaresq Shire Council manages a basic camping and picnic area at Georges Junction. The facility is situated on a travelling stock reserve beside the Kempsey-Armidale Road and forms a natural gateway to the planning area from the lower Macleay Valley and the coast. This facility is also on the Bicentennial National Trail. A number of other facilities managed by local councils and State Forests also contribute to the range of regional nature tourism opportunities in the region.

**Table 1 : Existing and proposed visitor facilities for the planning area.**

Visitor recreation node	Site description	Existing facilities	Proposed facilities	Existing class	Proposed class
<b>Day use areas – Oxley Wild Rivers National Park</b>					
Wollomombi Falls	Relatively large developed area. Open bushland setting adjacent deep gorge, high waterfall, and extensive views of gorge country.	<p>Sealed road to visitor facility area.</p> <p><u>Wollomombi</u>: 22 car parks (including 1 disabled), 1 van and trailer car park and 2 coach parking areas, picnic area with 8 tables, 3 gas barbecues, picnic shelter including 2 gas barbecues and 2 tables. 2 toilets (unsealed units). Sealed disabled access to toilets. Reticulated potable water. 12 Panel interpretative display shelter. Short walks include assisted wheelchair access to falls lookout. Medium walking tracks along rim to series of lookouts, walking track to Chandler River below falls (currently closed due to condition of the track).</p> <p><u>Edgars</u>: 10 car parks (including 2 disabled) and 1 coach parking area, picnic area with 2 tables, 1 gas barbecue and 1 toilet, reticulated potable water, disabled access to Edgars lookout platform and all day use facilities.</p>	<p><u>Wollomombi</u>: Upgrade 2 toilets to semi-composting sealed units.</p> <p><u>Edgars</u>: Upgrade toilet to wheelchair compatible and semi composting sealed unit. Link track between Green Gully Camping Area and Edgars Day Use area to be realigned and upgraded to wheelchair compatible standard.</p>	D3	D3
Long Point	Basic, bush setting, nearby gorge views.	Unsealed 2WD road, 6 car parks. Car park area bollarded to control vehicle movement. Picnic area with 3 tables, 2 barbecues, picnic shelter with water tank, 2 wood fireplace and 2 tables incorporating interpretative display. Medium loop walks through forest to lookouts with views into the Macleay and Chandler Gorges. A walk extends into the dry forests.	Upgrade of the toilet to semi-composting sealed unit. Upgrade of the interpretative display in the shelter. Upgrade of the interpretative signs along the walking tracks	D1	D1
Apsley Falls	Developed area in bush setting, gorge and waterfall, river upstream of falls.	Sealed road, car and coach parking, picnic area with tables, gas barbecues and toilets, water, series of lookouts (some wheelchair accessible), walking tracks around gorge rim.	Upgrade of the Oxley Walk including handrails on bridge, lookouts and walk track and limited pavement works.	D3	D3

Dangars Falls	Developed facility in timbered area adjacent deep gorge, high waterfall and dramatic views, adjacent creek.	Sealed road. 29 car parks (including 1 disabled) and 2 coach parking. 1 car and caravan/trailer park. Picnic area with 9 tables, 3 gas barbecues, 2 toilets (wheelchair compatible) and reticulated sprinkler system. Sealed wheelchair access to toilets. Picnic shelter with 2 gas barbecues and 4 associated tables. Reticulated potable water. Interpretation displays including 2 shelters and signage along walking tracks. Short walks include assisted wheel chair to picnic shelter and lookout platform; this walk includes a viewing area. Wheel chair assisted access between the picnic shelter and the camping area. Walk to top of falls platform, this walk includes 2 smaller lookout platforms; and 2 viewing areas; wheel chair assisted access to the 2 <sup>nd</sup> smaller platform only. (Assisted wheel chair access will be extended to view over the Salisbury Waters with the proposed construction of a raised walkway.) Walk across Salisbury Waters to falls lookout platform; this walk includes a steel bridge crossing the Salisbury Waters, a smaller wooden bridge crossing a drainage line and a boardwalk leading to the dog gate. Medium distance walks to Mihi Falls and bottom of gorge (Salisbury Waters). Safety barrier fencing along all tracks where required.	Unchanged.  Fauna hide (for viewing fauna) may be developed in future years.	D3	D3
Tia Falls	Attractive low key bushland area adjacent creek with swimming holes, gorge and waterfall.	Unsealed 2WD road, carpark short-medium walk to lookouts, separate picnic area with tables, gas barbecues and toilets.	Upgrade of Tiara Walk including bridge over Tia River and handrail works at lookouts. Upgrade of viewing areas on walk track around gorge rim on east of Tia Falls.	D1	D1
Budds Mare	Basic area in bushland setting above deep valley, views across the Apsley River and Macleay Gorges Wilderness.	Unsealed 2WD road, small basic picnic area with tables, shelter and barbecues, lookout, walking track to Riverside, Rowleys Creek circuit walk.	Reduce grounds maintenance of area by combining Day Use and Camping areas.	D1	D1



Gara Gorge	Low key facility. Attractive timbered area close to boundary with rural land, historic features, water hole, gorge with cascades.	<u>Blue Hole</u> : 14 car parks (including 1 disabled) and 1 coach parking. Car park area bollarded to control vehicle movement. Picnic area with 7 tables, 3 gas barbecues. Reticulated potable water. 2 toilets (no wheelchair access). Walks include informal (mown) walking track to Threlfall day use area.  <u>Threlfall</u> : 13 car parks and 1 coach parking area. Car park area bollarded to control vehicle movement. Picnic area with 8 tables, 3 gas barbecues. Interpretation displays including 1 shelter and signage along walking tracks. Walks include Threlfall walk with steel bridge crossing of Gara River.	<u>Blue Hole</u> : 2 toilets (wheelchair compatible). Seal wheelchair access to toilets. Interpretation displays including 1 shelter and signage along walking tracks. New walks include unassisted wheelchair access from picnic area across Gara River to weir outlet requiring construction of steel pedestrian bridge. Upgrade walking track to Threlfall day use area.  <u>Threlfall</u> : 2 toilets (wheelchair compatible). Seal wheelchair access to toilets. Interpretation includes 1 shelter.	D2	D1
Riverside	Open grassy area in deep forested valley on Apsley River.	4WD road, tables, gas barbecues, toilets. Access requires permit and numbers are restricted.	Unchanged	D1	D1
Youdales Hut	Clearing on valley floor adjacent hut and Kunderang Brook.	4WD road, barbecues, toilets. Access requires permit and numbers are restricted.	Reduce greenfield maintenance of area by reducing mown area.	D1	D1
Marys View:	Ridgetop setting with wilderness views across the Macleay and Apsley River valleys	Nil	Install bollards to control vehicle movement, hardening of site to basic car park and turning circle to prevent further degradation. Safety railing and basic interpretative signage installed where required.	NA	D1
Hoppys Lookout	Ridgetop setting with wilderness views across Kunderang Brook and Pinnacle Creek valleys.	Nil	Install bollards and cleared area to control vehicle movement. Rehabilitate trail to walking track standard. Safety railing and basic interpretive signage installed where required.	D1	D1
<b>Day use area – Cunnawarra National Park</b>					

Beech Lookout	Open area above cliffline.	2WD road, 1 table, 1 barbecue, lookout fence, 5 carpark spaces.	Upgrading of viewing structure, installing bollards to control vehicles.	D1	D1
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<b>Camping areas - Oxley Wild Rivers National Park</b>					
Wollomombi Falls (Green Gully)	Formal site in bushland setting, separated from day use area.	Sealed loop road. Bollards to control vehicles. 10 formal grassed and level campsites and an informal group camping area, 10 wood barbecues, 1 toilets (wheelchair compatible), and reticulated potable water. Interpretation shelter. Rubbish pit and fire wood holder. Walk track to Edgars day use area.	Camping fee collection infrastructure. Upgrade walk track to Edgars day use area to wheelchair unassisted. Consideration to be given to a self-serve cold water shower structure.	C2	C2
Dangars Falls	Basic character, open timbered setting, close to day use area.	Sealed loop road. Bollards to control vehicle movement. 8 formal, grassed and level campsites, 8 wood barbecues and 1 pit toilet. Reticulated potable water. Reticulated sprinkler system. Garbage pit and fire wood holder.	Upgrade toilet to single wheelchair compatible semi-composting sealed unit. Consideration to be given to a cold water shower structure.	C2	C2
Long Point	Small clearing in forest.	Unsealed 2WD access. 4 defined campsites with wood fireplaces with paving around. 1 garbage pit	Upgrade toilet to semi composting type.	C2	C2
Apsley Falls	Informal in bushland setting, separated from day use area.	Sealed 2WD access, 14 defined sites, barrier free septic toilets, and water.	Unchanged.	C2	C2
Tia Falls	Small basic area adjacent creek.	No defined sites, barbecues and shared toilets with adjacent day use area.	Close existing steep areas used for camping and provide new small camping area near the day use area, design to be partially walk-in and to provide a different experience to the other camping areas in the park.	C2	C2
Budds Mare	Bushland clearing.	No defined sites	Reduce grounds maintenance of area by combining day use and camping areas.	C2	C2
Riverside	Open grassy area in deep-forested valley adjacent river.	Shared facilities with day users, as above.	Unchanged.	C2	C2
Youdales Hut	Clearing on valley floor adjacent to hut and Kunderang Brook.	Shared facilities with day users, as above.	Unchanged.	C2	C2
<b>Georges Creek Nature Reserve</b>					
None		No existing facilities	No proposed facilities	Nil	Nil

**Refer to Appendix 3 for explanation of existing and proposed facility classifications**

## **Walking and pack camping**

As indicated above, walking tracks are provided at most of the visitor facilities, ranging from short paths at lookouts to strenuous walks into the gorges. The walking tracks are a primary means of promoting the natural and cultural heritage of the area.

The track system was in part constructed before park reservation. Many of these tracks initially went only to lookouts and have been progressively extended, re routed and maintained since gazettal. Those with high use have been hardened to minimise environmental impact.

It is proposed to provide a new walking track in the south-eastern corner of Oxley Wild Rivers National Park to enable views of the Kunderang Brook valley from the valley rim. This would begin at or near the junction of Racecourse Trail and the trail to Youdales Hut, and would cater for visitors to both Oxley Wild Rivers National Park and the adjacent Werrikimbe National Park. No associated picnic facilities will be provided as they are available nearby at Mooraback in Werrikimbe National Park and at Youdales Hut.

In addition to formal tracks, walking and viewing takes place at the Moona Falls and Enmore areas. These locations provide accessible natural areas for those seeking undeveloped settings and easy self-reliant walking opportunities.

Tracks into the gorges, particularly the track from Budds Mare to Riverside, the Chandler Track and the Bicentennial National Trail provide important opportunities for extended walking and backpack camping. Walking routes also occur on the Rowleys Creek circuit and Dangars Falls to Gara Gorge via Salisbury Waters.

Opportunities for isolation and solitude are available in much of the planning area, particularly the rugged wilderness core of Oxley Wild Rivers National Park and the northern part of Cunnawarra National Park. Because of the terrain, access for remote area walkers in Oxley Wild Rivers National Park is mainly from the visitor facilities at the park perimeter and from public and park roads.

A community group is investigating the feasibility of providing a long distance walking track from Walcha to Coffs Harbour. This proposal, known as the Waterfall Way Walk, may border sections of the planning area and, within the planning area, will only be allowed on existing management trails and walking tracks. NPWS will continue to liaise with the proponents of the Waterfall Way Walk but an amendment will be required to this plan if the proposal involves any new track or associated infrastructure construction within the planning area.

## **Kunderang East Homestead**

The Kunderang East Homestead is available for visitor accommodation, catering for up to 10 people in the main section plus a further four in the adjacent staff quarters if not needed for management purposes. The homestead is in a grand, isolated setting on the valley floor and the adjacent Macleay River is suitable for swimming, canoeing and fishing. The restored outbuildings add to the area's interest. Vehicle access is limited to guests staying in the homestead and to day visitors on organised Discovery Tours, to provide protection for the historic structures and to maintain the isolated experience.

Use of the homestead by paying guests is seen as a means of recouping costs incurred in conserving the building and site, as well as providing a very special tourism opportunity. Vehicle access to the homestead is via an unsealed road from the Armidale Kempsey Road. A conservation management plan is currently in preparation. A revised business plan will be undertaken to provide advice to management about future options for the site.

### **Bicycling**

In accordance with NPWS policy, bicycling will be permitted on the Bicentennial National Trail, roads and management trails but not walking tracks. Many of the management trails pass in and out of private property and riders would require the permission of landowners to use these.

### **Horse riding**

Recreational horse riding occurs primarily on the Bicentennial National Trail (BNT) which provides excellent riding opportunities in a remote setting. The BNT is a multi-use recreational trail that extends from Queensland to Victoria, traversing part of Cunnawarra and Oxley Wild Rivers National Parks (see figure 3). Management and use of the BNT occurs under a Memorandum of Understanding (MoU) with the BNT Board and NPWS, which aims to provide guiding principles and establish a framework for a cooperative working relationship. Riders can camp at several locations along the route including Left Hand Hut, Sunderlands (Middle Yard) Hut and Youdales Hut in Oxley Wild Rivers National Park. A camp is designated in the BNT guidebooks at Kunderang East homestead. This site is not appropriate due to the conflict with homestead visitors. There is also potential conflict between horse riders and other campers at Youdales Hut camping area.

The section of the BNT along Kunderang Brook follows a corridor between the Macleay Gorges Wilderness and Kunderang Wilderness. It is because this section of the BNT traverses what is otherwise wilderness, that the use will be managed to ensure ecological sustainability and the protection of environmental values, the remote setting and recreational experience. This will include placing limits on group size.

In places the route deviates from the corridor and enters the wilderness and in some locations, where the trail is steep or in poor condition, users are riding in Kunderang Brook. Route marking is needed to direct riders along the corridor, combined with track improvement in some locations.

Horse riding opportunities will also be provided on those park roads and management trails within Oxley Wild Rivers National Park that are outside declared wilderness areas (see figures 2 and 3).

Under NPWS policy horse riding is prohibited within declared wilderness areas and nature reserves.

### **Canoeing**

The Apsley, Chandler and Macleay Rivers provide opportunities for canoeing, although access is limited. The best access point within Oxley Wild Rivers National Park is at Riverside. Canoeists may obtain a permit to drive to Riverside and from there it is a 3-day canoe trip to Georges Junction. As the

park is not continuous along the length of the Macleay and Apsley Rivers, permission is required from landholders for camping outside the park.

### **Adventure Sports**

Rock climbing and abseiling is known to occur in the planning area, particularly at Gara Gorge and Wollomombi Gorge. There has been no geotechnical assessment undertaken in the planning area to determine where rock climbing and abseiling can be safely undertaken. In the absence of such assessment NPWS is not in a position to identify or nominate areas for rock climbing or abseiling. Gara Gorge has populations of the brush-tailed rock wallaby and the impact of rock climbing on this population has not been the subject of any study.

Cavers will only be allowed use of the Kunderang Brook karst system by obtaining a permit from the Service.

Aerial adventure activities such as bungy jumping and parachuting are not permitted in national parks.

### **Commercial Operations**

Coach and mini bus tours visit the major waterfalls in Oxley Wild Rivers National Park. Other current commercial activities include guided bush walking, canoeing, fishing, horse riding and nature study. Commercial tours can provide access for people who would not otherwise be able to visit the parks and can increase environmental understanding and support for conservation.

Commercial operations are subject to controls through licensing that may include such conditions as maximum group size or frequency of use in order to minimise impacts and conflicts with other visitors.

### **Desired Outcomes**

- A variety of nature based recreational opportunities is available.
- Recreational opportunities provide for enhanced enjoyment of the planning area and contribute to the environmental, social and economic well being of the local and regional communities.
- Recreational opportunities are culturally sensitive and ecologically sustainable.

### **Strategies**

- *Permit public vehicle use as shown on figure 2. Maintain park roads available to the public to 2WD standard except for trails to Riverside, Youdales Hut, Warwick Road, Racecourse Trail, Coachwood Road, Carrai Road and East Kunderang Road.*
- *The existing permit system for public vehicular access along the Restricted Public Access Roads to Riverside, Youdales Hut, and Kunderang East, all in Oxley Wild Rivers National Park, will continue (see figure 2). Permits will only be issued for 4WD vehicles due to the unsuitability of these roads to 2WD vehicles. The number of vehicles permitted to access any of these sites may be limited if crowding is likely or public safety is at risk (eg due to fire hazard or road condition).*
- *Liaise with Armidale-Dumaresq Council seeking upgrading of public roads to Wollomombi Falls, Gara Gorge and Dangars Falls.*

- *Continue to provide day use facilities, and undertake works as necessary, in accordance with Table 1.*
- *Manage visitor use at Marys View with the installation of vehicle access restriction measures and safety railing.*
- *Continue to provide facilities designed for wheelchair access at Wollomombi, Dangars Falls and Apsley Falls. Wheelchair access will be constructed at Gara Gorge.*
- *Investigate the feasibility of providing a walking track from Racecourse Trail to the valley rim with views of Kunderang Brook.*
- *Investigate the feasibility of providing a day use facility at Steep Drop Falls, provided public access becomes available to the park boundary.*
- *Upgrade and/or re-route the lower section of Chandler walking track due to soil erosion on the steep sections of the track.*
- *Progressively replace wood with gas barbecues at gorge rim day use areas.*
- *Continue to provide camping areas at Dangars Falls, Wollomombi Falls, Apsley Falls, Tia Falls, Long Point, Budds Mare, Riverside and Youdales Hut in accordance with Table 1.*
- *Continue to require a permit to visit Riverside (maximum 13 campsites at a time) and Youdales hut (maximum 6 vehicles). Provide no additional facilities at these sites.*
- *Gara Gorge will be redeveloped as a day use area only due to its close proximity to Armidale and the availability of camping areas nearby.*
- *Backpack camping outside of defined camping facilities is allowed at locations more than 200m from roads, public access vehicle tracks, day use areas and car-based camping areas. Camping is prohibited in day use areas.*
- *Continue to provide, develop and manage visitor accommodation at the Kunderang East Homestead consistent with the provisions of the conservation and business plan.*
- *Maintain existing formed walking tracks, and carry out upgrading where needed.*
- *If necessary for environmental protection or to maintain a remote area experience, place limits on the size of groups using the planning area.*
- *Allow bicycling on park roads, management trails and the Bicentennial National Trail only.*
- *Permit under licence appropriate tourism and recreation operations within the two parks (refer to horse riding strategies below). Develop and apply conditions where necessary to minimise environmental impact and maintain the experience of other visitors. Commercial operations will be encouraged to provide accurate and high quality interpretation leading to increased environmental understanding and support for conservation.*
- *Horse riding will be allowed on the Bicentennial National Trail (BNT) and those park roads and management trails within the planning area that are*

*designated on figure 2. The designated horse riding routes aim to be ecologically sustainable, safe to horse riders and avoid declared wilderness.*

- *In order to maintain conservation values and visitor experience, a maximum group size of 20 horses (including packhorses) will be allowed within Oxley Wild Rivers and Cunnawarra National Parks at any one time (including those on the BNT). A maximum number of 40 horses will be allowed within Oxley Wild Rivers National Park at any one time, and a maximum of 20 horses allowed within Cunnawarra National Park at any one time. The maximum number of horses at a campsite at any one time must not exceed 20. Camping with horses in the planning area is only permitted at Left Hand, Sunderlands (or Middle Yard) and Youdales huts.*
- *Private horse riding will take precedence over commercial horse riding if there is competition for available capacity. If recreational and/or commercial horse riding operations increase, a monitoring system will be implemented in conjunction with relevant users in an effort to resolve potential conflicts.*
- *Review the route of the BNT in consultation with the BNT coordinator to avoid sensitive environments.*
- *Where necessary for rider safety or environmental protection, route markers will be installed on the BNT and essential trail improvements undertaken. In the Kunderang Brook section of the park where no trail currently exists, no trail will be built.*
- *Promote the NPWS Horse Riding Code amongst recreational horse riders.*
- *Persons who wish to undertake any recreational activity in the planning area that may involve risking their own safety or the safety of other persons will require prior approval from the Regional Manager under the NPW Regulation.*
- *Individuals and/or groups wishing to undertake adventure sports will require approval from the Regional Manager pursuant to the NPW Regulations.*
- *Where necessary, in order to manage risk and ensure environmental sustainability, the Regional Manager may require individuals and/or groups wishing to undertake adventure sports within the planning area to undertake hazard identification, risk management, and any relevant planning and environmental impact assessments as part of the approval process.*
- *Allow visitor use of Youdales (for emergency use only), Left Hand, Sunderlands, Front Tablelands, Salt and Bark Huts.*
- *Allow the responsible use of the Kunderang Brook karst system through users obtaining a permit from the Service. The condition of the caves will be monitored for impacts and restrictions put on their use if required.*
- *Undertake regular monitoring of visitors (numbers, demographics, satisfaction etc).*
- *Monitor the condition of popular remote tracks and campsites and, if needed, take steps to reduce impacts.*



## 7. RESEARCH AND MONITORING

NPWS research and monitoring is undertaken to improve understanding and management of the natural and cultural heritage, including World Heritage values, and the processes which affect them. Vegetation, fauna and cultural heritage surveys have been undertaken but further study is needed to fill information gaps and to assess the success of management in achieving on-going ecological sustainability. Monitoring is a requirement of the Australian World Heritage Management Principles and will be undertaken as part of programs such as recovery plan requirements and visitor impact monitoring.

Research by other organisations, individuals and students may provide valuable information for management. There are a number of tertiary education and research institutions in the region examining geology, ecology, history, park management and nature-based tourism, making the planning area important for research and training programs. A prospectus will be prepared to encourage research in priority areas.

### Desired Outcomes

- Research is undertaken that enhances the information base and assists management of the planning area.
- Research causes minimal environmental impact.
- Monitoring programs are in place to detect any changes in the status of natural and cultural resources and World Heritage values.

### Strategies

- *Conduct and encourage appropriate research and monitoring to provide information addressing management issues, with priority given to:*
  - *completion of vegetation community mapping;*
  - *the ecology, status and distribution of rare communities and rare and threatened plant and animal species;*
  - *World Heritage values and possible threats to values;*
  - *the effects of fire on plant and animal communities;*
  - *the impacts of introduced species and potential control measures;*
  - *surveys of Aboriginal sites and other places of cultural heritage significance; and*
  - *visitor use, visitor expectations and visitor impacts.*
- *Encourage research where it:*
  - *has the potential to facilitate better management;*
  - *leads to a better understanding of conservation issues and/or biodiversity/ecology; and*
  - *does not conflict with the objectives of management.*
- *Prepare a schedule of preferred research projects and make available to tertiary and research organisations that may be interested in the planning area.*

## 8. MANAGEMENT FACILITIES AND OPERATIONS

Implementation of the management programs identified in this plan requires a system of access in addition to that provided by the public road system.

Some roads through Cunnawarra NP are not included within the park, but are vested in the Minister for the Environment to ensure access to private property and State forest. These provide access for park visitors and management staff and also for logging of adjacent state forest. A memorandum of understanding (MoU) will be negotiated between State Forests of New South Wales (SFNSW), local government, relevant landholders and the NPWS regarding maintenance of these roads. Other key access roads, such as Raspberry Road, also need MoU's between neighbours and other authorities.

In 1988, land subject to a Crown lease (in the Styx River area) was gazetted as part of Oxley Wild Rivers National Park on the understanding that the lease was about to be terminated (see "gazetted but not purchased" in figure 2). This information, however, was later found to be incorrect and the lease had in fact been extended to a lease in perpetuity (100 years) in 1986. The NPWS has offered to buy the lease but the lessee has declined. The lessee, however, continues to use the land and has sought its revocation from the Park. The conservation values within this Crown lease area are high and considered worthy of national park status. If appropriate management continues these values should not be threatened by the activities of the lessee.

A number of former logging snig tracks and other trails in the planning area have no value for visitor or management access. These are generally dead-end roads that do not lead to features of interest. They can have significant environmental impacts and closure and rehabilitation is needed.

Temporary accommodation for NPWS staff working in the area is available in the reconstructed southern section of the Kunderang East homestead and at Cedar Creek. Staff occasionally use Left Hand, Front Tableland, Salt and Sunderlands huts while working in the area. The Cedar Creek complex is managed as a field depot for management activities both in the southern part of Oxley Wild Rivers National Park and in Werrikimbe National Park.

In many places the park boundaries are immediately adjacent to farming land. Where possible, fencing is maintained and management vehicle access is established in cooperation with neighbours. In narrow parts of Oxley Wild Rivers National Park above the escarpment the impact of grazing stock can be significant on important and vulnerable plant communities. Where the boundaries traverse the rugged terrain of the gorges, fencing on the park boundary is not always practicable and other cooperative arrangements are developed with neighbours to minimise the straying of stock into the park. In the northern part of Cunnawarra National Park, there is occasional incursion of stock from intermittent grazing in adjacent state forest. The cost of fencing is not warranted in these areas and instead, the NPWS will work with graziers to use other means such as salt licks to limit stock movement.

### Desired Outcomes

- Management facilities adequately serve the needs of park management and have acceptable environmental impact.

- A good relationship is maintained with park neighbours.

### **Strategies**

- *Maintain and use management trails and facilities in a manner that minimises impact on the natural and cultural heritage. Exclude public vehicular access from all management trails (see figure 2) by signs, gates and/or other appropriate means.*
- *Close, and where necessary rehabilitate, all other roads and trails because they are not needed for visitor or management access.*
- *A MoU will be negotiated between SFNSW, local government, relevant landholders and the NPWS for the maintenance of ministerial roads and public roads accessing the planning area.*
- *Discussions will continue with the lessee of the Styx River section of Oxley Wild Rivers National Park to investigate options for the land under a lease in perpetuity but gazetted as national park, while preserving the lessee's existing rights and ensuring protection of the park's values.*
- *Continue to appropriately maintain the Cedar Creek complex for use by field staff when undertaking park management activities.*
- *Maintain provision for temporary accommodation of staff at the Kunderang East Homestead.*
- *Maintain the remote huts, and associated infrastructure such as stockyards, in accordance with the conservation plans currently in preparation. The conservation plans, being prepared for Left Hand, Sunderlands (or Middle Yard) and Front Tableland huts, establishes the significance of the huts and what needs to be considered in their maintenance.*
- *Work cooperatively with neighbours to establish and maintain boundary fencing and vehicle access where appropriate and practical to do so*
- *Work with neighbours to prevent incursion of stock into unfenced parts of the planning area.*

## 9. PLAN IMPLEMENTATION

This plan of management 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 NPW 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 Oxley Wild Rivers National Park, Oxley Wild Rivers State Conservation Area, Cunnawarra National Park and Georges Creek Nature reserve unless they are in accordance with the plan.

Implementation of this plan will be undertaken within the annual programs of the NPWS's Northern Tablelands and North Coast Regions. The actions identified in the plan are those to which priority will be given in the foreseeable future. Other management actions may be developed consistent with the plan objectives and strategies.

Relative priorities for identified activities are set out in the table below. These priorities are determined in the context of directorate and regional strategic planning, and are subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister.

The environmental impact of proposed activities, including impact on World Heritage values, 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. The implementation of the plan will be monitored and its success in achieving the identified objectives will be assessed. The Australian World Heritage Management Principles require review of the plan at intervals of not more than 7 years. If the review indicates that amendment of the plan is needed, this will be done in accordance with sections 73B of the National Parks and Wildlife Act.

### Strategies

- *Undertake an annual review of progress in implementing this plan of management.*
- *Undertake an assessment after 5 years of the effectiveness of managing the parks and reserve in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes, with particular attention to World Heritage values. Base the evaluation on the monitoring programs set out in this plan and any others that may be developed.*

### Plan Implementation Table

Plan ref	Priority	Principal Actions (summarised)
4.1	Medium	<ul style="list-style-type: none"> <li>The Kempsey Speleological Society will be encouraged to:               <ul style="list-style-type: none"> <li>- monitor and report on use of the karst system;</li> <li>- keep records of cave use and condition; and</li> <li>- inform the NPWS of any noticeable impacts or concerns.</li> </ul> </li> </ul>
4.1	Medium	<ul style="list-style-type: none"> <li>Cooperation of relevant authorities will be sought to have the Halls Peak mine site rehabilitated in order to lessen its visual impact and to prevent erosion and siltation in the planning area.</li> </ul>
4.1	Low	<ul style="list-style-type: none"> <li>Liaise with neighbours and authorities to minimise the impact of adjacent land use on the scenic values at key locations in the planning area.</li> </ul>
4.2	Medium	<ul style="list-style-type: none"> <li>Monitor natural revegetation of cleared areas within the planning area and take necessary steps to assist revegetation where needed.</li> </ul>
4.2	High	<ul style="list-style-type: none"> <li>Work with landholders and key groups and agencies such as Landcare and Greening Australia to encourage retention, enhancement and connection of remnant vegetation and habitat on both Crown and private land.</li> </ul>
4.3	High	<ul style="list-style-type: none"> <li>Continue to record the distribution of threatened and significant fauna species.</li> </ul>
4.3	Medium	<ul style="list-style-type: none"> <li>Maintain liaison with caving organisations regarding protection of bats and invertebrate populations in the Kunderang Brook caves.</li> </ul>
4.4	High	<ul style="list-style-type: none"> <li>As far as practicable, conserve all known Aboriginal sites and manage Aboriginal heritage, including any post contact sites, in consultation with the local Land Council or other relevant Aboriginal community organisations.</li> </ul>
4.4	High	<ul style="list-style-type: none"> <li>Progressively survey for Aboriginal sites, with priority being in areas where sites could be disturbed (eg. at recreation nodes). Such surveys will be undertaken in cooperation with the Aboriginal community.</li> </ul>
4.5	High	<ul style="list-style-type: none"> <li>Manage the Kunderang East homestead, hayshed, forge, yards, stockman's hut, adjacent fences and setting in accordance with the revised conservation plan.</li> </ul>
4.5	High	<ul style="list-style-type: none"> <li>Investigate the extent of the remains of the Styx River hydro-electric scheme in cooperation with State Forests of NSW to determine the location and land tenure of the site.</li> </ul>
4.5	Medium	<ul style="list-style-type: none"> <li>Manage Front Tablelands Hut, Left Hand Hut, Sunderlands Hut, Salt Hut, Bark Hut, Sunnyside woolshed and stockyards, and Youdales Hut in accordance with recommendations in relevant conservation plans.</li> </ul>
4.5	Medium	<ul style="list-style-type: none"> <li>Manage Cedar Creek homestead, Sunnyside woolshed and stockyards in accordance with recommendations in relevant conservation plans.</li> </ul>

<b>Plan ref</b>	<b>Priority</b>	<b>Principal Actions (summarised)</b>
4.5	Low	<ul style="list-style-type: none"> <li>Retain sections of fencing assessed to be historically significant.</li> </ul>
4.5	Medium	<ul style="list-style-type: none"> <li>The historic significance of the huts at Lower Creek in Cunnawarra National Park will be assessed. The huts will be demolished if not found to be historically significant. If the huts are significant they will be appropriately recorded but not maintained.</li> </ul>
5.1	High	<ul style="list-style-type: none"> <li>Undertake rehabilitation works on eroded areas where needed.</li> </ul>
5.2	Medium	<ul style="list-style-type: none"> <li>Liaise with local government, other authorities and landowners to maintain and, where possible, improve water quality.</li> </ul>
5.2	Medium	<ul style="list-style-type: none"> <li>Continue to participate in and support the Mid North Coast Catchment Management Board. North Coast Region will be advised of activities generated out of the CMB where there is likely to be an involvement or impact on Cunnawarra NP.</li> </ul>
5.2	Medium	<ul style="list-style-type: none"> <li>Liaise with appropriate authorities regarding preparation of contingency plans for accidents that have the potential to result in water pollution in the planning area.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>Control introduced species, and where practicable, eradicate them.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>Priority will be given for the control of introduced species: <ul style="list-style-type: none"> <li>- 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;</li> <li>- that have a significant environmental impact, including damage to threatened species, World Heritage values, catchment values and recreation values;</li> <li>- that may affect neighbouring lands or are considered of high priority by the community;</li> <li>- where management is needed to maintain benefits gained from previous control programs or to allow another high priority management program to be effective; or</li> <li>- where a window of opportunity occurs.</li> </ul> </li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>Continue to support research programs into effective biological control of Lantana. In the interim, develop effective herbicide control techniques to suppress the further spread of Lantana, with priority to rainforest areas.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>Continue to treat blackberry with the aim of eventual eradication, progressing from the head of catchments.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>Continue to treat other weeds in accordance with the pest species management plan.</li> </ul>

<b>Plan ref</b>	<b>Priority</b>	<b>Principal Actions (summarised)</b>
5.3	High	<ul style="list-style-type: none"> <li>• Continue to give priority to the control, and where possible eradication, of feral pigs, goats and deer.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>• Undertake control programs for wild dogs along boundary areas where there is significant economic loss resulting from wild dog attack.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>• Develop and implement effective strategies for control and eventual removal of cattle and feral horses from the planning area.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>• Carry out pest species control programs in conjunction with the Rural Lands Protection Board, Noxious Plants County Councils and adjoining landholders where appropriate.</li> </ul>
5.3	High	<ul style="list-style-type: none"> <li>• Permit domestic animals and stock only under the following circumstances: <ul style="list-style-type: none"> <li>- use of horses and dogs for park management purposes; specifically, the rounding up of strayed stock from neighbouring properties and management of pest animals, with the written approval of the Regional Manager;</li> <li>- recreational horse riding (where permitted – refer to section 6.2).</li> </ul> </li> </ul>
5.3	Medium	<ul style="list-style-type: none"> <li>• Monitor areas currently free of introduced species that are potentially susceptible to invasion.</li> </ul>
5.4	High	<ul style="list-style-type: none"> <li>• Prepare and implement draft fire management plans for the parks and reserve within the planning area.</li> </ul>
5.4	High	<ul style="list-style-type: none"> <li>• Use prescribed fire to achieve a variety of fire regimes that maintain fire thresholds for appropriate vegetation communities in accordance with the fire management plans, and to assist management of fire for asset protection.</li> </ul>
5.4	High	<ul style="list-style-type: none"> <li>• Implement fire management and suppression techniques in a manner that minimises its ecological impact and enhances conservation outcomes. Special attention will be paid to the protection of dry rainforest areas.</li> </ul>
5.4	High	<ul style="list-style-type: none"> <li>• Continue to participate in district bush fire committees. Liaise with and develop cooperative strategic plans with bushfire brigades, local government and neighbours, to ensure coordination of fire management in the reserves and adjoining lands.</li> </ul>
5.4	Medium	<ul style="list-style-type: none"> <li>• Maintain former farm dams that have fire management value.</li> </ul>

Plan ref	Priority	Principal Actions (summarised)
6.1	High	<ul style="list-style-type: none"> <li>The following themes will be emphasised in promotion and interpretation programs: <ul style="list-style-type: none"> <li>World Heritage values;</li> <li>wilderness and wild and scenic rivers values;</li> <li>geological history, the Macleay River system, Great Escarpment and spectacular scenery;</li> <li>biodiversity and importance of the planning area for threatened species;</li> <li>the history of Aboriginal and European use of the area;</li> <li>the importance of catchment management in the Macleay River system; and</li> <li>readily accessible recreation facilities at the lookouts and waterfalls along the Great Escarpment and self-reliant recreation elsewhere in the planning area.</li> </ul> </li> </ul>
6.1	High	<ul style="list-style-type: none"> <li>Continue to provide information and interpretative displays at the gorge rim visitor facilities, and at Riverside, Youdales Hut and Kunderang East Homestead. Progressively update or extend information, with special attention to ensuring that World Heritage values are presented</li> </ul>
6.1	High	<ul style="list-style-type: none"> <li>Involve Aboriginal community members in interpretation of Aboriginal heritage values.</li> </ul>
6.1	High	<ul style="list-style-type: none"> <li>Maintain up to date park brochures and educational material for distribution to tourist information outlets, user groups, Councils and from NPWS offices and shops.</li> </ul>
6.1	High	<ul style="list-style-type: none"> <li>Encourage cooperative information strategies with State Forests of NSW, Councils and tourism organisations.</li> </ul>
6.1	Medium	<ul style="list-style-type: none"> <li>Continue to promote the importance and purpose of management programs relating to natural and cultural heritage protection, fire management and control of introduced species within the local community, particularly neighbours.</li> </ul>
6.1	High	<ul style="list-style-type: none"> <li>Promote minimal impact recreation practices through such means as track head signs and leaflets.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Permit public vehicle use as shown on figure 2 – “Public Access Roads”. Maintain park roads available to the public to 2WD standard except for trails to Riverside, Youdales Hut, Warwick Road, Racecourse Trail, Coachwood Road, Carrai Road and East Kunderang Road.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>The existing permit system for public vehicular access along the Restricted Public Access Roads to Riverside, Youdales Hut, and Kunderang East will continue (see figure 2). Permits will only be issued for 4WD vehicles. The number of vehicles permitted to access sites may be limited.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Liaise with Armidale-Dumaresq Shire seeking upgrading of public roads to Wollomombi Falls, Gara Gorge and Dangars Falls.</li> </ul>



Plan ref	Priority	Principal Actions (summarised)
6.2	High	<ul style="list-style-type: none"> <li>Continue to provide day use facilities, and undertake works as necessary, in accordance with Table 1.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Manage visitor use at Marys View with the installation of vehicle access restriction measures and safety railing.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Continue to provide facilities designed for wheelchair access at Wollomombi, Dangars Falls and Apsley Falls. Wheelchair access will be constructed at Gara Gorge.</li> </ul>
6.2	Low	<ul style="list-style-type: none"> <li>Investigate the feasibility of providing a walking track from Racecourse Trail to the valley rim with views of Kunderang Brook.</li> </ul>
6.2	Low	<ul style="list-style-type: none"> <li>Upgrade and/or re-route the lower section of Chandler walking track due to soil erosion on the steep sections of the track.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Progressively replace wood with gas barbecues at gorge rim day use facilities.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Continue to provide camping areas at Dangars Falls, Wollomombi Falls, Apsley Falls, Tia Falls, Long Point, Budds Mare, Riverside &amp; Youdales Hut in accordance with Table 1.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Continue to require a permit to visit Riverside (maximum 13 campsites at a time) and Youdales hut (maximum 6 vehicles). Provide no additional facilities at these sites.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Gara Gorge will be redeveloped as a day use area only due to its close proximity to Armidale and the availability of camping areas nearby.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Continue to provide, develop and manage visitor accommodation at the Kunderang East Homestead consistent with the provisions of the conservation and business plan.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Maintain existing formed walking tracks, and carry out upgrading where needed.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Permit under licence appropriate tourism and recreation operations within the two parks. Develop and apply conditions where necessary to minimise environmental impact and maintain the experience of other visitors. Commercial operations will be encouraged to provide accurate and high quality interpretation leading to increased environmental understanding and support for conservation.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Horse riding will be allowed on the BNT and those park roads and management trails within Oxley Wild Rivers National Park that are outside declared wilderness areas (see figures 2 and 3). A permit will be required for horse riding off this trail network. A sign will be erected on any park road or management trail outside declared wilderness areas where horse riding is not permitted.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Review the route of the BNT in consultation with the Bicentennial National Trail coordinator to avoid declared wilderness areas and sensitive environments.</li> </ul>

<b>Plan ref</b>	<b>Priority</b>	<b>Principal Actions (summarised)</b>
6.2	High	<ul style="list-style-type: none"> <li>Promote the NPWS Horse-riding Code amongst recreational horse-riders.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Persons who wish to undertake any recreational activity in the planning area that may involve risking their own safety or the safety of other persons will require prior approval from the Regional Manager.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>Where appropriate, undertake risk and impact assessments of adventure sports and/or the sites they use in the planning area. Implement necessary risk management actions and ensure that adventure sports are monitored and undertaken in an ecologically sustainable manner.</li> </ul>
6.2	High	<ul style="list-style-type: none"> <li>In consultation with user groups undertake risk and impact assessments of adventure sports in the planning area in order to prepare activity based risk management plans. Implement any required risk management actions and ensure that use is monitored and is ecologically sustainable.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Allow visitor use of Youdales (emergency use only), Left Hand, Sunderlands, Front Tablelands, Salt and Bark Huts.</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Undertake regular monitoring of visitors (numbers, demographics, satisfaction etc).</li> </ul>
6.2	Medium	<ul style="list-style-type: none"> <li>Monitor the condition of popular remote tracks and campsites and, if needed, take steps to reduce impacts.</li> </ul>
7.0	Medium	<ul style="list-style-type: none"> <li>Conduct and encourage appropriate research and monitoring to provide information addressing management issues, with priority given to: <ul style="list-style-type: none"> <li>completion of vegetation community mapping;</li> <li>the ecology, status and distribution of rare communities and rare and threatened plant and animal species;</li> <li>World Heritage values and possible threats to values;</li> <li>the effects of fire on plant and animal communities;</li> <li>the impacts of introduced species and potential control measures;</li> <li>surveys of Aboriginal sites and other places of cultural heritage significance; and</li> <li>visitor use, visitor expectations and visitor impacts.</li> </ul> </li> </ul>
7.0	High	<ul style="list-style-type: none"> <li>Encourage research where it: <ul style="list-style-type: none"> <li>has the potential to facilitate better management;</li> <li>leads to a better understanding of conservation issues and/or biodiversity/ecology; and</li> <li>does not conflict with the objectives of management.</li> </ul> </li> </ul>
7.0	Medium	<ul style="list-style-type: none"> <li>Prepare a schedule of preferred research projects and make available to tertiary and research organisations that may be interested in the planning area.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Maintain and use management trails and facilities in a manner that minimises impact on the natural and cultural heritage.</li> </ul>

<b>Plan ref</b>	<b>Priority</b>	<b>Principal Actions (summarised)</b>
8.0	High	<ul style="list-style-type: none"> <li>Exclude public vehicular access from all management trails by signs, gates and/or other appropriate means.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Exclude public vehicular access from all management trails (see figure 2) by signs, gates and/or other appropriate means. Close, and where necessary rehabilitate, all other roads and trails.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Discussions will continue with the lessee of the Styx River section of Oxley Wild Rivers National Park to investigate options for the land under a perpetual lease but gazetted as national park.</li> </ul>
8.0	Medium	<ul style="list-style-type: none"> <li>Continue to appropriately maintain the Cedar Creek complex for use by field staff when undertaking park management activities.</li> </ul>
8.0	Medium	<ul style="list-style-type: none"> <li>Maintain provision for temporary accommodation of staff at the Kunderang East Homestead.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Maintain the remote huts, and associated infrastructure such as stockyards, in accordance with the conservation plans currently in preparation.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Work cooperatively with neighbours to establish and maintain boundary fencing and vehicle access where appropriate and practical to do so.</li> </ul>
8.0	High	<ul style="list-style-type: none"> <li>Work with neighbours to prevent incursion of stock into unfenced parts of the planning area.</li> </ul>

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**Appendix 1 : Rare or Threatened Australian Plants (ROTAP) known to occur in the planning area**

<b>Species</b>	<b>TSC Act</b>	<b>ROTAP Code</b>	<b>Known Locations</b>
<b><i>Acacia barringtonensis</i></b> Barrington Wattle		3RCa	East of Mary's View.
<b><i>Acacia ingramii</i></b> Gorge Wattle		2RCa	Dangars Falls, Gara Gorge, Wollomombi Falls, Chandler River (Halls Peak), south of Long Point, the Enmore area, Mihi Falls and Winterbourne Gorge.
<b><i>Bertya ingramii</i></b> Gorge Bertya	E	2VCit	Dangars Falls, Gara Gorge, Mihi Falls and Apsley Falls.
<b><i>Callistemon pungens</i></b>		3R	Echo Point (Apsley Gorge).
<b><i>Chiloglottis platyptera</i></b>		2KC-	Old Winterbourne State Forest.
<b><i>Cryptocarya floydii</i></b> Gorge Laurel		3RCi	Wollomombi Falls, Long Point, Paradise Rocks, Yard Creek (Kunderang Brook), Polands Gorge and Rowleys Creek.
<b><i>Cynanchum elegans</i></b>	E	3ECi	Top Creek and Rafferty's Creek.
<b><i>Discaria pubescens</i></b> Australian Anchor Plant		3RCa	Dangars Falls and Apsley Falls.
<b><i>Dodonaea rhombifolia</i></b>		3RCa	Wollomombi Falls, Apsley Gorge, Rowleys Creek, Steep Drop Falls, Mihi Falls and the Winterbourne area.
<b><i>Dodonaea serratifolia</i></b>		2RC-	Rowleys Creek, Steep Drop Falls and Moona Falls.
<b><i>Eucalyptus elliptica</i></b> Bendemeeer White Gum		3KC-	Apsley Falls and Tia Falls.
<b><i>Eucalyptus magnificata</i></b> Blue Box		3K	Hole Creek Gorge, Mihi Gorge and Gara Gorge.
<b><i>Eucalyptus malacoxylon</i></b> Moonbi Apple Box		3R	Stoney Creek Falls and Apsley Gorge.
<b><i>Eucalyptus michaeliana</i></b> Hillgrove Spotted Gum		3RCa	Chandler Gorge, Styx River Gorge, Long Point, the Enmore area and the Winterbourne area.
<b><i>Eucalyptus nicholii</i></b> Narrow-leaved Black Peppermint	V	3V	Apsley Gorge and old Enmore State Forest.
<b><i>Eucalyptus youmanii</i></b>		2R	Salisbury Waters Gorge
<b><i>Gonocarpus longifolius</i></b>		3RC	Wollomombi Falls (Church Point).
<b><i>Grevillea beadleana</i></b>	E	3ECi	Salisbury Waters Gorge
<b><i>Grevillea granulifera</i></b>		3KCa	Wollomombi Falls.

Species	TSC Act	ROTAP Code	Known Locations
<i>Grevillea guthrieana</i>	E	3V	Mary's View.
<i>Hakea fraseri</i>	V	2VC-	Dangars Falls, Gara Gorge, Winterbourne Gorge, Tia Falls, Chandler River Gorge and the Apsley River.
<i>Haloragis exalata</i> subsp. <i>velutina</i>	V	3VC-	Dangars Falls, Top Creek, Haydon's Fire Trail and Youdales Hut.
<i>Hibbertia hermanniifolia</i>		3RCa	Moona Falls.
<i>Olearia</i> sp.2 (Wollomombi; J.B. Williams s.n. 1974)		2KC-	Wollomombi Falls, Mihi Falls and Rowley's Creek Gorge.
<i>Ozothamnus adnatus</i>		3KC-	Mary's View, Steep Drop Falls and Rowley's Creek Gorge.
<i>Phebalium squamulosum</i> subsp. <i>verrucosum</i>		2RC-	Wollomombi Falls, Long Point and Tia Falls.
<i>Pultenaea campbellii</i>		3K	Grave Yard Creek (Apsley Gorge), Tabletop Mountain and Hole Creek Gorge.
<i>Ricinocarpus speciosus</i>		3Rci	Winterbourne Gorge (Blue Mountain Creek).
<i>Sarcophilus aequalis</i>		3RC-	Kunderang Brook area.
<i>Sarcophilus fitzgeraldii</i>	V	3VC-	Kunderang Brook area.
<i>Senecio macranthus</i>		3RC-	Wollomombi Falls and Tia Falls.
<i>Senna acclinis</i>	E	3RC-	Wollomombi Falls and Riverside (Apsley River).
<i>Thesium australe</i>	V	3VCi+	East of Paradise Rocks and Gara Gorge and Kunderang Brook.
<i>Westringia glabra</i>		2RC-	Wollomombi Falls and Mihi Falls.

ROTAP (Rare or Threatened Australian Plant) codes from Briggs and Leigh (1995).

- 2 Geographic range in Australia less than 100 km
- 3 Geographic range in Australia greater than 100 km
- E Endangered, at risk of disappearing in wild within 10-20 years
- V Vulnerable, not presently endangered but at risk over longer period (20-50 years)
- R Rare, species considered rare in Australia but does not currently have any identifiable threat
- K Poorly known, species suspected but not definitely known to belong to one of the above categories
- C Reserved, at least one population known to occur within a conservation reserve
- K Species considered poorly known in Australia, but suspected of being rare, vulnerable or endangered
  - a 1000 plants or more are known to occur within a conservation reserve
  - i less than 1000 plants are known to occur within a conservation reserve
  - t total known population reserved
  - reserved population size is not accurately known
  - + overseas occurrence.

**Appendix 2 : Threatened fauna species known to occur in the planning area**

<b>Endangered Fauna Species <sup>1</sup></b>		
<b>Scientific Name</b>	<b>Common Name</b>	<b>Known Habitat</b>
<i>Xanthomyza phrygia</i>	Regent Honeyeater	Open forest and woodland, including strips of river oak.
<i>Pseudomys oralis</i>	Hastings River Mouse	High altitude sites with high rainfall and dense cover of ferns, grasses and sedges beneath a tall open forest.
<b>Vulnerable Fauna Species <sup>2</sup></b>		
<b>Scientific Name</b>	<b>Common Name</b>	<b>Known Habitat</b>
<i>Litoria subglandulosa</i>	New England Tree Frog	Small streams in New England region.
<i>Ptilinopus magnificus</i>	Wompoo Fruit-dove	Large undisturbed patches of rainforest.
<i>Calyptorhynchus lathami</i>	Glossy Black-cockatoo	Closed forests and open woodlands primarily in stands containing black she-oak ( <i>Allocasuarina littoralis</i> ).
<i>Ninox strenua</i>	Powerful Owl	Dense foliage, often along streams between ridges covered with eucalypt forest.
<i>Tyto novaehollandiae</i>	Masked Owl	Eucalypt forest and woodland, requiring partial clearing or forest edges for hunting; roosts in the dense cover of gullies and caves.
<i>Tyto tenebricosa</i>	Sooty Owl	Pockets of rainforest and wet eucalypt forest, roosting in tree trunk hollows.
<i>Atrichornis rufescens</i>	Rufous Scrub-bird	Dense undergrowth of cool-temperate rainforest and adjacent eucalypt forest.
<i>Pachycephala olivacea</i>	Olive Whistler	Rainforest and eucalypt forest above 500 metres elevation.
<i>Phascolarctos cinereus</i>	Koala	Eucalypt forest and woodland, especially in areas containing Manna Gum <i>Eucalyptus viminalis</i> , a recognised feed tree species.
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	Extensive areas of forest and woodland.
<b>Scientific Name</b>	<b>Common Name</b>	<b>Known Habitat</b>

<sup>1</sup> Schedule One (Endangered) in the *Threatened Species Conservation Act, 1995* (NSW); and also listed as *Nationally Endangered* in the *Endangered Species Protection Act, 1992* (Commonwealth);

<sup>2</sup> Schedule Two (Vulnerable); *Threatened Species Conservation Act 1995*.



<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	Dry sclerophyll forests and woodlands, preferring open forests with a sparse ground cover.
<i>Potorous tridactylus</i>	Long-nosed Potoroo	Dry and wet sclerophyll forests.
<i>Petaurus australis</i>	Yellow-bellied Glider	Tall, mature wet eucalypt forests.
<i>Petaurus norfolcensis</i>	Squirrel Glider	Wet forest areas bordering on rainforest.
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Sites with numerous caves, ledges and crevices, with multiple escape routes. Especially favour sites with a northerly aspect, which allow the animals to sun themselves in the morning and evening.
<i>Macropus parma</i>	Parma Wallaby	Prefers wet forest with thick shrubby understorey and some grassy patches.
<i>Thylogale stigmatica</i>	Red-legged Pademelon	Wet sclerophyll forest and rainforest.
<i>Mormopterus norfolkensis</i>	Eastern Little Mastiff-bat	Appears to live in sclerophyll forest and woodland.
<i>Falsistrellus tasmaniensis</i>	Great Pipistrelle	Roosts in stem holes of living eucalypts. Forages mostly above the forest canopy, in open woodland or over water.
<i>Miniopterus australis</i>	Little Bent-wing Bat	Caves and tunnels during the day, foraging for insects by night beneath the canopy of well-timbered habitats. Frequently shares roosting sites with the Common Bent-wing Bat.
<i>Miniopterus schreibersii</i>	Common Bent-wing Bat	Caves and tunnels during the day, foraging for insects by night beneath the canopy of well-timbered habitats. Frequently shares roosting sites with the Little Bent-wing Bat.
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	Tree-lined creeks and the junction of woodlands and cleared paddocks; less frequently seen foraging in rainforests.
<i>Pseudomys gracilicaudatus</i>	Eastern Chestnut Mouse	Heathland, especially dense wet heath and swampy areas, usually shared with the Swamp Rat ( <i>Rattus lutreolus</i> ).

### Appendix 3 : Visitor facility classifications

#### DAY USE AREA CLASSIFICATION

Facilities	Basic (class D1)	Developed (class D2)	Fully developed (class D3)
Water supplied	optional	yes	yes
BBQs - gas or electric	optional	yes	yes
BBQs - wood	optional	optional	if wood provided
Tables	optional	yes	yes
Shelter / covered area	optional	optional	yes
Toilets - sewer/treatment plant	no	optional	acceptable
Toilets - composting/vaulted	optional	preferred	acceptable
Toilets – septic	no	optional	optional
Toilets – pit	optional	optional	no
Garbage collection	no	no	no
Visitor centre	no	no	optional
Information shelter	optional	yes	yes
Carparking	optional	yes	yes, defined sites
Site limit (maximum)*	5	15	30

#### CAMPING AREA CLASSIFICATION

Facilities	Remote camp area (class C1)	Basic camping area (class C2)
Defined camp sites	no	optional
Vehicle access to site	no	optional
Powered sites	no	no
Water - reticulated	no	no
Water - tank, stream, etc	optional	yes
BBQs - gas or electric	no	optional
BBQs - wood	optional	optional
Tables	no	optional
Shelter / covered area	no	optional
Showers - hot water	no	no
Showers - cold water	no	no
Toilets – sewer/treatment plant	no	no (sewer availability unlikely)
Toilets – composting / vaulted	optional, if adequately screened	preferred
Toilets – septic	no	optional
Toilets – pit	optional (if screened)	optional
Garbage collection	no	no
Kiosk	no	no
Information shelter	no	optional
Built accommodation	no	no
Site limit (maximum)**	5	20

Note: These classifications are extracts from McGregor (2002).

## **Appendix 4: Australian World Heritage Management Principles**

### **1 General principles**

1.01 The primary purpose of management of natural heritage and cultural heritage of a declared World Heritage property must be, in accordance with Australia's obligations under the World Heritage Convention, to identify, protect, conserve, present, transmit to future generations and, if appropriate, rehabilitate the World Heritage values of the property.

1.02 The management should provide for public consultation on decisions and actions that may have a significant impact on the property.

1.03 The management should make special provision, if appropriate, for the involvement in managing the property of people who:

- (a) have a particular interest in the property; and
- (b) may be affected by the management of the property.

1.04 The management should provide for continuing community and technical input in managing the property.

### **2 Management planning**

2.01 At least 1 management plan should be prepared for each declared World Heritage property.

2.02 A management plan for a declared World Heritage property should:

- (a) state the World Heritage values of the property for which it is prepared; and
- (b) include adequate processes for public consultation on proposed elements of the plan; and
- (c) state what must be done to ensure that the World Heritage values of the property are identified, conserved, protected, presented, transmitted to future generations and, if appropriate, rehabilitated; and
- (d) state mechanisms to deal with the impacts of actions that individually or cumulatively degrade, or threaten to degrade, the World Heritage values of the property; and
- (e) provide that management actions for values, that are not World Heritage values, are consistent with the management of the World Heritage values of the property; and
- (f) promote the integration of Commonwealth, State or Territory and local government responsibilities for the property; and
- (g) provide for continuing monitoring and reporting on the state of the World Heritage values of the property; and
- (h) be reviewed at intervals of not more than 7 years.

### **3 Environmental impact assessment and approval**

3.01 This principle applies to the assessment of an action that is likely to have a significant impact on the World Heritage values of a property (whether the action is to occur inside the property or not).

3.02 Before the action is taken, the likely impact of the action on the World Heritage values of the property should be assessed under a statutory environmental impact assessment and approval process.

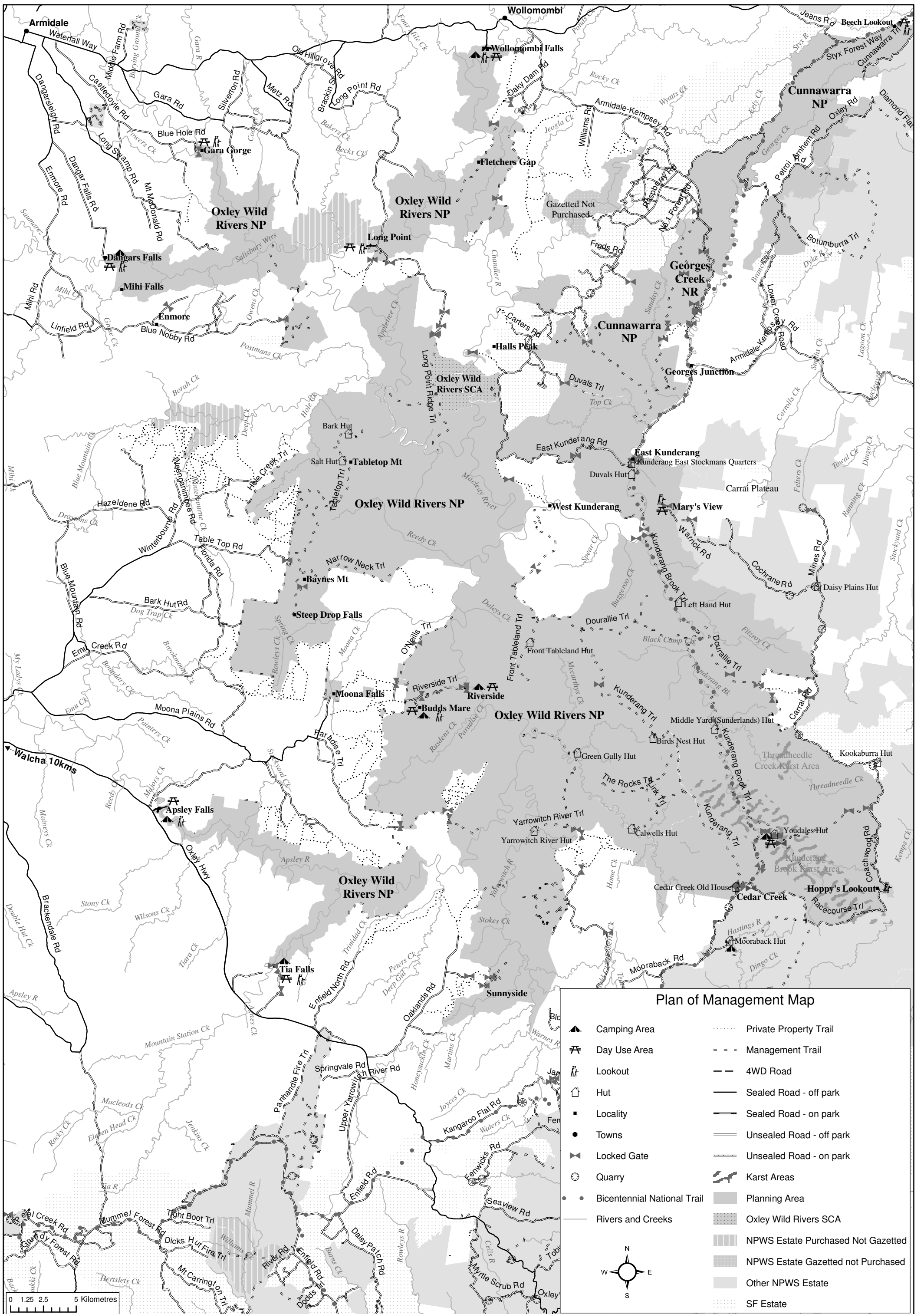
3.03 The assessment process should:

- (a) identify the World Heritage values of the property that are likely to be affected by the action; and
- (b) examine how the World Heritage values of the property might be affected; and
- (c) provide for adequate opportunity for public consultation.

3.04 An action should not be approved if it would be inconsistent with the protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.

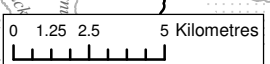
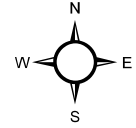
3.05 Approval of the action should be subject to conditions that are necessary to ensure protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.

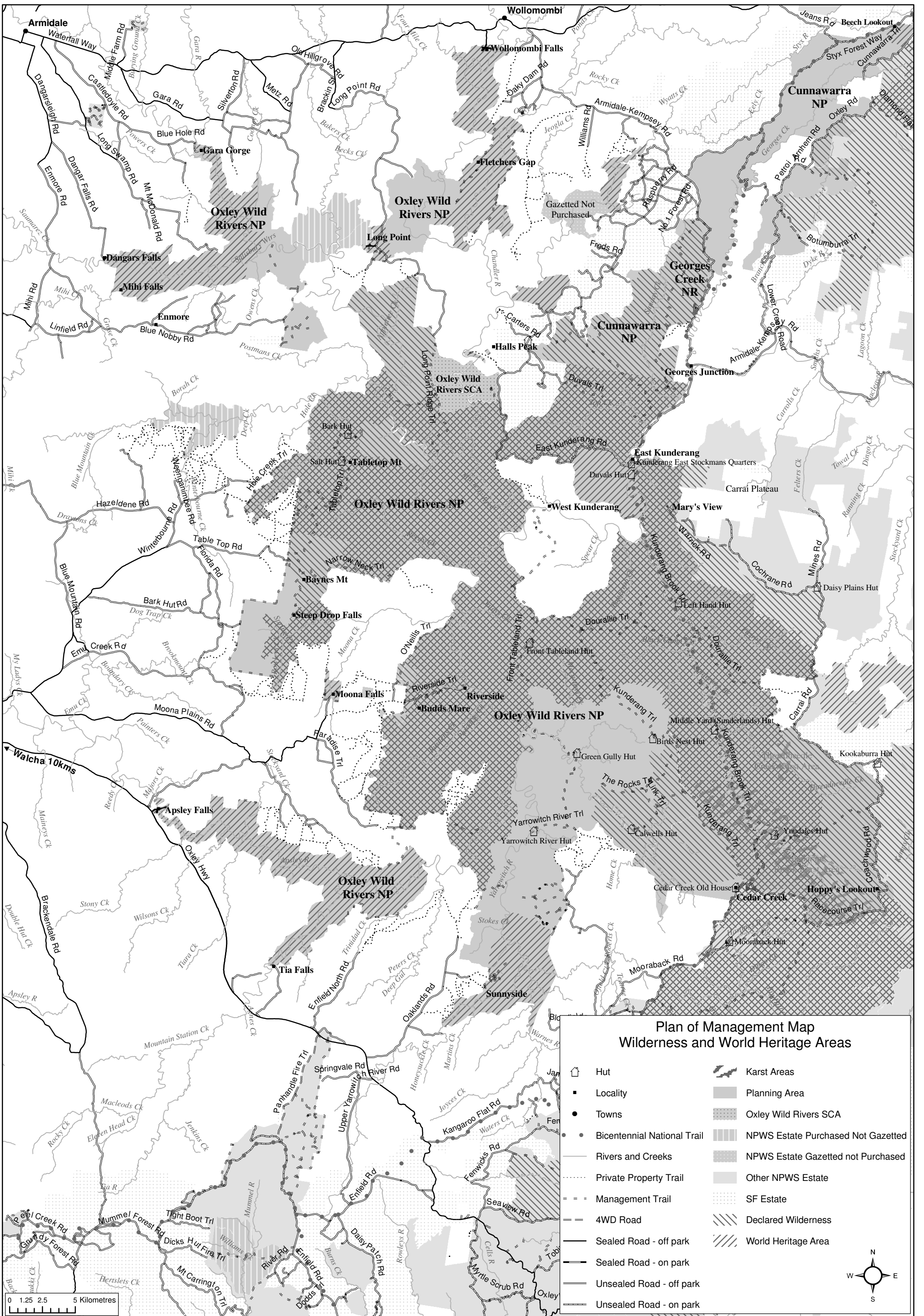
3.06 The action should be monitored by the authority responsible for giving the approval (or another appropriate authority) and, if necessary, enforcement action should be taken to ensure compliance with the conditions of the approval.



**Plan of Management Map**

- |   |                             |       |                                    |
|---|-----------------------------|-------|------------------------------------|
| ▲ | Camping Area                | ..... | Private Property Trail             |
| ⚡ | Day Use Area                | - - - | Management Trail                   |
| ⚡ | Lookout                     | ==    | 4WD Road                           |
| 🏠 | Hut                         | —     | Sealed Road - off park             |
| ■ | Locality                    | —     | Sealed Road - on park              |
| ● | Towns                       | —     | Unsealed Road - off park           |
| ▶ | Locked Gate                 | —     | Unsealed Road - on park            |
| ⊙ | Quarry                      | ▨     | Karst Areas                        |
| ● | Bicentennial National Trail | ▨     | Planning Area                      |
| — | Rivers and Creeks           | ▨     | Oxley Wild Rivers SCA              |
|   |                             | ▨     | NPWS Estate Purchased Not Gazetted |
|   |                             | ▨     | NPWS Estate Gazetted not Purchased |
|   |                             | ▨     | Other NPWS Estate                  |
|   |                             | ▨     | SF Estate                          |





**Plan of Management Map  
Wilderness and World Heritage Areas**

- |  |                             |  |                                    |
|--|-----------------------------|--|------------------------------------|
|  | Hut                         |  | Karst Areas                        |
|  | Locality                    |  | Planning Area                      |
|  | Towns                       |  | Oxley Wild Rivers SCA              |
|  | Bicentennial National Trail |  | NPWS Estate Purchased Not Gazetted |
|  | Rivers and Creeks           |  | NPWS Estate Gazetted not Purchased |
|  | Private Property Trail      |  | Other NPWS Estate                  |
|  | Management Trail            |  | SF Estate                          |
|  | 4WD Road                    |  | Declared Wilderness                |
|  | Sealed Road - off park      |  | World Heritage Area                |
|  | Sealed Road - on park       |  |                                    |
|  | Unsealed Road - off park    |  |                                    |
|  | Unsealed Road - on park     |  |                                    |

0 1.25 2.5 5 Kilometres

