BELLINGER RIVER NATIONAL PARK

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

May 2000

This plan of management was adopted by the Minister for the Environment on 15th May 2000.

Acknowledgments: This plan of management was prepared by staff of the Northern Region of the NSW National Parks and Wildlife Service.

Acknowledgment is made of the specialist advice provided by Lachlann Ison, John Hunter and Phil Gilmour in the preparation of the draft plan of management.

Members of the Bellingen community and others who provided comments on the draft plan, participated in consultation workshops or contributed to the planning process in other ways are gratefully acknowledged.

Photograph of Bellinger River National Park with Bellinger River in foreground by Janelle Brooks.

NSW National Parks and Wildlife Service

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FOREWORD

Bellinger River National Park is located between New England and Dorrigo National Parks, south of Dorrigo on the north coast of NSW.

The park was reserved as part of the New South Wales Government's forest reforms, which aim to establish a comprehensive, adequate and representative reserve system in NSW. Other parks in the region established under the same reforms are Chaelundi, Nymboi-Binderay and Dunggir National Parks.

Bellinger River National Park forms a continuous forested link between Dorrigo and New England National Parks, both of which are included as part of the Central Eastern Rainforest Reserves of Australia World Heritage Area. Bellinger River National Park is being considered for addition to this World Heritage property.

The natural floral diversity of the park includes subtropical, gully and dry rainforests, creating habitat for many species of fauna. At least ten animal species and one plant species listed as endangered or vulnerable on the *Threatened Species Conservation Act 1995* are known to occur within the park. Six plant species listed nationally as rare or threatened also occur within the park.

The emphasis of management of the park is to protect and restore the natural and biophysical characteristics of the park, to provide a wildlife link between the adjoining Dorrigo and New England National Parks, and to manage the park as part of the regional system of reserves on the Great Escarpment.

This plan of management establishes the scheme of operations for Bellinger River National Park. In accordance with the provisions of section 75 of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

Bob Debus

Minister for the Environment

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1. INTRODUCTION

The *National Parks and Wildlife Act 1974* (NPW Act) requires that a plan of management be prepared for each national park. A plan of management is to contain a written scheme of operations proposed to be undertaken within the national park, and must be consistent with the purpose and objectives of the Act.

The Act requires that a plan of management is placed on public exhibition for at least one month. This is an opportunity for individuals, community groups and organisations to formally comment on the draft plan. During the period of public exhibition, any person may submit comments about the plan.

After public exhibition of the plan of management, the plan and all representations received in response to the exhibition are referred to the National Parks and Wildlife Advisory Council for consideration and advice. The plan is then submitted, together with comments from the Advisory Council, to the Minister for the Environment.

The Minister may adopt the plan of management with or without alteration, or may refer it back to the Director-General and Advisory Council for further consideration.

Once a plan has been adopted by the Minister, no operations may be carried out in the national park unless they are in accordance with the plan.

A draft plan of management for Bellinger River National Park was placed on public exhibition from 7th May to 30th July 1999. The exhibition of the draft plan attracted 23 submissions which raised 3 issues. All comments received were referred to the National Parks and Wildlife Advisory Council for its consideration and advice. The comments and suggestions of the Council were in turn considered by the Minister before adopting this plan of management.

Enquiries relating to this plan of management or to the management of Bellinger River National Park can be directed to the NPWS office at the Rainforest Centre, Dorrigo National Park (telephone 02 6657 2309).

2. MANAGEMENT CONTEXT

2.1 National Parks in New South Wales

The national park concept was introduced into Australia through the establishment of Royal National Park in 1879.

For the purposes of preparing a plan of management, the NSW National Parks and Wildlife Service has adopted the International Union for the Conservation of Nature and Natural Resources (IUCN) Guidelines for Protected Area Management (1994) which defines a national park as:

"*A natural area of land and/ or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area, and (c) provide a foundation for spiritual, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.*"

National parks are part of the regional pattern of land use. The management of a national park aims at minimising disturbance to its natural and cultural heritage. Other land uses (for example, agriculture, forestry and mining) are distinguished by an acceptance or encouragement of environmental modification. National parks, therefore, provide for only a limited part of the land use in any region.

2.2 Bellinger River National Park

Bellinger River National Park is located approximately 14 kilometres west of Bellingen and eight kilometres south of Dorrigo. It comprises 2,862 hectares of forested land and forms a backdrop to a section of the Bellinger Valley. Formerly Bellinger River State Forest, the decision to reserve the area as a national park was announced in September 1996 as part of the NSW Government's forest reforms. The primary aim of these reforms is to establish a comprehensive, adequate and representative reserve system in NSW.

The Bellinger River National Park is part of a broad contiguous belt of relatively undisturbed forested land along the eastern escarpment and plateau, from north of Dorrigo to the Hastings valley. Protected reserves in this land system include Dorrigo, New England, Guy Fawkes River, Cathedral Rocks, Gibraltar Range, Washpool, Werrikimbe, Oxley Wild Rivers, Chaelundi, Nymboi-Binderay and Dunggir National Parks, and Mount Hyland and Guy Fawkes River Nature Reserves.

The park falls within the territory of the Gumbaynggir Aboriginal people. Archaeological evidence of Aboriginal use of the park is minimal. This is primarily a reflection of the lack of archaeological surveys in the park, the often elusive and sometimes cryptic nature of records of Aboriginal use of rainforests, and the sensitivity of the archaeological evidence to disturbance. A bora ring located outside the park near Thora and a record of a Meeluara site (animal increase centre) south west of McGraths Hump indicate that the area was important for ceremonial activities and is likely to be of high local significance.

The area forms part of one of the largest significant refuges for forest dependent fauna in north-east NSW. Bellinger River National Park is an important link in the conservation of protected forested habitat along the Great Escarpment, linking the New England and Dorrigo National Parks (refer map, page 4).

The initial proposal for dedication of a Bellinger River National Park was jointly made by the Dorrigo and New England National Parks Trusts in 1971. The proposal outlined the values of the park, including significant areas of high quality rainforest, and its value as a corridor between the two existing national parks. The early proposal was rejected in 1973, as the then Commissioner of Forests stressed the importance of the forests for maintenance of hardwood sawlog supplies to mills in the Bellinger Valley. The National Parks Association of NSW submitted the same proposal in 1977, but it was again unsuccessful. Most recently, the Bellingen Environment Centre submitted a proposal for the gazettal of the park.

Bellinger River National Park falls within a zone of very high rainfall receiving, on average, greater than 1,500 mm annually across most of the park. The park, along with Dorrigo and New England National Parks, provides protection for part of the catchment of the Bellinger River. Within the park are Richardsons Creek and Water Gum Creek, tributaries of the Bellinger River flowing off the Dorrigo plateau.

Both Dorrigo and New England National Parks are included as part of the Central Eastern Rainforest Reserves of Australia World Heritage Area. Bellinger River National Park is being considered as an addition to this World Heritage property.

Due to its steepness and limited public access, the park has had minimum recreational use, with the majority of use being self-reliant pursuits such as bush walking, nature study and photography.

Timber-getting has been a principal economic activity in the Bellinger Valley since the 1840s. Due to the steep terrain of the area, logging has been limited to the accessible areas. For most of the past century logging has been only light and selective (SFNSW 1995).

The park is locally significant for the protection of the corridor of forested habitat between Dorrigo and New England National Parks. It is a strategic component in the regional system of reserves on the eastern escarpment and plateau margins.

3. OBJECTIVES OF MANAGEMENT

3.1 Objectives of national park management

As outlined by the *National Parks and Wildlife Act 1974*, management of the Bellinger River National Park will be in accordance with the following objectives:

- the conservation of wildlife;
- the preservation of the national park and the protection of its special features;
- the prohibition of the execution of any works adversely affecting the natural condition or special features of the national park;
- the preservation of any historic structure or object or any relic or Aboriginal place in the national park; and
- the encouragement and regulation of appropriate use, understanding and enjoyment of the national park.

3.2 Objectives for management of Bellinger River National Park

In addition to the above legislative objectives, the management of Bellinger River National Park will be in accordance with the following specific objectives:

- protection of Bellinger River National Park as part of a system of rainforest reserves in north-east NSW, and as a link between Dorrigo and New England National Parks which have been internationally recognised as part of the Central Eastern Rainforest Reserves of Australia World Heritage Area;
- protection of the physical, biological and scenic features of Bellinger River National Park, as part of a system of forested lands bridging the escarpment fall between the Dorrigo Plateau and the Bellinger Valley; and
- promotion of the importance of the park as a continuous forested link between Dorrigo and New England National Parks.

3.3 Management strategy

Within the operational timeframe of this plan of management, the emphasis for management of Bellinger River National Park will be on protection of the natural and biophysical characteristics of the park, as a continuous forested link joining the Dorrigo and New England National Parks, and as part of a regional system of reserves on the Great Escarpment. Provisions for recreation in the park will complement existing opportunities for recreation in other parks and public land in the region.

4. POLICIES AND FRAMEWORK FOR MANAGEMENT

This section contains the policies and framework for the management of Bellinger River National Park, supported by relevant background information. Policies are addressed under the following section headings:

4.1 Conservation of natural landscapes

4.2 Conservation of cultural heritage

4.3 Use of the park

The policies outlined in this plan of management will provide the framework for management of Bellinger River National Park. These are based on consideration of matters raised through the community consultation process, NPWS legislative responsibilities and anticipated availability of resources for management of the park.

Management actions in this plan have been developed to pursue the stated objectives for management of the park. Where not specified in this plan, management of Bellinger River National Park will be in accordance with the provisions of the *National Parks and Wildlife Act 1974* and general NPWS policies.

4.1 Conservation of natural landscapes

4.1.1 Geology, landform, hydrology and soils

The Bellinger River National Park ranges from 40 metres above sea level in the Bellinger Valley to an altitude of 800 metres on the Dorrigo Plateau. The park is an important forested corridor, bridging the steep fall from the Dorrigo Plateau to the Bellinger Valley, and linking the escarpment forests of the New England and Dorrigo National Parks.

The majority of the Bellinger River National Park lies on Bellinger River Slates with some of the escarpment on Tertiary Basaltic Volcanics. In the north-eastern section of the park, the geological types are McGraths Hump Metabasalt and Dorrigo Mountain Complex. The steeply-dipping slates of the Bellinger River National Park are one of the geological types most susceptible to mass erosion (Soil Conservation Service of NSW 1994).

Bridging the fall between the Dorrigo Plateau and the Bellinger Valley, the majority of the park is steeply sloped. Table 1 shows that more than three-quarters of the area of the park has a slope gradient of greater than 25°.

Table 1: Slope class, Bellinger River National Park

Slope Class	Area	Proportion of total	Cumulative percentages
20° - 25°	499 ha	18%	94% > 20°
25°-30°	652 ha	23%	76% > 25°
30°-35°	1,205 ha	42%	53% > 30°
>35°	326 ha	11%	11% > 35°

Adapted from SFNSW (1995).

The soils of the park are characteristically highly susceptible to erosion. Table 2 outlines the soil landscapes of the park. The steep colluvial Diehappy soil landscape in Bellinger River National Park, comprising 66% of the total area of the park, has both highly erodible topsoil and subsoil (SFNSW 1995).

Table 2: Soil landscape units, Bellinger River National Park

Soil landscape unit	Area (ha)	% of park	Characteristics
Bellinger	78	3	Topsoil and subsoil highly erodible; unsuitable for untreated roading (silts and fine sand topsoil; clayed sands subsoil). Alluvial soil.
Bundageree	47	2	Transferral soil. Highly erodible subsoil.
Diehappy	1,872	66	Colluvial soil associated with sideslopes. Highly erosive topsoil and subsoil.
Kellys Creek	8	<1	Colluvial soil. Topsoil unsuitable for untreated roading (clayed sands).
McAlisters Peak	325	11	Colluvial soil associated with escarpments.
Pine Creek	517	18	Topsoil unsuitable for untreated roading (organic silts).

Adapted from SFNSW (1995).

The Bellinger River National Park includes part of the catchment of the Bellinger River, which joins the Kalang River and flows into the Pacific Ocean at Urunga. Within the national park, Richardsons Creek, Water Gum Creek and several unnamed watercourses flow directly into the Bellinger River. The Bellinger River forms the southern boundary of the park in some sections.

Maintenance of the water quality of streams within the park is important because they flow into the Bellinger River which provides habitat for the Bellinger River short-necked turtle (*Emydura sp*.). Although this species has not yet been formally described, it is only known to occur in a restricted section of the Bellinger River upstream of Thora (Cann 1994). The species is considered vulnerable under the *Threatened Species Conservation Act 1995* and may be sensitive to changes in water quality.

Water quality of the Bellinger River is also important because the river provides domestic water for the townships of Bellingen and Urunga. Many riverside rural properties also use the river for their water supply.

The *Catchment Management Act 1989* provides the framework for total catchment management in NSW. Amongst its stated aims are cleaner water, less soil erosion,

improved vegetation cover, the maintenance of ecological processes and a balanced and healthy environment. Total catchment management also provides a focus to balance conservation needs and development pressures and aims to encourage a more aware and involved community. An important means of achieving these aims is the formation and support of catchment management committees at a local level.

Policies and actions

- Management will aim to decelerate or stabilise erosion where it has been accelerated by human activities or is threatening significant habitats, significant cultural sites or other values.
- In order to ensure that management activities and works within the park do not cause or accelerate the process of erosion, all management activities and works undertaken within Bellinger River National Park will be consistent with standard erosion mitigation guidelines developed by the Department of Land and Water Conservation.
- Proposed developments or activities which may compromise the landforms, hydrology, or scenic or cultural features of the park will be opposed by NPWS.
- The NPWS will liaise with the Dorrigo Mountain Top Landcare Group, Bellinger River Catchment Management Committee, Orama River Care Association, and neighbouring land owners in the Bellinger Valley and on the escarpment to maintain and improve the water quality and soil stability within the park.
- Areas of human induced erosion within the park will be identified and measures implemented to decelerate or stabilise the erosion. A program of restoration will be undertaken for areas of erosion caused by past management, or threatening significant habitat or other values. Restoration will include stabilisation of the erosion and rehabilitation of the affected areas.

4.1.2 Native Plants

An assessment of the vegetation present within the national park was undertaken in 1999 (Austeco Environmental Consultants). A total of 322 species was recorded from the 33 sites surveyed within the park and communities assessed using air photo analysis.

Rainforest comprises around one third of the park, primarily in the steep gullies and along drainage lines in the park. The rainforest types have been mapped as subtropical rainforest and warm temperate rainforest. The park is being considered as an addition to the Central Eastern Rainforest Reserves of Australia World Heritage Area. The neighbouring Dorrigo and New England National Parks are already part of this World Heritage property.

Table 3 outlines the main vegetation communities within the park.

Table 3: Vegetation Communities, Bellinger River National Park

Vegetation Community	Area (ha)	% of park
Warm Temperate Rainforest	300	10
Subtropical Rainforest	640	22
Tall Wet Sclerophyll Forest	880	32
Tall Wet Sclerophyll Forest	445	15
Tall Dry Sclerophyll Forest	445	15
Tall Wet/Dry Sclerophyll Forest	160	6

Based on Austeco, 1999.

Within the park, subtropical rainforest occurs on the escarpment on the Tertiary Basaltic Volcanic geological formation. It contains emergent flooded gums (*Eucalyptus grandis)* and other species.

Warm temperate rainforests occur in the gullies extending from the escarpment to the Bellinger Valley on the sedimentary rocks of the Bellinger River Slate geological formation. This forest type contains a mixture of the characteristics of subtropical and warm temperate rainforests, and occurs in areas which receive average annual rainfalls of between 1,500 and 2,100 mm. Coachwood (*Ceratopetalum apetalum)*, crab apple *Schizomeria ovata,* sassafras (*Doryphora sassafras)*, red cedar (*Toona ciliata)* and the giant stinging tree (*Dendrocnide excelsa)* are some of the associated species. Bangalow palm (*Archontophoenix cunninghamiana)* is common. Characteristics of this forest type include a great variety of tree species, tall closely spaced trees, epiphytic ferns, orchids, vines, palms, strangling figs and trees with large buttresses.

Hoop pine (*Araucaria cunninghamii)* occurs as an emergent tree in some of the dry rainforest patches. Epiphytes are less abundant and diverse than in either the subtropical or gully rainforests, and palms are absent. This community is primarily associated with the escarpment within the park.

A tall wet sclerophyll forest of Sydney blue gum (*Eucalyptus saligna*) and tallowwood (*Eucalyptus microcorys)* occurs at mid elevations, generally towards the eastern boundaries of the park. It has a well-developed mesophytic understorey of rainforest trees, shrubs and vines. These forest types are closely associated with the rainforests within the park, occurring on the sideslopes.

Blackbutt *(Eucalyptus pilularis)* is an extensive forest type within the park. Tall wet sclerophyll forest dominated by blackbutt and turpentine (*Syncarpia glomulifera*) occurs on well developed soils along ridges and upper valley slopes, where trees may reach heights of 55 metres. A tall dry sclerophyll forest is found on the drier exposed north-south ridges. Blackbutt is the dominate tree species and tree heights are lower.

A dry sclerophyll forest dominated by white mahogany (*Eucalyptus acmenioides)* and grey gum *(Eucalyptus propinqua)* occurs in the far eastern areas of the park. At sites with long burning intervals, this forest forms a wet sclerophyll forest with a dense shrubby understorey.

A small area, approximately 0.5 hectares, of lowland rainforest dominated by white booyong (*Argyrodendrum trifoliolatum*) (without Eucalypt emergents) has also been found in the park near the river. Lowland rainforest has been listed as an Endangered Ecological Community under the NSW *Threatened Species Conservation Act 1995* (TSC Act).

Several plant species listed nationally as rare, or as endangered or vulnerable under the TSC Act, have also been recorded within the park, or are considered likely to occur within the park based on their distribution and habitat characteristics. These species are listed in Table 4.

Table 4: Nationally rare or threatened plants known or likely to occur in Bellinger River National Park (* denotes listing on TSC Act)

Species known to occur in Bellinger River National Park	Species which may also occur in Bellinger River National Park
Dorrigo waratah *Alloxylon pinnatum*	*Acacia tessellata*
Pink cherry *Austrobuxus swainii*	*Rusty plum *Amorphospermum whitei*
Ringwood *Backhousia anisata*	Dorrigo laurel *Cryptocarya dorrigoensis*
Five-leaved bonewood *Bosistoa floydii*	Mountain laurel *Cryptocarya nova-anglica*
Goodenia fordiana	*Eucalyptus ancophila*
Large-flowered milk vine *Marsdenia liisae*	*Red boppel nut *Hicksbeachia pinnatifolia*
*Milky silkpod *Parsonsia dorrigoensis*	*Milletia australis*
	**Neoastelia spectabilis*
	*Dorrigo daisy bush *Olearia flocktoniae*
	Quassia sp. A
	*Ravine orchid *Sarcochilus fitzgeraldii*

Distributed from the Bellinger Valley to Hastings River, *Acacia tessellata* is a tall shrub or small tree 2.5 to 15 metres in height (Harden 1993a). It occurs in tall moist eucalypt forest, at the edge of rainforest and among rock outcrops. It has been recorded in New England and Werrikimbe National Parks (Binns 1995).

Typically occurring above 700 metres altitude, the Dorrigo waratah (*Alloxylon pinnatum)* inhabits warm temperate rainforest and rarely wet sclerophyll forest. The species is a tree reaching 24 metres in height, and has red or pink flowers (Harden 1993a). Distributed from near Dorrigo to the McPherson Range (Tweedie *et al*.

1995), the species is known to occur in Dorrigo National Park (Binns 1995) and in Bellinger River National Park (Phil Gilmour pers. comm.).

Amorphospermum whitei is a small to medium sized tree which reaches a height of up to 20 metres (Floyd 1989). The common name of the species (rusty plum) is attributed to the rusty appearance of the crown from beneath. The species has a distribution north from the Macleay River to southern Queensland. It occurs in littoral and warm temperate rainforest, and also in wet sclerophyll forest with or without a well developed rainforest understorey (Tweedie *et al*. 1995).

Austrobuxus swainii is a rainforest tree occurring in warm temperate rainforest, rainforest ecotones, and the understoreys of moist hardwood forests. The Bellinger Valley is the southern extent of its distribution, which ranges to just north of the Queensland border (Moore and Floyd 1994). The species has been recorded within Bellinger River National Park, and is also reserved in Dorrigo National Park (Floyd 1989).

Known as ringwood or aniseed tree, *Backhousia anisata* occurs in gully rainforests on the better alluvial soils along streams, and is associated with *Archontophoenix* on the poorer soils of the lower slopes. This medium to large tree is virtually confined to the Nambucca and Bellinger valleys (Floyd 1989). Bellinger River National Park is important for the conservation of this inadequately conserved species.

Restricted to the NSW North Coast, but locally abundant from the Nambucca to the Richmond Rivers in NSW, *Bosistoa floydii* occurs in subtropical rainforest on rich alluvial or basaltic soils. This small to medium sized tree has been recorded in both Dorrigo and Bellinger River National Parks (Floyd 1989).

Cryptocarya dorrigoensis is generally a multi-stemmed small to medium tree up to six to 20 metres tall, and with a stem diameter up to ten centimetres (Floyd 1989). The species occurs in the understorey of warm temperate rainforest on cold exposed ridges at 600-700 m altitude, or in the understorey of cool temperate rainforest at 800 m as an understorey to *Nothofagus moorei* and *Doryphora sassafras*. Confined to eastern Dorrigo, it has been recorded on Dome Mountain and Killungoondie Plain in Dorrigo National Park (Floyd 1989) and is expected to occur in Bellinger River National Park.

Known as mountain laurel, *Cryptocarya nova-anglica* is a small tree which generally occurs at altitudes above 1,200 metres, and is usually restricted to cool temperate rainforest areas. The species has been recorded in Mount Hyland Nature Reserve, New England National Park, Guy Fawkes River National Park and Chaelundi Mountain (Binns 1995). Suitable habitat is thought to occur within the park.

Endemic to the Bellinger, Nambucca and Macleay River Basins of the NSW North Coast, *Eucalyptus ancophila* occurs on lower slopes and valleys of subcoastal ranges and foothills, in wet sclerophyll forests with rainforest understorey (NPWS 1994a). The tree reaches 35 metres in height and is a type of ironbark (Harden 1993a).

Goodenia fordiana is a prostrate herb endemic to the NSW North Coast, occurring from Coffs Harbour to Bulahdelah. Little is known about the habitat of this species, other than it occurs in sclerophyll forest and woodland of coastal ranges (NPWS

1994a). It is most likely to occur in areas receiving an annual rainfall greater than 1,200 mm, and has been recorded in the park (Phil Gilmour pers. comm.).

A small tree with corky bark, *Hicksbeachia pinnatifolia* grows in subtropical rainforest from the Nambucca valley to south-east Queensland. It has been recorded in subtropical rainforest and under flooded gum/tallowwood forest in the Richmond Valley, as well as in Dorrigo National Park (Sheringham and Westaway 1995).

Marsdenia liisae has scattered occurrences from the Nightcap Range to the Hastings River. This vine is recorded in the Guy Fawkes River area in dry open forest dominated by *Eucalyptus campanulata* and *E. microcorys* (Sheringham and Westaway 1995), and has also been recorded in disturbed areas in wet sclerophyll forest and rainforest (Moore and Floyd 1994). In Dorrigo National Park the species occurs in warm temperate rainforest (J. Hunter pers. comm.). Known also to occur in New England and Guy Fawkes River National Parks (Sheringham and Westaway 1995), the species probably occurs in Bellinger River National Park.

A robust subtropical rainforest vine of the coast and adjacent ranges, *Millettia australis* is found in dry and littoral rainforest. The species has a wide distribution from Melanesia and New Guinea, through Queensland to Port Macquarie. The closest record of the species to the park is in Dorrigo National Park (Moore and Floyd 1994).

Considered endemic to New England National Park (Binns 1995), *Neoastelia spectabilis,* a tufted perennial herb (Harden 1993b), occurs in rock crevices near waterfalls and seepage areas on rocky slopes in cool temperate rainforest. The species occurs at 900-1,100 metres altitude, and may occur along the Bellinger River escarpment (Tweedie *et al*. 1995).

The Dorrigo daisy bush *Olearia flocktoniae* is known from many locations on the Dorrigo Plateau and is considered to be endemic to this area (Griffith pers. comm.). The species is a pioneer species of disturbed wet sclerophyll forest and rainforest, but is believed to be threatened by ongoing habitat loss and inappropriate forest management practices (Griffith 1992). The species may occur in suitable habitat within Bellinger River National Park. A draft species recovery plan has been prepared for *Olearia flocktoniae* (Griffith 1992). Recovery actions in the plan include research, surveillance, and management of habitat. If found within the park, management of the park will include implementation of the appropriate recovery actions.

Parsonsia dorrigoensis occurs in subtropical and warm temperate rainforests, especially in more open parts and on rainforest margins, and in wet sclerophyll forests (Quinn *et al*. 1995). The species is a climber to five metres high with slender twining stems, and has a milky stem when cut (Quinn *et al*. 1995). It has been recorded within an altitudinal range of 150-800 metres and is known from 14 small populations near Dorrigo. It occurs in the valleys of the Bellinger, Kalang, and Nambucca Rivers, and Woolgoolga Creek. It is locally common in parts of the Bellinger catchment (J. Hunter pers. comm.). Past threats include clearing of the Dorrigo Plateau and the Bellinger and Kalang River valleys. Quinn *et al*. (1995) recommended further searches for the species.

Quassia sp. A occurs from Dorrigo National Park to the lower Tweed. An understorey species to five metres tall, the tree grows under subtropical rainforest (Tweedie *et al.* 1995).

An orchid restricted to few sites in wet sclerophyll forests and rainforest ecotones, *Sarcochilus fitzgeraldii* occurs in shallow humus on rocks or occasionally on the base of large trees. It grows at altitudes between 500 and 700 metres, in moist shady conditions such as ravines or near streams. The species has a scattered distribution from the Macleay River to south-east Queensland, and has been recorded in Dorrigo National Park (Sheringham and Westaway 1995). Threats to the species include collection by orchid enthusiasts and invasion by the weed mistflower (*Ageratina riparia)* (Quinn *et al*. 1995).

It is also of note that two species, the Sydney red gum (*Angophora costata*) and three-veined cassinia (*Cassinia trinerva*), reach their northern limit on the NSW north coast within the park (Austeco, 1999).

Many of the rare or threatened species known or considered likely to occur in the park are rainforest species or occur in association with rainforest vegetation. Effective management of rainforest within the park will be critical in achieving the objectives of this plan.

The Threatened Species Conservation Act requires that a recovery plan be prepared for all species listed as endangered or vulnerable under the Act. The purpose of a recovery plan is to promote the recovery of the species to a position of viability in nature. Where a plan exists for species occurring within Bellinger River National Park, any relevant actions from those plans will be implemented.

Policies and actions

- The range of native vegetation communities and natural ecological processes within the park will be conserved.
- Management will aim to minimise threats to plant species occurring within the park which are listed nationally as rare or threatened, or which are listed as endangered or vulnerable under the NSW *Threatened Species Conservation Act 1995*. Where recovery plans exist for species within the park, these will be implemented.
- Management will aim to minimise threats to plant species occurring within the park which are of regional significance due to their distributional limits or for other reasons.
- Research into the vegetation communities and significant flora species of the park will be encouraged. Priority will be given to proposals which will provide information to enhance management of the park.
- Information on native plants and vegetation communities within the park, including their location and conservation status (for example, listing on TSC Act schedules) will be entered into the NPWS Wildlife Atlas database and made accessible for the management of and planning for the park.

4.1.3 Native Animals

A survey of the native animals of the park was undertaken in 1998 and the fauna of the park has been sampled as part of larger regional surveys (for example: SFNSW 1995; NPWS 1994b). Information gathered from these surveys indicates that Bellinger River National Park provides a range of habitat types and supports a rich array of native animals.

Mammals recorded within the park include the vulnerable (TSC Act) tiger quoll (*Dasyurus maculatus*), koala (*Phascolarctos cinereus*) and parma wallaby (*Macropus parma*). The long-nosed bandicoot (*Perameles nasuta*), mountain brush-tail possum (*Trichosaurus caninus*), eastern grey kangaroo (*Macropus giganteus*), bush rat (*Rattus fuscipes*), and the greater glider (*Petauroides volans)* have also been recorded in the park. Based on an assessment of habitat, the vulnerable long-nosed potoroo (*Potorous tridactylus*), squirrel glider (*Petaurus norfolcensis*) and yellow-bellied glider (*Petaurus australis*) are likely to occur within the park.

Bat species known to occur within the park are the little bent-wing bat (*Miniopterus australis*), which is a vulnerable species (TSC Act), Goulds long-eared bat (*Nyctophilus gouldi*), eastern broad-nosed bat (*Scotorepens orion*), little cave eptesicus (*Vespadelus pumilus*), and King River eptesicus (*Vespadelus regulus*).

The echidna (*Tachyglossus aculeatus*) has been recorded within the park, and the platypus (*Ornithorhynchus anatinus*) has been recorded in the Bellinger River (Grant and Denny 1993). There is documented evidence of platypuses being taken by foxes (Grant and Denny 1993) so fox control at the lower elevations is important for the maintenance of platypus in the river.

Sixty-nine bird species have been recorded within the park (Holmes 1979), many of which are rainforest-dependent species. Records include the vulnerable (TSC Act) wompoo fruit-dove (*Ptilinopus magnificus*) which is the largest of the fruit-doves, and rose-crowned fruit-dove (*Ptilinopus regina*) which is close to the southern limit of its range in Bellinger River National Park. The vulnerable rufous scrub-bird (*Atrichornis rufescens*) may also occur in the park. Other species known to occur are the Australian king parrot (*Alisterus scapularis*), Australian owlet-nightjar (*Aegotheles cristatus*), rainbow bee-eater (*Meropus ornatus*), superb lyrebird (*Menura novaehollandiae*), scarlet honeyeater (*Myzomela sanguinolenta*), paradise riflebird (*Ptiloris paradeseus*) and satin bowerbird (*Ptilonorhynchus violaceus*).

The wedge-tailed eagle (*Aquila audax*), grey goshawk (*Accipiter novaehollandiae*), and the endangered (TSC Act) red goshawk (*Erythrotriorchis radiatus*) have also been recorded in the park.

The masked owl (*Tyto novaehollandiae*) and sooty owl (*Tyto tenebricosa*), both vulnerable (TSC Act) large forest owls, are known to occur within the park. Both species require large hollow bearing trees for nesting, and maintenance of arboreal mammals which comprise a significant portion of their diet.

Frog species known to occur within the park include the ornate burrowing frog (*Limnodynastes ornatus*), red-backed toadlet (*Pseudophryne coriacea*) and Lesueurs frog (*Litoria lesueuri).* Based on habitat assessments, the vulnerable (TSC Act) pouched frog (*Assa darlingtoni*), New England tree frog (*Litoria*

subglandulosa), stuttering frog (*Mixophyes balbus*), giant barred frog (*Mixophyes iteratus*) and sphagnum frog (*Philoria sphagnicolus*) are likely to occur within the park.

Twelve reptile species are known to occur within the park. These include the eastern water dragon (*Physignathus lesueurii*), lace monitor (*Varanus varius*), eastern blue-tongued lizard (*Tiliqua scincoides*) and red-bellied black snake (*Pseudechis porphyriacus*). The vulnerable (TSC Act) Stephens banded snake (*Hoplocephalus stephensii*) has been recorded within the park. Turtle species which have been recorded in the Bellinger River and may occur within the park include the Bellinger River saw-shelled turtle (*Elseya sp*.), which is restricted to the Bellinger drainage, and the vulnerable (TSC Act) Bellinger River short-necked turtle (*Emydura sp*.) which is restricted to a section of the Bellinger River upstream of Thora (Cann 1994). These turtles may use the park for nesting.

The TSC Act requires that a recovery plan be prepared for all species listed under the Act. Where a plan exists for endangered or vulnerable animals occurring within Bellinger River National Park, any actions from those plans relevant to the management of the park will be implemented.

Policies and actions

- The range of native animals and their habitats and natural ecological processes within the park will be conserved.
- Management will aim to minimise threats to native animals known to occur within the park. Where recovery plans exist for species within the park, these will be implemented.
- A comprehensive fauna survey will be undertaken within the park in 1997/98. The survey will particularly target threatened (TSC Act) animals known or considered likely to occur within the park.
- Research into the native animal communities and significant animal species of the park will be encouraged. Priority will be given to proposals which will provide information to enhance management of the park.
- Information on native animals within the park, including their conservation status, will be entered into the NPWS Wildlife Atlas database and made accessible for management of and planning for the park.

4.1.4 Fire management

Fire is an important natural phenomenon recognised as one of a number of factors determining the composition of vegetation and faunal communities in Australia. Many species of Australian flora and fauna have developed mechanisms or behaviour to survive fire, and some require fire for reproduction or stimulation of new growth.

Rainforest communities, however, are particularly sensitive to fire. On the east coast of Australia, rainforest is generally distributed within the high rainfall belt (most of the park receives an average annual fall of between 1,500 and 1,700 mm, and up to 2,100 mm on the escarpment). Situated in the southerly facing gullies, the rainforests in the park are not affected by the hot dry northerly and westerly winds

which dry out the fuels in less protected areas. This, combined with the characteristic high humidity, high fuel moisture levels, and closed canopy of rainforests, generally renders these communities relatively fire free, with fire only occasionally burning through rainforest during periods of extreme fire weather conditions.

The majority of the rare or threatened plant species known or considered likely to occur within the park are rainforest species. Several threatened animal species known or likely to occur, including the wompoo fruit-dove, masked and sooty owls, and yellow-bellied glider, also rely on rainforest as habitat. Fire management of the park will have regard to the maintenance of rainforest types within the park.

In close association with rainforest, and also occupying a considerable area of the park, are the more fire-tolerant sclerophyll vegetation communities. A significant effect of fire on rainforest is the delimiting of rainforest margins when fires burn through adjacent fire tolerant eucalypt forest. Effective exclusion of fire from these forest communities may result in extension of the rainforest into adjoining eucalypt communities, while fire which penetrates rainforest may result in a retreat of rainforest and advance of the eucalypt communities.

NPWS is a fire authority under the *Rural Fires Act 1997* and has a responsibility to contain fires on areas of national park and to ensure they do not cause damage to other land or property. This responsibility includes the implementation of fuel management programs by prescribed burning or other mechanical means. NPWS may also assist with the control and suppression of fires on property adjacent to or near reserved lands.

The absence of fire scars on the bases of trees, and the presence of fire sensitive species such as brush cypress pine (*Calliatris maclaeyana*) (Boland *et al*. 1992), indicates that most of the park has remained unburnt for some time. Table 5 relates to fire history in Bellinger River National Park for the period 1989 to 1996 (Lachlan Ison, SFNSW, pers. comm.). While these recent fires were relatively small in area, a major wildfire in 1968 burnt a significant area of the park.

Table 5: Fire history within Bellinger River National Park 1989-1996

Date	General location	Area burnt within park
28/9/96	Enterprise Road	1 ha
12/10/93	Dorrigo Mountain Road	47 ha
13/9/91	Swing Saw Trail	50 ha
29/8/91	Swing Saw Trail	10 ha
12/10/89	Dorrigo Mountain Road	100 ha

Some fires in the past were associated with logging operations, however the most likely source of unscheduled fire to the park is escape from Waterfall Way or from private property or national parks on the boundaries of Bellinger River National Park.

NPWS regards co-operative fire management as essential for both the protection of surrounding property and of the natural heritage of Bellinger River National Park. An important part of NPWS's fire management is participation as a member of local District Bushfire Management Committees in the preparation of District Co-operative Bush Fire Risk and Operational Plans. These plans contain operational arrangements, fuel management planning and a resources directory. The commitments each organisation makes in the plan are legally binding.

Fire management will require comprehensive planning, particularly for species which are not fire tolerant, to ensure that both NPWS responsibilities under the *National Parks and Wildlife Act 1974* and the *Rural Fires Act 1997* can be achieved.

A fire management plan for the park will be prepared and implemented. The primary objectives of the plan will include conservation of biodiversity within the park and protection of life and property.

Policies and actions

- Fire management within Bellinger River National Park will be in accordance with Bellinger River National Park Fire Management Plan (when prepared) and the District Bush Fire Risk and Operational Plan.
- Fire management will aim to conserve biodiversity and minimise the threat of fires within the park on life and property.
- NPWS will aim to contain all fires within the boundaries of the park.
- NPWS will minimise the extent of environmental degradation caused by fire and fire suppression techniques.
- Fire planning within the park will include provisions to protect Aboriginal sites, historic places and management facilities within the park.
- Fire management in the park will aim to maintain species habitat and diversity, avoid local extinctions of native plant and animal species and enhance the conservation of rare or threatened native plant and animal species.
- Priority for fire management within the park is given to protection of life and property; suppression of wildfire; protection of Aboriginal sites, historic places and management facilities; conservation of vegetation communities and plant and animal species which require specific fire regimes; and maintenance of species and habitat diversity.
- No new vehicle trails will be constructed within the park unless they are essential for fire control or other emergency operations. Trails constructed for fire control or emergency operations will be closed and rehabilitated following completion of the operation.
- The NPWS will maintain liaison with local Rural Fire Service Brigades, Fire Control Officers, land managers and the Bellingen Bush Fire Management Committee to ensure cooperative fire management and co-ordination of wildfire suppression within the park and on adjoining private property.
- A fire management plan will be prepared for the park. The plan shall be pursuant of NPWS responsibilities under the *National Parks and Wildlife Act 1974*, *Rural Fires Act 1997* and the regional Fire Management Plan, and consistent with

regimes required to maintain the diversity of habitats and species naturally occurring within the park. Preparation of the plan will be undertaken in consultation with local fire management authorities and groups or individuals likely to be affected by fire management within the park.

- A geographical information database will be maintained for the park to record fire history, fire advantages (for example, fire trails, permanent water), sites requiring specific protection (e.g. archaeological sites, threatened species sensitive to fire), and other information relevant to fire management in the park. This information will be used for fire planning and for response to wildfires within the park.

4.1.5 Introduced plants and animals

Non-native plants and animals have an impact on the natural environment through displacement, predation, and disturbance. Activities such as roading, traffic, logging, and fire have provided opportunities for the introduction and invasion of non-native plants and animals.

No comprehensive survey of introduced plants and animals in the park has been undertaken, however, the flora and fauna surveys to be undertaken in 1997/98 will include recording pest plants and animals. Species known to occur in the park include red deer (*Cervus elaphus*), fallow deer (*Dama dama*), foxes (*Vulpes vulpes*), cats (*Felis catus*), dogs (*Canis familiaris*), goats (*Capra hircus*), lantana (*Lantana camara*), giant Parramatta grass (*Sporobolus indicus var. major*), honeysuckle (*Lonicera japonica*), senna (*Senna x floribunda*) and mistflower (*Ageratina riparia*). Parramatta grass and mistflower are listed as noxious weeds in Bellingen Shire.

The deer in the park are predominantly forest grazers, moving from forest cover in the late afternoon to feed at the forest edge and in clearings. Short grasses and sedges are eaten, and acacias, rushes and bracken browsed.

Foxes and cats are two of the largest terrestrial predators in mainland Australia, being predominantly carnivorous, although opportunistic predators and scavengers (Strahan 1995). Their diets include medium to small sized mammals, and there is evidence that they are predators of some endangered or locally rare species.

Able to feed on virtually any foliage below about 1.8 metres, feral goats can cause immense environmental damage. Even in low numbers, goats can have a noticeable impact on palatable species (Strahan 1995). By removing the vegetation and breaking up the surface with its hooves, goats make the soil more vulnerable to erosion. They also displace native species through habitat destruction and competition for habitat and food resources.

Lantana, a native of South America, rapidly establishes in disturbed areas. Effective control of lantana requires that sufficient follow-up work be carried out. Failure to do so will often result in the subsequent re-invasion of the area by lantana or invasion by other weed species.

Although not considered a serious threat within the park, giant Parramatta grass is a major threat to adjoining pastoral lands. Primarily a weed of disturbance, limited to roads and trails within the park, control of this species can be achieved with minimum impact to native species.

The *Noxious Weeds Act 1993* places an obligation upon public authorities to control noxious weeds on land that they manage to the extent necessary to prevent such weeds spreading to adjoining lands. NPWS is also responsible under the *Rural Lands Protection Act 1989* for fully and continuously suppressing and destroying any noxious animals (such as rabbits and pigs) found within the park.

Dingoes or wild dogs are present in the park (at present there is no reliable method to differentiate between dingoes and wild dogs). The dingo is not a noxious species under the *Rural Lands Protection Act 1989* where it occurs in national parks. NPWS considers the dingo to be part of the native fauna of NSW which it has the responsibility to conserve. However NPWS recognises that dingoes or wild dogs sometimes impact on livestock on areas adjacent to national parks and, despite its responsibility for conserving dingoes, NPWS accepts that there may be a need for management of dingoes on the margins of national parks to minimise attacks on stock where this occurs.

There are no licensed apiary sites within the park although introduced bees may occasionally forage in the park. Introduced bees may have an impact on native plants and animals and hives will therefore not be permitted.

Policies and actions

- Management will aim to minimise damage caused to natural vegetation, native animals and water quality within the park by non-native plants and animals.
- Priority for control of introduced species will be given to:
  - species which are aggressive competitors known to displace native species;
  - are damaging cultural heritage;
  - are or may affect neighbouring lands; may be a threat because of disease;
  - have a high capacity for dispersal; are new isolated occurrences; and/or
  - have the potential to spread along roads and management trails.
- Appropriate biological controls, where available, will be utilised to suppress and control non-native plant species within the park.
- Domestic pets, stock and other introduced animals will not be permitted in the park, with the exception of guide dogs for the blind. Bee keeping will not be permitted within the park.
- NPWS will undertake co-operative wild dog control along the park boundaries to reduce the impact to livestock on adjoining land where there is evidence that the wild dogs are coming from the park, where other control measures on the adjoining land including fencing have failed, and where the impact on the dingo population will not threaten the viability of dingoes or other native animals within the park.
- A pest species management plan will be prepared and implemented for the management of introduced plants and animals within the park. Preference will be given to management techniques which have minimum environmental impact. The pest species management plan will include a monitoring component so that the effectiveness of control can be measured.
- Dorrigo District will liaise with Bellingen Council, the Rural Lands Protection Board, Bellinger River Total Catchment Management Committee, Orama River

Care Association, Dorrigo Mountain Top Landcare Group and other land managers within the region to promote and participate in co-operative management of introduced species in the park and on neighbouring private property and ensure a co-ordinated response to management of problem species.

- Research into biological control methods, and assessment of the distribution, abundance and impact of introduced species on native species and habitats within the park will be encouraged.
- The known occurrence, distribution and density of introduced plants and animals will be periodically mapped as part of the monitoring strategy to be included within the introduced species control plan.

4.2 CONSERVATION OF CULTURAL HERITAGE

Cultural heritage encompasses both indigenous (Aboriginal) and non-indigenous heritage, and may be of aesthetic, historic, scientific and/or social significance to the community and to future generations. Preservation of cultural heritage will be an important aspect of management of Bellinger River National Park.

4.2.1 Aboriginal Cultural Heritage

There is no satisfactory chronology of Aboriginal use of the upper catchments of north coast rivers such as the Bellinger River. It is known, however, that use of the escarpment forests by Aboriginal people increased about 5,000 years ago.

Bellinger River National Park lies within the territory of the Gumbaynggir Aboriginal people, which extends from Grafton in the north to the Nambucca River in the south and westward from the coast to the headwaters of the Nymboida River. The park falls within a region not administered by a Local Aboriginal Land Council, but shares boundaries with the Bowraville, Coffs Harbour and Grafton Ngerrie Local Aboriginal Land Councils. Whilst NPWS has a legal responsibility for management of Aboriginal sites under the *National Parks and Wildlife Act 1974,* NPWS is committed to consultation with the Aboriginal community regarding management of Aboriginal sites and Aboriginal cultural heritage issues.

Evidence of Aboriginal use of the park is minimal, due partly to a lack of archaeological surveys in the area. In addition, archaeological surveys elsewhere in the northern forests of NSW have demonstrated that the material record of Aboriginal use of rainforests is elusive, and sometimes cryptic. The record is easily disturbed and has often been destroyed by European use of the land.

Although there are no records of Aboriginal sites within the park, a bora ring near Thora and a record of a Meeluara site (animal increase centre) south-west of McGraths Hump indicate that the area was important for ceremonial activities and is likely to be of high local significance.

Policies and actions

- Further research into the cultural and scientific significance of Aboriginal sites will be encouraged.

- Any Aboriginal sites found within the park will be recorded, conserved and protected in consultation with the local Aboriginal community, including the Bowraville, Coffs Harbour and Grafton Ngerrie Local Aboriginal Land Councils.
- Where appropriate, and in consultation with the local Aboriginal community, the natural degradation of sites will be retarded and sites will be protected from visitor and management activities.
- Any Aboriginal sites found within the park will be entered onto the NPWS Aboriginal sites database. The database will be consulted for management of and planning for the park.

4.2.2 Non-indigenous Cultural Heritage

The first Europeans in the Bellinger Valley were cedar getters, who arrived in the 1830s and 1840s to harvest valued timber from the extensive rainforest in the valley. Sheep and cattle were introduced into the region in the early 1840s. A second wave of cedar getting occurred in the 1850s, leading to establishment of permanent European settlements in the region. Land around Bellingen was settled in 1863.

Following the construction of the Dorrigo Road (now known as Waterfall Way) in the 1880s settlement became more extensive, and the early 1900s saw the expansion of the hardwood timber industry. Sawmills replaced the traditional saw-pit method of sawing cedar. The mills were set up close to or within the forests. By the 1920s bullock teams had been replaced by traction engines, which were later replaced by tractors and trucks. In the 1950s, as a result of improved roads and advances in machinery, the sawmills were removed from the forests to nearby towns.

Due to the steep terrain and numerous creeks and gullies within Bellinger River National Park, most of the area has only been lightly selectively logged. Evidence of old log dumps and several clearings where mills were situated still remain within the park.

Proposals for the creation of the Bellinger River National Park date from the early 1970s. Justification of these proposals highlighted the conservation values of the area, with the major reason for the proposal being the continuous forested link between the Dorrigo and New England National Parks. Early park proposals were unsuccessful due to the value of the forest for maintenance of the hardwood sawlog supply to mills in the Bellinger Valley.

Policies and actions

- Historic sites found on Bellinger River National Park will be recorded on the NPWS Historic Sites Register and assessed for their historic significance.
- The co-operation of the Bellinger Valley Historic Society and other relevant groups and individuals will be sought for management of historic sites of significance within the park.
- The sites of the old logging dumps and mills within the park will be recorded and allowed to revegetate.

4.3 USE OF THE PARK

At present, the only existing legal public access to the park is from Waterfall Way which, due to lack of off-road parking, does not have the capacity to withstand high volumes of use. Most of the southern boundary of the park has no public access because of private property and Darkwood Road, which runs along or near the southern boundary, is not of a standard suitable for tourist traffic. Private property and the steep escarpment prohibit access along the northern boundary. NPWS will manage appropriate use of the park for recreation, research and education. Use of the park, including activities for management purposes, will conform with the management objectives of this plan and will be subject to access limitations. The primary uses of the park have been identified as self-reliant recreation such as bushwalking, research and education.

4.3.1 Recreation

The national parks in the region provide a range of recreational opportunities. At one end of the spectrum are high use areas, such as the Rainforest Centre in Dorrigo National Park which has a cafe, interpretative display, shop, raised boardwalks, formed walking tracks, lookouts and picnic areas. At the other end of the spectrum are the wilderness areas of New England National Park. New England National Park, however, also has cabins, formed walking tracks, lookouts, picnic areas and a formed camping area. Bellinger River National Park, which forms a link between Dorrigo and New England National Parks, has no facilities and is little used except for bush walking, photography and nature appreciation by locals.

Some trails within Bellinger River National Park were previously used for four-wheel drive access by loggers, and Tysons Trail was occasionally used by horse riders travelling from the Bellinger Valley to the escarpment. The trails within the park are very steep and highly susceptible to erosion. In addition access to Tysons Trail from both the plateau and the valley is through private property and not generally available to the public. NPWS considers that the slopes, geology and vegetation of Bellinger River National Park, in addition to the lack of public access, mean that it is not a suitable park for driving, horse riding or cycling.

These same constraints, plus difficulties of gaining access off the Waterfall Way, mean that the park is not suitable for development of recreational facilities such as picnic areas. Discussions will be held with Bellingen Shire Council regarding the possibility of erecting an information board at Newell Falls or some other location on Waterfall Way, outlining the values of Bellinger River National Park and opportunities for recreation in other parks in the Dorrigo District.

Walking access is also difficult. Most access to the park is from Waterfall Way or New England National Park. Walkers must seek authorisation from property owners for access through private property.

A number of small properties along Darkwood Road have expressed interest in developing cabins on their land and providing walking access into the park for their visitors. Any such proposal will be assessed on the basis of impacts on the natural and cultural values, implications for future maintenance, public health and safety, and public access.

Policies and actions

- The impact of recreational activities within the park on the natural environment and other values within the park will be minimised.
- Bushwalking, bush camping and similar low impact, self-reliant recreational activities will be permitted in the park provided that unacceptable impacts do not occur.
- Access to the park through private property will not be promoted by NPWS.
- Access tracks/trails into the park from private property will be monitored. If unacceptable impacts are indicated, NPWS will review this access.
- Any commercial activities on the park will require a licence from NPWS.
- NPWS will negotiate with any private property promoting use of the park to also provide for public access through their property to the park.
- Due to the high erodibility of the soils within the park and limited public access, no recreational facilities will be provided within the park and four-wheel driving, trail bike riding, cycling and horse riding will not be permitted within the park.
- NPWS will discuss with Bellingen Shire Council the suitability of erecting an information board on the local parks at a suitable location on Waterfall Way.

4.3.2 Research and education

Effective management of Bellinger River National Park to meet the stated objectives is reliant upon knowledge of the natural and cultural resources within the park. An inventory of the flora and fauna species and communities, significant cultural heritage sites, and the extent and impact of non-native species within the park have been identified within this plan as priorities for research. This research will improve the understanding of natural and cultural heritage within the park, and may identify specific management requirements to meet the objectives of this plan of management.

Bellinger River National Park provides an opportunity for school students to undertake low impact environmental studies, or to use the setting of the park for other studies. The Chrysalis School in the Bellinger Valley have identified the park as an important educational setting. NPWS will encourage appropriate use of the park for environmental education.

Policies and actions

- The district will encourage research on the natural and cultural heritage of the park, the extent and impact of pest species, and the level and impacts of recreational use of the park. Priority for research will be given to areas identified in this plan as requiring research.
- Research proposals will be assessed for their likely impact on the environment. Preference will be given to research which has no impacts and which could potentially contribute to management of the park.
- All research will be subject to NPWS requirements in terms of licensing, minimum impact and submission of results to the Service.

- NPWS will support use of the park for environmental education. Approval from the District Manager must be obtained prior to the use of the park for this purpose.

4.3.3 Management operations

Bellinger River National Park is administered by the Dorrigo District of the National Parks and Wildlife Service. The District office is located at the Rainforest Centre in Dorrigo National Park.

There are four main management trails within the park: Halls Trail, Enterprise Trail, Tysons Trail and Swing Saw Trail. All of these trails pass through private property from Darkwood Road and are therefore not publicly accessible. A number of other trails, likely to be old logging trails and snig tracks, also occur in the park.

The trails within the park are available for use by walkers and authorised vehicles only. The trails provide access for essential management operations such as research, weed and feral animal control, and fire prevention and control.

Swing Saw Trail provides a route through the park which is walked or driven by some Darkwood Road residents when the Bellinger River is flooded and Darkwood Road is inaccessible from Waterfall Way.

Further development of the management trail system is limited by the erodibility of the soil and the terrain. Most of the park is steeply sloped and has highly erodible soils (see section 4.1.1), and the alignment of the ridge and gully systems in a predominantly north-south direction reduces the feasibility of a track or trail crossing the park from east to west.

A Travelling Stock Route (TSR 52678) passes through the eastern end of the park fairly close to Waterfall Way. The route is never used by stock because of the steep grades, however weeds along the route are a matter of concern. NPWS will liaise with the local Rural Lands Protection Board in regard to adding the reserve to the park and, in the interim, controlling weeds on the travelling stock route.

Policies and actions

- The management trails within the park (see map) will be reviewed. Those trails identified as essential for fire management activities under the fire management plan will be maintained in an environmentally stable condition. All other trails will be closed and rehabilitated.
- No new management trails will be constructed within the park. Trails may be constructed for emergency operations if no practical alternative is available, but will be closed and rehabilitated following completion of the emergency operation.
- Use of management trails within the park will be restricted to vehicles authorised by the Area Manager. Trails will be gated to prevent unauthorised vehicle use.
- The gate on the Swing Saw Trail will be opened to permit emergency access during flood periods by people living along Darkwood Road.
- Management trails within the park may be used for walking without specific authorisation from the NPWS.

- NPWS will liaise with the local Rural Lands Protection Board and relevant government departments with a view to adding TSR 52678 to Bellinger River National Park and controlling weeds on the reserve.
- Any land added to Bellinger River National Park will be managed consistent with the objectives, policies and actions contained in this plan of management. If any developments are proposed for land added to the park, this will be subject to an amendment to this plan which will be placed on public exhibition in accordance with Section 76(6) of the Act.

5. PLAN IMPLEMENTATION

This plan of management is part of a framework of management developed by the National Parks and Wildlife Service (NPWS). The framework includes the *National Parks and Wildlife Act 1974* (NPW Act), the NPWS Corporate Plan, field management policies, established conservation and recreation philosophies, and strategic planning at corporate and regional levels.

The orderly implementation of this plan of management will be undertaken within the annual programs of the NPWS North Coast Region. Priorities, determined in the context of regional strategic planning, will be subject to the availability of necessary staff and funds, and to any specific requirements of the Director-General or Minister.

Regional programs are subject to on-going review, within which works and other activities carried out in Bellinger River National Park will be evaluated in relation to objectives laid out in this plan.

The environmental impact of all development proposals will continue to be assessed at all stages of the development, and any necessary investigations undertaken in accordance with established environmental assessment procedures.

Section 81 of the NPW Act requires that this plan be carried out and given effect to, and that no operations shall be undertaken in relation to the national park unless they are in accordance with the plan. However, if after adequate investigation, operations not included in the plan are found to be justified, this plan may be amended in accordance with Section 76(6) of the Act.

As a guide to the orderly implementation of this plan, relative priorities for identified actions are summarised below.

HIGH PRIORITY	**Plan reference**
• Implement restoration program for eroded areas	4.1.1
• Undertake fauna survey	4.1.3
• Prepare fire management plan for park	4.1.4
• Prepare and implement pest species management plan	4.1.5
• Discuss information board with Council and erect if approved	4.3.1

MEDIUM PRIORITY	
• Record historic sites in park	4.2.2
• Identify management trails to be retained and rehabilitate others	4.3.3
• Encourage priority research	4.3.2
• Pursue addition of TSR to park	4.3.3

ONGOING ACTIONS	Plan reference
• Liaise with others to maintain and improve water quality in park	4.1.1
• Undertake co-operative fire management	4.1.4
• Promote co-operative control of introduced species	4.1.5
• Liaise with Aboriginal community regarding management of Aboriginal sites	4.2.1
• Liaise with RLPB re management of TSR	4.3.3
• Include information on native plants and vegetation communities, native animals, cultural heritage and fire on databases	various

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