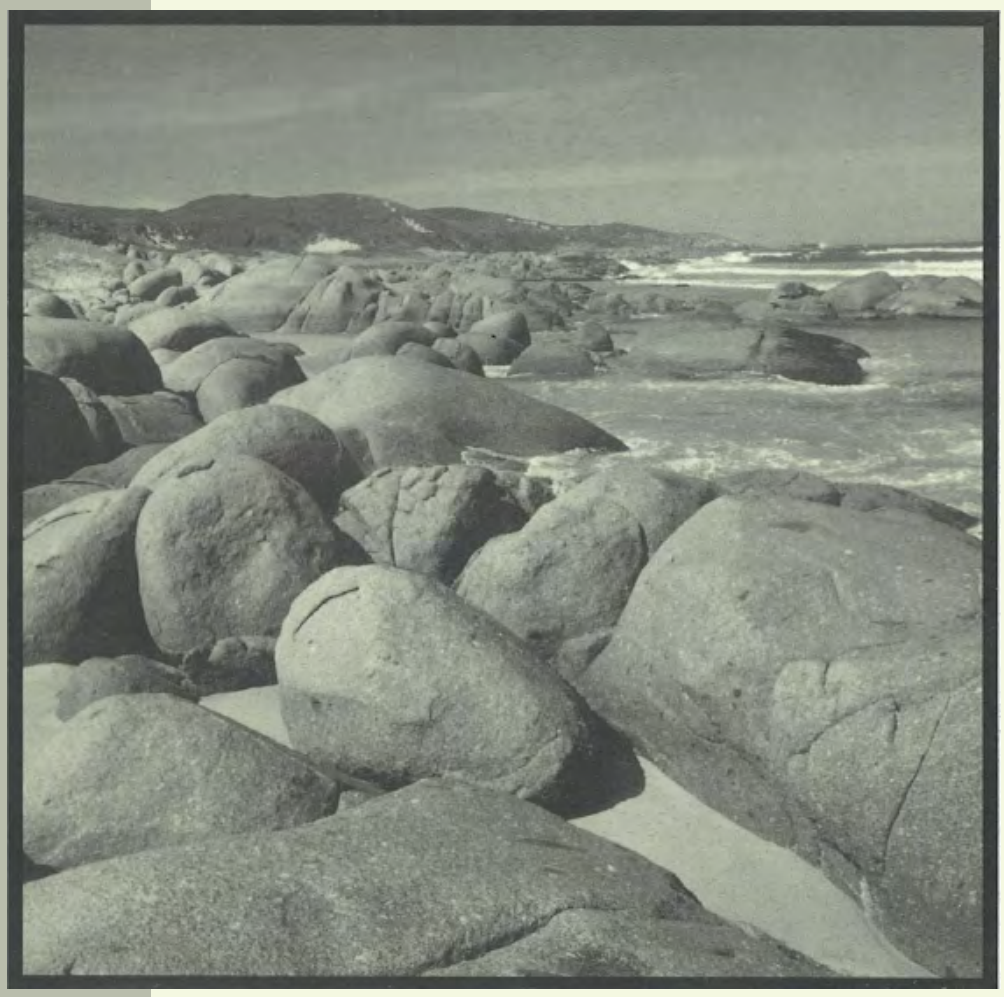
National Parks Service

Croajingolong National Park

Management Plan

June 1996



NATURAL RESOURCES
AND ENVIRONMENT

This Management Plan for Croajingolong National Park is approved for implementation. Its purpose is to direct all aspects of management in the Park until the Plan is reviewed. A Draft Management Plan was published in June 1993. A total of 36 submissions were received.

Copies of the Plan can be obtained from:

Cann River Information Centre
Department of Natural Resources and Environment
Princes Highway
CANN RIVER VIC 3809

Information Centre
Department of Natural Resources and Environment
240 Victoria Parade
EAST MELBOURNE VIC 3002

Further information on this Plan can be obtained from the NRE Cann River office (051) 586 370.

CROAJINGOLONG NATIONAL PARK

MANAGEMENT PLAN

National Parks Service

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT

VICTORIA

JUNE 1996

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Note: In April 1996 the Department of Conservation and Natural Resources (CNR) became part of the Department of Natural Resources and Environment (NRE).

Cover: Looking east from Rame Head (photograph K. Twyford).

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FOREWORD

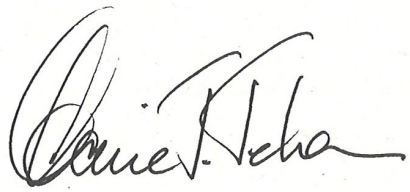
Croajingolong National Park is one of the most significant coastal parks in Victoria. It has outstanding conservation, recreation and wilderness values and has been designated by UNESCO as a Biosphere Reserve.

The diverse and essentially pristine character of the Park, and the outstanding scenery of the coastal fringe, attract those wanting to experience a strikingly different part of Victoria, particularly through camping, walking, canoeing, vehicle-based touring and nature study. Its proximity to Mallacoota and other popular tourist destinations makes the Park an increasingly valuable attraction for visitors to Far East Gippsland.

This Approved Management Plan establishes the long-term management framework to protect the significant values of the Park while ensuring that it plays an important role in nature-based tourism in East Gippsland.

As a result of the Plan's implementation, I am confident that the Park's diverse environments and spectacular pristine coastal scenery will be protected for future generations while still providing outstanding enjoyment for nature-based tourism and recreation.

I look forward to the community's support for the management of this very important National Park, which is such a significant part of Victoria's Park system.

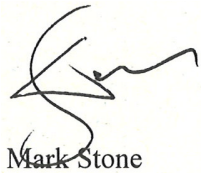


The Hon Marie Tehan MP
MINISTER FOR CONSERVATION & LAND MANAGEMENT

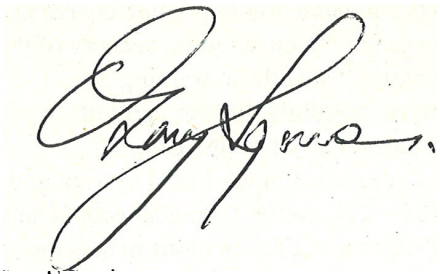
APPROVED MANAGEMENT PLAN

This approved Management Plan has been prepared under the provisions of sections 17 and 17B of the *National Parks Act 1975* (Vic.) and is approved for implementation.

The plan provides the basis for future management of the Croajingolong National Park. It was finalised following consideration of 36 submissions received on the Draft Plan.



Mark Stone
Director, National Parks Service



Garry Squires
Interim Regional Manager, Gippsland

SUMMARY

Croajingolong National Park (87 500 ha) is on the coast in far eastern Victoria. It has very high conservation values and two wilderness zones, four reference areas, a remote and natural area, two natural catchment areas and part of a heritage river. Together with Nadgee Nature Reserve (NSW), the Park forms Croajingolong National Park Biosphere Reserve, designated under UNESCO's Man and the Biosphere Program.

The Park's diverse environments, unspoilt coastal scenery and essentially undeveloped character make it attractive for a range of activities, including camping, canoeing and boating, walking and vehicle touring. Its significant natural values make it an important area for nature study, and there is great potential for continued scientific research.

Croajingolong National Park will be managed as a world-class protected area for conservation and appropriate recreation. Protecting and enhancing the Park's largely undisturbed environments will be an important management goal, as will maintaining its distinctive unspoilt character and the sense of remoteness that are key attractions to visitors.

The majority of car-based visitors enjoy the Park from day visitor and camping areas along the coast, while self-reliant recreationalists explore remote sections of the 'wilderness' walk. The Park makes important contributions to nature-based tourism in East Gippsland.

Management directions for the Park are summarised below.

- Most of the Park will be maintained in a largely undeveloped condition, and significant natural features will be given special protection.
- Interstate liaison will continue on cross-border issues, including park protection and visitor management.
- The Park's fire protection strategy will be refined in the light of continuing research.
- A pest plant and animal control strategy will be prepared, identifying key sites, target species and methods of control.
- Visitor enjoyment of the Park will be enhanced by improved interpretation at key sites. Opportunities for a variety of driving and walking experiences will be maintained.
- The involvement of Friends groups and volunteers in relevant aspects of Park management will be supported and encouraged.

CONTENTS

1 INTRODUCTION

1.1 Location and planning area

Croajingolong National Park is in Far East Gippsland. Situated 430 km east of Melbourne and 530 km south of Sydney, it extends as a wide tract of land along some 100 km of coast from Sydenham Inlet in the west to the New South Wales border in the east (figure 1).

This management plan covers Croajingolong National Park (87 500 ha) which includes the following areas:

- Sandpatch (15 600 ha) and Cape Howe (7100 ha) Wilderness Zones;
- Rame Head Remote and Natural Area (9800 ha);
- Barga (1030 ha), Baawang (600 ha), Benedore River (1130 ha) and Seal Creek (905 ha) Reference Areas;
- Mallacoota Education Area (49 ha);
- the East Gippsland Coastal Streams Natural Catchment Area, (12 030 ha covering the catchments of the Red and Benedore Rivers, and Shipwreck, Easby and Seal Creeks), and the Double Creek Natural Catchment Area (1590 ha);
- part of the Bemm, Goolengook, Arte and Errinundra Heritage River Area (the area immediately east of Sydenham Inlet) covering about 340 ha.

Most of the Park boundary follows natural features (figure 2). The mean low water mark of the coastline forms the southern boundary. The Skerries, Tullaberga Island and all islands and sandbars exposed in Mallacoota Inlet at low water are included in the Park, as are the waters of Swan Lake, Mud Lake, Tamboon Inlet, Lake Elusive, Lake Furnell, Wingan Inlet, Lake Barracoota and Lake Wau Wauka.

At Sydenham Inlet, the western boundary of the Park follows the low water mark of the eastern shore of the Inlet, the Bemm River and freehold land. The northern boundary mostly follows forest tracks, ridge lines, creeks abutting State forest and freehold land. The eastern boundary is the State border with New South Wales.

Mallacoota township (including a surrounding buffer of State forest) and Tamboon South township are outside, but entirely surrounded by, the Park. The waters of Mallacoota Inlet are also excluded.

1.2 Regional context

Croajingolong National Park, together with the proposed Cape Conran Coastal Park and the Nadgee Nature Reserve (NSW), forms the largest continuous coastal reserve on the south-eastern Australian mainland, encompassing more than 115 000 ha and some 150 km of coastline.

Far East Gippsland is a region that is attracting an increasing number of visitors who wish to experience the area's diverse natural attractions. The Park complements a number of other areas throughout East Gippsland which have a similar remote character, and contrasts with a variety of more developed visitor settings.

Townships such as Mallacoota, Cann River and Orbost are strategically located and will play increasingly important roles in the development of nature-based tourism in the region.

Other popular destinations in the region include:

- Snowy River National Park - accessible to visitors seeking remote experiences in some of the most spectacular mountain and gorge country in the State;
- Errinundra National Park - opportunities for scenic short-term visits attracting day visitors to rainforests and interpretive walks;
- proposed Cape Conran Coastal Park - an area used by day visitors from Marlo and Orbost, and by tourists wanting more formal camping sites and facilities, including cabins.

1.3 Significance of the Park

Croajingolong National Park makes a valuable contribution to Victoria's parks system, which

aims to protect viable, representative samples of the State's natural environments on public land. Parks also provide opportunities for visitors to enjoy and appreciate natural and cultural values, and many make important contributions to tourism.

The Park is one of great significance in a naturally diverse corner of the State. It protects some of Victoria's most spectacular and significant coastal environments, as well as a significant representation of East Gippsland's diverse lowland forest and heath ecosystems, and important natural catchments.

The Park's diverse natural values complement those found in other conservation reserves in East Gippsland, including;

- Snowy River National Park, which protects significant geomorphological sites, diverse vegetation and a suite of threatened flora and fauna in the rugged Snowy River and tributary valleys;
- Errinundra National Park with its rainforests and old growth montane forests, particularly of Shining Gum and Cut-tail;
- the little-disturbed Coopracambra National Park with its granite peaks, the distinctive sandstone Genoa River gorge and significant fauna;
- the proposed Cape Conran Coastal Park, which has significant coastal environments.

In turn, these and other reserves complement various conservation measures in surrounding State forest.

The diverse and essentially pristine character of the Park, and its outstanding coastal scenery, attract those wanting to experience a strikingly different part of Victoria, particularly through camping, walking, canoeing, vehicle-based touring and nature study. Its proximity to Mallacoota and other more populated areas of visitor interest make the Park an increasingly valuable attraction for visitors to Far East Gippsland.

Together with Nadgee Nature Reserve in New South Wales, the Park forms the Croajingolong National Park Biosphere Reserve designated under the 'Man and the Biosphere Program' of the United Nations Educational Scientific and Cultural Organisation (UNESCO) - one of only three in the State.

The Park is assigned to the IUCN Category II (National Parks) of the United Nations' List of National Parks and Protected Areas. Category II areas are managed primarily for ecosystem conservation and appropriate recreation.

Croajingolong National Park is also listed on the Register of the National Estate, in recognition of the area's outstanding values and their importance as a part of our heritage. Although not yet complete, the National Estate regional assessment has highlighted a number of areas of exceptional significance, largely associated with the extensive flora and fauna values of the Park. The Park rates highly against the criteria of biogeographic range of flora, endemic flora, places important for succession, natural landscapes and wilderness quality.

Significant features of the Park are listed below (see also appendix 1).

Natural values

- A wide variety of highly significant coastal landforms including tidal inlets, estuaries and lagoons, dune-blocked lake and swamp systems, freshwater interdune lakes, extensive sand dunes and sand sheets, and prominent rocky cliffs.
- Many sites recognised for their geological and geomorphological significance.
- Habitats supporting over 1000 recorded native plant species, 87 of which are listed as threatened in Victoria and have their primary stronghold in the Park.
- Ninety species of orchids, including all five of Australia's lithophytic and epiphytic orchids.
- Significant and well developed sites of Warm Temperate Rainforest in the lower reaches of a number of rivers - of note Wau Wauka Creek, Harrisons Creek and Dowell Creek.

- Coastal Heathland, a community considered to be extremely species rich, and covering up to 10 per cent of the Park.
- Habitats supporting 43 species of threatened native fauna, including the Little Tern, Ground Parrot, Eastern Bristle-bird, Eastern Broad-nosed Bat, and Australian Fur Seal.
- The Skerries, one of only four Australian Fur Seal colonies in the State and an important breeding site for penguins and other seabirds.
- Records for the Park of one third of Victoria's, and one quarter of Australia's, bird species.
- Some of the richest amphibian habitats in Victoria.
- Highly significant coastal streams and catchments which are relatively undisturbed, with an absence of introduced fish species and good populations of native fish species.
- Localities with among the highest wilderness quality in the State, outside the Mallee, and two of the three coastal wilderness areas in Victoria.

Cultural values

- An area of major significance and importance in Victoria for the conservation and protection of Aboriginal sites.
- Sites giving an insight into the European history of the State, with evidence of maritime history, settlement, utilisation and the reservation of parks.
- The site of the first European sighting of eastern mainland Australia by Lieutenant Hicks aboard the *Endeavour,* in 1770.

Tourism and recreation values

- A diverse range of natural attractions complementing features in other parts of East Gippsland.
- Major attractions for recreation activities in coastal settings, ranging from developed visitor precincts to secluded, remote ocean beaches.
- Several inlets which are very popular for camping, boating, fishing, and swimming.
- Short walks to key features of the Park.
- Car-based camping at a number of remote and scenic locations on the coast.
- Some of the most remote walking on the Victorian coast, including one of Australia's best long-distance coastal walks.
- Scenic four-wheel drive touring on a network of remote vehicle tracks.
- Canoe touring of estuaries and inlets, and off-shore sea kayaking against a highly scenic backdrop.
- Opportunities for boat-based recreation on secluded inlets and waterways.

1.4 Creation of the Park

Croajingolong National Park was included on Schedule Two of the National Parks Act as a result of the *National Parks (Amendment) Act 1978* (Vic.) and proclaimed on 26 April 1979. Small amendments were made in 1981 and 1984, and 1500 ha was added to the Park in 1988, bringing the Park to its current area of 87 500 ha.

The Park was created in 1979 and expanded in 1988 following Government decisions on recommendations from Land Conservation Council (LCC) studies in the East Gippsland Area (LCC 1977; LCC 1986). In particular, in 1977 the LCC recommended a major coastal national park combining the then Mallacoota Inlet, Wingan Inlet and Captain James Cook National Parks, and extensive interlinking areas, covering 86 000 ha.

1.5 Legislation, LCC recommendations and guidelines

Croajingolong National Park is reserved and managed under the National Parks Act. The Act requires the Director to preserve and protect the natural condition of the Park and its natural and other features, and to provide for its use by the public for enjoyment, recreation, education and research.

The Sandpatch and Cape Howe Wilderness Zones were recommended as a result of the LCC Wilderness Special Investigation (LCC 1991b). These were proclaimed on 30 June 1992 and are managed under the wilderness provisions of the National Parks Act and the relevant LCC recommendations, particularly those relating to management principles for wilderness areas (LCC 1991b).

The Rame Head Remote and Natural Area, also recommended by the LCC (1991b), was proclaimed on the same date. It is managed under the provisions of the National Parks Act and the relevant LCC recommendations relating to Remote and Natural Areas, which aim to protect remote and natural values and preclude new and incremental developments.

Two reference areas - Benedore River and Seal Creek - are proclaimed under the *Reference Areas Act 1978* (Vic.) and managed in accordance with Ministerial directives, the relevant Department of Natural Resources and Environment (NRE) guideline, and Reference Area Management Plans (Cheal 1982; 1983). A further two areas - Barga and Baawang - are to be proclaimed and managed in the same way.

Following the 1991 Rivers and Streams Special Investigation (LCC 1991b), the Bemm, Goolengook, Arte and Errinundra Heritage River Area, the East Gippsland Coastal Streams Natural Catchment Area and the Double Creek Natural Catchment Area were proclaimed under the *Heritage Rivers Act 1992* (Vic.) on 10 August 1992. This Act, together with the LCC recommendations, provides for their protection and indicates particular uses which are or are not permitted in these areas.

The Mallacoota Education Area was recommended by the LCC (1986) and is part of the Park. The area is intended to enable students of all ages to study the nature and functioning of a reasonably natural ecosystem.

The LCC (1986) has also made particular recommendations relating to the appropriate use and management of the Park, including the phasing out of commercial fishing in Tamboon Inlet, and an adjustment of the Park boundary adjacent to the Mallacoota aerodrome. The LCC (1991a; 1991b) also made specific recommendations relevant to particular issues in certain parts of the Park.

The LCC's Marine and Coastal Special Investigation Proposed Recommendations (LCC 1995) recommended two marine parks (comprising Sanctuary and Conservation Zones) off the Park coast at Rame Head and Cape Howe. In addition, the waters of Mallacoota Inlet and the Point Hicks lighthouse reserve have been proposed as special management areas, while an area south of the Betka River has been proposed as a coastal protection zone.

The outcome of this Special Investigation will, in relation to the waters directly adjacent to the Park and surrounding the Skerries and Gabo Island, have important implications for the conservation of marine ecosystems and the management of adjacent Park land.

The Park is managed in accordance with NRE guidelines for the management of parks (NPS 1995) and with other NRE plans and guidelines, including:

- the Orbost Region Fire Protection Plan (CFL 1990);
- the East Gippsland Forest Management Area (FMA) Plan (CNR 1995b);

1.6 Park management aims

Sections 4, 17 and 17A of the National Parks Act provide the main basis for management of the Park. The following management aims are derived from those sections and as such broadly govern all aspects of park management.

Resource conservation

- Preserve and protect the natural environment.

- Maintain, or where possible enhance, wilderness values.
- Allow natural environmental processes to continue with the minimum of disturbance, and maintain biodiversity.
- Conserve features of archaeological, historical and cultural significance.

Park protection

- Protect water catchments and streams.
- Protect human life, the Park and adjacent lands from injury by fire.
- Eradicate or otherwise control introduced plants, animals and diseases.

The Park visit

- Provide opportunities for appropriate recreation and tourism.
- Promote and encourage an appreciation, understanding and enjoyment of the Park's natural and cultural values and its recreational opportunities.
- Encourage appropriate park use and behaviour, and foster a conservation ethic in visitors.
- Take reasonable steps to ensure the safety of visitors.

Other

- Provide for and encourage scientific research, surveys and monitoring that will contribute to a better understanding and management of the Park.
- Co-operate with local, State and interstate government authorities, the community and other interested organisations to assist in the management of the Park.

2 STRATEGIC DIRECTIONS

2.1 Park vision

A future visitor to Croajingolong National Park finds a world-class reserve renowned for its pristine coastal landscapes and diverse environments. The Park is one of several remaining areas in south-eastern Australia which conserve extensive areas of relatively undisturbed coastal environments and their forested hinterlands.

The Park is being managed with an increased understanding of its diverse natural environments. Its many significant species and communities are well protected, and disturbance to its significant catchment and wilderness areas is minimal.

Visitor facilities are in keeping with the remote and essentially undeveloped character of the Park, and concentrated mainly at key coastal destinations locations and a number of other key sites within its boundaries. These, and accompanying high quality interpretation, assist the car-based day visitor and camper to enjoy and understand better the Park's splendid environments.

In the more remote areas, visitors enjoy walking sections of the 'wilderness coast' canoeing the tranquil inlets and sea kayaking. The Park is highly regarded for its contribution to nature-based tourism in East Gippsland, supported by private infrastructure and services in neighbouring townships, providing significant socio-economic benefits to the wider East Gippsland community.

Use of the adjacent lighthouses for nature-based tourism complements visitor services in the Park.

Continued liaison with the NSW National Parks and Wildlife Service ensures efficient and effective management of the coastal walk and the international Biosphere Reserve. Adjacent marine parks enhance the protection of the area's conservation values.

Careful and sensitive management by NRE, assisted by a strong Friends group and supported by the local community, ensures that increased visitor use is accommodated without compromising the Park's key attributes.

2.2 Management directions

Major management directions for the Park are outlined below.

Resource conservation

- Most of the Park will be maintained in a largely undeveloped condition, in particular the wilderness zone, remote and natural area, and natural catchment areas.
- Significant natural and cultural features will be given special protection. Initial priorities will be given to heathland management the Little Tern, Eastern Bristle-bird and Australian Fur Seal, and Koori occupation sites.

Park protection

- The Park's fire protection strategy will be refined in the light of the findings of research.
- A pest plant and animal strategy will be prepared which identifies key sites, target species and methods of control.
- Further testing and mapping will continue in suspected Cinnamon Fungus sites, and appropriate measures will be taken to restrict its spread.
- Seasonal restrictions on vehicle access will help to protect the condition of vehicle tracks.

The Park visit

- Existing day visitor and camping area facilities will be maintained to a high standard.
- A variety of walking tracks of differing lengths and standards will be maintained.
- The Park's walking track system will be included in a broader regional network of walking tracks.

- A permit system will be introduced to maintain environmental values and the wilderness experience of walking the 'wilderness coast'.
- Opportunities for four-wheel-driving will be maintained.
- Surveys will be conducted to better determine visitor needs.
- Visitor enjoyment of the Park will be enhanced by improved interpretation of features such as estuaries, rainforest and heathland.

Community awareness and involvement

- The involvement of Friends groups and volunteers in relevant aspects of Park management will be supported and encouraged.
- Liaison with local community groups and landholders will be maintained in regard to aspects of planning and management.

2.3 Zoning

A Park management zoning scheme has been developed to:

- provide a geographic framework in which to manage the Park;
- indicate which management directions have priority in different parts of the Park;
- indicate the types and levels of use appropriate throughout the Park;
- assist in minimising existing and potential conflicts between uses and activities, or between those and the protection of park values;
- provide a basis for assessing the suitability of future activities and development proposals.

Five management zones apply to the Park - Conservation and Recreation, Recreation Development, Wilderness, Reference Area and Education Area.

In addition, Special Protection Areas and the following Land Use Designations - Remote and Natural Area, Natural Catchment Area and Heritage River Area - are used to summarise additional requirements to those of the underlying primary management zones.

Table 1 specifies management zone and overlay characteristics. The location of zones and overlays is shown on figure 2.

TABLE 1 MANAGEMENT ZONES AND OVERLAYS

	ZONES				
	CONSERVATION & RECREATION	RECREATION DEVELOPMENT	WILDERNESS	REFERENCE AREA	EDUCATION
AREA/ LOCATION	56 245 ha, 64.3% Most of the Park outside wilderness zones.	Main visitor destinations. (approx. 6 ha, >1%)	27 526 ha, 31.5% Sandpatch and Cape Howe Wilderness Zones.	3665 ha, 4.2% Barga, Baawang, Benedore River, and Seal Creek.	49 ha, >1% Mallacoota Education Area
VALUES	Important natural values and scope for recreation opportunities.	Sites with facility development in a natural setting.	Large, essentially undisturbed areas.	Relatively undisturbed representative land types and associated vegetation.	Area for education purposes.
GENERAL MANAGEMENT AIMS	Protect less sensitive natural environments and provide for sustainable dispersed recreation activities and small-scale recreation facilities without significant impact on natural processes.	Provide primarily for high-use visitor nodes with a concentration of recreation and/or interpretation facilities.	Protect or enhance the essentially unmodified natural condition of the area and, subject to that protection and minimal interference to natural processes, provide opportunities for solitude, inspiration and appropriate self-reliant recreation.	Protect viable samples of one or more land types that are relatively undisturbed for comparative study with similar land types elsewhere, by keeping all human interference to the minimum essential and ensuring as far as practicable that the only long-term change results from natural processes.	Provide primarily for environmental education in a relatively undisturbed area.
FIRE MANAGEMENT	Fuel reduction burning; fire suppression preferably using minimal impact techniques.	Fuel reduction generally by mechanical means.	Fuel reduction and ecological burning under strict controls; minimal impact fire suppression techniques.	No fuel reduction burning; fire suppression in adjacent zones.	As per Regional Fire Protection Plan
ACCESS	2WD and 4WD public access generally available.	Good 2WD access generally available.	Access for essential management transport and walkers only.	For approved scientific research.	2WD - adjoins Mallacoota Road
SIGNAGE	Directional, identification, interpretation and information signs.	Signage to support site requirements.	Minimal, unobtrusive directional signs only where essential for management.	Not necessary.	As required.

Table 1 (cont.)

	OVERLAY			
	SPECIAL PROTECTION AREAS	REMOTE AND NATURAL AREA	NATURAL CATCHMENT AREA	HERITAGE RIVER AREA
AREA/ LOCATION	12 013 ha Areas detailed in appendix 1 and figure 2.	9 800 ha Rame Head Remote and Natural Area.	13 620 ha East Gippsland Coastal Streams Natural Catchment Area and Double Creek Natural Catment Area.	340 ha Part of Bemm, Goolengook, Arte and Errinundra Heritage River (area east of Sydenham Inlet).
VALUES	Discrete significant areas requiring special attention.	Significant remote and natural area. Opportunities for self-reliant recreation.	Catchments in essentially natural condition.	Rivers significant for nature conservation, recreation, scenic or cultural heritage.
GENERAL MANAGEMENT AIMS	Protect specific natural or cultural values in specific areas and sites where a special management focus is required.	Protect the area's remote and natural attributes; prevent new and incremental developments, including the construction and upgrading of vehicular tracks and construction of new structures.	Maintain or enhance the area's essentially natural condition and preclude certain activities, including the making and upgrading of new roads.	Protect the heritage values of the area.
FIRE MANAGEMENT	Fuel reduction and ecological burning under strict controls; minimal impact fire suppression techniques	As per underlying management zone.	As per underlying management zone.	As per underlying management zone.
ACCESS	Depends on particular values	As per underlying management zone.	As per underlying management zone.	As per underlying management zone.
SIGNAGE	Minimal interpretation signs where appropriate.	As per underlying management zone.	As per underlying management zone.	As per underlying management zone.

3 RESOURCE CONSERVATION

3.1 Geological and landform features

The Park is one of the most significant conservation reserves in Victoria for protecting an outstanding variety of coastal landform features and examples of active geomorphic processes. The topography of the Park is generally flat, most being less than 300 metres, and a substantial area less than 150 metres, above sea level. Two major physiographic units are principally represented in the Park:

- coastal tablelands comprised of Ordovician marine sediments which give rise to the inland topography, and Devonian granites forming the higher peaks, promontories and islands;
- coast dune complexes, which have developed primarily from Tertiary and Quaternary sediments and have formed a complex of dunes, some relic and now well vegetated and others mobile.

McRae-Williams, Rosengren & Kraemers (1981) identified 25 sites of geological and geomorphological significance, Telegraph Point being of national significance and many of the others of State significance. The area supports a variety of features of major importance in the study of coastal morphology, including estuary and dune dynamics and the movement of sand.

The formation of dune barriers has led to the development of numerous lagoon systems and inlets in the Park. Many of these waterbodies are subject to prolonged closure, and bars are only breached naturally following heavy seas or high rainfall. Periodic closure of these inlets is a natural event and is an important component of their natural processes.

Many of the inlets and lagoons are small, generally shallow and often closed to the sea. These and the dune-blocked lakes (e.g. Barracoota Lake and Lake Wau Wauka) need special protection to ensure that they are not polluted or otherwise affected by visitor or other activity.

Aims

- Protect areas of geological and geomorphological interest.
- Provide opportunities for appropriate research, appreciation and education of geological and geomorphological sites and processes.
- Maintain the functioning of natural aquatic ecosystems in inlets throughout the Park.

Management strategies

- *Minimise disturbance to the small inlets, lagoons and lakes in the Park, and establish a monitoring program to assist in ensuring that the impacts of activities (particularly camping) on these features are minimised.*
- *Open park estuaries only where there is an immediate threat to private property, and such works are approved and supervised by Department staff.*
- *Ensure that vehicle and walking track maintenance in dune systems causes minimal impact to this unstable landform.*

3.2 Rivers and catchments

The rivers, streams, lakes and catchments of the Park, many of them largely undisturbed, are major features which contribute to its scientific importance and conservation significance.

The East Gippsland Coastal Streams Natural Catchment Area (covering the catchments of the Red and Benedore Rivers, and Shipwreck, Easby and Seal Creeks) is particularly significant. Nowhere else in Victoria can such an array of contiguous entire catchments be found from headwaters to ocean, with such a level of naturalness (LCC 1991a). They form an invaluable resource as reference catchments against which to judge the condition of many other streams in south-eastern Australia. Separate management plans for this area as well as the Double Creek Natural Catchment Area (of which 1590 ha of its 16 060 ha area lies in the Park) and Errinundra Heritage River corridor (of which 7 km (340 ha) of its 148 km

lies in the Park) will be prepared under the Heritage Rivers Act.

The LCC (1991a) has recommended that the Thurra River, including the section in the Park, should be designated a 'Representative River', characteristic of the eastern Victorian dissected uplands and riverine plains. In addition, the catchment of the Benedore River is declared a 'Scientific Reference Segment' under the State Environment Protection Policy - Waters of East Gippsland.

The Betka, Thurra, Mueller and Wingan Rivers, which have a large portion of their catchments outside the Park, are the largest forested catchments discharging into the sea in a relatively intact condition anywhere in the State (Commissioner for the Environment 1988).

The faunal assemblages in the fresh waters of the Park are unique and have a high conservation value, particularly due to the absence of introduced species (LCC 1989; Meredith, Goss & Seymour 1989).

Aims

- Protect and maintain the integrity of catchments within the Park.
- Protect and enhance the conservation and recreation values of all rivers in the Park.

Management strategies

- *Minimise the impact of management and visitor activities on rivers and catchments in the Park.*
- *Liaise with appropriate Departmental services and external agencies regarding river and stream activities outside the Park to reduce off-site and downstream impacts.*
- *Include appropriate erosion mitigation measures in all works.*

3.3 Vegetation

The Park supports over 1000 native plant species, of which 87 are rare or threatened in Victoria (Gullan, Cheal & Walsh 1990), and eight rare or threatened Australia-wide. These species are either of restricted distribution or at the southern limit of their range, or are found in habitats which are limited or at risk. The Park's rare and threatened flora is listed in appendix 2.

Croajingolong contains many species more typical of NSW and some that do not occur elsewhere in Victoria. Among its spectacular wildflower displays, 90 species of orchids are known to occur, including all five of Victoria's lithophytic and epiphytic orchids. Bryophytes reach optimal diversity in rocky outcrop areas such as Genoa Creek Falls. The mouth of one coastal creek supports a small yet very significant community of *Sphagnum* mosses, comprising five species - two of which are newly discovered and undescribed.

The Park also harbours areas with an overlap of Cool Temperate and Warm Temperate Rainforest floras, supporting many species with subtropical affinities. Large stands of Warm Temperate Rainforest are present in the eastern part of the Park, smaller pockets occurring in a number of areas throughout (Parkes, Moorrees & Williams 1985; Roberts 1990). Forbes, Gullan & Walsh (1981) consider this community to be significant across East Gippsland as a result of its limited distribution in Victoria and threats from frequent fires and the spread of weeds.

Around 5 to 10 per cent of the Park is occupied by Coastal Heathland (Parkes, Moorrees & Williams 1985), which occurs in interdune swales, gullies, coastal clifftops and areas of impeded drainage. Species diversity of this community is comparable to that of the South African Heaths, which are regarded as the richest vegetation community in the world outside lowland tropical rainforest (Parsons & Cameron 1974).

While some areas within the Park have been subject to varying levels of disturbance from previous land uses, including grazing and

mining, the overall natural condition is very high.

Processes and activities threatening the survival and viability of threatened plants in the Park vary between species. The key issues to be considered in threatened flora management are introduced plants and animals, recreation and illegal collection.

Wildfire, fuel reduction burning and ecological burning can all influence the nature of vegetation communities (and their associated fauna). The management of fire therefore presents a management challenge, particularly with regard to establishing appropriate fire regimes in an area with such a diverse and closely juxtaposed set of vegetation communities. Research is required to assist in determining directions for future vegetation (and fauna) management. In particular, information is needed on the detailed fire ecology of specific vegetation communities and significant plant species in the Park.

Aims

- Protect native plant communities in their natural condition, and maintain genetic diversity.
- Enhance the long-term survival prospects of threatened or significant plant species or communities.

Management strategies

- *Manage Flora and Fauna Guarantee listed plants (appendix 2) according to approved Action Statements.*
- *Encourage surveys and research on significant flora and communities in the Park to improve knowledge of their management requirements.*
- *Determine appropriate management strategies for Special Protection Areas (appendix 1) to protect significant or threatened species or populations.*
- *Protect rare or threatened species at potential risk from illegal collection by providing information on their location only with the approval of the Ranger-in-Charge.*
- *Monitor and review strategies implemented as part of the Coastal Heathland Management Plan (in conjunction with sections 3.4 and 4.1).*
- *Allow burning for ecological purposes as outlined in section 4.1.*

3.4 Fauna

Commensurate with the outstanding botanical diversity and significance of the area, the Park supports a rich and varied fauna. Its great diversity of relatively undisturbed habitats makes it a most valuable area for fauna conservation. A systematic survey of fauna in the Park has yet to be undertaken, but information is available from a number of surveys in the region. The Park supports 43 fauna species (including three unconfirmed records) that are considered to be threatened in Victoria (appendix 3).

Of the 52 mammal species recorded in the Park, arboreal mammals and bats are particularly well represented. A number of marine mammals, including three seal species, whales and dolphins, occur in coastal waters adjacent to the Park and on islands within the Park. Whale strandings are not common, but have occurred.

Within the Park, 243 species of birds, including 21 which are threatened, have been recorded (CNR 1995b; CNR 1995c). This represents over one third of Victoria's, and approximately one quarter of Australia's, total bird species, clear evidence of the importance of the Park for avifauna conservation.

Many families of birds are well represented. The islands and ocean beaches attract migratory seabirds and waders, the wetlands area a habitat for a rich assemblage of waterfowl, and the coastal woodlands are favoured habitat for 18 species of birds of prey and six large owl species.

Significant populations of reptiles and amphibians also occur, including three marine reptile species which are considered vagrants,

as well as some of the richest amphibian habitats in Victoria. (G. Gillespie, pers. comm. 1991).

The East Gippsland Forest Management Plan has proposed a habitat management system using corridors and other protected areas to link the Park with habitat in adjacent areas.

Aims

- Protect native animal communities, and maintain genetic diversity.
- Enhance the long-term survival prospects of threatened or significant faunal species and populations.

Management strategies

- *Manage Flora and Fauna Guarantee listed species (appendix 3) according to approved Action Statements.*
- *Determine appropriate management strategies for Special Protection Areas (appendix 1) to protect significant or threatened species and populations.*
- *Improve knowledge of the occurrence, distribution and management requirements of the Park's fauna, concentrating on locating threatened species, and develop management actions for their protection.*
- *Develop a monitoring program which focuses on key populations or species, in particular those subject to threatening processes and those with a restricted distribution.*
- *Protect the Australian Fur Seal colony and bird breeding localities by restricting access to the Skerries and Tullaberga Island.*
- *Protect rare or threatened species at potential risk from illegal collection by providing information on their location only with the approval of the Ranger-in-Charge.*
- *Monitor and review strategies implemented as part of the Coastal Heathland Management Plan (in conjunction with section 3.3 and 4.1).*
- *Develop a contingency plan for stranded whales, which includes requirements for staff training and volunteer assistance, with input from appropriate agencies and functions, and in accordance with NRE guidelines.*

3.5 Landscape

The magnificent unspoilt coastline with its beaches and rugged cliffs, the undisturbed rivers and the diverse vegetation are characteristic features of the Park. The most spectacular views are of the pristine coastal environment and associated landforms and across Mallacoota Inlet to the Howe Range. The varied pattern of the contrasting vegetation communities contributes to a special scenic beauty. Significant viewing sites include Genoa Peak, Mount Everard, Point Hicks, Rame Head and Little Rame Head.

The areas adjacent to high use recreation areas and access roads, and the more remote and undisturbed parts of the Park, require particular attention to ensure that the natural qualities of the landscape are not impaired. Park management activities, structures and activities on adjacent land have the potential to adversely affect landscape qualities.

Aim

- Protect and enhance landscape values.

Management strategies

- *Minimise as far as practicable the visual impacts of management activities.*
- *Protect landscape values in the Park in accordance with NPS guidelines.*
- *Continue to provide input into management activities in adjacent State forest and private property which have potential to affect landscape values within the Park, in particular access routes on the Park boundary and gravel pits.*

- *Improve the landscape quality of degraded areas by rehabilitating sites as appropriate.*

3.6 Cultural heritage

Koori heritage

The Park is of major significance and importance in Victoria for the conservation of Koori cultural and historic sites. The Park and surrounding areas were a rich source of food. The abundance of artefacts and middens indicates a history of occupation by reasonably large populations of Koori people, who most probably concentrated around the inlets, estuaries and wetlands of the present Park.

The Australian Heritage Commission has instigated a study in East Gippsland. Results of this survey are held by the Far East Gippsland Aboriginal Corporation; however, ongoing work is required to fully assess the location and significance of sites.

The protection of Koori sites is provided for under the *Archaeological and Aboriginal Relics Preservation Act 1972* (Vic.) and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth). Sites in the Park are endangered by a number of threatening processes, including recreation and souvenir hunting.

European heritage

The Park offers a fascinating insight into part of the European history of the State. Point Hicks was the first European sighting of the south-eastern Australian mainland, made by Lieutenant Hicks aboard the *Endeavour* in 1770. Rame Head and Cape Howe were named by Captain Cook on the same voyage. The lightstation at Point Hicks was built in 1887 to warn mariners of this hazardous section of coast, where in the last 200 years numerous ships have been wrecked and many lives lost.

Early settlement in the area was largely associated with pastoralism. A number of leases began in the early 1800s under such names as *Mallacoota* and *Genoa*, which later gave way to closer settlement and the formation of townships in the 1880s.

Gold discoveries in the 1890s inspired a short but prosperous mining industry led by the Spotted Dog Gold Mine, evidence of which still remains. Along with Europeans, Chinese settlers also came in search of gold.

Other key features of historical interest include the Lakeview Hotel, located at the site of the original Mallacoota township. The hotel was first associated with mining and tourism, and today represents an opportunity for restoration. Also of note is an old residence and ancillary building at Bakers Bight, and Allans Head Cemetery, which contains graves of early settlers and shipwreck victims.

The Croajingolong area is also significant for the declaration of two of the State's earliest conservation reserves. The Mallacoota and Wingan Reserves were first gazetted as sites for National Parks in 1909.

Aims

- Identify, protect, and where appropriate interpret, Koori sites.
- Promote further investigations into Koori history and culture.
- Encourage Koori involvement in the management of sites within the Park.
- Identify and conserve sites and artefacts of European historical interest and significance.
- Improve knowledge and understanding of history in the Park and the effects of past land use.

Management strategies

- *Liaise and consult with the Far East Gippsland Aboriginal Corporation and Aboriginal Affairs Victoria regarding the development and implementation of management and protection strategies for known sites in the Park and all new sites as they are discovered, and the monitoring of key sites.*
- *Continue to assist the Far East Gippsland Aboriginal Corporation to facilitate a systematic oral history and archaeological*

survey to provide a basis for management and interpretation of cultural sites.

- *Train park staff in Koori cultural site management.*
- *Consult the Far East Gippsland Aboriginal Corporation in the process of planning Park developments.*
- *Record and map post-settlement historic sites and artefacts in the Park.*
- *Encourage a systematic oral history and archaeological surveys to provide a basis for management and interpretation of post-settlement historic sites.*
- *Liaise with the Department's Historic Places Section and local communities to ensure management actions do not adversely affect historic sites and artefacts.*
- *Assess European heritage sites and priority significant sites, and develop conservation plans as appropriate.*

4 PARK PROTECTION

4.1 Fire management

The National Parks Act requires the Director of National Parks to ensure appropriate and sufficient measures are taken to protect Parks from injury by fire.

Current fire protection measures are in accordance with the Orbost Regional Fire Protection Plan (CFL 1990). This plan includes provision for the maintenance of a system of fire protection tracks; liaison with private land holders for the common purpose of fire management within the Park and on adjacent land; and information including the location of reference areas and areas of ecological and cultural significance. The Park's fire protection strategy will be reviewed in association with reviews of the Fire Protection Plan, or as new information becomes available, ensuring that Park values are considered in the preparation of fire pre-suppression strategies.

Further research is required into the effects of fire and the fire ecology of flora and fauna communities. This is particularly important in planning controlled fire, and in the protection of those species or communities identified as rare or threatened (sections 3.3 and 3.4). At this stage, little information is available on the duration of, the effects of, or benefit from, fuel reduction burning in different land types and vegetation communities, and hence the frequency of burning required to achieve effective fire protection results.

Construction of helipads in the Park is generally not warranted because of the availability of suitable landing sites on heathlands and beaches. Proposals in the Regional Fire Protection Plan will be amended accordingly when that Plan is reviewed.

Areas which will not be subjected to fuel reduction burning include rainforest, selected heathlands, coastal dune scrub, unstable sand dune areas, old growth areas and sites of high botanical significance (e.g. Howe Range). Fuel reduction burning will be avoided in and adjacent to areas sensitive to fire, particularly Riparian Forest and Warm Temperate Rainforest.

There is good evidence to support the need for ecological burning in some parts of the Park for vegetation and habitat management, in particular the heathland communities (W. Peel and D. Cameron, pers. comm. 1990) which are prime Ground Parrot habitat. A Coastal Heathland Management Plan (CNR 1993) has been developed specifically for this area, incorporating the latest information on heathland fire ecology. The plan outlines prescriptions necessary for the regeneration and perpetuation of this community, and in particular those frequencies most conducive to the breeding requirements of the Ground Parrot.

Aims

- Protect life, property and Park values from injury by fire.
- Minimise the adverse effects of fires and fire suppression methods.
- Maintain fire regimes appropriate to the conservation of native flora and fauna.

Management strategies

- *Undertake prescribed burning in accordance with the Orbost Regional Fire Protection Plan, as modified (see below) and shown in figure 3, and the Coastal Heathland Management Plan.*

Park Management Zone	Change
• Special Protection Areas 4, 5, 6, 13, 16, 20, 24, 25 • Red River (western section of catchment) • Benedore River catchment • Shipwreck Ck catchment	Priority 3 to Priority 4
• Easby Tk to Easby Ck • Red River catchment headwaters	Priority 2 to Priority 4

- *Publicise and enforce regulations and restrictions on the use of fire within the Park.*

- *Maintain the existing network of water points (figure 3) to support fire suppression in the Park.*

- *Give preference to using the following suppression methods whenever practicable, particularly in wilderness zone, special protection areas and natural catchment areas:*
  - *use of hand tools and sulphate-based aerial retardants;*
  - *use of heathlands or beaches for helipads;*
  - *use of existing roads and tracks, and natural features as control lines;*
  - *backburning;*
  - *allowing wildfires to burn out to appropriate control lines.*

- *Rehabilitate fire control lines, temporary helipads and other disturbances resulting from fire suppression activities as soon as possible after the fire.*

- *Construct temporary helipads at locations as identified in the Regional Fire Protection Plan only when required during major wildfire suppression.*

- *Liaise with the NSW State Forests and NSW National Parks and Wildlife Service regarding planning and implementation of fire protection works across the State border.*

- *Co-ordinate burning in the priority 4 areas to meet ecological requirements and to achieve both ecological and fuel reduction benefits.*

- *Undertake burning for ecological purposes only where it can be established that such action is deemed necessary for the conservation of a significant population or community. Burning for ecological purposes will be subject to the preparation of an approved species or community management plan.*

- *Establish monitoring programs to measure the ecological consequences of various fire regimes in selected vegetation types.*

- *As research and experience give a better understanding of fire regimes and management techniques, ensure that this information is included in ecological fire management strategies (e.g. Coastal Heathland Management Plan), and in the review of the Fire Protection Plan, giving consideration to the objectives of the Park.*

4.2 Pest plants and animals, and diseases

Over 100 species of introduced plants have been recorded in the Park. The majority of these are restricted in distribution and present in low numbers, and occur in association with localised disturbances such as adjacent private property and roads. The relatively low number of serious infestations is largely a reflection of minimal disturbance in the past.

A small number of infestations do, however, pose significant threats to the survival and integrity of native vegetation and wildlife habitat. Bridal Creeper, Cape Ivy and Dolichos Pea are of great concern because they invade minimally disturbed or undisturbed bushland and compete successfully with several vegetation types.

Seventeen introduced vertebrate species have been recorded in the Park (eight mammals and nine birds). Major problem species include predators such as foxes, cats and dogs. Predators have been implicated in the decline of small native fauna; in particular, dog and fox predation on Little Terns and Hooded Plovers endangers the breeding success of these species. Pigs and goats have the potential to become major problems in the Park.

One particular disease threat is Cinnamon Fungus and associated species. These fungi are harboured as spores in the soil and can move through drainage lines, on vehicles and, potentially, on walkers. Cinnamon Fungus is prevalent in the coastal forests of East Gippsland and has been detected widely throughout the Park, the worst infestations

being apparent between Mallacoota and Shipwreck Creek (Ward & McKimm 1982).

Aims

- Control, and where possible eradicate, pest plants and animals in the Park.
- Minimise the impact of control programs on native flora and fauna.
- Protect the Park from threats and diseases, in particular Cinnamon Fungus.

Management strategies

- *Prepare and implement a Pest Plant and Animal Strategy to address priorities for funding, target species, techniques and monitoring. Continue current programs to control Dolichos Pea, Bridal Creeper, Cape Ivy, pigs, and feral cats and dogs.*
- *Where possible, liaise and co-ordinate control efforts with neighbouring land holders, including NSW State Forests and NSW National Parks and Wildlife Service.*
- *Encourage interested groups, individuals and organisations to assist with pest plant and animal control where appropriate.*
- *Develop an action plan for current and new infestations of Cinnamon Fungus with the aim of containing spread to protect the uninfected parts of the Park.*

5 THE PARK VISIT

5.1 The Park visitor

Croajingolong National Park received 180 000 visitors in 1993-94, including approximately 2000 who walked various sections of the coast. The total visitor numbers to the Park reflect its significance for tourism in Victoria and in East Gippsland in particular, where tourism is mostly concentrated on the coast from Lakes Entrance to Mallacoota.

The Park's natural beauty, diverse environments, remote character and proximity to other tourism attractions in the region give it a valuable role in the provision of tourism opportunities in East Gippsland, particularly at the less developed and more self-reliant end of the spectrum.

It is evident that the emerging trends of increasing visitor interest in nature-based tourism and backpacking (particularly by international visitors) will be felt in the Park. In addition, the Park's unspoilt and remote coastal setting is a quality increasingly being sought by interstate and international travellers, and is likely to draw a growing number of such visitors to the Park. As a result, it is likely that the demand for bushwalking and commercial tours catering for these visitors will increase. The opportunity for coastal walking can be an adventure/nature-based tourism experience of the highest quality.

Various forms of this 'close to nature'-based tourism are gaining in popularity, particularly with family groups. Experiences on offer in the Park include bird watching, botany, photography and painting.

Providing for the visitor

The majority of visitors to Croajingolong are from surrounding townships, i.e. Mallacoota, Cann River, Bemm River and Eden. They visit the Park to undertake specific activities, in particular fishing, boating and day-length walks.

Croajingolong National Park appeals to two core NPS market segments:

- Natural Adventurers
- Bush Solitudes.

They enjoy the Park's remote and spectacular coastal settings, good range of nature-based and ecotourism activities, particularly bushwalking, and the low key facilities.

The visitor services strategy for the Park will aim at providing for the visitor experiences outlined above. Its implementation will enhance the visitor's enjoyment of the attributes of the Park. It recognises the important role of nearby townships, particularly Mallacoota, in providing accommodation and services that complement those available in the Park.

High-standard, low-key facilities at picnic sites and camping areas will be provided and managed so as not to dominate the natural setting or diminish unduly the sense of remoteness and feeling of being in an unspoilt landscape, which is an important part of the visitor experience. Carrying capacities will be determined as necessary, particularly in the more remote parts of the Park, to help protect the environment and the visitor experience.

Existing and future visitor needs will be evaluated to identify trends as a basis for determining appropriate visitor services.

Overall, the challenge for management will be to provide the opportunities for experiencing the Park's special qualities while retaining its remote and largely undeveloped nature. The promotion of minimal impact techniques and safe practices, regardless of the activity, will be important in ensuring the long-term sustainability of recreational use of the Park as well as enhancing the enjoyment of visitors generally.

Aim

- Provide for visitors in accordance with the above overview of future management for visitors.

Management strategies

- *Provide facilities and services which highlight, but are in keeping with, the area's distinctive characteristics (sections 5.3 and 5.4, and tables 3, 4 and 5).*
- *Conduct visitor surveys to assess visitor profiles, expectations, preferences and patterns of behaviour to assist in Park management.*
- *Establish a program to determine levels of recreational activity consistent with protecting recreational experiences and park values.*
- *Permit recreational activities in accordance with table 2.*
- *Encourage all visitors to adopt minimal impact techniques and to adhere to Codes of Conduct appropriate to their activity.*
- *Monitor visitor use to ensure adequate provision of facilities consistent with appropriate types and levels of use.*
- *Promote the Park as a unique destination for remote nature-based experiences.*

5.2 Visitor recreation activities and facilities

5.2.1 Vehicle access

The Park has a network of roads and tracks, extending some 430 kilometres, largely as a consequence of past land uses.

The major Park entry roads are two-wheel drive standard (which are occasionally closed due to wet conditions) and run south off the Princes Highway. These include Tamboon Road, Point Hicks Road, West Wingan Road and the Mallacoota-Genoa Road. They give access to the key recreation areas such as Furnell Landing and Tamboon Inlet, Thurra Camp, and beaches and inlet picnic sites at Point Hicks and Mallacoota.

A variety of minor tracks branch off the major roads and are accessible to four-wheel drive vehicles on a seasonal basis.

Aims

- Provide and maintain an access network for visitor enjoyment, management purposes and private property access.
- Minimise the impact of vehicle and track management on the Park's natural and cultural values.

Management strategies

- *Manage and permit use of roads and tracks in accordance with table 3, figure 5 and Departmental guidelines.*
- *Liaise with the Victoria Association of Four Wheel Drive Clubs over temporary and seasonal road closures (figure 5).*
- *Liaise with the Shire of East Gippsland to ensure a co-operative approach to management of Fairhaven and Mallacoota-Genoa Roads and maintenance of Buckland and Duke Roads.*
- *Promote the responsible and safe use of vehicles on Park roads through appropriate signage and publications.*
- *Schedule non-emergency but essential maintenance and monitoring tasks using vehicles in the wilderness zone concurrently and record each journey and its purpose.*
- *Provide information to Park visitors on vehicle touring routes of interest.*

TABLE 2 SUMMARY OF RECREATION ACTIVITIES

ACTIVITY	1	2	3	4	5	6
Picnicking	*Yes*	*Yes*	*Yes*	*No*	*YC*	*No*
Camping - vehicle-based, designated sites (limited facilities)	*Yes*	*Yes*	*No*	*No*	*N/A*	*No*
Camping - land-based dispersed, self reliant (no facilities)	*Yes*	*Yes*	*Yes*	*No*	*YC*	*No*
Camping - boat-based, fully self contained (no facilities)	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*No*
Walking	*Yes*	*Yes*	*Yes*	*No*	*YC*	*Yes*
Bicycle riding	*YC*	*YC*	*No*	*No*	*YC*	*No*
Horse riding	*YC*	*YC*	*No*	*No*	*No*	*No*
Fishing	*Yes*	*Yes*	*Yes*	*No*	*YC*	*N/A*
Intertidal collecting	*YC*	*N/A*	*YC*	*N/A*	*YC*	*N/A*
Firewood removal	*No*	*No*	*No*	*No*	*No*	*No*
Motor boating (including launching and mooring)	*YC*	*YC*	*No*	*N/A*	*No*	*N/A*
Water-skiing	*YC*	*YC*	*No*	*N/A*	*No*	*N/A*
Dogs	*No*	*No*	*No*	*No*	*No*	*No*
Canoeing and kayaking	*Yes*	*Yes*	*Yes*	*No*	*YC*	*N/A*
Swimming	*Yes*	*Yes*	*Yes*	*No*	*YC*	*N/A*
Nature study and photography	*Yes*	*Yes*	*Yes*	*No*	*YC*	*Yes*
Orienteering/rogaining	*Yes*	*Yes*	*No*	*No*	*No*	*No*
Rock climbing/abseiling	*Yes*	*Yes*	*N/A*	*No*	*No*	*N/A*

Management zones and overlay:

1 Conservation and Recreation Zone
2 Recreation Development Zone
3 Wilderness Zone
4 Reference Area Zone
5 Special Protection Area
6 Education Zone

Response Key:

Yes Appropriate
No Not appropriate
YC Conditions: refer to relevant section or activity code of conduct
N/A Not applicable

5.2.2 Day visits

The Park's scenic natural features, particularly those accessible to two-wheel drive vehicles, attract day visitors from adjacent towns such as Mallacoota, or those visiting other attractions in East Gippsland. Day visitors are the largest group of visitors to the Park and should be provided with appropriate information and facilities at specific locations to enhance their appreciation of the Park's environment. It is desirable to have areas set aside for day visitor use where camping is not permitted, to minimise conflict between groups.

Seventeen picnic sites have been developed in the Park on various arms of Mallacoota Inlet, and at Shipwreck Creek, Genoa Peak, Double Creek, Thurra River mouth and Wingan Inlet. Most day visitor use is concentrated in the east of the Park around Mallacoota, where access is generally of a higher standard.

TABLE 3 ROAD AND TRACK MANAGEMENT

All roads and tracks listed may be subject to seasonal road closure.

ROAD OR TRACK	ACCESS*	STATUS+		FUTURE MANAGEMENT/COMMENTS
		CURRENT	PROPOSED	
Howe Range				
Lakeview Track	3	O	O	Special Protection Area 3; access to 'Jingolong Flats'
Howe Hill Track	3	M	M	Wilderness area; fire pro. track
Barracoota Link Track	3	O	O	Boundary of wilderness area
Barracoota Track	3	M	M	Wilderness area
Howe Flat Track	3	O	O	Boggy; not suitable in wet
Duncans Road	3	O	O	Special Protection Area 4; monitor vehicle impacts
David Creek Track	3	M	M	Special Protection Area 4; bridge out
Fern Gully Track	3	O	O	Access to private property
New Binns Road	2	O	O	Park boundary
Fairhaven Road	1	O	O	
Ken Spur Track	2	O	O	Park boundary
Cape Horn Track	3	O	O	Access to Mallacoota Inlet picnic areas
Fairhaven Link Track	3	O	O	
Dukes Road	3	O	O	No through road
Snapper Point Track	3	O	O	Little use except for management
Wingan-Mallacoota				
Roger Track	3	O	O	Mostly in State forest; 4WD route
Genoa Peak Track	2	O	O	Access to Genoa Peak; upgrade to 1
Genoa River Fire Trail	2	O	O	Access to picnic area
Coolwater Track	3	O	O	Access to Eastern Energy easement
Sou-west Arm Track	1	O	O	Access to picnic area
Sandy Point Track	1	O	O	Access to picnic area
Captain Creek Fire Trail	3	M	M	MVO
Miners Track	3	O	O	Betka River access
Pipeline Road	2	O	O	Access to State forest and pump station
Betka Track	3	O	O	Boundary of wilderness zone
Aerodrome Track	3	O	C	Close track; poor condition; duplicates Centre track; traverses area with Cinnamon Fungus
Centre Track	2	O	O	Access to Shipwreck camp, upgrade to 1
Old Coast Track	3	M	M	Special Protection Area 16; wilderness area; essential MVO
Little Rame Head Track	3	M/W	M/W	Walkers only from dunes to trig. station
Shipwreck Track	3	M	C	Wilderness area; poor condition; essentially closed, formalise closure; not requirement for management
Rocky Ridge Track	3	M	M	Wilderness area; not required for management
Rocky Ridge Link Track (formerly Sandpatch) Track (East Wingan)	3	O	O	4WD tour route; Park and wilderness area boundary
Sandpatch Track (Rocky Ridge Tracks - Red River Track)	3	M	C	Natural catchment area and wilderness zone, allow to overgrow to walking track category D standard

Table 3 (cont.)

ROAD OR TRACK	ACCESS*	STATUS+		FUTURE MANAGEMENT/COMMENTS
		CURRENT	PROPOSED	
East Wingan Track	3	M	W	Wilderness area; allow to overgrow to walking track category E standard
Red River Track	3	M	M	Wilderness area; badly eroded; essential management purposes only
Easby Track	3	M	W	Wilderness areas, natural catchment area and heathland, allow to overgrow to walking track category D standard
Sandpatch Link Track	3	M	W	As above
Boundary Track	3	M	M	Wilderness area; access to stream gauge, closed east of river
Thurra				
West Wingan Road	2	O	O	Access to Wingan Camp, upgrade to 1
Jungle Creek Track	3	M	W	Special Protection Area 18; allow to overgrow to walking track category D standard
Gale Hill Track	3	O	O	4WD route to the coast
Cicada Trail	3	O	O	4WD tour route
Gus Track	3	O	O	Overgrown; 2 crossings washed out
Humphreys Track	3	M	M	
Mueller Link Track	3	O	O	Closed to public for safety reasons
Mueller Jeep Track	3	M	M	Badly eroded; impassable most of year
Mount Everard Track	3	O/W	O/W	Walkers-only up peak
Point Hicks Road	2	O	O	Main access to Tamboon/Pt Hicks
Elusive Track	3	M	M	Walking access to lake; water point
Mueller Camp Track	2	O	O	Access to Mueller camp
Tamboon				
Clinton Rocks Track	3	O	O	4WD route to coastal camping
Fisherman Track	2	O	O	Park boundary; access to Fisherman's landing
61 Fire Trail	3	M	M	Special Protection Area 24
Swan Lake Track	3	O	O	

* Access: 1 All vehicle - all weather, 2 All vehicle - dry weather, 3 4WD - dry weather only.

+ Status:

- M Management Vehicles Only
- O Open to public vehicles (seasonal restrictions may apply)
- W Walkers only
- C Close track and rehabilitate

Aim

- Establish and maintain high standard but low-key day visitor facilities which enhance visitor enjoyment and are consistent with protecting Park values.

Management strategies

- *Develop and maintain facilities in accordance with table 4 and figure 4.*
- *Monitor, and take steps to ensure adequate provision of, facilities for appropriate levels of use.*

- *Investigate options for improving the vehicle access and parking at all day visitor areas, in particular at Genoa Peak.*

5.2.3 Camping

Camping is an important component of many of the recreation activities undertaken in the Park. There are adequate opportunities for camping in formal campgrounds or in the undeveloped, more remote areas of the Park, whether vehicle touring, bushwalking or canoeing based. Camping localities are shown on figure 4 and opportunities are summarised in table 5.

Most vehicle-based camping occurs at Thurra River, Wingan Inlet, Shipwreck Creek, Peachtree Creek and Mueller Inlet, where basic facilities and beach or inlet access are available.

Walkers camp either in remote, secluded sites where fresh water is available (e.g. Sandpatch Point, Seal Creek, Lake Wau Wauka) or at the overnight walk-in sites at Wingan Inlet and Shipwreck Creek.

Boat-based camping at sites with no facilities occurs on the shores of Tamboon Inlet and on Mallacoota Inlet.

For all forms of camping, visitor numbers are highest during the summer holiday period, the Australia Day and Melbourne Cup weekends and Easter.

All camping in the Park is subject to fees. A booking system is used to ensure equity of access to these sites over summer and Easter. A self-registration system for payment of camping fees supplements fees collected by Rangers and at the Cann River Information Centre during off-peak periods.

Aim

- Provide opportunities for a variety of camping experiences in keeping with the Park's unspoilt and remote character while minimising impacts on Park values.

Management strategies

- *Maintain all campsites and maintain associated facilities to a high standard. Delineate and sign campsites in accordance with table 5.*
- *Monitor the condition of campsites in the Park to ensure that natural features and recreation experiences are not compromised.*
- *Encourage the use of fuel stoves in preference to firewood.*
- *Promote minimal impact camping, including a 'take your rubbish home' philosophy, at all sites.*
- *To assist with maintaining high quality facilities, introduce a park camping fee structure which is consistent with the levels of facilities provided (table 5).*
- *Rationalise campsites at Mueller Inlet to alleviate problems associated with periodic flooding.*
- *Investigate future management options for Thurra campground as the need arises.*
- *Monitor the impacts of activities (particularly camping) on the small inlets, lagoons and lakes along the coastal 'wilderness' walk to assist in minimising visitor impacts on these sensitive environments.*

5.2.4 Bushwalking

Bushwalking opportunities in the Park are varied, from short walks along formed and signposted tracks to extensive four to five day 'wilderness' walks.

Short walks along developed tracks around Mallacoota Inlet, Thurra River camp, Wingan Inlet and elsewhere (e.g. Genoa Peak, Lake Elusive, Mount Everard) are very popular with day visitors and campers exploring the Park.

The coastal walk from Sydenham Inlet to Mallacoota, and then beyond into the Nadgee Nature Reserve (NSW), is widely recognised as being one of the outstanding coastal 'wilderness walks' in Australia. Walkers are able to undertake shorter overnight sections of

TABLE 4 PROPOSED AND EXISTING DAY VISITOR FACILITIES

LOCATION	TOILETS	TABLES	FIRE PLACE	JETTY	WALK TRACK	INFO BOARD
Allens Head	●	●	●	●	●	
Cape Horn	○	●	●	○		
Cape Horn Bay			●		●	
Captain Creek		●	●	●	●	
Cemetery Bight	●	●	●	●	●	
Double Creek		●	●		●	○
Genoa Falls					●	
Genoa Peak		●	●		●	○
Genoa River Fire Tk	●	●	●	●		
Goanna Bay	●	●	●	●		
Gravelly Point	●	●	●	●		
Kingfish Point		●	●	●		
Mueller Inlet	●	○				○
Narrows Jetty		●	●	●		
Narrows Walk					●	○
Sandy Point	●	●	●			
Shipwreck Ck	●	●	●		●	●
Sou-west Arm	●	●	●	●	●	
Thurra River	●	●	●		●	●
Wingan Inlet	●	●	●	●	●	●

● = Existing ○ = Proposed

TABLE 5 CAMPING OPPORTUNITIES*

TYPE	MAXIMUM DURATION	LOCATION
Vehicle-based Basic facilities provided	2 weeks during peak periods, 5 weeks at all other times	Wingan (25 sites) Thurra (47 sites) Mueller (9 sites) Shipwreck (5 sites)
4WD Vehicle-based No facilities	2 nights at any one site	Swan Lake (2 sites) Gale Hill (2 sites) Clinton Rocks (2 sites)
Boat-based No facilities	2 weeks camping	Tamboon Inlet (9 sites) (Mallacoota Inlet overnight stays on boats - not in the Park)
Walker-based No facilities	Maximum stay during peak times to be determined	Generally along the coastal strip

*Camping permit required at all sites

the route (e.g. Point Hicks to Wingan Inlet) or longer, more challenging treks covering over 100 km of spectacular coastline. The coastal walking route follows the sandy beaches of the Park and occasionally diverts inland to tracks across Coastal Heathland to avoid cliffs and rocky points.

The increasing popularity of this walk is placing increasing pressures on the sensitive coastal environments, particularly at the campsites. In addition, there is the potential for the wilderness experience of walking and camping in a remote and unspoilt coastal setting to be diminished by overcrowding and large groups.

In the broader sense, East Gippsland has many opportunities for a number of walks in a variety of environments. Preliminary planning is being undertaken to investigate the feasibility of a regional walking track network. It is envisaged that tracks within Croajingolong National Park will play an important role in this network.

Aims

- Provide a range of opportunities for walking, while minimising impacts on Park values.
- Promote the walking track network as a significant nature-based opportunity within the Park.

Management strategies

- *Allow walking throughout the Park except in Reference Areas and specific Special Protection Areas.*
- *Liaise with relevant authorities to include the Park's walking tracks in a regional network.*
- *Discourage off-track walking (with the exception of some sections of the coastal walk). Monitor the condition of all tracks and walk-in campsites and ensure that there is no incremental development.*
- *To ensure environmental impacts are minimised, allow some site hardening to occur in coastal sections of the Wilderness Zone.*
- *In consultation with the NSW National Parks and Wildlife Service, peak walking groups and commercial operators, develop and implement a permit system to protect environmental values and wilderness experiences along the coastal walk. Initial guiding principles will include the following:*
  - *equal potential allocation of capacity to commercial and non-commercial sectors in appropriate sections of the walk;*
  - *adoption of a maximum group size and a maximum number of people in each section of the walk;*
  - *a maximum stay at any campsite during peak periods.*
- *Maintain walking tracks at categories specified in tables 3 and 6.*
- *Encourage walkers to adopt minimal impact techniques, and, in particular, not to disturb breeding seabirds and waders along the coast.*

5.2.5 Fishing

Fishing, including bait and intertidal collecting, is a popular activity in the Park. The great diversity of fishing opportunities available (ocean, river, estuary and lake) is a major attraction.

The larger waterbodies with motor boat access are fished, namely Mallacoota, Wingan and Tamboon Inlets. Beach fishing is also common near camping areas in the Park and at more remote sites, such as Clinton Rocks. Prawns, crabs, sandworms and pipis are collected. Oysters and mussels are also taken by campers at Wingan Inlet.

Collection of bait can affect the abundance and diversity of species, although the present level of impact is unknown. Boating and the activities of collectors may also disturb breeding seabirds in some areas of the Park.

TABLE 6 WALKING TRACK MANAGEMENT

TRACK NAME	DISTANCE (KM)	TRACK CATEGORY*
Howe Flat Track	1	E
Quambie Point Track	6	D
Captain Creek Track	3	D
Pipeclay Track	4	D
Double Creek Arm	2	D
Captain Creek jetty to Genoa Road	3	D
Old Coast Walk (Aerodrome to Shipwreck)	5	D
Narrows to Bucklands jetty to Captain Creek jetty	8	D
Double Creek nature trail	1	C
Spotted Dog Gold Mine	0.7	D
Cemetery Bight to Allan Head	2	D
Gipsy Point Walk	1.2	D
Barracoota Trail	8	D
Cape Howe Trail	3.4	E
Mallacoota to Cape Howe	22	E
Genoa Peak	1	D
Genoa Falls	0.2	E
Shipwreck Creek Beach Track	0.5	C
Wingan Nature Trail	2	C
Petrel Point		D
Mt Everard	4.5	D
Elusive Lake	2	D
Gale Hill	8.5	D
Easby Creek	4.5	D
Boundary Track	5	D
Clinton Rocks	7	D
Thurra Swamps	1.5	D
Red River	8	D
Sandpatch Link	3	D
Rame Head	1	D
Little Rame Head	3	D
Old Coast Track	9	D
Dunes Walk	2	D

*Track category as per in NPS guideline 17.5R:

C - a well defined track up to 1.5 m in width, well drained with a good surface (boardwalk, bitumen, gravel or wood chips).

D - a track, defined through use, benched and drained and cleared in sections.

E - a track or footpath defined through use but having no basic construction.

Aim

- Provide opportunities for fishing including bait collection and intertidal collecting, where it is consistent with the protection of Park values.

Management strategies

- *Allow fishing (including bait and intertidal collecting for personal use or consumption in the Park) in all areas except Reference Areas and Special Protection Areas.*
- *Monitor the impacts of fishing activity on the ecology of inlets and take appropriate action to ensure sustainability.*
- *Provide appropriate input into the preparation of an integrated management*

plan for major inlets to ensure long-term sustainable use of these ecosystems.

- *Promote the use of responsible methods of rubbish disposal, particularly among the angling community.*

5.2.6 Boating

Motor boating, usually in conjunction with fishing, picnicking and sightseeing, is popular on a number of inlets and estuaries in or alongside the Park. Boats from Mallacoota and Gipsy Point are the only form of access to some picnic facilities around Mallacoota Inlet. Trailer-sailers and motor cruisers use Mallacoota Inlet and sometimes moor overnight at Park jetties.

On Tamboon Inlet, boats are the only means of transport from Furnell Landing to Tamboon South township and to camping sites around the Inlet.

Ocean access is available for power boats at Mallacoota (outside the Park). Access from Tamboon and Sydenham Inlets is unreliable because of entrance closures and shallow water. Boats occasionally negotiate the entrance at Sydenham (outside the Park), Wingan and Tamboon Inlets although all require local knowledge and expert boat handling skills.

Water-skiing and jet skiing are occasional summer activities on Tamboon Inlet, which is the only suitable waterbody in the Park. This, however, is not currently an issue of concern. Similarly, sailing is also a minor activity in the Park; only the waters of Tamboon Inlet are suitable and accessible.

Motor boating on Mueller Inlet, Swan Lake and Mud Lake is disrupting wildlife, particularly breeding waterbirds, degrading banks and disturbing visitors seeking solitude (section 5.2.8).

Aim

- Provide opportunities for boating in the Park, where appropriate.

Management strategies

- *Minimise the impacts of motor boating on Tamboon and Wingan Inlets by:*
  - *implementing a power limit of 15 kw (20 hp) and a speed limit of 8 km/h (5 knots) on Wingan Inlet;*
  - *implementing a speed limit of 8 km/h (5 knots) within the Tamboon South speed zone on Tamboon Inlet.*

- *To protect wildlife, permit access to Tullaberga Island and The Skerries only with the written permission of the Ranger in Charge.*

- *Prepare a zoning plan for Tamboon Inlet and the lower reaches of the Cann River to rationalise boat-based camping, maintain recreational opportunities and protect environmental values.*

- *Liaise with the Shire of East Gippsland on the management of boating in Mallacoota Inlet.*

5.2.7 Jetties

Departmental jetties provide mooring sites and access into the Park at many of the day visitor areas around the Mallacoota Inlet (see 'Discovering Mallacoota Inlet' brochure). Jetties associated with boat ramps at Furnell Landing, Peachtree Creek (both outside Park) and Wingan Inlet assist with boat launching and landing.

Private jetties on the eastern shore of Mallacoota Inlet provide mooring facilities for private property inholdings. A number of unlicensed private jetties at Tamboon South are used by local residents and Park visitors.

Aim

- Provide for appropriate boating access to and use of Park inlets and waterways.

Management strategies

- *In consultation with local residents, prepare a jetty management plan for Tamboon Inlet. The plan will:*

- *outline licence details and conditions for private jetties;*
- *develop guidelines on standards of construction and maintenance;*
- *reduce the number of private jetties by encouraging joint and co-operative use;*
- *develop guidelines on erosion mitigation requirements.*

- *Maintain existing Departmental jetties at Wingan Inlet and Mallacoota Inlet to appropriate standards.*

- *Issue Methodist Ladies College with a licence to construct and maintain a five berth jetty at Harrisons Creek.*

- *Liaise with the relevant authorities on jetty management and navigational issues in Mallacoota Inlet.*

5.2.8 Canoeing and sea kayaking

The smaller estuaries and inlets, including the arms of Mallacoota Inlet, are suitable for canoeing. This activity is increasing on estuaries accessible by vehicle. Wingan Inlet and Mueller River are popular canoeing waters for visitors seeking quiet, secluded areas.

Mueller Inlet, Swan Lake and Mud Lake are three small waterbodies in pristine settings. Combined with their close affinities with the wilderness character of the Park, this makes them more appropriate for non-motorised vessels.

Sea kayaking is an activity quickly increasing in popularity. Mallacoota supports a relatively large sea kayaking group, and a number of commercial operators. Although this activity generally uses waters outside the Park, coastal vehicle access points are used for launch and pick-up, as are camping sites along the wilderness coast.

Aim

- Provide for the use of Park inlets and waterways for canoeing and kayaking.

Management strategies

- *Manage and promote canoeing and sea kayaking in line with minimal impact techniques and in conjunction with local operators, and canoeing and kayaking organisations.*

- *Maintain a pristine setting for visitors to Mueller Inlet, Swan Lake and Mud Lake by restricting boating to non-motorised vessels.*

5.2.9 Other activities

Many other popular recreational activities occur to a lesser extent in the Park. Such activities include swimming, surfing, diving, nature study and photography.

There are opportunities for cycling and horse riding, although numbers using the Park are relatively low. Touring by mountain bike is increasing in popularity, and public vehicle roads and tracks throughout the Park outside of the Wilderness Zone provide a variety of terrains. Horse riding is permitted on all public vehicle roads and tracks and Eastern Energy easements within the Park.

Low-flying aircraft or the persistent presence of aircraft can detract from the enjoyment of visitors to the Park, particularly in wilderness zones. Although there is an aerodrome at Mallacoota which operates sight-seeing and domestic charter flights, aircraft disturbance is not a major problem at present.

Aim

- Provide for a range of other recreational activities, as appropriate.

Management strategies

- *Permit cycling on all vehicle roads and tracks, except those in the Wilderness Zone.*

- *Permit horse riding on public vehicle roads and tracks and on Eastern Energy easements within the Park.*

- *Liaise with scenic flight operators and Air Services Australia (formerly Civil Aviation*

Authority) as necessary to encourage sensitive flight practices over the Park.

5.3 Visitor information, interpretation and education

Interpretive services and environmental education help orientate visitors, foster an understanding and appreciation of the Park's features and values, influence visitor use, reduce management problems and contribute to a broader understanding of natural environments and management objectives.

Information, interpretation and community education services should build on themes related to the Park's diverse environments, its remote and natural character and its pristine coastline, as well as emphasising the need for minimal impact and self-reliance in undertaking activities in the Park.

Current interpretive media includes publications, information shelters and boards, much of which requires updating.

Summer holiday programs based at Thurra and Wingan Inlet, and outside the Park at Mallacoota, are conducted each year. These focus on organised activities such as talks, Ranger-guided walks, spotlighting, Junior Ranger activities, slide shows and environmental games. They help to increase visitor appreciation of the Park and Park management, and encourage environmentally responsible behaviour. The Park is used to a limited extent by local and visiting schools and tertiary students for educational studies and research.

Contact with Rangers on routine patrols and duties is a valuable source of information for visitors. In addition, the information and interpretation requirements of Park visitors are well served by the Information Centres at Cann River and Mallacoota (figure 4).

The Mallacoota Education Area is an appropriate area that could be used for educational studies, particularly those involving field study techniques. Its proximity to Mallacoota increases its potential usefulness as an educational resource.

Aims

- Enhance visitor appreciation and visitors enjoyment of the natural and cultural features of the Park, and the value of national parks generally.
- Increase public awareness of management activities including fuel reduction burning, pest plant and animal control, the conservation of threatened species, natural and cultural features and the impacts of people on the Park.

Management strategies

- *Develop and implement a Park interpretation plan, in the context of broader regional opportunities, focusing on the following themes:*
  - *the diverse environments;*
  - *the remote and unspoilt character of much of the Park, particularly its coastline;*
  - *threatened species management programs (e.g. Ground Parrot);*
  - *Aboriginal and non-Aboriginal history;*
  - *minimal impact and self-reliant recreation.*
- *Provide appropriate interpretation at important sites requiring special protection (e.g. Little Tern colonies).*
- *Provide on-site landscape interpretation information at roadside lookouts and on information boards.*
- *Prepare publications relating to areas of major visitor interest in the Park (e.g. day use areas around Mallacoota Inlet).*
- *Provide activities during periods of peak visitor demand. Locate programs generally at Mallacoota and major visitor areas.*
- *Upgrade and standardise road and track signposting throughout the Park in accordance with the CNR Signs Manual and guidelines for signage in the Park (table 1).*

- *Encourage use of the Mallacoota Education Area for appropriate education activities following gazettal in accordance with the Parks Regulations 1992.*
- *Provide adequate visitor orientation information and safety messages at major entry points.*
- *Establish and implement monitoring and maintenance schedules for all interpretive facilities.*
- *Undertake regular evaluation of information and interpretation programs related to the Park.*

5.4 Commercial tourism operations

Commercial tours play an important role in introducing visitors to the Park, providing easy access and promoting and interpreting its values and uses.

Several established tour operators, who cater for people who prefer expertise, equipment and organisation to be provided, are an important part of the tourism 'infrastructure' of the Park. Activities currently offered by commercial operators under permit include sea kayak expeditions, motorcycle tours, boat cruises, bushwalking, four-wheel-drive tours and nature study.

As commercial tours tend to involve larger groups, conflicts may arise with other users and environmentally sensitive areas. These problems can be overcome through careful planning of, and subsequent adherence to, permit conditions, and frequent liaison with operators. Such liaison is also vital in assisting operators with their interpretive roles.

Outside the Park, around Mallacoota and Genoa, freehold land creates opportunities for accommodation and more intensive tourism infrastructure to be developed which could enhance the area's accessibility for commercial tourism without affecting the Park.

Two lighthouses have been returned to the State Government by the Federal Government. These significant sites, at Gabo Island and Point Hicks, present opportunities for nature-based tourism which will enhance the experiences available to Park visitors (section 7.2).

Aims

- Provide for tourism activities based on the Park's remote and unspoilt character - its distinctive quality and competitive advantage.
- Provide opportunities for sustainable, high quality adventure and nature-based experiences.
- Support and complement broader tourism opportunities and activities in the region.

Management strategies

- *Inform the tourism industry and the community about visitor opportunities in the Park.*
- *Encourage commercial tour operations to provide high quality, sustainable adventure and nature-based experiences, within appropriate limits.*
- *Assist commercial tour operators develop itineraries, knowledge about the Park and its values, and sustainable practices.*
- *Ensure that Rangers liaise closely with commercial tour permit holders.*
- *Liaise with proponents and planning authorities where tourism development proposals arise for freehold land in the vicinity of the Park to ensure that any facilities are compatible with Park objectives and enhance its use for tourism.*
- *Liaise with local, state and interstate tourism associations, in particular the Lakes and Wilderness Tourism Board, to promote and develop appropriate tourism opportunities.*

5.5 Public safety

The challenge of meeting nature on its own terms is an important part of the experience for visitors exploring the remote areas of the Park. This should be respected when planning for visitor safety. Because there are no constructed facilities once the visitor leaves the main road system, Park users must be appropriately prepared and equipped, particularly those on coastal walks where access to some remote beach localities is difficult.

The Victoria Police is responsible for search and rescue operations. Within the Park such operations would usually involve NRE, the State Emergency Service and other groups under police supervision.

Aim

- Promote and encourage safe practices among visitors and staff.

Management strategies

- *Encourage all visitors to adopt the 'tell someone before you go' philosophy.*
- *Train Park staff in first aid and search and rescue techniques, and ensure qualifications are kept up to date.*
- *Contribute to Displan planning for search and rescue within the Park.*
- *Develop close liaison with the local State Emergency Service and Police to ensure a quick and efficient response to emergency situations.*

6 COMMUNITY AWARENESS AND INVOLVEMENT

6.1 Friends and volunteers

The Friends of Croajingolong National Park, the Friends of Mallacoota, field naturalist clubs, local bird observers and other interested groups or individuals make valuable contributions to park management projects and their continued involvement is to be encouraged.

In the past the Friends of Croajingolong have helped to remove unwanted structures from the coast, and the Australian Trust for Conservation Volunteers has completed extensive walking track works in the area.

Local school groups also play a part in park management. In particular, the Methodist Ladies College's *'Marsh Mead'* has made important contributions to various projects, such as weed removal.

Another volunteer initiative, the Campground Host program, runs at Thurra and Wingan Inlets during the summer and Easter school holidays. The hosts help to orientate Park visitors, carry out interpretation activities, manage booked sites, and report regularly to ranger staff on campground activity.

Aim

- Assist volunteer groups to undertake appropriate management tasks in the Park.

Management strategies

- *Support and encourage the involvement of Friends groups and other volunteers.*
- *Develop a long-term volunteer strategy for the Park that encourages the involvement of volunteer groups, and utilises the skills and interests of such groups in undertaking appropriate actions derived from this plan (e.g. monitoring threatened species, and track maintenance).*
- *Continue to engage Campground Hosts to assist with the visitor management of selected sites within the Park.*

6.2 Community awareness and Park neighbours

Located in a relatively undeveloped area of the State, and largely bordered by sea or State forest, the Park has few immediate neighbours. Small townships, historically associated with agriculture, logging or tourism, have developed at Mallacoota, Genoa, Cann River and Bemm River. Additionally, the Park abuts or surrounds a small number of agricultural holdings in the Genoa area.

Many residents have strong cultural and pioneering links with the surrounding country, much of which is now Park. Consequently, neighbours have a keen interest in Park management, particularly in terms of fire management, pest plant and animal control and access.

Also increasing is an interest in tourism, driven by an emerging industry with operators in the Gypsy Point, Genoa and Mallacoota areas, which is developing opportunities for adventure and nature-based experiences. The individuals involved are seeking new ways to increase client experience and satisfaction in these activities.

Man and the Biosphere Program

Together with the abutting Nadgee Nature Reserve in New South Wales, the Park forms the Croajingolong National Park Biosphere Reserve (110 000 ha) designated under the 'Man and the Biosphere Program' of the United Nations Educational Scientific and Cultural Organisation (UNESCO) - one of only three in Victoria.

Biosphere reserves are areas significant on a world scale for their characteristic landforms, plants and animals and the way they have been used by people. Begun in 1971, the designation of Biosphere Reserves is a world-wide program of international scientific co-operation dealing with people-environment interactions in the globe's range of bioclimatic and geographic situations. Research under the program is designed to produce the information needed to

solve practical problems of resource management.

Key ingredients are the involvement of decision-makers and local people in research projects, training and demonstration in the field, and the pooling of disciplines from the social, biological and physical sciences in addressing complex environmental problems (ANCA 1993).

Programs for the Park are yet to be developed.

Aims

- Increase public awareness of management activities, including fuel reduction burning, pest plant and animal control, and the conservation of threatened species.
- Encourage conservation and sound land management practices on private land adjoining the Park.
- Promote and encourage adoption of the principles of the 'Man and the Biosphere Program.'

Management strategies

- *Maintain liaison with local community groups and land holders, and as appropriate involve them in relevant aspects of planning and management of the Park.*
- *Apply, and encourage the application of, the Good Neighbour Policy to management issues on or near the boundary of the Park.*
- *In conjunction with NSW National Parks and Wildlife Service, identify management requirements of the Croajingolong National Park Biosphere Reserve.*

7 OTHER ISSUES

7.1 Authorised uses

7.1.1 Commercial fishing

In 1986, the LCC recommended that commercial fishing on Tamboon Inlet be phased out. There are currently four non-transferable general endorsements in the inlet.

Aim

- Phase commercial fishing out of the Tamboon Inlet in accordance with the government-approved LCC recommendation.

Management strategy

- *Phase out commercial fishing in Tamboon Inlet in consultation with Fisheries and licence holders, and ensure that no new licences are issued over the Park.*

7.1.2 Apiculture

In accordance with LCC recommendations, apiculture is permitted within the Park. Stands of Bloodwood in the Mallacoota-Genoa area provide a nectar resource which supports a small apiculture industry. A maximum number of 20 bee sites is permitted (figure 4). Honey production is not permitted in reference areas or wilderness zones, or within specified distances from their boundaries.

There is concern that honey bees may adversely affect native flora and fauna. Environmental concerns focus on the effects of competition between bees and native pollinators, the efficiency of pollination by honey bees, and the displacement of native birds and mammals by feral colonies. Bees can also be a hazard to Park users.

While studies on the effects of beekeeping are limited, a conservative approach to apiculture in the Park is warranted until longer-term studies establish otherwise.

Aim

- Allow apiculture in the Park in accordance with LCC recommendations and NRE guidelines.

Management strategies

- *Issue permits for a maximum of 20 bee sites (as needed) as identified in figure 4.*
- *Liaise with the apiary industry to ensure equitable access to and maintenance of the nominated sites.*
- *Liaise with the apiary industry on possible methods for the eradication of feral honey bees.*
- *Encourage continued research into the effects of honey bees on native flora and fauna.*

7.1.3 Gravel extraction

The only pit in operation in the Park is Miners Pit, north-west of Mallacoota. Miners Pit is an important source of gravel for road works and quality sand for bricklaying and cement preparation. The operators are required to progressively work out and rehabilitate exhausted areas before opening up new sites within the pit.

Gravel for road construction and maintenance is a scarce resource in East Gippsland.

A former pit, on the Old Coast Road, is no longer in use and is slowly undergoing natural regeneration.

Aims

- Minimise the environmental and visual impacts of gravel extraction operations.
- Provide material for road maintenance in the Park where this has only minimal impact on the Park.

Management strategies

- *Phase out gravel extraction from Miners Pit by 1998 and ensure that the operators adequately rehabilitate the area.*
- *Permit gravel extraction only for use within the Park where there is no practical alternative outside the Park and impact on the Park is minimal.*
- *Assess further requirements to enhance rehabilitation of the Old Coast Road gravel pit site.*

7.1.4 Public utilities

Public utilities within the Park include trigonometrical stations, electricity supply lines and easements, stream gauging stations, telephone lines and cables, a navigation light and a water pumping station. The Eastern Energy easement between Genoa and Mallacoota is eroded in places and requires improved gully crossings.

There are a number of public utilities within the Park's wilderness zone. These include trig. stations on Little Rame Head and Sandpatch Point and a navigation light on Wingan Point within the Sandpatch Wilderness Zone, and trig. stations on Cape Howe, Howe Hill and Mount Carlyle within the Cape Howe Wilderness Zone. In addition, the Commonwealth Australian Maritime Safety Authority (AMSA) operates an automatic lightstation on Little Rame Head.

Aims

- Minimise the impact of public utilities on the Park.
- Ensure appropriate use and licensing of existing and any proposed new public utilities in the Park.

Management strategy

- *Ensure that each existing public utility is covered by Section 27 consent or management agreement in accordance with NPS guidelines.*
- *Remove unnecessary trig. stations from the wilderness zone as technology permits, in consultation with the Office of Surveyor General.*

7.1.5 Training exercises

Although there are no proclaimed training areas for military use in the Park, the Department recognises Defence Force and Emergency Services training as a legitimate use of public land. However, certain activities can conflict with the conservation and recreation values of public land, especially in National Parks.

The Park is also used for navigation, survival and bushcraft exercises by a variety of other groups.

Aim

- Allow appropriate training exercises by the Defence Forces, Emergency Services and other groups.

Management strategy

- *Permit training exercises in accordance with Departmental guidelines.*

7.1.6 Pollution and water quality

Litter left by visitors, especially plastics, has the potential to kill wildlife. Fishing line, bait bags and other items often entangle or suffocate coastal and marine life. Education and the promotion of responsible litter disposal is essential in reversing this trend.

Oil and chemical spills can have devastating effects on visitors, fauna and the coastal environment.

Response to major spills follows the Displan structure, incorporating the expertise and assistance of a broad range of agencies and volunteers. In such a situation, the Department will chiefly co-ordinate the clean-up of beaches and the rescue and rehabilitation of injured fauna.

Aims

- Reduce pollution in the Park from point source discharges and recreational use.
- Ensure an effective oil and chemical spill response.

Management strategies

- *Encourage the public to dispose of waste responsibly outside the Park.*
- *Promote educational material for the Park, emphasising the harmful effects of rubbish in the marine environment, in particular plastics and fishing line.*
- *Ensure the Spill Response Plan is current and staff trained appropriately.*
- *When required, implement the Spill Response Plan quickly and liaise with other relevant coastal management agencies.*

7.2 Boundaries and adjacent land use

Croajingolong National Park shares its western border with the proposed Cape Conran Coastal Park, and its eastern border with the Nadgee Nature Reserve (NSW). These three parks complement each other and provide a broad range of recreation opportunities.

Gabo Island and Point Hicks lighthouse reserves border the Park and have high conservation and heritage significance. While these areas are Crown land outside the Park, they are recognised as having important strategic implications for Park management. Both reserves present important opportunities for nature-based tourism.

The majority of the Park's northern boundary abuts State forest (figure 5). Timber harvesting in parts of these areas is an on-going operation and has implications for Park management in areas such as landscape, access and conservation.

The Shire of East Gippsland controls and plans for agriculture, and residential, industrial or tourist developments on private property adjoining the Park. The next decade is likely to see increasing pressures from development near its boundaries.

Aims

- Enhance the collective values and co-operative management of the Park, the proposed Cape Conran Coastal Park and Nadgee Nature Reserve (NSW).
- Minimise impacts on Park values from surrounding land use, including timber harvesting in adjacent State forest.

Management strategies

- *Co-ordinate, where appropriate, planning and management programs in Croajingolong National Park with those in the proposed Cape Conran Coastal Park and Nadgee Nature Reserve (NSW).*
- *Liaise with the lessee(s) of Point Hicks and Gabo Island lighthouse reserves to establish co-operative management programs (e.g. pest plant control) and to ensure that facilities and services complement the Park and enhance visitor opportunities.*
- *Liaise with the Forests Service over activities in adjacent State forest which may impact on the Park.*
- *Liaise with the Shire of East Gippsland on adjacent public land planning matters, and in particular on works associated with the Genoa-Mallacoota Road.*
- *Liaise with the Committee of Management for Mallacoota foreshore and Mallacoota aerodrome on planning and operational matters of mutual interest.*

8 IMPLEMENTATION

A three-year rolling implementation program will be prepared for the Park to ensure efficient implementation of this Plan. Priorities for management are identified in table 7 as an initial step in this process.

TABLE 7 PRIORITY MANAGEMENT STRATEGIES

MANAGEMENT STRATEGY	SECTION IN PLAN
Conservation	
Develop and implement active management strategies for the protection of key species and communities, in particular: • Little Tern • Eastern Bristle-bird • Ground Parrot • Australian Fur Seal • Coastal Heathland communities • Rainforest.	3.3, 3.4
Survey and protect significant Aboriginal and European sites of historical interest.	3.6
Protection	
Implement the Coastal Heathland Management Plan.	4.1
Prepare input for the review of the Regional Fire Protection Plans.	4.1
Plan and construct water points as necessary.	4.1
Develop and implement a Pest Control Strategy.	4.2
Survey and map Cinnamon Fungus sites.	4.2
The Park visit	
Maintain visitor facilities.	5.2
Liaise with Park users, user groups, and commercial operators.	5.2, 5.3, 5.4
Develop and introduce a permit system for walking the 'wilderness coast'.	5.2.4
Complete a plan for, and continue to provide Park information and interpretation.	5.3
Assess the potential to link the Park's walking tracks into a wider regional walking track system.	5.2.4
Prepare a zoning plan for Tamboon Inlet and the lower Cann River.	5.2.6
Monitoring and research	
Encourage surveys and research on rare or threatened flora and fauna.	3.3, 3.4
Encourage research into the effects of fire and fire ecology.	4.1
Establish programs to monitor indicators of visitor impacts and management techniques, particularly in wilderness zones.	5.1, 5.2.3
Assess visitor use and requirements at sites around the Park perimeter.	5.2, 5.3, 5.4
Other	
Phase commercial fishing out of the Park.	7.1.1
Identify management requirements under the 'Man and the Biosphere' Program.	6.2
Maintain interstate liaison for all cross-border matters, particularly fire suppression and visitor management.	4.1, 5.2, 7.2

REFERENCES

ANCA 1993, *Australia's Biosphere Reserves: A Report*, Australian National Commission for UNESCO, Australian Natural Conservation Agency, Canberra.

Beauglehole, A.C. 1981, *The Distribution and Conservation of Vascular Plants in the East Gippsland Area, Victoria*, Western Field Naturalists Clubs Association, Portland.

CFL 1990, *Orbost Regional Fire Protection Plan*, Department of Conservation, Forests and Lands, Orbost.

Cheal, D.C. 1982, *Benedore River Reference Area Management Plan*, National Parks Service, Victoria.

Cheal, D.C. 1983, *Seal Creek Reference Area Management Plan*, National Parks Service, Victoria.

CNR 1993, *Fire Management Plan for Coastal Heathland in Far-east Gippsland*, Department of Conservation and Natural Resources, Victoria.

CNR 1995a, Atlas of Victorian Wildlife, Wildlife Branch, Department of Conservation and Natural Resources, Victoria (unpub.).

CNR 1995b, *East Gippsland Forest Management Area Forest Management Plan*, Department of Conservation and Natural Resources, Victoria.

CNR 1995c, *Threatened Fauna in Victoria – 1995*, Department of Conservation and Natural Resources, Victoria.

Commissioner for the Environment 1988, *Victoria's Inland Waters. State of the Environment Report*, Government of Victoria, Melbourne.

FIS 1996, Flora Information System database of Victorian plant distribution records, Flora Branch, Department of Conservation and Natural Resources (unpub.).

Forbes, S.J., Gullan, P.K. & Walsh, N.G. 1981, Sites of botanical significance in East Gippsland, Environmental Studies Publication No. 322, Ministry for Conservation, Victoria.

Gullan, P.K., Cheal, D.C. & Walsh, N.G. 1990, *Rare and threatened plants in Victoria*, Department of Conservation, Forests and Lands, Victoria.

Gullan, P.K., Walsh, N.G., & Forbes, S.J. 1981, Vegetation of the Gippsland Lakes catchment, *Muelleria* 4, 333-383.

LCC 1977, *East Gippsland Study Area Final Recommendations*, Land Conservation Council, Victoria.

LCC 1986, *East Gippsland Area Review Final Recommendations*, Land Conservation Council, Victoria.

LCC 1989, *Rivers and Streams Special Investigation Report*, Land Conservation Council, Victoria.

LCC 1991a, *Rivers and Streams Special Investigation Final Recommendations*, Land Conservation Council, Victoria.

LCC 1991b, *Wilderness Special Investigation Final Recommendations*, Land Conservation Council, Victoria.

LCC 1995, *Marine and Coastal Special Investigation Proposed Recommendations*, Land Conservation Council, Victoria.

McRae-Williams, M.S., Rosengren, N.J. & Kraemers, S.M. 1981, Sites of geological and geomorphological significance in East Gippsland, Victoria, Environmental Studies Publication No. 320, Ministry for Conservation, Victoria.

Meredith, C.W., Goss, H. & Seymour, S. 1989, Nature conservation values of the rivers and catchments of Gippsland, Water Resource Management Report Series No. 44, Dept of Water Resources, Victoria.

NPS 1995, *National Parks and Conservation Reserves, Guidelines and Procedures Manual*, National Parks Service, Department of Conservation and Natural Resources, Victoria.

NREC 1991, *Allocation of fish resources in Victorian bays and inlets*, Natural Resources and Environment Committee, Parliament of Victoria, Melbourne.

Parkes, D., Moorrees, A. & Williams, J. 1985, Floristic vegetation map sheets, East Gippsland (1:100 000), National Herbarium of Victoria, Melbourne.

Parsons, R.F. & Cameron, D.G. 1974, Maximum plant species diversity in terrestrial communities, *Biotropica* 6, 202-204.

Roberts, I. 1990, Rainforest mapping in Victoria (1:100 000), Flora Branch, Department of Conservation and Environment, Victoria (unpub.).

Ross, J.H. 1990, *A census of the vascular plants of Victoria*, National Herbarium of Victoria, Melbourne.

Ward, B.K. & McKimm, R.J. 1982, A preliminary survey of severe dieback in the coastal, mixed eucalypt forests of East Gippsland, *For. Tech. Pap*. 29, 41-56.

Winstanley, R.H. 1985, Commercial fishery situation report: Tamboon Inlet, Marine Fisheries Report No. 7, Fisheries and Wildlife Service, Department of Conservation, Forests and Lands, Victoria.

Personal communications

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Peel, William. Botanist, NRE Flora Branch.

APPENDIX 1 DETAILS OF SPECIAL PROTECTION AREAS

NO*	NAME	AREA (HA)	COMMENTS
1	Lake Wau Wauka	140	Essentially undisturbed land-locked fresh-water lake, supporting a population of the rare Australian Bass. Geological and geomorphological State significance.
2	Howe Range	1690	Unique example of a Warm and Cool Temperate Rainforest overlap, of national significance. The Howe Range area supports 27 rare or threatened plant species.
3	Harrisons Creek	840	Extremely rare coastal low elevation mixed species rainforest, supporting 15 threatened plants.
4	Dowell Creek	1260	4A. Partially regenerated mature Warm Temperate Rainforest following fire and/or logging disturbances. Unique assemblage of rare and threatened species including the Yellow Elderberry. 4B. The largest roosting colony of Grey-headed Flying-fox, and unconfirmed records of Little Red Flying-fox.
5	Little River	320	Significant rainforest conservation site, supporting excellent stands of Sandpaper Fig.
6	Teal Creek	260	Significant for rainforest conservation.
7	Islands and shoals, Mallacoota Inlet	35	All the islands, mudflats and sandflats exposed at low water mark within the Bottom Lake provide feeding habitat for intercontinental migratory waders and breeding colonies of the Crested Tern.
8	Tern breeding colonies	150	8A. Goodwin Sands - Important breeding site for seabirds, in particular Little Tern. Rated as State zoological significance. 8B. Mallacoota Big Beach - Little Tern nesting site. 8C. Tamboon South - the only successful Little Tern breeding site of the 1990-91 season. 8D. Sydenham Inlet - historically, one of the Little Tern's best breeding colonies.
9	Smellies Creek	140	Warm Temperate Rainforest of State significance supporting excellent specimens of Sandpaper Fig.
10	Howe Flat and Lake Barracoota	1325	Howe Flat is the largest and most significant wetland complex in the Park, the entire area is of State geological and geomorphological significance, and Lake Barracoota is the largest freshwater coastal lake in Victoria and of great scientific and ecological interest.
11	Tullaberga Island	8	State zoological significance due to the large numbers of breeding seabirds.

*refer to figure 2

Appendix 1 (cont.)

NO*	NAME	AREA (HA)	COMMENTS
12	Genoa Creek Falls	90	Floristic significance due to the protection provided for rare and threatened plant species.
13	Genoa Peak	500	The only Victorian record of Long-tail Spleenwort, which is now extinct in the State, and of Long Clubmoss, which is locally extinct. Roosting sites for Common Bent-wing Bat, and feeding area for Glossy Black-Cockatoo.
14	Double Creek South Branch	140	Important site for rainforest conservation, and incorporates part of the Double Creek Natural Catchment Area. Supports the most westerly occurrence of the Sandpaper Fig.
15	Benedore River	1300	Examples of pre-fire Warm Temperate Rainforest, sustaining only minor canopy scorch from the 1983 fires.
16	Coastal Heathlands	810	One of the most significant stands of Coastal Heathland in the park, a community considered to be extremely species-rich. Many sub-communities along the coastal fringe, species composition varies greatly over short distances.
17	The Skerries	5	The only breeding colony of the Australian Fur Seal, and an important breeding site for seabirds.
18	Wingan Inlet	850	Rare stands of Warm Temperate Rainforest at sea level, of State significance.
19	Lake Elusive	30	The deepest dune-blocked coastal lake in Victoria (21 metres), and one of few coastal perched or high dune lakes on the Victorian coast. Recognised as a high naturalness catchment, and of State geomorphological significance.
20	Humphreys Track	110	Heaths south of Humphreys Track are the best example of 'hinterland' coastal heaths in the Park.
21	Mueller River	240	Area important for rainforest conservation, supporting the vulnerable Green Wattle.
22	Thurra Swamps	40	Valuable habitat for wetland fauna species. Formation of the swamp is of geomorphological interest.
23	Lake Furnell	100	Considered to be an important feeding ground for a variety of waterbirds, particularly for Little Terns which nest at Tamboon South.
24	Barga Heathlands	530	The oldest examples of Coastal Heathlands in East Gippsland (probably the State), last burnt in 1951-52.
25	Mud and Swan Lakes	1100	Extensive wetland and tidal channel system important for waterbird habitat and displaying a variety of unique geomorphic processes, which are of State significance.

*refer to figure 2

APPENDIX 2 THREATENED FLORA

SCIENTIFIC NAME	COMMON NAME	CONSERVATION STATUS[+]	VEGETATION COMMUNITIES[x]
Acacia irrorata	Green Wattle	v	WTR
Acacia maidenii	Maiden's Wattle	e	RF, WTR
Acacia subporosa	Bower Wattle	r	RF, WTR, BW
Adiantum formosum	Giant Maidenhair-fern	r	WTR
Adiantum hispidulum	Rough Maidenhair	r	WTR, RF
Almaleea paludosa	Marsh Bush-pea	r	
Asplenium obtusatum	Shore Spleenwort	v	CH
Asplenium polyodon	Long-tail Spleenwort	x	ROS
Astrotricha sp. aff. *longifolia*	Long-leaf Star-hair	v	CBW, CH
Baeckea linifolia	Swamp Baeckea	r	CH, WCH, LSF, RF
Brunoniella pumilio	Dwarf Brunoniella	e	LSF
Burnettia cuneata	Burnettia	Rr	CH, WCH
Callistemon subulatus	Dwarf Bottlebrush	r	RS
Chorizandra sphaerocephala	Roundhead Bristle-sedge	r	CH, WCH
Conospermum taxifolium	Variable Smoke-bush	v	CH, LSF
Correa lawrenciana var. *genoensis*	Mountain Correa	e	WTR, LSF
Cryptandra ericoides	Heathy Cryptandra	v	
Cryptostylis hunteriana	Leafless Tongue-orchid	Ve	CH, LSF
Cyathea cunninghamii	Slender Tree-fern	Rr	WTR, WTR/CTR
Cyathea leichhardtiana	Prickly Tree-fern	v*	WTR
Cyathochaeta diandra	Sheath Sedge	r	BW, CH, LSF, RS
Darwinia camptostylis	Clustered Darwinia	r	CH
Dendrobium speciosum	Rock Orchid	e*	ROS
Dendrobium striolatum	Streaked Rock Orchid	r	ROS
Deparia petersenii	Japanese Lady-fern	r	WTR
Deyeuxia nudiflora	Climbing Bent-grass	r	
Diuris palustris #	Swamp Diuris	v	
Diuris punctata	Purple Diuris	v*	CH, LSF?
Dodonaea truncatiales #	Angular Hop-bush	v	
Eucalyptus fraxinoides	White Ash	r	LSF
Eucryphia moorei	Eastern Leatherwood	v	WTR
Ficus coronata	Sandpaper Fig	v	WTR
Genoplesium pumilum	Green Midge-orchid	r	CH, CSF?, BW?
Gleichenia rupestris #	Rock Coral Fern	r	CH
Goodenia bellidifolia	Daisy Goodenia	r	CH
Hakea dactyloides	Finger Hakea	r	DSF, ROS
Hibbertia rufa	Brown Guinea-flower	r	CH, RF
Huperzia varia	Long Clubmoss	v	DSF, ROS
Isolepis congrua #	Slender Club-sedge	v	
Isopogon prostratus	Prostrate Cone-bush	e	LSF
Korthalsella rubra #	Jointed Mistletoe	v	WTR
Lastreopsis decomposita	Trim Shield-fern	v	WTR
Leptomeria acida	Sour Currant-bush	r	LSF, RS, BW
Leucopogon esquamatus	Swamp Beard-heath	r	CH BW, WCH
Lindsaea microphylla	Lacy Wedge-fern	r	
Logania pusilla	Tiny Logania	r	CH, BW, WCH
Mirbelia rubiifolia	Heathy Mirbelia	v	CH
Notothixos subaureus	Golden Mistletoe	r	CSF, BW, LSF
Olax stricta	Olax	r	BW, CH?
Olearia allenderae	Promontory Daisy-bush	Rv	LSF, CH,
Olearia tomentosa	Toothed Daisy-bush	r	CSF, LSF
Ozothamnus argophyllus	Spicy Everlasting	r	

Appendix 2 (cont.)

SCIENTIFIC NAME	COMMON NAME	CONSERVATION STATUS[+]	VEGETATION COMMUNITIES[x]
Phebalium squamulosum ssp. *argenteum*	Silvery Phebalium	v	DSF, LSF
Pittosporum revolutum	Rough-fruit Pittosporum	r	RF, WTR
Plectorrhiza tridentata	Tangle Orchid	r	WTR,RF
Plinthanthesis paradoxa	Wiry Wallaby-grass	v	WCH
Podolobium ilicifolium	Prickly Podolobium	r	DSF, LSF
Polyscias murrayi	Large-leaf Panax	v	WTR
Pomaderris costata	Veined Pomaderris	Rr	LSF, DSF
Pomaderris discolor	Eastern Pomaderris	r	RF, WTR, CSF
Poranthera corymbosa	Clustered Poranthera	r	LSF
Prasophyllum frenchii	Slaty Leek-orchid	e	CH, LSF, BW
Prasophyllum lindleyanum	Green Leek-orchid	v	CH, BW
Prasophyllum parviflorum	Slender Leek-orchid	v	CH
Prasophyllum rogersii #	Marsh Leek-orchid	v	
Prasophyllum patens group	Leek-orchid	-	CH
Pseudanthus divaricatissimus	Tangled Pseudanthus	Rr	LSF
Pterostylis baptistii #	King Greenhood	v*	RF, BW
Pterostylis grandiflora	Cobra Greenhood	r	LSF
Pterostylis pedoglossa	Prawn Greenhood	v	CH, LSF
Pterostylis spp. (Howe Range)		-	
Ripogonum album	White Supplejack	r	WTR
Rulingia dasyphylla	Clustered Kerrawang	r*	LSF
Sambucus australasica	Yellow Elderberry	v	WTR
Santalum obtusifolium	Blunt Sandalwood	v	LSF, WTR
Sarcochilus falcatus	Orange-blossom Orchid	e*	WTR
Schoenus turbinatus	Top Bog-sedge	r	CH, WCH
Scutellaria mollis	Soft Skullcap	r	RS, CSF, WTR
Sicyos australis	Star Cucumber	v	WTR
Spyridium cinereum	Tiny Spyridium	Rv	CH, BW?
Stackhousia nuda	Wiry Candles	r	CH
Sticherus flabellatus	Shiny Fan-fern	r	RF, WTR
Stylidium laricifolium	Giant Trigger-plant	v	RF, LSF, CBW?
Thelymitra circumsepta	Bog Sun-orchid	v	CH, WCH
Thelymitra matthewsii	Spiral Sun-orchid	Vv	
Thelymitra spp. (Howe Range)	Sun Orchid	-	WCH
Tmesipteris ovata	Oval Fork-fern	r	RF, WTR
Trema tomentosa	Peach-leaf Poison-bush	x	WTR
Zieria cytisoides	Dwarf Zieria	r	?
Zieria smithii	Sandfly Zieria	r	WTR, LSF

Source: FIS (1996), Beauglehole (1981)

[+] Conservation status and classification according to Gullan, Cheal & Walsh (1990).
- x Presumed extinct in Victoria.
- e Endangered in Victoria
- V Vulnerable in Australia
- v Vulnerable in Victoria.
- R Rare in Australia.
- r Rare in Victoria.
- - Not listed by Gullan, Cheal & Walsh (1990).

* Listed under the Flora and Fauna Guarantee Act

\# Unconfirmed record.

Taxonomy follows Ross (1990)

[x]Vegetation communities:

LSF	Lowland Sclerophyll Forest
CSF	Coastal Sclerophyll Forest
DSF	Dry Sclerophyll Forest
BW	Banksia Woodland
CBW	Coastal Banksia Woodland
CH	Coastal Heathland
WCH	Wet Coastal Heathland
PDS	Primary Dune Scrub
ROS	Rocky Outcrop Scrub
WTR	Warm Temperate Rainforest
RF	Riparian Forest
RS	Riparian Scrub

APPENDIX 3 THREATENED FAUNA

SCIENTIFIC NAME	COMMON NAME	CONSERVATION STATUS[+]
Mammals		
Arctocephalus pusillus	Australian Fur Seal	-
Dasyurus maculatus	Spot-tailed Quoll	Vul*
Dasyurus viverrinus	Eastern Quoll	End*
Eubalaena australis	Southern Right Whale	End*
Megaptera novaeangliae	Humpback Whale	End
Myotis adversus	Large-footed Myotis	R
Pseudomys fumeus	Smoky Mouse	R
Scotorepens orion	Eastern Broad-nosed Bat	Ins
Birds		
Accipiter novaehollandiae	Grey Goshawk	R
Botaurus poiciloptilus	Australasian Bittern	Ins
Calyptorhynchus banksii	Glossy Black-Cockatoo	Vul
Charadrius rubricollis	Hooded Plover	Vul*
Coturnix chinensis	King Quail	R
Dasyornis brachypterus	Eastern Bristlebird	Vul*
Ixobrychus flavicollis	Black Bittern	R
Lophoictinia isura	Square-tailed Kite	Vul
Neophema pulchella	Turquoise Parrot	R*
Ninox strenua	Powerful Owl	R*
Oxyura australis	Blue-billed Duck	R
Pezoporus wallicus	Ground Parrot	R*
Porzana pusilla	Baillon's Crake	Ins
Rallus pectoralis	Lewin's Rail	R
Sterna albifrons	Little Tern	End*[#]
Sterna bergii	Crested Tern	R/C
Sterna nereis	Fairy Tern	Vul*
Stictonetta naevosa	Freckled Duck	R*
Tyto novaehollandiae	Masked Owl	R*
Tyto tenebricosa	Sooty Owl	R*
Xanthomyza phrygia	Regent Honeyeater	End*
Reptiles		
Egernia coventryi	Swamp Skink	R
Morelia spilota spilota	Diamond Python	Vul*
Pseudemoia rawlinsoni	Glossy Grass Skink	Ins
Varanus varius	Tree Goanna	Ins
Amphibians		
Litoria citropa	Blue Mountains Tree Frog	R
Uperoleia tyleri	Tyler's Toadlet	Ins
Fish		
Galaxias brevipinnins	Broadfin Galaxias	R
Galaxias truttaceus	Spotted Galaxias	R
Geotria australis	Pouched Lamprey	R
Gobiomorphus australis	Striped Gudgeon	R
Gobiomorphus coxii	Cox's Gudgeon	Vul
Macquaria novemaculeata	Australian Bass	R
Philypnodon sp. nov.	Dwarf Flathead Gudgeon	Ins
Prototroctes maraena	Australian Grayling	Vul*

Source: CNR (1995a)

[+]Conservation status in Victoria (CNR 1995c):

End Endangered Vul Vulnerable R Rare

R/C Restricted colonial, breeding or roosting sites

Ins Insufficient known, suspected of being in one of the above categories

***** Listed under the Flora and Fauna Guarantee Act

\# Species listed on China/Australia and the Japan/Australia Migratory Bird Agreements

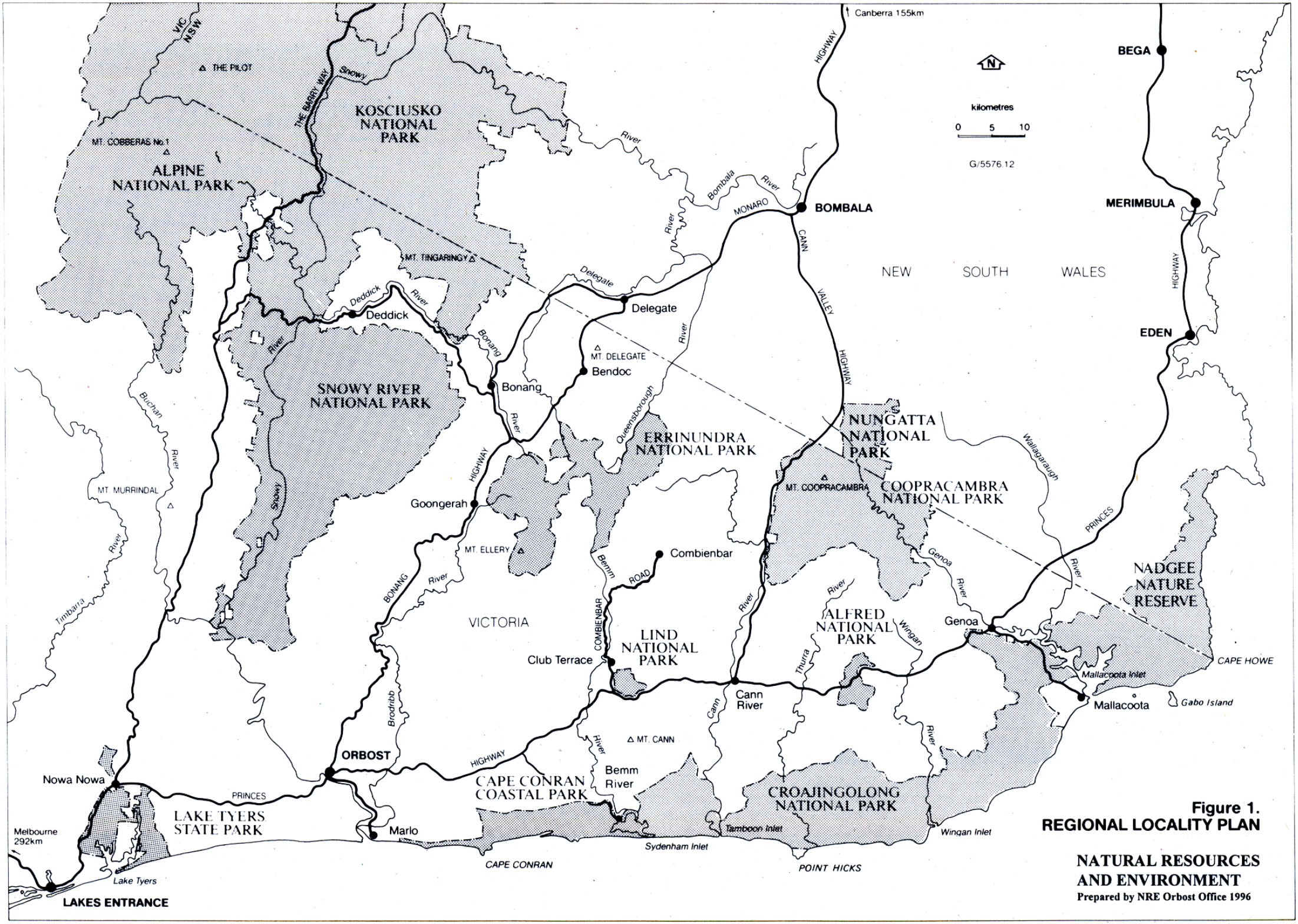
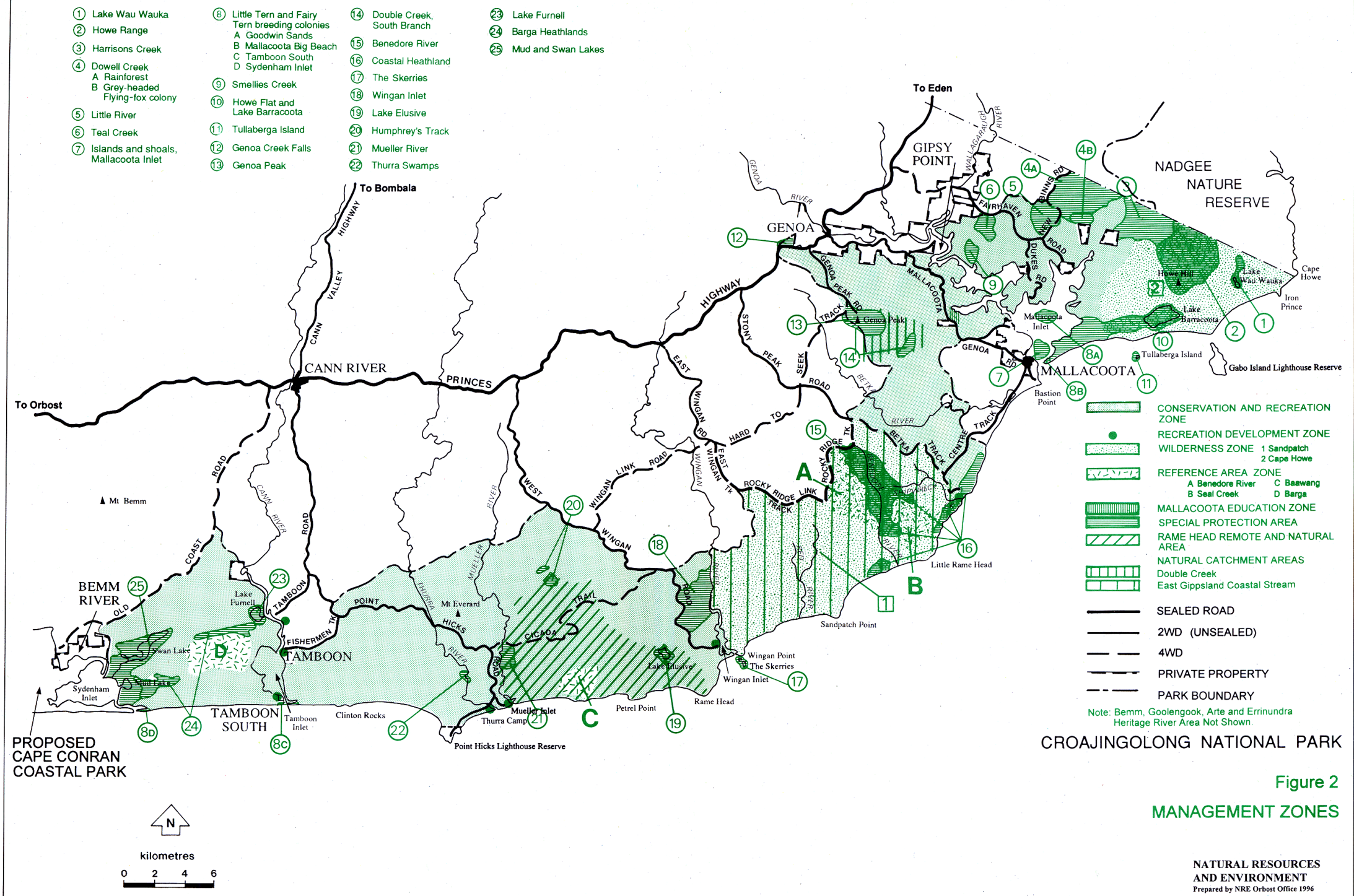


Figure 1.
REGIONAL LOCALITY PLAN

NATURAL RESOURCES AND ENVIRONMENT
Prepared by NRE Orbost Office 1996

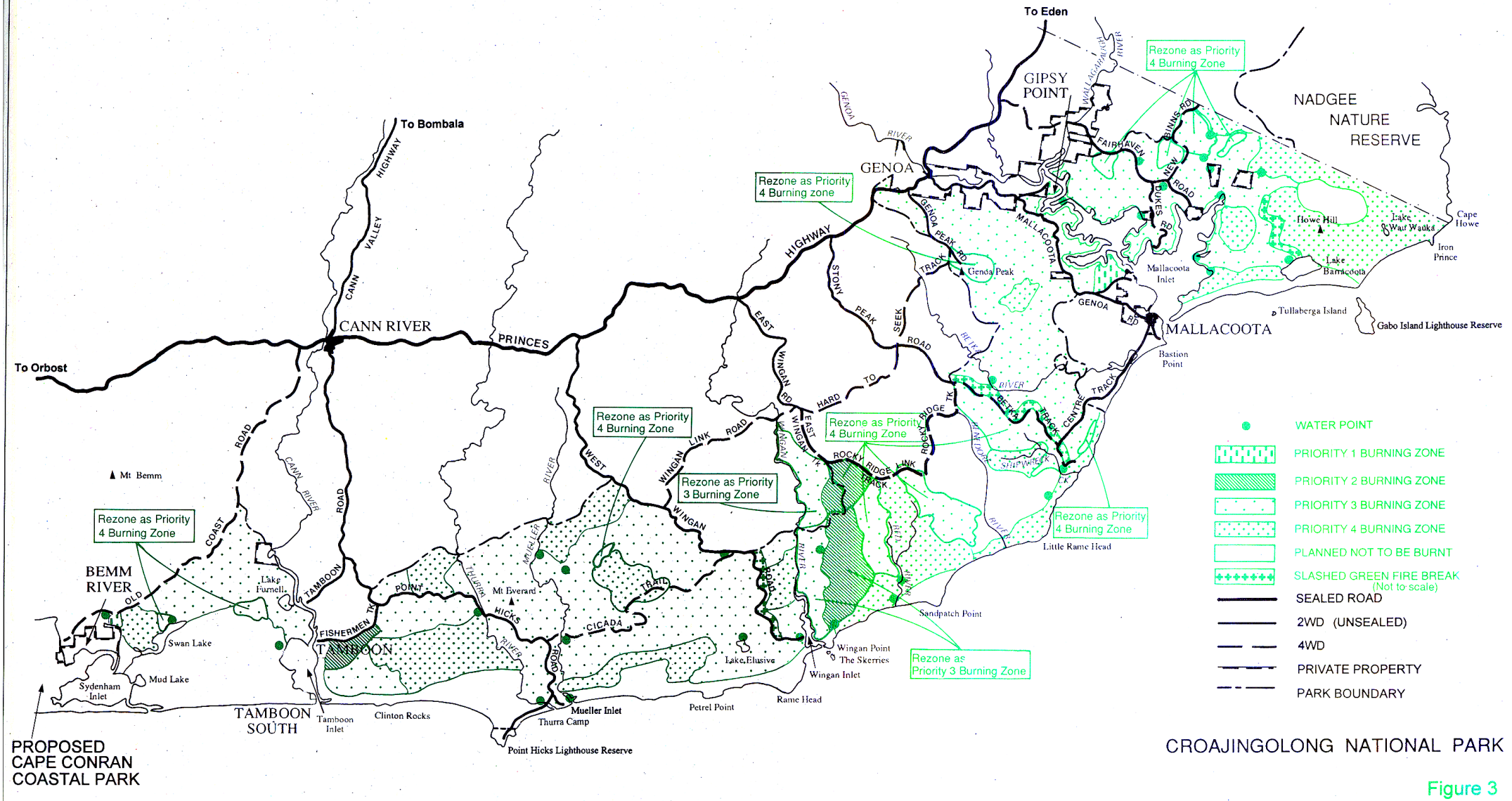


CROAJINGOLONG NATIONAL PARK

Figure 2

MANAGEMENT ZONES

NATURAL RESOURCES AND ENVIRONMENT
Prepared by NRE Orbost Office 1996



CROAJINGOLONG NATIONAL PARK

Figure 3

FIRE PRE-SUPPRESSION STRATEGY

NOTE: Statements in boxes on this map indicate proposed amendments to the Regional Fire Protection Plan (CFL 1990)

NATURAL RESOURCES AND ENVIRONMENT
Prepared by NRE Orbost Office 1996

FACILITIES

- CNR offices / Information Centre
- Day visitor facilities
- Serviced camp areas
- 4WD camps
- Boat-based camps
- Walkers only camps
- Walk in camps
- Proposed Day visitor facilities

RESOURCE UTILISATION

- Apiary site area (specific localities from local CNR Office)
- (S) Stream Gauging Station
- (T) Trignometric Survey Point
- (N) Navigational Aid

Refer to "Discovering Mallacoota Inlet" brochure for further details on this area.

To Eden
To Bombala
To Orbost
PROPOSED CAPE CONRAN COASTAL PARK
GIPSY POINT
GENOA
NADGEE NATURE RESERVE
MALLACOOTA
CANN RIVER
PRINCES HIGHWAY
CANN VALLEY HIGHWAY
GENOA RIVER
GENOA PEAK RD
GENOA PEAK TRACK
Genoa Peak
MALLACOOTA INLET ROAD
FAIRHAVEN
BINNIS RD
NEW DUKES RD
GENOA RD
Howe Hill
Lake Wau Wauka
Cape Howe
Iron Prince
Lake Barracoota
Mallacoota Inlet
Tullaberga Island
Gabo Island Lighthouse Reserve
Bastion Point
STONY PEAK ROAD
SEEK ROAD
EAST WINGAN RD
HARD TO
BETKA RIVER
BETKA TRACK
CENTRE TRACK
ROCKY RIDGE TK
ROCKY RIDGE LINK TRACK
WINGAN TK
WINGAN LINK ROAD
BENEDORE RIVER
SHIPWRECK CK
Little Rame Head
Mt Bemm
COAST ROAD
CANN RIVER ROAD
BEMM RIVER
OLD
Swan Lake
Mud Lake
Sydenham Inlet
Lake Fumeil
TAMBOON TK
FISHERMEN POINT
TAMBOON
TAMBOON SOUTH
Tamboon Inlet
Clinton Rocks
MUELLER RIVER
WEST WINGAN RIVER
WINGAN RIVER
THURRA HICKS RIVER
Mt Everard
CICADA TRAIL
HICKS ROAD
Mueller Inlet
Thurra Canyon
Point Hicks Lighthouse Reserve
Lake Elusive
Petrel Point
Rame Head
Wingan Point
The Skerries
Wingan Inlet
RED RIVER
Sandpatch Point

- SEALED ROAD
- 2WD (UNSEALED)
- 4WD
- PRIVATE PROPERTY

N

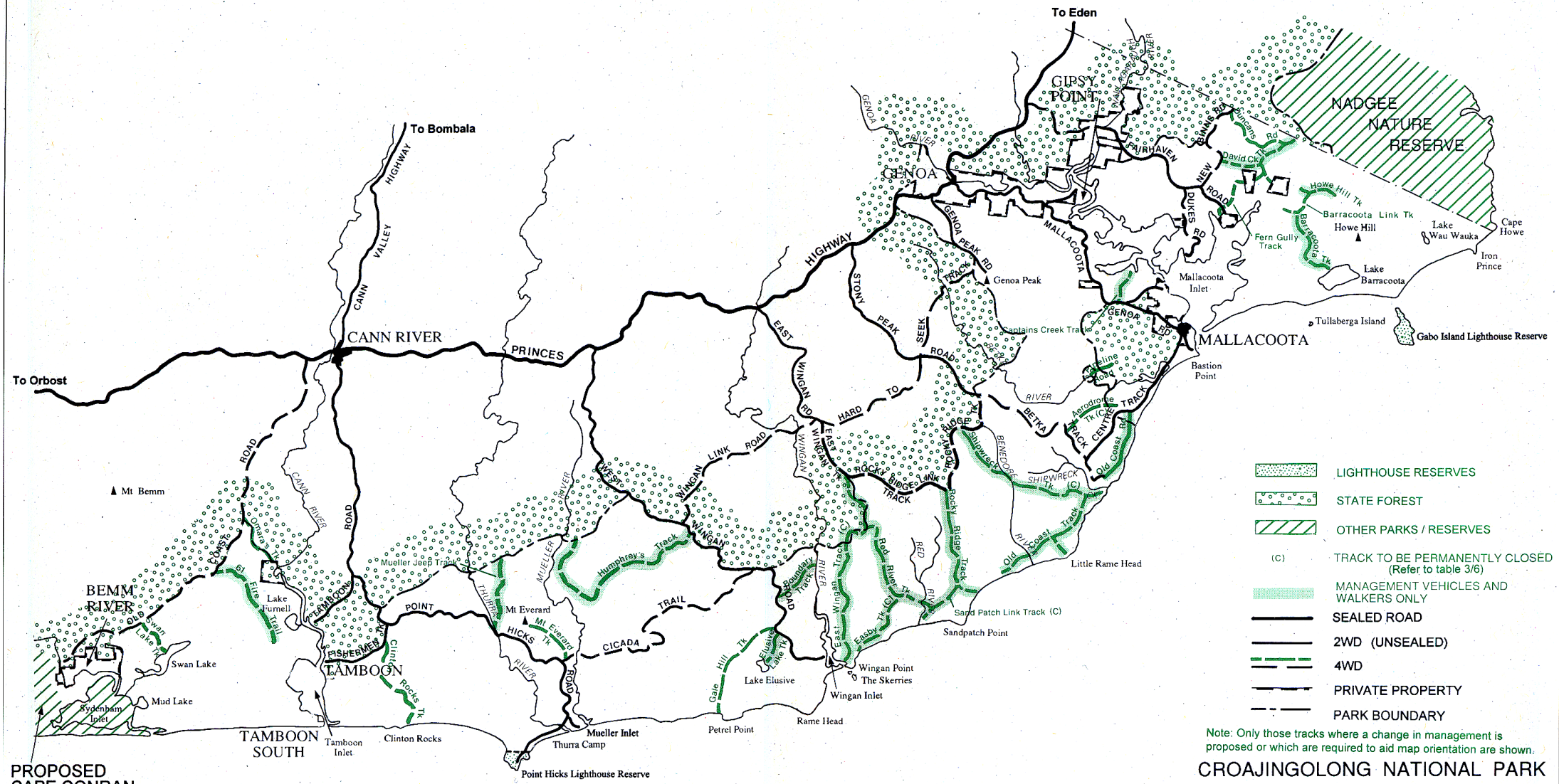
kilometres
0 2 4 6

CROAJINGOLONG NATIONAL PARK

Figure 4

RECREATION MANAGEMENT AND RESOURCE UTILISATION

NATURAL RESOURCES AND ENVIRONMENT
Prepared by NRE Orbost Office 1996



Note: Only those tracks where a change in management is proposed or which are required to aid map orientation are shown.

CROAJINGOLONG NATIONAL PARK

Figure 5

ACCESS MANAGEMENT AND ADJACENT LAND TENURE

NATURAL RESOURCES AND ENVIRONMENT
Prepared by NRE Orbost Office 1996