

Yarra Ranges National Park



Management Plan

June 2002

This Management Plan for Yarra Ranges National Park is approved for implementation. Its purpose is to direct management of the park until the plan is reviewed. Eighty-four per cent of the park is within the Designated Water Supply Catchment Area (DWSCA) that is managed under the Government's Closed Catchment Policy (see glossary). Details of this plan concerning the DWSCA have been jointly prepared with Melbourne Water, the agency responsible for protection and maintenance of water supply and catchment values.

A Draft Management Plan was published in February 1998. Twenty-eight submissions were received and have been considered in developing this Approved Management Plan.

Copies

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YARRA RANGES NATIONAL PARK
MANAGEMENT PLAN



JUNE 2002

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The plan is also prepared without prejudice to any future negotiated outcomes between the Government/s and Victorian Aboriginal communities. It is acknowledged that such negotiated outcomes may necessitate amendment of this plan.

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Cover: Mountain Ash forest, Yarra Ranges National Park (Photo: Ern Mainka).

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FOREWORD

Yarra Ranges National Park, created in 1995, has a long history of environmental protection. A large part of the area now included in the park had been permanently reserved for metropolitan water supply purposes by 1888. Building on this auspicious beginning, the park conserves a range of vegetation communities including nationally significant old-growth forests of majestic Mountain Ash and ancient Myrtle Beech rainforest, and sub-alpine heaths at Lake Mountain. It provides secure habitat for diverse fauna including the threatened Leadbeater's Possum, Powerful Owl and Barred Galaxias.

Around 50 per cent of Melbourne's water supply is obtained from the park's catchment areas, and public access will continue to be restricted in the catchments to protect water quality.

Late last century, areas within the park were popular with visitors for viewing the tall trees and ferny glades, for picnics and sightseeing. Today the area is undergoing a renaissance in visitor interest and the park receives around 800 000 visits per year, including large numbers of visits to destinations such as Lake Mountain, Badger Weir Picnic Area and Mount Donna Buang.

This approved management plan establishes the long-term management framework to protect the outstanding conservation, water resource and recreation values of the park and provide appropriate opportunities for visitors to enjoy its special features.



Sherry Garbutt MP
Minister for Environment and
Conservation

APPROVED MANAGEMENT PLAN

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

The plan provides the basis and direction for the future management of Yarra Ranges National Park.

It was finalised following consideration of the 28 submissions received on the Draft Management Plan released in February 1998.



**Chloe Munro
Secretary to the
Department of Natural Resources and
Environment**



**Mark Stone
Chief Executive
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SUMMARY

Yarra Ranges National Park (76 003 ha) is one of Victoria's newest parks, having been proclaimed in December 1995. The park protects spectacular mountain forests in the Central Highlands, around 60 km north east of Melbourne. Large areas of mature forest are recognised as being of National significance for their botanical and faunal conservation values.

Water supply has been a major use of areas of the park since the late 1800s and the park's catchments now supply over 50 per cent of Melbourne's water. Protection of the catchments and their water resources is the paramount consideration in most of the park. Protection and management of the water resources within the catchments are a joint function with Melbourne Water.

The protected conservation values include 14 of the 23 Ecological Vegetation Classes identified in the Central Highlands Region, rare and threatened species including Leadbeater's Possum, and at Lake Mountain the most westerly occurrence on the mainland of sub-alpine vegetation.

The areas included within the park are traditionally associated with the Wurundjeri (south of the Great Dividing Range) and the Taungurung (north of the Range), and are known to contain artefacts and places of significance to Aboriginal people. The history of these areas also includes tourism, timber harvesting, gold mining and fire, and the park contains a range of values associated with these activities and events.

Yarra Ranges National Park attracts visitors in all seasons. Snow sports are a popular winter entertainment at Lake Mountain and Mount Donna Buang, and in the warmer seasons the tall, lush mountain forests and the Yarra River are attractive settings for a wide range of activities including bushwalking, picnicking, nature observation and car touring.

Significant management directions for the park are summarised below.

- Preservation of significant conservation areas including old-growth forests.
- Protection of water resources in the water supply catchments. Protection measures include continued restrictions on public access.
- Protection of the park from potentially damaging processes including wildfire, soil erosion and pest plants and animals.
- Provision of a range of nature-based visitor settings and activities, with a primary focus on day visitors. Improved visitor facilities and services will encourage year-round use of the park.
- Programs of inventory, research and monitoring in partnership with higher education and research institutions, to improve park management.
- Investigations for new short walks and long-distance trails.
- Improved orientation and information services to assist visitors to use and enjoy the park.
- Increased participation of the local community, interest groups and individuals in park management and activities.
- Management of cultural and historical places for protection and appropriate visitor access and interpretation.

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1 INTRODUCTION

1.1 Location and planning area

Yarra Ranges National Park (76 003 ha) is located in the Central Highlands about 60 km north east of Melbourne in the vicinity of the townships of Healesville, Marysville, and Warburton (figure 1). The park includes a large proportion of the headwaters of the Yarra, Taggerty and Acheron rivers.

The planning area includes the park (figure 2) and several small crown allotments around the Fernshaw Picnic Area that are to be managed as part of the park. The park includes the following areas:

- the Designated Water Supply Catchment Area (64 500 ha), which is legislated under the National Parks Act to protect water catchment and water resource values (figure 2 and glossary). It is managed jointly with Melbourne Water in accordance with a Catchment Management Agreement (sections 2.5, 4.2 and appendix 1);
- four Reference Areas (figure 3): Watts Creek (890 ha), Deep Creek (1045 ha), Walsh Creek (945 ha) and Mount Gregory (880 ha);
- O'Shannassy River Natural Catchment Area (9 960 ha, figure 2);
- the Lake Mountain Ski Trail Zone and Summit Area (figures 2, 6 and glossary), which is managed jointly with the Lake Mountain Alpine Resort Management Board in accordance with a Heads of Agreement (section 2.5);
- some sections of main road, including the Fernshaw–Dom Dom Saddle section of Maroondah Highway and the section of Marysville–Woods Point Road (Cumberland Road) within the O'Shannassy and Armstrong Creek Catchments. (The Maroondah Highway south of Fernshaw, Donna Buang Road including the Ben Cairn section, Acheron Way, Warburton–Woods Point Road and the Noojee-Matlock Road are excluded from the park.)

For planning purposes, the park is divided into four major units:

- Maroondah Unit, comprising the Maroondah Catchment, Maroondah Catchment Buffer, Cement Creek Catchment, Mt Donna Buang Block, and Acheron River Block (figures 2 and 4);
- O'Shannassy Unit, comprising the O'Shannassy Catchment, O'Shannassy Catchment Buffer and Yarra River Block (figures 2 and 5);
- Lake Mountain Unit, comprising the Lake Mountain Block and the Armstrong Creek Catchment (figures 2 and 6);
- Upper Yarra Unit, comprising the Upper Yarra Catchment (figure 2).

The Management Plan makes reference to activities on land adjacent to the park where there may be an impact upon the park.

1.2 Creation of the park

In 1994 the former Land Conservation Council (LCC), in its Final Recommendations for the Melbourne Area District 2 Review (LCC 1994), recommended establishing an 'Ash Ranges National Park' to protect the area's significant mature Wet Forests and Cool Temperate Rainforests. The Government subsequently accepted this recommendation with several variations, including changing the name to Yarra Ranges and incorporating the Maroondah, O'Shannassy and Upper Yarra Reservoirs and an area at Dom Dom Saddle in the park.

Subsequently, the Yarra Ranges National Park was included on Schedule Two of the *National Parks Act 1975* (Vic.) on 15 December 1995 as a result of the *National Parks (Yarra Ranges and Other Amendments) Act 1995* (Vic.). Four small areas (total area 3 ha) were added to the park on 25 January 2001.

1.3 Developing the management plan

This management plan has been prepared after extensive research, planning and consultation.

A Draft Management Plan, prepared in consultation with key stakeholders, was released for public comment in February 1998. Twenty-eight submissions were received and

these were carefully considered and taken into account in preparing this approved management plan.

2.1 Regional context

Yarra Ranges National Park is a large national park within easy reach of Melbourne. Its forested ranges are visible from the city and eastern suburbs. The southern and western uplands of the park form a backdrop to the Upper Yarra River valley, Healesville and Warburton.

The park is bounded mostly by State forest, and is within a region that contains extensive areas of public land and is known as the Central Highlands.

Private property adjoins the park near Healesville and Warburton. The main use is grazing, with some residential areas, tourist and accommodation venues and school camps.

Nearby parks include Dandenong Ranges National Park, Baw Baw National Park, Kinglake National Park and Cathedral Range State Park.

The Region's parks, including Yarra Ranges National Park, attract a large number of Melbourne residents for bushwalking and pleasure driving/sightseeing.

The park contains the nearest snowfields to Melbourne for cross-country skiing and snowplay—at Lake Mountain and Mount Donna Buang. The part of the park on the Lake Mountain plateau and the adjacent Lake Mountain Alpine Resort are a key attraction within the popular tourist area around Marysville.

A number of nature-based visitor attractions adjoin or are close to the park, such as the Healesville Sanctuary and the Maroondah and Upper Yarra Reservoir Parks. Regional tourist drives link these features to the park and other tourist attractions, including the Yarra Valley wineries.

A network of regional recreation trails form links with Melbourne and areas further afield. These include the Lilydale–Warburton Rail Trail (formerly the Warburton–Lilydale railway), the Yarra Trail, which links to the Alpine Walking Track, and the Bicentennial National Trail.

The majority of Yarra Ranges National Park is within the Yarra Valley, Dandenongs and the Ranges Tourism Region. Lake Mountain is in the Goulburn–Murray Waters Tourism Region.

The Yarra Valley, Dandenongs and the Ranges Tourism Region is seen as catering for day trips and local overnight stays from Melbourne, and recreation for residents of the region. The Region attracts around 2.5 million visits per year, including a proportion of overseas visitors that is high relative to that for most other tourism regions in Victoria.

2.2 Park values and significance

Yarra Ranges National Park makes a valuable contribution to Victoria's parks system, which aims to protect viable representative samples of the State's natural environments occurring 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 Yarra Ranges National Park is assigned the International Union for the Conservation of Nature (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. The Watts Creek, Deep Creek, Walsh Creek and Mount Gregory Reference Areas are assigned the IUCN Category Ia (Strict Nature Reserve) and are managed for scientific reference purposes.

The Designated Water Supply Catchment Area (DWSCA) of the Yarra Ranges National Park is an essential component of Melbourne's water supply system, providing high quality water to the metropolitan area, the Yarra Valley and Mornington Peninsula.

The upper Acheron River catchment is listed on the Register of the National Estate. The O'Shannassy River Catchment, Cement Creek and the Mount Donna Buang Wingless Stonefly Habitat have been nominated for listing, and the remainder of the park contains a wide variety of National Estate values (AHC & CNR 1994; NRE 1996b).

Yarra Ranges National Park contains the following significant values.

Natural values

- Several land systems which are inadequately represented in other conservation reserves.
- The occurrence of 14 of the 23 Ecological Vegetation Classes (EVCs) identified in the Central Highlands region.
- Sites of National and State botanical significance.
- The mainland's most westerly occurrence of sub-alpine vegetation communities, at Lake Mountain.
- Botanically significant representation of old-growth Mountain Ash Wet Forest and Cool Temperate Rainforest.
- Twenty rare or threatened flora species.
- Large areas of mature forest important for conserving hollow-dependent fauna species.
- Twenty-one threatened fauna species.

Catchment area and water resources

- The DWSCA in the park is a major source of domestic water for Melbourne and surrounding areas.

Cultural values

- Extensive old-growth forest and tall trees, also of importance as a historical remnant of a now largely modified landscape.
- Artefacts and places of significance to Aboriginal people.
- A range of gold-mining sites and associated places, including part of the Warburton–Reefton goldfields and the Yarra Track.
- Places of past tourism activity including Fernshaw (1880s), and the Baw Baw Track from Warburton to Walhalla (1906).
- Places and relics of timber sawmills and tramways around Mount Donna Buang, Cambarville and Mount Horsfall, and a history of grazing at Lake Mountain.

Tourism and recreational values

- Opportunities for year-round nature-based recreation activities and facilities.

- Opportunities for day trips from Melbourne and overnight stays at local accommodation venues.
- Opportunities for cross-country skiing, snowplay and tobogganing.
- Tourist drives to view the spectacular mountain forest scenery, including tall trees and rainforest.
- Access to a range of walking and camping opportunities.
- Interpretation of natural, cultural and historical values.
- Opportunities for increased visitor access to the park via commercial tours or as part of a package tour to other local tourist features.
- Locations for other activities including abseiling, rock climbing, cycling, hang gliding and fishing.

2.3 Past land use

Current evidence of Aboriginal use of the area is limited. However, Aboriginal Affairs Victoria has suggested that further surveys are likely to reveal an extensive pattern of use and occupation (section 4.9).

In the 1870s, gold mining was carried out in the Warburton–Reefton area and some mine shafts remain from the time. Places such as Fernshaw were major stops on the Yarra Track to the Woods Point goldfields. Timber cutting was also a major activity in some areas. Cattle and sheep were run on Lake Mountain from the 1870s to 1963 (section 4.10).

Much of the area included in the park has a long history of water harvesting. Initially, weirs were constructed on the Watts River (1891), Graceburn Creek, and O'Shannassy River (1914). Subsequently, dams were completed on the O'Shannassy River and Watts River (Maroondah Dam) (1920s), and the Upper Yarra River (1957) (Griffiths 1992).

Late last century some areas now included in the park were popular with visitors viewing the tall trees and ferny glades, for picnics and sightseeing.

Wildfire has had a dramatic impact on the use of the ash range on a number of occasions.

2.4 The park visitor

Today the area is undergoing a renaissance in visitor interest. The park's closeness to Melbourne makes it attractive for day trips by residents and tourists from the city and the many holiday-makers staying at nearby resort towns such as Warburton, Healesville and Marysville.

Park visitor numbers

Visitation to the park occurs year-round, and is estimated at 800 000 per annum in recent years. This number includes the following:

- Lake Mountain: 140 000
- Mount Donna Buang (including 10 Mile Picnic Area): 125 000
- Badger Weir Picnic Area: 180 000
- Fernshaw Picnic Area: 150 000
- Dom Dom Saddle Picnic Area: 70 000
- Rainforest Gallery: 45 000
- Donnellys Weir Picnic Area: 28 000.

The Cumberland Memorial Picnic Area, Lady Talbot Drive, Big Peninsula Picnic Area, Little Peninsula Picnic Area, Mount St Leonard and Ben Cairn also attract substantial numbers of visitors.

There is a trend towards increased visitor numbers to the park, probably relating to increasing awareness of the park based on improved tourism infrastructure, improved visitor facilities and the increase in the population of Melbourne. Visitor numbers have increased substantially at Lake Mountain over the past decade (but fluctuate depending on snow conditions) and increased rapidly at the new Rainforest Gallery since its inception in 1999. Visitor numbers to Mount Donna Buang also vary considerably with snow conditions.

The Maroondah Reservoir Park and the Upper Yarra Reservoir Park, which are adjacent to the Yarra Ranges National Park, attract around 230 000 and 60 000 visitors respectively.

Visitor activities

The park offers a range of opportunities for visitors from Melbourne and the nearby resort towns, particularly for day visitors.

The park's snowfields are a special winter attraction. Lake Mountain is popular for cross-country skiing and snowplay whereas Mount Donna Buang mostly attracts young families seeking snowplay, tobogganing and first-time experiences of snow.

In the warmer months, scenic car touring and nature-based recreation are popular visitor activities. These activities are expected to increase substantially in the future.

Within the DWSCA, public access and recreation remains restricted to protect water resources (section 4.2), although some limited access is permitted on certain walking tracks and at Badger Weir, Donnellys Weir, Fernshaw and the Cumberland Memorial Picnic Area.

2.5 Legislation, LCC recommendations and guidelines

Legislation

Yarra Ranges National Park is reserved and managed under the provisions of the National Parks Act. These include specific provisions that apply only to those areas that are part of Melbourne's water supply catchments and their associated buffers (the DWSCA).

Sections 4 (Objects) and 17 of the Act provide the main basis for management of the park. They require the Secretary to the Department of Natural Resources and Environment to ensure that the natural condition of the park and its natural and other features (including the DWSCA) are protected and, subject to this, to provide for the use of the park by the public for enjoyment, recreation and education, and research.

The specific provisions applying to the DWSCA aim to protect the water supply catchments and their water resources, including water quality, and also provide a statutory basis for Melbourne Water's continuing involvement in the Area's management. Particular provisions of the National Parks Act:

- state that the paramount consideration in respect of the DWSCA is the protection of that area and its water resources (Section 32H);

- require the Secretary to ensure that the DWSCA and its water resources are protected, including restricting human activity to achieve that protection (Section 32H);
- provide for a catchment management agreement between the Secretary and Melbourne Water which, among other things, must specify the duties, functions and powers of the Secretary which may be carried out by Melbourne Water in the DWSCA. It is deemed to be a term of such an agreement that Melbourne Water determines the policy necessary to protect the DWSCA for the purposes of water supply, protect its water resources and restrict human activity to achieve that protection. (Section 32I)

Other provisions of the Act:

- enable Melbourne Water to harvest, on a once-only basis, softwoods in the Maroondah catchment (Section 32L);
- provide for the leasing of O'Shannassy Lodge when the current lease expires (Section 31AB).

The National Parks (Yarra Ranges National Park and Other Amendments) Act provides for the following pre-existing arrangements to continue:

- two agreements in respect of parts of the Maroondah Highway and the Marysville-Woods Point Road (Section 20);
- a licence granted to Telstra in respect of the Mount St Leonard tower (Section 20);
- the lease over O'Shannassy Lodge (Section 21).

The Park Regulations 1992, which provide the regulatory framework for the park, include specific regulations to protect the water resources and infrastructure within the DWSCA.

Following the 1991 Rivers and Streams Special Investigation (LCC 1991), the O'Shannassy River catchment was designated a Natural Catchment Area under the *Heritage Rivers Act 1992* (Vic.). This Act prohibits certain uses in that area and recognises the need for Melbourne Water to carry out reservoir maintenance and catchment management activities. A Heritage Rivers and

Natural Catchment Areas Draft Management Plan (NRE 1997b) also applies to this area.

The four reference areas established in the park under the *Reference Areas Act 1978* (Vic.) are also managed in accordance with Ministerial directives and the associated management guideline and relevant plans.

Issues relating to Native Title are dealt with in accordance with the *Native Title Act 1993* (Cwlth).

Management agreements

The Catchment Management Agreement dated 6 December 1995 between the Director of National Parks [Secretary] and Melbourne Water provides the basis for co-operative management of the DWSCA and determines the respective management responsibilities of the Secretary (through Parks Victoria) and Melbourne Water (appendix 1). It enables Melbourne Water to carry out its water supply functions and to protect the area and its water resources for the purpose of water supply.

The 1995 Lake Mountain Heads of Agreement between the Alpine Resorts Commission [succeeded by the Lake Mountain Alpine Resort Management Board] and the Director of National Parks [Secretary], which was confirmed in a subsequent agreement in 1999, facilitates co-ordinated management of the winter recreational activities in the Lake Mountain area. The agreement enables the Board to manage the Lake Mountain Ski Trail Zone and Summit Area in the park for the purposes of maintaining and developing ski trails and managing visitor use of those areas during the declared snow season (section 5.6). Parks Victoria manages visitor use outside the snow season and remains responsible at all times for the protection of conservation values. The Agreement recognises the protection of national park values as being the paramount consideration.

In addition to the Park Regulations 1992, certain modified provisions of the Alpine Resorts (Management) Regulations 1998 apply to the Ski Trail Zone and the Summit Area in the park.

Several Crown land blocks at the Fernshaw Picnic Area currently vested in Melbourne Water are to be managed as part of the park.

LCC Recommendations and guidelines

The LCC (1994) made specific recommendations on appropriate use and management of the park. These include prohibiting the harvesting of forest products, grazing, hunting and constructing new vehicular tracks in the water supply catchments, and also recommendations on the ski trails in the Lake Mountain section of the park. Government variations to the recommendations included: modifying the management responsibilities in the catchment areas; allowing for once-only harvesting of non-native species; providing for the Lake Mountain Alpine Resort manager to harvest water from the Taggerty River; and recognising certain pre-existing uses (including a television transmission facility on Mount Victoria).

The park is also managed in accordance with Parks Victoria's operational policies and guidelines, and with other plans including:

- fire protection plans (CNR 1992; 1994; NRE 1997c);
- Code of Practice for Fire Management on Public Land (CNR 1995a);

and with due consideration to:

- regional tourism plans (ATM 1994).

Park management aims

The aims for the park, consistent with the Government-accepted LCC regulations and legislation, are as follows:

Conservation

- Preserve and protect the natural environment.
- Allow natural environmental processes to continue with the minimum of interference.
- Maintain biodiversity.

- Conserve features of archaeological, historical and cultural significance.

Park protection

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

Catchment areas and water resources

- Protect the DWSCA.
- Maintain water quality and protect the water resources of catchment areas.
- Restrict human activity to protect water supply catchment areas and water resources.

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 visitor behaviour and foster a conservation ethic in visitors and an understanding of minimal impact behaviour.
- 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 (including local Aboriginal communities) and other interested organisations, to facilitate management of the park.

3 STRATEGIC DIRECTIONS

3.1 Park vision

A future visitor to the Yarra Ranges National Park will find a park with features of national botanical and zoological significance, which include old-growth forests of the world's tallest hardwood (Mountain Ash), Cool Temperate Rainforest and the endangered Leadbeater's Possum.

The partnership approach to management of the DWSCA continues to deliver water of the highest quality for domestic consumption while maintaining ecological values within the catchments. Human activity remains restricted in the DWSCA to protect catchment areas and their water resources.

Being close to Melbourne, the park attracts increasing numbers of predominantly day visitors, including tourists as well as first-time park visitors. The park is a major nature-based tourism attraction of the region, complementing the attractions in the Yarra Valley and Marysville.

Visitors enjoy the characteristic features of the park assisted by well-maintained visitor facilities, including short walks, picnic areas, lookouts and scenic drives. People with restricted mobility find the park's facilities easy to use. Visitors seeking less formal settings are attracted to the park's linear trails and more remote circuit and long-distance trails.

Depending on snow levels, snowplay is a popular winter activity at both Lake Mountain and Mount Donna Buang. Lake Mountain is a well-known cross-country skiing destination, and management of this activity is integrated with protection of the area's high conservation values. Both these high country sites are visited year round with increased summer-time visitation for activities such as walking, cycling and nature study.

Visitors drawn to these magnificent tall forests learn about the rich, often concealed, cultural heritage associated with Aboriginal occupation, water supply, gold mining, timber harvesting, tourism, and how people lived in the forests and coped with the isolation and the catastrophic wild fires that have razed the forests.

Central to the visitor experience is a well-planned range of interpretation facilities and programs, which serve to instil in visitors an appreciation of the park and a desire to learn more about its rich natural and cultural heritage.

The range of enlightening, unobtrusive interpretive and day-use facilities within the park is supported by nature-based visitor centres and tourist attractions outside the park. Partnerships with local tourism associations and with commercial operators co-ordinate the provision of services that enhance the visitor experience while protecting park values.

Sound management is supported by ecological research and monitoring programs linked to higher education and research institutions, and by state-of-the-art technology.

3.2 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 these and the protection of park values;
- provide a basis for assessing the suitability of future activities and development proposals.

Four management zones apply to the park: Reference Area, Conservation and Water Supply, Conservation and Recreation, and Recreation Development. Management zones are specified in table 1 and their locations are shown in figure 3.

TABLE 1 MANAGEMENT ZONES AND OVERLAY

ZONE/OVERLAY	AREA/LOCATION	VALUES	GENERAL MANAGEMENT AIM
Zone			
Reference Area	3760 ha, 5% of the park. Watts Ck (890 ha), Deep Ck (1045 ha), Walshs Ck (945 ha) and Mount Gregory (880 ha) (figure 2).	Relatively undisturbed representative land types and associated vegetation.	Protect viable samples of one or more land types that are relatively undisturbed for comparative study with similar land types elsewhere, by minimising human interference and ensuring as far as practicable that the only long-term change results from natural processes.
Conservation & Water Supply	64 500 ha, 84 % of the park. Comprises the Designated Water Supply Catchment Area (figure 2).	High-quality water supply. Important natural values including areas of national botanical and faunal significance.	Protect the DWSCA and its water resources as the paramount use and protect natural environments. Provide for minimum impact recreation activities in defined areas consistent with the protection of the water resource while ensuring minimal interference to natural processes.
Conservation & Recreation	7720 ha, 10% of the park. Includes the Lake Mountain, Acheron River, Mt Donna Buang and Yarra River Blocks (figure 2).	Important natural values and scope for recreation opportunities.	Protect sensitive natural environments and provide for sustainable dispersed recreation activities and small-scale recreation facilities without significant impact on natural processes.
Recreation Development	20 ha, < 0.01% of the park. High-use visitor destinations of Mount Donna Buang, Rainforest Gallery, Badger Weir Picnic Area and Cambarville.	Sites with facility development in a natural setting.	Provide primarily for high-use visitor nodes with a concentration of recreation and/or interpretation facilities.
Overlay			
Land Use Designation–Natural Catchment Area	O'Shannassy River Catchment above O'Shannassy Reservoir dam wall (9960 ha) (NRE 1997b)	Catchment in essentially natural condition.	Maintain or enhance the area's essentially natural condition and preclude certain activities which may affect values. Provide for catchment management activities.

In addition, a Land Use Designation–Natural Catchment Area overlay applies (table 1 and figure 3).

3.3 Management directions

Major management directions for the park are outlined below.

Resource conservation

- Areas of natural and cultural conservation significance, including old-growth ash forests, rainforests, habitats of rare species, hollow-bearing trees and cultural places relating to tourism, water supply and resource utilisation will be protected. The Reference Area Zone and the Conservation and Water Supply Zone, in particular, will be managed so as to minimise disturbance.

- A continuing program of inventory, research and monitoring will be established, in partnership with higher education and research institutions, to provide a sound basis for management.
- All management actions will consider and respect the cultural interests of Aboriginal people.
- Park values, including the water catchment and water supply values, will continue to be protected from potentially damaging processes including wildfire, soil erosion and uncontrolled visitor access.
- Pest plants, animals and diseases will be eradicated or controlled in co-operation with adjoining land managers.

- Pressures arising from increased visitation to the park will be absorbed, wherever possible, by upgrading the carrying capacity of existing visitor sites or by using previously disturbed areas, and by coordinating the provision of recreation sites and services with nearby providers, rather than by establishing new sites in undisturbed areas.

Catchment area and water resources

- Protection of water resources and catchment values will be the paramount consideration in managing the DWSCA.
- Public access into the DWSCA will continue to be restricted in accordance with the Restricted Access Policy (see glossary).

The park visit

- The park will cater for a range of visitor expectations, with a primary focus upon day visitors seeking easily accessible, well-maintained facilities and short walks.
- A range of facilities and services, which enhance visitor access, enjoyment and appreciation, but are in keeping with the park's distinctive character, will be developed and/or maintained.
- Walking and cycling opportunities, particularly short circuit walks for day visitors, will be enhanced with new and upgraded trails. Longer trails in the park will link into the regional trail network.
- A range of interpretation services, which communicate the rich historical and cultural values of the park, will be established.
- Visitor access to information about opportunities in the park will be made easier by linkages with local information centres and strategic distribution networks.
- Facilities and services for visitors with disabilities will be improved.
- Facilities at Lake Mountain will be improved in co-operation with the Lake Mountain Alpine Resort Management Board to enhance year-round visitor opportunities.

- Recreational activities will be permitted in accordance with table 2.
- Current market surveys on visitor profiles, patterns of behaviour, expectation and preferences will be applied to assist in park management.
- Visitor numbers and use of the park will be monitored to ensure adequate provision of facilities consistent with appropriate types and levels of use and protection of the park.
- Links with local tourism associations and other tourist and recreation providers will be established to co-ordinate and optimise the range of facilities and services offered to visitors in the region.

Community awareness and involvement

- Volunteers will be encouraged to be involved in park management and resource conservation programs.
- Parks Victoria will liaise with and inform local Aboriginal communities in respect of park management.
- Co-operative programs with adjoining landholders will protect both private property and public land from fire, pests and other hazards.
- Schools education services will be encouraged.

TABLE 2 SUMMARY OF RECREATION ACTIVITIES

ACTIVITY	MANAGEMENT ZONES			
	1	2	3	4
Picnicking	No	YC	Yes	Yes
Camping: walker-based, at designated camping areas (no facilities)	No	No	YC	No
Walking	No	YC	Yes	Yes
Bicycle riding	No	YC	YC	YC
Horse riding	No	YC	YC	No
Snow sports	No	No	YC	YC
Orienteering/Rogaining	No	YC	YC	No
Rock climbing/Abseiling	No	No	YC	YC
Hang gliding	No	No	YC	No
Fishing	No	No	Yes	Yes
Firewood collection	No	No	No	No
Organised and competitive events	No	No	YC	YC
Hunting	No	No	No	No
Dogs	No	No	No	No
Zone 1 Reference Area Zone	Y	Yes		
Zone 2 Conservation and Water Supply Zone	YC	Conditional—refer to relevant section for details		
Zone 3 Conservation and Recreation Zone	No	Not appropriate		
Zone 4 Recreation Development	N/A	Not applicable		

Note: Public access in the Conservation and Water Supply Zone is restricted to approved recreation sites and trails to protect water resources. Recreation activities within the Land Use–Natural Catchment Area are as for the underlying Conservation and Water Supply Zone.

4 STRATEGIES FOR CONSERVATION

4.1 Geological and landform features

The park lies at the western limit of the East Victorian Uplands, a major geomorphic province of the State. Ranging from an altitude of about 200 m on the valley floors to more than 1460 m, the park includes the gentler slopes in the lower Watts River Catchment, the broad ridge-tops and deeply dissected slopes within the O'Shannassy River and upper Armstrong Creek catchments, the steep upper slopes that form the rim of the catchments and the sub-alpine plateau of Lake Mountain.

The park contains good representations of several land systems that are considered to be inadequately represented elsewhere in the State's conservation reserves (LCC 1994).

The 19 Mile Quarry on the Marysville–Woods Point Road is of international significance as a Silurian–Baragwanathian fossil site (Jeremiah & Roob 1992). There are several sites of regional geological and geomorphological significance along the Yarra River, including the Big Peninsula diversion tunnel (McHugh 1991).

Aims

- Protect areas of significant geological and geomorphological interest from damage.
- Provide support for research into, education about and appreciation of geological and geomorphological sites.

Management strategies

- *Identify, monitor and protect sites of geological and geomorphological significance.*
- *Provide information about the park's geology and landforms.*

4.2 Water resources

Some 64 500 ha or 84 per cent of the Yarra Ranges National Park is within the DWSCA (figure 2). This area is a major supplier of water to Melbourne and surrounding areas. The 30-year mean average yield from the catchments is 350 100 megalitres per year, which represents around 50 per cent of Melbourne Water's supply. The protected

natural state of the catchments means that the water from these areas needs only minimal treatment before distribution to consumers.

Specific provisions of the National Parks Act state that the paramount consideration in respect of the DWSCA is the protection of the area and its water resources (section 2.5). Melbourne Water is responsible for managing these functions in accordance with the National Parks Act and the Catchment Management Agreement (section 2.5).

Melbourne Water maintains an on-ground management presence in the catchments and undertakes works that include security arrangements and patrols, road and gate maintenance, water supply asset operations and maintenance and wildfire prevention works. Melbourne Water also assists Parks Victoria and the Department of Natural Resources and Environment (NRE) with wildfire detection and suppression.

Water resources are managed in accordance with the guidelines for drinking water quality specified by the World Health Organisation (1993; 1996) and the National Health and Medical Research Council of Australia (1987). The water resource is largely untreated and catchment management aims to prevent activities with the potential to degrade the quality and quantity of the water.

The water source must be protected from contamination by human and feral animal waste, which can contain a variety of bacterial, viral and protozoan pathogens and parasites. This is done primarily through the long-standing Restricted Access Policy (see glossary) which is determined by Melbourne Water for the DWSCA in accordance with Section 32I of the National Parks Act. This Policy provides for:

- no public access into the catchments (i.e. those parts of the DWSCA actually producing water) except for vehicle access on the current public through-roads and walking access on the current public walking tracks (sections 5.2 and 5.5 and table 5);

- access within the catchment buffers (parts of the DWSCA—see glossary) to a limited number of walking tracks in locations and under conditions approved by Melbourne Water;
- vehicle and walking access elsewhere in the catchment buffers under a permit system and conditions as determined by Melbourne Water (section 5.5).

Some additional, limited recreational opportunities may be possible in the catchment buffers. These opportunities will be investigated in conjunction with Melbourne Water and other major stakeholders (section 5.5).

Domestic pets remain prohibited in the whole of the park and feral animal populations are controlled to protect against the potential for contamination of water resources from animal waste.

Several main roads, such as the Maroondah Highway, Marysville–Woods Point Road and the Acheron Way, traverse the DWSCA. Most of these roads do not form part of the park. However, parts of the Maroondah Highway and the Marysville–Woods Point Road are within the park but are managed by VicRoads in accordance with statutorily recognised management agreements to minimise impacts upon water resource values (section 2.5).

The Fernshaw Picnic Area on the Maroondah Highway is the only serviced roadside stop within the DWSCA and is subject to strict management controls (section 5.3).

Badger Weir and Donnellys Weir Picnic Areas are located in the Maroondah Buffer. The visitor facilities in the Cambarville area are located in the Armstrong Creek Catchment (although the main area at Cambarville is drained to outside the catchment).

The damaging effects of wildfire are a significant threat to water resources. Immediate effects following a wildfire may include a lowering of water quality from ash and debris washing into the system, and soil erosion contributing to turbidity of water supplies and siltation of reservoirs.

A longer-term effect from a severe fire can be a substantial loss of water quantity arising from increased water uptake by regrowth forests. A bushfire that converted the old-growth Mountain Ash into regrowth would

dramatically decrease water yield, with implications for water use in Melbourne. Fire protection measures for the catchments include slashed breaks, access roads and fire towers; these are dealt with in the Draft Yarra Ranges National Park Fire Protection Plan (NRE 1997c) (section 4.6).

Soil erosion from roads, tracks and other sources can also adversely affect water resources (section 4.8), while pest plants and animals can have some impacts (section 4.7).

A portion of the Lake Mountain Block, on the eastern fall, is within a Proclaimed Water Supply Catchment. The Goulburn Broken Catchment Management Authority should be consulted regarding activities which may affect water resources in this area.

Aims

- Protect the DWSCA, the Proclaimed Water Supply Catchment and water resources.
- Manage the DWSCA and water quality to meet the guidelines for drinking water quality specified by the World Health Organisation (WHO 1993) and the National Health and Medical Research Council of Australia (1987).

Management strategies

- *Maintain the Restricted Access Policy for the DWSCA to protect water resources from potential sources of contamination.*
- *Investigate opportunities for some limited additional recreational access in the catchment buffers that do not affect water resources (section 5.5).*
- *Continue to prohibit domestic pets and control feral animals in the DWSCA to protect water resources from potential sources of contamination.*
- *Monitor the impact on water quality of visitation to the Fernshaw Picnic Area and walking tracks in the DWSCA, and control as appropriate (section 5.3).*
- *Protect the DWSCA from wildfire in accordance with the Draft Yarra Ranges National Park Fire Protection Plan (section 4.6).*

- Protect the DWSCA from soil erosion, pest plants and animals, and diseases (sections 4.8 and 4.7).
- Monitor the effects of roads and traffic that traverse the DWSCA, and liaise with managing authorities as appropriate.
- Liaise with the Goulburn Broken Catchment Management Authority regarding activities that may affect the Proclaimed Water Supply Catchment at Lake Mountain.

4.3 Vegetation

The park protects diverse vegetation types and conserves a substantial representation of the mountain and foothill forests of the Central Highlands of Victoria and an element of the sub-alpine environment. Fourteen of the 23 Ecological Vegetation Classes identified in the Central Highlands occur in the park (appendix 2).

The park also contains a number of sites identified as having National, State or Regional botanical significance (appendix 4). These areas, which contain extensive, undisturbed areas of Cool Temperate Rainforest and Wet (Mountain Ash) Forest, are a feature of the park. The old-growth forests of the park have high conservation value as their extent outside the park has diminished significantly since European settlement. The significance of these communities attracts considerable interest from tertiary institutions for scientific research and study. Much valuable work is done, which presents opportunities to further improve knowledge related to park management.

Twenty plant species are threatened, including three listed under the *Flora and Fauna Guarantee Act 1988* (Vic.) (appendix 3).

Many of these species are protected in relatively isolated areas, but some need active management including protection works, monitoring and further survey.

Lake Mountain's sub-alpine vegetation has a high diversity of plant species and communities, many being at the western limit of their distribution. This area is of State significance, and the impact of recreation activities and fire on these species and communities requires ongoing research and monitoring.

The Lake Mountain Draft Management and Development Plan (ARC & DCE 1990) identifies the sub-alpine heath and bog complexes on the plateau as requiring special protection to minimise impacts from recreation activities, including the development and use of ski trails.

Aboriginal people seek some plants for traditional purposes (section 4.9).

Major threats to the vegetation are: soil disturbance from recreation activities; disturbance arising from inappropriately planned and maintained roads; infrastructure; wildfire; pest plant invasion and disease.

Although several vegetation surveys have been undertaken in recent years, large areas of the park are still awaiting a comprehensive survey.

Aims

- Conserve native plant communities in their natural condition and maintain habitat diversity while allowing natural environmental processes to continue.
- Improve knowledge of flora in the park and associated management requirements.
- Provide special protection for significant plant species and communities.

Management strategies

- Manage Flora and Fauna Guarantee listed species (appendix 3) according to approved action statements.
- Encourage flora surveys and research on significant species and communities to improve conservation management.
- Identify gaps in current knowledge of flora species and communities and encourage additional survey and research to address deficiencies in knowledge.
- Protect heath and bog complexes at Lake Mountain in accordance with the recommendations of the Lake Mountain Draft Management and Development Plan including:
 - little or no modification of existing vegetation communities and stream/bog systems;
 - relocation and rehabilitation of existing developments where appropriate;

- *action to reduce effects from adjacent use;*
- *measures to ensure visitor activity does not adversely affect flora values.*
- *Encourage Friends, naturalists and volunteers to contribute to collecting information on significant flora.*
- *Encourage tertiary institutions to undertake flora research projects and liaise to focus efforts, where possible, on projects beneficial to park management.*
- *Actively manage threatening processes such as weed invasion to protect significant species and communities.*

4.4 Fauna

The park is one of the key regions in the State for its diversity of mammals and other vertebrates. This diversity results from the diversity of types and ages of ecological communities, which provide a broad range of habitats, and the undisturbed nature of the catchments, which have been largely protected from human activity. The large areas of mature and mixed-age forests are particularly important for the conservation of hollow-dependent species such as arboreal mammals, bats, owls and parrots. Twenty-one species are considered threatened, including 10 listed under the Flora and Fauna Guarantee Act.

Some 40 native mammal species are known to occur in the park, and of these eight are listed as threatened in Victoria (appendix 5). Of particular interest is the endangered Leadbeater's Possum. The park contains more than 20 per cent of its known habitat, which is confined almost entirely to the ash forests of the Central Highlands. It has also been located recently in Snow Gum Woodland at Lake Mountain. The park is a vital refuge for Leadbeater's Possum (Lindenmayer 1996) and other threatened species including the Spotted-tailed Quoll and Smoky Mouse.

The park provides habitat for 120 recorded species of native birds. Threatened species (appendix 5) include the hollow-using Sooty Owl, Powerful Owl and Barking Owl. Notable species include the Pink Robin, Yellow-tailed Black-Cockatoo, Australian King-Parrot and Grey Goshawk.

The Taggerty River, upstream of the Lady Talbot Drive crossing, is important habitat for

the Barred Galaxias, which is listed as critically endangered in Victoria.

Sedimentation of streams arising from poorly designed or maintained roads or eroding areas is a potentially threatening process for this and other stream-dwelling fauna.

The Maroondah Unit of the park contains the entire known population of the vulnerable Mt Donna Buang Stonefly.

Lake Mountain is one of the few known localities of two rare copepods (tiny aquatic crustacea) (appendix 5).

Further survey and monitoring is required to establish accurate information on the presence, abundance and distribution of fauna populations in the park, particularly for significant species. The park presents an opportunity to encourage research projects by tertiary and other appropriate institutions, particularly on endangered species such as Leadbeater's Possum.

Fauna may be sought by Aboriginal people for traditional purposes (section 4.9).

Potential threats to faunal populations include modifications to ecosystems by weed invasion, wildfire, soil erosion and the impacts of pest animals. Maintaining a supply of mature hollow-bearing trees is important for preserving species such as Leadbeater's Possum.

Visitors currently feed Crimson Rosellas at Badger Weir Picnic Area and at the Maroondah Reservoir Park adjacent to the park. Feeding wildlife adversely affects the health of the animals and causes ecological problems arising from unnaturally large populations of feeding species. For these reasons it is policy to prohibit such feeding in parks.

Aims

- Protect native fauna species and maintain genetic diversity.
- Provide special protection for significant fauna and their habitat.
- Increase knowledge of the distribution and management of significant fauna species.

Management strategies

- *Manage Flora and Fauna Guarantee listed species (appendix 5) according to approved action statements.*
- *Encourage surveys of fauna and faunal habitats in the park, giving priority to threatened species.*
- *Encourage research and monitoring of Leadbeater's Possum to ensure that the park continues to support viable populations of this endangered species.*
- *Maintain and enhance fauna habitat through the control of potentially threatening processes, including pest plant and animal control.*
- *Communicate the policy of no feeding of wildlife in the park to visitors, and prohibit the sale or distribution of birdseed within the park.*

4.5 Landscape

The Yarra Ranges are highly scenic, being part of the Central Highlands at the southern end of the Great Dividing Range. The rugged terrain rises abruptly from the Yarra River floodplain and forms a prominent scenic backdrop, much of which can be seen from the eastern suburbs of Melbourne to the Yarra Valley.

The park's most significant feature is the tall Mountain Ash forests with their understorey of tree-ferns and adjacent gullies of Cool Temperate Rainforest. These landscape elements are easily accessible at locations such as the Black Spur on the Maroondah Highway.

The highest elevations of the park grade into sub-alpine landscapes, and snow at Lake Mountain and Mount Donna Buang is a regular winter attraction.

The contiguous tall ash forests give a smooth, uniform texture to the landscape when viewed from outside the park. This landscape can be highly sensitive to disturbance that creates sharp breaks in the forest canopy, such as telecommunications towers, roadworks and other utilities. Similarly, land management practices on adjacent State forest and private property, such as timber harvesting and vegetation clearing, can impact on the visual quality experienced from within the park, particularly from major visitor destinations

including Lake Mountain and Mount Donna Buang (section 7.2).

On entering the park, the typical visitor experience is of an enclosed viewscape dominated by uniform stands of towering ash eucalypts, a lush tree-fern understorey and darkened rainforest gullies. This enclosed landscape is sensitive to inappropriate intrusions such as poorly designed or located facilities, weed invasion and changes arising from land management practices.

The park's steep terrain creates an expectation of extensive landscape vistas, although the tall Mountain Ash trees generally obscure such views. Lookout towers give enhanced views at Mount Donna Buang and Mount St Leonard, although views of the park from the latter site are becoming restricted by forest regrowth.

The park has inherited a range of artificially created and maintained viewing points that were used for visitor appreciation, fire detection and other management purposes. They were maintained by the periodic cutting-back of regrowing trees and tall shrubs.

The National Trust has designated parts of the park as 'Classified' landscapes. Classified areas include 'those parts of the physical environment, both natural and man made, which contribute to the heritage of Australia and which must be preserved' (LCC 1994). Classified landscapes within the park are:

- Yarra River and environs;
- Donna Buang Range;
- O'Shannassy Catchment;
- Maroondah Highway–Black Spur.

The towering Mountain Ash forest along the Black Spur section of the Maroondah Highway is considered to be a landscape feature of national significance. Management of trees along this tourist road needs to balance visitor safety with preservation of the special landscape attributes of the forest.

Some former farm sites along the Yarra River and older recreation sites such as Mt Donna Buang lower car parks and Ten Mile car park, Cumberland Memorial Picnic Area, and Big and Little Peninsula Picnic Areas are visually unattractive.

Inappropriate activities in adjoining areas of the park can affect the visual experience of park visitors.

Aims

- Protect natural landscapes, particularly those of high scenic quality.
- Upgrade or rehabilitate sites and facilities that are visually unattractive.

Management strategies

- *Improve visual quality by rehabilitating or upgrading sites that do not meet current visual standards, including:*
 - Mt Donna Buang lower car parks and Ten Mile car park;
 - Cambarville area (including the VicRoads depot and houses—see section 7.1);
 - Mount St Leonard tower area;
 - Dom Dom Saddle Picnic Area;
 - Big and Little Peninsula Picnic Areas;
 - previously cleared areas such as former farm sites along the Yarra River.
- *Participate in planning processes and continue to liaise with the Forests Service and the Shires of Yarra Ranges and Murrundindi to maintain visual quality from high-use visitor destinations and viewing points in the park, including Mount Donna Buang and Lake Mountain.*
- *Incorporate landscape protection measures into the siting and design of all facilities and utilities. Continually improve landscape values while planning and implementing management activities.*
- *Inventory and assess existing viewing points. Close viewing points that are no longer required and prepare a plan for continuing maintenance of those viewing points that are to be retained, taking into account the need to minimise disturbance to environmental values.*
- *Protect areas designated by the National Trust as ‘Classified’ landscapes.*
- *Maintain the scenic values of the following tourist routes: the Black Spur (Maroondah Highway), Reefton Spur section of Warburton–Woods Point Road, Acheron*

Way, Donna Buang Road including the Ben Cairn section, and Marysville–Woods Point Road (section 5.2).

4.6 Fire management

The National Parks Act requires the Secretary to the Department of Natural Resources and Environment to ensure that appropriate and sufficient measures are taken to protect parks from injury by fire. Current fire protection measures are in accordance with the Department of Natural Resources and Environment's Code of Practice for Fire Management on Public Land (CNR 1995), the Draft Yarra Ranges National Park Fire Protection Plan (NRE 1997c), the (former) Dandenong Region Fire Protection Plan (CNR 1992) and the Alexandra Region Fire Protection Plan (CNR 1994) for the Lake Mountain area. These Plans include provision for liaising with private landholders for the common purpose of fire management within the park and on adjacent land. Fire protection also includes informing park users about fire regulations.

The Department of Natural Resources and Environment (NRE) is responsible for fire protection in the park, including the DWSCA. Under the Catchment Management Agreement (appendix 1), Melbourne Water assists with fire protection works and activities in the DWSCA and contributes financially so as to protect water resource values.

The park is susceptible to periodic severe wildfires. Large sections of the park were burnt in 1939, and in 1983 several thousand hectares were burnt in the area of the O'Shannassy and Upper Yarra Dams. Regular fuel reduction burning has previously occurred in the Maroondah Catchment Buffer.

The DWSCA elsewhere has been subject to only limited fuel reduction burning, to protect water quality. Consequently most of the catchments have not been burnt for a considerable period of time, and further research is required to determine the ecological implications of various burning regimes in the park.

The significant sub-alpine vegetation on Lake Mountain is exposed to the threat of a wildfire entering the plateau after burning up the steep valley slopes.

Aims

- Protect human 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 annual fire prevention measures in accordance with the Draft Yarra Ranges National Park Fire Protection Plan.*
- *Publicise and enforce fire regulations and restrictions on the use of fire within the park.*
- *Investigate, with the Forests Service NRE, measures necessary to protect significant sub-alpine vegetation communities at Lake Mountain from damage by wildfire and seek to include suitable measures in the Alexandra Regional Fire Protection Plan.*
- *Encourage research on the ecological effects of fire management in the park and seek to amend the fire protection plan as necessary. If found appropriate, and in the DWSCA consistent with the protection of water resource values, carry out the necessary ecological burning so that flora and fauna populations are conserved and enhanced.*
- *Liaise with the Country Fire Authority in relation to fire management issues in and adjacent to the park, and co-operative wildfire control.*
- *Prepare a rehabilitation plan for the park (including the DWSCA), in the event of wildfire, in accordance with the principles of the Code of Practice for Fire Management on Public Land (CNR 1995) and the protection of water resources.*

4.7 Pest plants and animals, and diseases

Over 60 weed species have been recorded in or near the park (appendix 6) and many have the potential to spread through the park, threatening the indigenous flora and fauna communities and the survival of species.

Overall the level of weed infestation in the park is low, although there are areas of locally severe infestation. Roads, visitor sites and walking tracks are the major points of access for weed invasion into the park.

The catchments have remained relatively weed-free as a result of limited human access and activity in the past. Continuing access restrictions will help keep the catchments in this condition.

Blackberry is the most widespread weed in the park. Holly, English Broom and Gorse have invaded areas of State forest and private property near the park and present a potentially serious threat. Pine wildings, Holly and Ragwort are potential problems in areas adjacent to portions of the O'Shannassy Aqueduct. Introduced grasses, Ragwort and thistles are invasive in localised areas adjacent to cleared farmland.

Pest animal trapping indicates that introduced predators, particularly foxes, cats and dogs, are present in the park in large numbers. Introduced trout inhabit the Yarra River downstream from the Upper Yarra Dam.

Sambar deer are present in the park in large numbers. Although Sambar deer are an introduced species, they are protected wildlife under the *Wildlife Act 1975* (Vic.). There is evidence of substantial grazing at some locations in the park. Insufficient knowledge is available on the impacts of deer populations on native environments and the management requirements to protect the park.

Psyllids and a form of black spot fungus are severely defoliating large areas of ash-type eucalypts in the park and adjacent State forests. Some significant old-growth trees at Cumberland Memorial Picnic Area and Rainforest Gallery appear to be severely affected, but treatment of the trees appears to be impractical. Research suggests that the infestation may be related to the pattern in recent years of mild, wet summers, and may be halted naturally with a warmer summer. Further research and monitoring of the problem is in progress.

Myrtle Wilt is a fungal disease that has caused the death of large numbers of mature Myrtle Beech trees in some parts of Victoria. It exists throughout the Myrtle Beech forests of the Central Highlands, including the park. Wounding of stems and root systems by

management activities such as road and track construction or maintenance can exacerbate the spread of the disease (NRE 1996a).

Aims

- Monitor, control and, where possible, eradicate, pest plants and animals in the park.
- Minimise the impact of control programs on native flora and fauna.
- Minimise the impact of pathogens on native flora and fauna.
- Restore native vegetation to areas where weeds have been eradicated.

Management strategies

- *Develop and implement measures to minimise the impacts of pest plants and animals, incorporating the following:*
 - *encourage surveys of the incidence of pest plants and animals in the park;*
 - *identify priority weeds to target with control programs;*
 - *minimise the spread of weeds into weed-free areas, especially the catchments;*
 - *identify potential threats on adjoining land and undertake Good Neighbour programs jointly with adjacent landholders and managers, including the Forests Service NRE and Lake Mountain Alpine Resort Management Board.*
 - *continue pest animal control as required (section 4.2).*
- *Liaise with the Port Phillip Regional Catchment and Land Protection Board and the Goulburn Broken Catchment Management Authority when developing priorities for pest plant and animal control programs.*
- *Co-ordinate pest plant and animal control efforts in the park with those on adjacent land (section 6.2).*
- *Monitor deer populations to determine their impact on natural values including water quality. Implement appropriate control strategies where detrimental impacts have been identified.*

- *Encourage research into the environmental impacts of deer in the park.*
- *Encourage survey and monitoring of, and research into, the incidence of potentially threatening vectors such as psyllids, black spot fungus and Myrtle Wilt.*
- *Minimise the potential for Myrtle Wilt to spread by preparing a special prescription for the planning, construction and maintenance of roads, tracks, structures or other works near Myrtle Beech trees.*

4.8 Soil conservation

High rainfall, steep slopes and deep soils make large parts of the park naturally susceptible to soil erosion. Human activities such as road and infrastructure construction, vegetation removal and recreation activities can increase the potential for erosion. The undesirable impacts of soil erosion include degradation of conservation values and water quality.

Natural agents such as plant disease, fire, excessive rainfall and uprooting of trees by wind can expose soils or cause landslips, leaving soils exposed to erosion by wind, water and, in the higher elevations, frosts.

Roads and tracks within the park are the major potential source of eroded soil and require regular maintenance, especially in the catchments. Where any new walking track is proposed, careful planning will be necessary to minimise the potential for erosion.

Recreation activity such as walking, horse riding and skiing can increase soil loss. Car parks and picnic areas are potential sites for soil compaction and runoff. Careful planning, design and maintenance of park infrastructure will minimise visitor impacts on soils.

The sub-alpine soils at Lake Mountain are particularly vulnerable to erosion. All earthworks and ground disturbance in the Ski Trail Zone and Summit Area require measures to stabilise the soil and establish a longer-term protective cover of vegetation.

Aims

- Prevent and control soil erosion from visitor and management activities.
- Protect water quality by preventing and controlling soil erosion.

- Revegetate disturbed areas with indigenous species.

Management strategies

- *Regularly maintain all roads and tracks to minimise erosion (table 3).*
- *Monitor and maintain recreation facilities and areas of high recreational use to minimise soil erosion.*
- *Liaise with the Port Phillip and Westernport Catchment and Land Protection Board and the Goulburn Broken Catchment Management Authority with regard to park management activities.*
- *Rehabilitate and revegetate disturbed areas.*
- *Protect and maintain the integrity of catchment and water resource values within the park (section 4.2).*
- *Apply 'Field Guidelines for the Development and Maintenance of Cross-country Ski Trails' (ARC 1992) to minimise soil erosion during ski trail development and maintenance works.*

4.9 Aboriginal cultural heritage

The park lies within the lands traditionally associated with the Wurundjeri (south of the Great Dividing Range) and the Taungurung (north of the Range). These Aboriginal communities assert a spiritual and cultural connection to the park and have expressed an interest in helping protect the park's Aboriginal cultural values.

Nine Aboriginal archaeological sites have been formally recorded to date, reflecting the level of investigation to date. However, Aboriginal Affairs Victoria NRE has advised that further surveys are likely to reveal an extensive pattern of use and occupation.

Aboriginal archaeological and cultural sites and places are protected under the *Archaeological and Aboriginal Relics Preservation Act 1972* (Vic.) and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth). The Commonwealth legislation identifies the local Aboriginal communities from whom consent is required for certain specified activities.

Areas of highest archaeological sensitivity are the mountain ridge tops and creeks and rivers,

along routes of movement (du Cros 1988). There were pathways along the Yarra River and other rivers and ridgelines of the park.

Local Aboriginal people have an interest in the landscape and flora and fauna of the park. Materials are occasionally sought for traditional purposes, including the teaching of traditional uses to Aboriginal children. The preservation and maintenance of cultural uses of materials is an important part of Victoria's heritage.

Aims

- Protect archaeological, historic and cultural sites and places of significance.
- Provide access to, and interpret, suitable sites and places, consistent with protection of the sites, artefacts and relics.
- Improve knowledge of archaeological and historic sites and places and traditional uses.

Management strategies

- *Encourage surveys and research to identify sites and places of Aboriginal significance and areas of archaeological significance, and to elucidate the land use history and significance of the land for Aboriginal people.*
- *Assess the potential effect of any proposed development works or ground disturbance on Aboriginal or other cultural values and undertake site specific surveys within areas that could be an archaeological site or place, prior to implementation of the works.*
- *Manage sites and places of Aboriginal significance in accordance with relevant legislation and Parks Victoria's operational policies.*
- *Liaise with local Aboriginal communities including the Wurundjeri and Taungurung, and those nominated in relevant legislation or by Aboriginal Affairs Victoria NRE, on Aboriginal cultural interests in the park.*
- *Inform local and nominated communities about plans for the park that are likely to impact on their cultural interests.*

- Foster Aboriginal involvement in park management activities in accordance with Parks Victoria's operational policies.
- Permit Aboriginal collection of plant material in accordance with Parks Victoria's operational guidelines.

4.10 Post-settlement cultural heritage

The extensive European history of the Yarra Ranges National Park offers an important opportunity to protect and present one of the best collections of places representing the full range of historical themes associated with the forests in such close proximity to Melbourne.

By the 1840s squatters had occupied surrounding areas but did not permanently settle the densely forested terrain of the Yarra Ranges. Grazing of the forests under temporary licence was largely phased out by the 1920s, although summer grazing of Lake Mountain continued until the 1960s.

Goldfields opened up around the Warburton to Reefton Spur area in the 1850s and 1860s. The Yarra Track provided access to the Woods Point goldfields via Healesville, Fernshaw and Cumberland. The sites of several former Yarra Track hotels, now overgrown, were added to the park in 2001 (section 1.2).

The tall trees of the Yarra Ranges attracted wide interest and, from the 1880s, townships such as Marysville and Warburton became popular tourist destinations. Fernshaw also became a popular destination until its removal in 1885. A tourist track from Warburton to Walhalla through the Upper Yarra catchment was popular with walkers and horse riders in the early decades of the 20th century. The Cumberland Memorial Scenic Reserve near Cambarville (1929) protected the area's tall trees as a memorial to servicemen (Griffiths 1992).

Diversions for Melbourne's water supply commenced in 1886 with a weir on the Watts River, followed by the O'Shannassy and Maroondah Dams (1920s) and the Upper Yarra Dam (1957). The Closed Catchment Policy saw the removal of Fernshaw Township, which was in the Maroondah Reservoir Catchment, in 1885 and the cessation of most human activities in the catchments (Dingle & Rasmussen 1991).

Outside the closed catchments, temporary sawmill settlements and timber tramways expanded from the 1880s to 1950.

Downhill snow skiing was popular at Mount Donna Bung from 1912 to the 1950s, and since the 1970s Lake Mountain has become a major cross-country skiing destination.

A number of old huts remain in the park. Most are in a state of disrepair and are relatively inaccessible, though at least one is still used and maintained by a walking club (section 7.1).

Historic and cultural places will be managed in accordance with the *Heritage Act 1995* (Vic.) and the ICOMOS Charter for Conservation of Places of Cultural Significance (Burra Charter) (ICOMOS 1999).

Certain issues relating to geographic place names have arisen as a result of the revocation and incorporation in the park of various scenic reserves and weir parks. Place name issues are dealt with in accordance with the *Geographic Place Names Act 1998* (Vic.) and associated guidelines and procedures.

Aims

- Protect archaeological, historic and cultural places of significance.
- Provide sufficient access to, and interpret, suitable places, to allow people to appreciate the full range of historic and cultural themes associated with the park, and consistent with protection of the places, artefacts and relics.
- Improve knowledge of archaeological and historic places by encouraging further survey and research.

Management strategies

- Manage historic places in accordance with the Burra Charter of Australia ICOMOS and Parks Victoria's operational policies.
- Undertake a strategic assessment of the heritage values of the park using existing research, with a view to protecting the significant places and identifying a representative group of places suitable for representing to the public the cultural heritage of the forest. The strategy should identify any action plans needed to guide the management of these places.

- *Prepare heritage action plans according to the Burra Charter guidelines for significant cultural heritage places and landscapes, where required.*
- *Liaise with local historical societies, former management agencies and individuals to improve knowledge of the cultural heritage of the park and to identify opportunities for co-operative projects.*
- *Encourage further field and literature research into the cultural heritage of the park.*
- *Assess historic and recreation values of, and visitor safety issues for, the existing huts within the park. Maintain huts with significant value or use in a safe condition or, if otherwise, assess the cultural values of the huts and use this information to determine their future. Prior to any removal, professionally record and document the huts.*
- *Following research into the historic importance of place names, seek the renaming of features with inappropriate place names in accordance with the Geographic Place Names Act.*

5 STRATEGIES FOR VISITORS

5.1 Information, interpretation and education

Yarra Ranges National Park has a rich variety of natural and cultural values suited to interpretation and outdoor education.

The proximity of the park to Melbourne, and its ease of access for visitors, create opportunities to present information on the broader values and uses of national parks to visitors who do not usually visit national parks.

There are also opportunities to develop partnerships in the delivery of the park's interpretive and educational programs relating to natural and cultural values, for example by linking natural history programs with the new Museum of Victoria, particularly its Forest Gallery, and the park's Aboriginal programs with the new Galeena Beek Living Cultural Centre at Healesville.

Several roads traversing the park are promoted as tourist drives by regional tourist associations (sections 4.5 and 5.2). Promotion includes road signs, tourist brochures and publications. There are opportunities to include park destinations such as Mount Donna Buang and Lake Mountain in the tourist drives.

Information

Partnerships with tourism organisations and local tourist attractions are a ready means for distributing park awareness and pre-visit information. The park features in several tourist-drive brochures.

The visitor information centres at Healesville, Warburton, and Marysville, which are located on major access routes to the park, distribute park information. The Lake Mountain Alpine Resort Management Board runs an information service at Lake Mountain during winter.

Information boards are located within the park at the Beeches, Big Culvert and Cambarville. Additional boards have been erected recently at the Rainforest Gallery, Mount Donna Buang and Lake Mountain.

Several Parknotes for the park and brochures giving quality information on visitor sites,

activities and walking tracks are available for visitors.

Most of the signs erected under previous management arrangements have been replaced with unified and co-ordinated signage that aids visitor orientation and identifies Parks Victoria with the park, and Melbourne Water with the DWSCA, as appropriate.

Interpretation

There are interpretation facilities at Dom Dom Saddle and Mount Donna Buang, and site-specific interpretation at Cambarville Memorial Picnic Area (tall trees). A major old-growth interpretation facility and elevated walk is established at Rainforest Gallery.

There are opportunities to develop high-standard, interpretive short return walks at major visitor sites such as Mount Donna Buang and Lake Mountain (section 5.5), and at O'Shannassy Aqueduct and the Lady Talbot Drive, to improve the range of experiences available to day visitors. Two commercial operators currently offer programs of interpretive walks at Badger Weir Picnic Area.

Further interpretation programs could be offered to the general public in peak periods and to targeted interest groups.

Schools education

The park presents a range of opportunities for environmental and cultural education, including topics such as nature conservation, water supply and land use.

Specialist schools education facilities and programs are located nearby at Dandenong Ranges National Park, Healesville Sanctuary and the Toolangi Forest Discovery Centre. These providers may be able to expand their programs to include the Yarra Ranges National Park.

Several school camps in the vicinity of the park run regular programs in the adjoining Upper Yarra Reservoir Park and the Warburton Information Centre as well as the national park. There may be opportunities to develop linkages between national park programs and programs provided at these complementary attractions.

Aims

- Present the park as a whole to visitors and improve visitor awareness and orientation within the park.
- Enhance visitors' enjoyment and understanding of the park's natural and cultural values by interpreting its values.
- Provide and support appropriate opportunities for environmental and cultural education activities in the park.

Management strategies

- Prepare a park information and interpretation strategy, including options for saleable publications, based on visitor requirements and the following themes:
 - old-growth forests and rainforest;
 - rare and threatened flora and fauna;
 - water catchments and water supply values;
 - Aboriginal history and culture;
 - Historic and cultural use including mining, timber and tourism.
- Liaise and consult with the Wurundjeri and the Taungurung in the development of a strategy for interpreting the park's Aboriginal history and culture.
- Establish and maintain partnerships with local tourist associations and operators to co-ordinate the provision of visitor information and interpretation programs.
- Establish and maintain partnerships with the Department of Education, Employment and Training, Museum of Victoria and other relevant organisers and interpretation / education providers.
- In partnership with the Lake Mountain Alpine Resort Management Board and the Shire of Murrindindi, enhance awareness of Lake Mountain as a year-round visitor destination, including improving visitor information at Lake Mountain.
- Provide appropriate visitor information at local tourist information centres at Marysville, Healesville and Warburton.
- Complete the replacement of various signs in the park with unified and coordinated signage to aid visitor orientation and

identify Parks Victoria with the park, and Melbourne Water with the DWSCA, as appropriate.

- *Provide adequate park information including safety messages and interpretation at key visitor sites according to table 4.*
- *Provide or improve interpretive information for short walks commencing at:*
 - Mount Donna Buang car park;
 - Lake Mountain car park;
 - O'Shannassy Aqueduct (water supply history); and
 - Lady Talbot Drive (timber tramways and mountain streams).
- *Encourage all visitors to adopt minimal impact techniques and to adhere to codes of conduct appropriate to their activity.*
- *Maintain appropriate Parknotes for the park.*
- *Investigate opportunities for additional interpretation services by commercial operators.*
- *Undertake regular evaluation of information and interpretation programs related to the park.*
- *Encourage nearby schools education providers, including school camps, to use the park for programs focusing on park management, recreation, conservation and water supply, and work with education providers to facilitate the programs.*

5.2 Vehicle access

Several main roads run near or through the park giving good vehicle access for visitors (figures 4, 5 and 6).

The Maroondah Highway provides access through the Maroondah Unit of the park (figure 4). The section of highway north of Fernshaw (the Black Spur) is included within the DWSCA (table 3). South of Fernshaw Picnic Area, the highway is within a road reserve which is excluded from the park. The Donna Buang Road and the Acheron Way, which also provide access through the Maroondah Unit, are excluded from the park. They are declared tourists' roads under the

Transport Act 1986 (Vic.) and are managed by VicRoads.

The Ben Cairn section of the Donna Buang Road links Don Road (west of the park) to the Mount Donna Buang area, a distance of around 8 km. This road is popular in summer for the access it provides to views and the Ben Cairn summit, and as a link between Healesville and Mount Donna Buang. The road has potential as part of a tourist circuit but, being unsealed and narrow for 3.5 km, is not suitable for buses or large volumes of traffic at present. The road is subject to a formal road closure in winter. Upgrading the road has been suggested, but the feasibility of such action is uncertain. An environmental assessment would be required to determine whether or not upgrading the road would be compatible with the protection of park values.

The Marysville–Woods Point Road (Cumberland Road) passes through O’Shannassy and Armstrong Creek Catchments of the DWSCA. It is part of the park but is managed by VicRoads as a tourists’ road.

The Lake Mountain Unit of the park has good access from the Marysville–Woods Point Road, Warburton–Woods Point Road, Lake Mountain Road and Lady Talbot Drive (figure 6).

No public access is available into the Upper Yarra Unit, although the Warburton–Woods Point Road and Noojee–Matlock Road (both excluded from the park) provide access around the perimeter. The Warburton–Woods Point Road gives good sealed road access to the Upper Yarra Reservoir Park, which adjoins Yarra Ranges National Park.

There is an extensive network of fire and management vehicle access tracks within the DWSCA that are managed by Melbourne Water for fire protection and water supply purposes. Public vehicle use of these tracks will remain prohibited to protect water catchment and water supply values. These tracks are not listed in table 3.

Four-wheel drive access for recreation is provided outside the DWSCA, mostly on tracks which are subject to a winter closure. Usually the tracks subject to closure are on

steep, erodible mountain soils in high-rainfall areas. They are seasonally closed to prevent track and soil damage and ensure public safety. Seasonally closed tracks include Roads 10 and 15 in the O’Shannassy /Acheron area, Upper Taggerty Road near Lake Mountain and Road 20 in the Upper Yarra area (table 3). Four-wheel driving is allowed year-round on some tracks including Peninsula Road.

A number of short tracks in the Lake Mountain / Taggerty River area were rendered untraffickable to vehicles over 10 years ago to prevent unauthorised access to the alpine resort and damage to fragile soils. There are two other short, dead-end tracks that serve no purpose—Big Bills Track and Lynch Road—in the O’Shannassy Unit. Fees are charged on the Lake Mountain and Mt Donna Buang Roads during the snow season.

Lady Talbot Drive traverses both the park and State forest, giving access to a number of important recreation sites along the Taggerty River. It is promoted as a forest drive from Marysville (sections 5.1).

Aims

- Provide for public and management access to the park by a well planned and managed road and track network.
- Minimise environmental impacts by maintaining the road and track network in good condition.

Management strategies

- *Manage and permit the use of roads and tracks in accordance with table 3, and continue to liaise with the Victoria Association of Four Wheel Drive Clubs.*
- *Liaise regularly with road managers to ensure that all road works include measures to protect park values.*
- *Liaise with VicRoads to investigate the feasibility of upgrading the Ben Cairn section of the Donna Buang Road as part of a tourist circuit. Ensure that any impacts on the park are fully assessed prior to a decision being made.*

TABLE 3 MANAGEMENT OF VEHICULAR ROADS AND TRACKS *

ROAD/TRACK	CURRENT CLASSIFICATION	FUTURE MANAGEMENT/COMMENT
Roads and tracks open to public vehicles		
Maroondah Hwy south of Fernshaw	4,A	Excluded from park. A sealed major road managed by VicRoads.
Maroondah Hwy north of Fernshaw (Black Spur)	4,A	Within the DWSKA of the park. A sealed major road managed by VicRoads under statutorily recognised agreement.
Marysville–Woods Point Rd (Cumberland Road)	4,A	Managed by VicRoads under statutorily recognised agreement. Encourage sealing of the 3 km unsealed section within the DWSKA of the park.
Marysville/Warburton –Woods Point Rd east of Cumberland Junction (Woods Point Rd)	4,B	Excluded from the park. Surfaced with gravel (minor sections sealed) and managed by Vic Roads.
Warburton–Woods Point Rd south of Cumberland Junction (Reefton Spur Road)	4,A	Excluded from the park. Sealed and managed by VicRoads.
Donna Buang Rd (Ben Cairn section)	4,C	Excluded from the park and is a declared tourists' road managed by VicRoads. Seasonal road closure applies. Feasibility of upgrading to be investigated.
Donna Buang Rd (excluding Ben Cairn section)	4,A	Excluded from the park and is a sealed, declared tourists' road managed by VicRoads.
Acheron Way	4,B	Excluded from the park and is a declared tourists' road managed by VicRoads.
Lake Mountain Road	3,A	Excluded from the park and managed by the Lake Mountain Alpine Resort Management Board and Vic Roads.
Noojee–Matlock Rd	4,C	Excluded from the park and managed by VicRoads.
Peninsula Tk	5,D	Seasonal road closure. Unchanged.
Peninsula Rd	4,B	Unchanged.
Little Peninsula Tk	5,C	Unchanged. Picnic Area access.
Lady Talbot Dve	4,C	Joint management with Forests Service NRE. Unchanged.
Upper Taggerty Rd	5,D	Upgrade to Class 3. Retain existing seasonal road closure.
Bantick Rd	–	Close. Track is overgrown, untraffickable and not required.
Bantick Link (Line) Tk	–	Close. Track is overgrown, untraffickable and not required.
Goulds Tk	–	Close. Track is overgrown, untraffickable and not required.
Goulds No. 2 Tk	–	Close. Track is overgrown, untraffickable and not required.
Taggerty River Fireline	–	Close. Track is overgrown, untraffickable and not required.
Grace Darling Track	–	Close. Track is overgrown, untraffickable and not required.
Lynch Rd	–	Close. Track is overgrown, untraffickable and not required.
Monda Tk (Rd 9)	4,C/D	Unchanged. Open to gate at end.
Acheron Rd 15	5,C	Unchanged. Seasonal road closure.
Cambarville Rd	4,B	Unchanged. Managed by Forests Service NRE. Picnic Area access.
Badger Weir Rd	5,B	Unchanged. Park gates closed at night. Picnic Area access.
Donnelly's Weir Rd	5,C	Unchanged. Park gates closed at night. Picnic Area access.
Upper Yarra Rd 20	4,D	Unchanged. Seasonal road closure. Managed by Melbourne Water.

O'Shannassy Rds 8 & 10	5,E	Unchanged. Seasonal road closure applies to Rd 10 (otherwise open to gate near Mount Ritchie). Rd 8 is managed by Forests Service NRE; Rd 10 by Melbourne Water.
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Roads and tracks outside the DWSCA—open to management vehicles and cycles only

Road 4 off Acheron Way	5,D	Unchanged.
Road 7 off Acheron Way	5,D	Unchanged.
Mt Victoria Tk	5,C	Unchanged. Open to telecommunication tower.
Old Peninsula Tk	—	Close track.

* Roads and tracks open to management vehicles only are not shown.

Note: Certain sections of walking track and, outside the snow season, certain ski trails, are open to management vehicles and cyclists (tables 5 and 6).

KEY TO PARKS VICTORIA ROADS CLASSIFICATION:

Function:

Class 4 Roads provide for park access, and additional functions such as commercial uses, through access to other locations (outside the Park), or access to private property or utilities.

Class 5 Roads exclusively provide access for visitors into parks for recreational activities, or exclusive use for park management.

Development:

- A Primary Road—all weather, two laned, mainly sealed road.
- B Secondary Road—all weather, two laned formed and gravelled, or single lane sealed with gravel shoulders.
- C Minor Road—Single lane unsealed, formed road usually lightly gravelled.
- D Access Track—Single lane, dry weather formed (from natural materials).
- E Rough Track—Single lane, unformed earth track at or near the natural surface.

- *Prepare a management strategy for the Lady Talbot Forest Drive with the Forests Service NRE and in consultation with the Shire of Murrundindi and relevant interest groups.*
- *Continue to prohibit public use of roads and tracks in the DWSCA other than in accordance with the Restricted Access Policy (glossary).*
- *Liaise with regional tourist associations to include major park destinations such as Mount Donna Buang and Lake Mountain on tourist drives.*

5.3 Day visits

The park is a popular day visit destination. The spectacular scenery and natural features attract visitors year-round to appreciate and enjoy scenic drives, picnics and nature walks in the warmer months, and cross-country skiing and snowplay in winter.

Most visits are to a small number of well-established sites, including Badger Weir Picnic Area, Cumberland Memorial Picnic Area, Mount Donna Buang and Lake Mountain (section 2.4).

Day visits throughout the year are expected to increase as the park becomes better known. The increased use can be accommodated by improving facilities at existing sites and better managing vehicle and visitor access, while protecting and rehabilitating sensitive areas. For example, Lake Mountain, Cumberland Memorial Picnic Area and Mount Donna Buang could accommodate more visitors in summer. A range of alternative sites for day visitors are located outside the park, at the Maroondah and Upper Yarra Reservoir Parks and the townships of Healesville, Marysville and Warburton.

Lake Mountain is popular with visitors year-round. In winter, visitors are attracted by opportunities for cross-country skiing, tobogganing and snowplay (section 5.6).

Over the last decade, the numbers of visits to Lake Mountain has grown rapidly and peak visitation levels in winter now exceed the capacity of facilities.

The Lake Mountain access road, car parks, facilities and structures at Snowy Hill, Gerratys, Arnolds Gap and The Cascades are all outside the park and within the adjacent Lake Mountain Alpine Resort. Commercial visitor facilities are mostly located around the Gerratys car park. The walking tracks, lookout points, park information, trails and other visitor facilities are located between Gerratys car park and the Summit Area.

Proposed improvements to visitor facilities in the Lake Mountain Alpine Resort, and the Ski Trail Zone and the Summit Area in the park, will enhance this area as a key year-round destination in the northern part of the park, which also includes Cumberland Memorial Picnic Area and the suite of visitor opportunities around Marysville including the Lady Talbot Drive.

Parks Victoria plans improvements to visitor facilities in the Ski Trail Zone in partnership with the Lake Mountain Alpine Resort Management Board, in accordance with the Lake Mountain Heads of Agreement (section 2.5).

The recently approved Lake Mountain Alpine Resort Planning Scheme provides the framework for future planning and development of the Resort.

The Fernshaw Picnic Area is located in the Maroondah Catchment of the DWSCA and would normally be subject to access restrictions. It was originally developed as a roadside stop but has gradually expanded to become a substantial picnic area, a use that was never intended.

The new old-growth interpretation facility and elevated walk at the Rainforest Gallery on the southern slopes of Mount Donna Buang is proving to be a major tourist attraction. Visitor numbers continue to grow and use of the site needs to be monitored.

Facilities at Mount Donna Buang and Dom Dom Saddle Picnic Area have been upgraded (section 5.6).

There are opportunities to enhance the visitor experience by coordinating the management of day visitor facilities in the park with those in the surrounding areas, including the Maroondah and Upper Yarra Reservoir Parks (figure 4), Healesville Sanctuary, Lake Mountain Alpine Resort and nearby State

forest. For example, many visitors to the park also use Lady Talbot Drive near Marysville and visit Wirrawilla Rainforest Walk near Toolangi and the Walk into History between Warburton and Poweltown.

Visitors with disabilities, and those who may have had limited previous experience of park environments, need to be considered in the design of any new facilities and upgrades at major visitor sites.

Environmental and cultural impact
assessments will be needed for proposed major new works or upgrades to identify and protect environmental values.

Aims

- Maintain existing facilities to enable visitors to experience and appreciate the park consistent with protecting park values.
- Accommodate increases in visits by improving facilities at existing sites other than Fernshaw.

Management strategies

- *Progressively improve visitor sites as outlined in table 4.*
- *Enhance existing short walk opportunities (including interpretive information) at day visitor sites as appropriate (sections 5.1 and 5.5).*
- *Monitor the impact of visitors on recreation sites and implement actions to protect environmental and water resource values.*
- *Provide appropriate facilities for people with disabilities at major visitor sites.*
- *Liaise with the managers of nearby public land to co-ordinate the provision and management of visitor facilities (sections 5.1, 5.4 and 5.5).*
- *Investigate opportunities to enhance visitor services in and around the park through partnerships with local Aboriginal communities and other tourist attractions such as Healesville Sanctuary and the Gagaiena Beek Living Cultural Centre.*

TABLE 4 EXISTING AND PROPOSED VISITOR FACILITIES

SITE	TOILETS	PICNIC TABLE	ELECTRIC OR FIRE PLACE GAS BBQ	WATER SUPPLY	PARK INFO.	WALK TRACK	FEATURE	PARK INTERPS	PICNIC SHELTER
Maroondah Unit									
Mount Donna Buang	E	-	-	E	P	E/U	Lookout tower-E	E	E
10 Mile Turntable	E	P	E	-	E/U	P	E	-	E/U
Rainforest Gallery	E/U	-	-	-	E/U	P	E/U	Tree Canopy Walk-E	E
Badger Weir Picnic Area	E	E/U	P	E	E	E/U	E/U	-	E/U
Donnelly's Weir Picnic Area	E	E	-	E	E	E/U	E	-	P
Fernshaw Picnic Area	E	E	-	E	E	E	E/U	-	E
Dom Dom Saddle Picnic Area	E	E	P	-	E	E	E/U	-	E
Mt St Leonard	-	-	-	-	-	P	E	Lookout tower-E	P
Graceburn car park (proposed)	-	-	-	-	-	P	P	-	-
Lake Mountain Unit									
Cambarville * (Cumberland Memorial Picnic Area)	E	E	-	E	E	E	E	Lookout platform-E	P
The Big Culvert	-	-	-	-	-	E	E	-	-
Keppel Falls & Phantom Falls	-	-	-	-	-	P	E	Lookout platform-E/U	P
Taggerty River carpark	-	E	-	-	-	E	E	Historic culvert	E/U
The Beeches Picnic Area	E	E	-	-	-	P	E/U	-	E/U
Lake Mountain (Forward Patrol Base)	P	-	-	-	-	P	E	-	-
O'Shannassy Unit									
Big Peninsula Picnic Area	-	P	-	P	-	P	E/U	-	P
Little Peninsula Picnic Area	-	E	-	E	-	P	E/U	-	-
O'Shannassy Aqueduct Weir	-	P	-	-	-	P	P	-	P

E = existing facility; E/U = upgrade existing facility, - = no facility; P = proposed facility.

* Other facilities located in the vicinity of Cambarville are shown on figure 6

Note: Recreation sites and facilities adjacent to but outside the park are shown on figures 4, 5 and 6.

- Review the current level of visitor use at Fernshaw Picnic Area with Melbourne Water and monitor ongoing usage to ensure that water resource values are protected. Do not undertake further development that has the potential to attract increased visitation.*
- Monitor use of the Rainforest Gallery and, if visitor numbers continue to rise, develop plans to resolve management issues arising (e.g. toilet capacity and bus parking) consistent with the protection of park values.*

5.4 Camping

The park's primary visitor management objective is to provide for day visitors. Nearby areas are more appropriate for overnight stays, including camping.

An adequate range of camping opportunities is provided in areas near the park. Significant existing camping services include:

- campgrounds with a full range of facilities at townships such as Marysville, Healesville and Warburton;
- dispersed vehicle-based camping in the Yarra and Marysville State Forests;
- a range of camping opportunities in nearby Kinglake National Park, Cathedral Range State Park and other parks;
- camping at Upper Yarra Reservoir Park, adjacent to Yarra Ranges National Park, which provides unpowered sites for tents and caravans in a formal parkland setting.

Camping opportunities for bushwalkers and ski-tourers are provided in the park at Lake Mountain, complementing camping facilities outside the park. Snow camping at Lake Mountain is regulated for safety, conservation and visitor management reasons.

If necessary to complement camping opportunities provided outside the park, additional basic camping facilities could be considered at Camp Duncan—a disused school camp on the north side of the Yarra River (section 7.1 and figure 5); Cambarville—a former sawmill and township site (figure 6); and Misery Flat at the Big Peninsula Picnic Area (figure 5). An assessment of the environmental, historical and cultural values

of these sites would be required before any decision is made to develop campsites.

Camping is not permitted in the DWSCA.

The potential for damage to the fragile sub-alpine vegetation and soils from inappropriate or excessive levels of camping is high.

Campsites required for any 2–4 day walks traversing the park (section 5.5) should be located outside the park.

Aim

- Provide for camping in a limited number of locations that complement the range of camping opportunities provided in areas near the park, while protecting environmental, cultural and water resource values.

Management strategies

- Prohibit camping in the DWSCA to ensure that water resource values are protected.*
- Allow dispersed camping within the Lake Mountain Ski Trail Zone for use by bushwalkers and ski-tourers, introducing a camping permit system as soon as practicable (figure 6).*
- Monitor the condition of environmental, cultural and water resource values at designated camping areas and take corrective action if degradation is occurring.*
- Encourage development of overnight accommodation and camping facilities for park visitors outside the park in nearby areas.*
- Consider the provision of additional basic camping facilities in the park, only:*
 - if no alternative exists outside the park;*
 - outside the DWSCA;*
 - for sites assessed and found capable of sustaining camping activities consistent with the protection of park values.*

5.5 Bushwalking

The tall trees and lush fern valleys of the area have been popular with bushwalkers ever since ‘hiking’ first became fashionable in the 1880s. Walking tracks in the park lead to tall trees,

rainforests, views, historic goldfields and timber tramways (table 5).

There is a range of walking tracks in the park. Vehicle access tracks (table 3) and, outside the snow season, ski trails at Lake Mountain (table 6) are also available for walkers.

Public walking access within the DWSCA remains restricted to particular historically used walking tracks and traditional picnic areas (section 5.3). There are short walks that commence at the Donnelly's Weir Picnic Area, Maroondah Highway near Graceburn Weir, the Badger Weir Picnic Area and the Cumberland Memorial Picnic Area. There are longer walks on Morleys Track, Condons Track, around the northern margins of the Maroondah Catchment, and on the Dom Dom Saddle – Mount Donna Buang track (figure 4). The traditional access tracks remain open to the public provided that water resource values are not affected.

The Draft Victorian Trails Strategy 2001–2004 prepared by the Victorian Trails Co-ordinating Committee (VTCC 2001) identifies several proposed priority actions for developing trails that could be considered in the future:

- short walks from key visitor nodes and interpretive walks;
- half-day and whole-day walks within 90 minutes drive of Melbourne;
- well-serviced overnight hikes and 3–4 day walks 2–3 hours from Melbourne; and
- an investigation into the development of a trail to link Healesville and Warburton, incorporating the disused O'Shannassy Aqueduct.

Visitor surveys in the park indicate that many of the park's day visitors appreciate short walks with interpretation provided (section 5.1).

The ski trails at Lake Mountain currently receive limited use and can comfortably carry more visitors without affecting the sensitive sub-alpine environment. Promoting Lake Mountain as a summer walking destination will expand the range of visitor's experiences of the park and make better use of existing facilities in the park and the alpine resort.

Opportunities to provide new walks in the park, including walks linked to the trails network in the area, are limited by the

legislative requirement to give paramount consideration to protecting water resources in the DWSCA (sections 4.2). The Restricted Access Policy precludes developing additional access into the Maroondah, O'Shannassy, Cement Creek, Armstrong Creek and Upper Yarra catchments, but not necessarily within buffer areas.

There are opportunities to develop half-day or day walks:

- around the summit of Mount Donna Buang (2 km including 1.5 km of existing track);
- linking Donnelly's Weir Picnic Area, Maroondah Reservoir Park and the Badger Weir Picnic Area (mostly comprising existing tracks, skirting the margin of the Maroondah Catchment Buffer).

These walks will provide half-day or day walking opportunities for a high proportion of park visitors and facilitate better use of existing facilities. Establishment of the walks will be consistent with protection of water resource values if carefully planned and managed.

There may be opportunities to establish new 2–3-day walks by linking existing tracks in the park to those in the surrounding areas. This will require the co-operation of the managers of public land near the park. For example, the existing Dom Dom Saddle–Mount Donna Buang track could be incorporated in a trail linking the Lilydale–Warburton Rail Trail to Marysville.

Sections of the short walks that commence at the Donnelly's Weir Picnic Area, Maroondah Highway near Graceburn Weir, and the Badger Weir Picnic Area, are located along the Maroondah, Graceburn and Corranderk aqueducts respectively. Use of these tracks is increasing and Melbourne Water has raised concerns about the potential impact of the use on water quality.

Aim

- Provide opportunities for walking consistent with the protection of park values.

Management strategies

- *Manage existing walking tracks in accordance with table 5.*

- Encourage enhanced use of ski trails and alpine resort facilities at Lake Mountain for bushwalking during summer (table 6).
- Develop a 2 km circuit walk around Mount Donna Buang based on existing tracks (section 5.1).
- Investigate alternatives for sections of walking routes located along the Corranderk, Graceburn and Maroondah aqueducts in consultation with Melbourne Water. Where practicable and appropriate, develop alternative routes and improve the tracks overall.
- Develop a linked walk between Donnellys Weir Picnic Area, Maroondah Reservoir Park and the Badger Weir Picnic Area, including existing short walks and other existing track sections in the Maroondah Catchment Buffer as appropriate.
- Investigate a walking track on the O'Shannassy aqueduct in consultation with Melbourne Water.
- In consultation with the managers of nearby public land, and the Federation of Victorian Walking Clubs and Melbourne Water, investigate opportunities to develop additional 2–3-day walks by linking existing tracks in the park to the trails in nearby areas.
- Investigate opportunities to develop trails for people with disabilities.
- Incorporate access to natural, cultural and historic features, and interpretation of these features, into new track developments.
- Monitor use of walking tracks and maintain tracks in accordance with table 5 and to ensure that environmental and water supply values are protected.

TABLE 5 MANAGEMENT OF WALKING TRACKS

NAME	DISTANCE (ONE WAY)	CURRENT GRADE	REMARKS	ADDITIONAL WORK REQUIREMENTS	FUTURE GRADE
Beeches Track	2.5 km	3		Surface, drain, upgrade boardwalks	2
Keppel Lookout	0.3 km			Drain and reform, upgrade bridges	
Phantom Falls	0.3 km	4			4
Cumberland Memorial Walk	2 km	4	Track on flat ground and well drained	Surface patches, upgrade viewpoints	3
Mt Donna Buang—10 Mile Turntable	1.2 km	4	Steep and rocky	Install additional markers & signs, drain & clear	3
Mt Donna Buang—Rainforest Gallery	3 km	1	Very steep & slippery	Drain, form track & boardwalks	1
Rainforest Gallery	0.5 km	1		Maintain boardwalk in accordance with engineer's specifications	1
Warburton—Mt Victoria	6 km	5	Very steep & slippery	Drain and form track	5
Mt Donna Buang—Mt Boobyalla—Acheron Gap	7 km	5		Drain and form track	4
Ben Cairn	800 m	4	Easy walk	Form track, protect historic features	3

Table 5 (cont.)

NAME	DISTANCE (ONE WAY)	CURRENT GRADE	REMARKS	ADDITIONAL WORK REQUIREMENTS	FUTURE GRADE
Morleys Track	8 km	4	Mostly easy, steep near Carters Gap	Form track and clear	3
Condons Track	6.5 km	4	Steep sections. Part on management road	Drain, clear and sign	4
Mt Juliet	4.5 km	4	Steep sections. Part on management road	Drain, clear and sign	4
Mt Riddell *	6 km	4	Part on management roads, moderate grade	Drain, clear and sign	4
Graceburn Weir *	1.2 km	3	On management road	Consider relocating walk away from the aqueduct	3
Mt St Leonard *	1 km	2	On management roads and fire break, variable grade		2
Mt St Leonard–Dom Dom Saddle *	18 km	3	On management roads and fire break, moderate grade		3
Dom Dom Saddle–Mt Donna Buang *	22 km	5	Partly on management roads, moderate grade	Form track	4
Big Peninsula Goldfields Walk	9 km	4	Moderate grade	Drain & form track, upgrade access & protect historic features	3
Lake Mountain Lookouts	3.5 km	4	Easy with rocky sections	Protect erodible soils with boardwalk, upgrade viewing points	3
Boundary Trail (Lake Mountain to Keppel Hut)	12 km	4	Easy in summer, snow covered in winter	Form track & drain	3
Badger Weir Circuit (Badger Weir Picnic Area)	2.5 km	3	Easy	Relocate off aqueduct	2
Mt St Leonard–Donnelly's Weir *	7 km	4	Moderately steep	Drain, clear and sign	4

* Walking tracks that include sections of management roads open to cyclists.

Note: Ski trails available for walking outside the snow season are shown in table 6.

KEY TO AUSTRALIAN STANDARDS CLASSIFICATION FOR TRACKS:

Grade 1 Large number of visitors with high level of interpretation facilities.

Grade 2 Opportunity for a large number of visitors to walk easily in a natural environment with a moderate level of interpretation and facilities.

Grade 3 Opportunity to walk in relatively undisturbed natural environments, requiring moderate levels of fitness and care. Low levels of interpretation and facilities.

Grade 4 Opportunity for visitors to explore and discover natural environments along distinct tracks with minimal if any facilities.

Grade 5 Opportunity for those with advanced outdoor knowledge and skills to find their own way along often-indistinct trails to more remote locations.

Grade 6 Opportunity for highly experienced walkers to explore remote and potentially hazardous natural areas without reliance on managed tracks.

5.6 Cross-country skiing, tobogganing and snowplay

Lake Mountain

Lake Mountain Resort is popular for cross-country skiing, tobogganing and snowplay. In recent years, about 80 000 visits have been made to the resort during the snow season, although numbers vary considerably with snow conditions. About 60 per cent of winter visits are for skiing.

Over the last decade, visitation at Lake Mountain within the park and the resort has grown rapidly.

Approximately 32 km of cross-country ski trails are located within the Ski Trail Zone and Summit Area of the park (table 6 and figure 6).

Snow-based activities in the Ski Trail Zone and Summit Area are managed by the Lake Mountain Alpine Resort Management Board in accordance with the Lake Mountain Heads of Agreement (section 2.5). The agreement enables co-ordinated management of the ski trails within the park and the alpine resort while protecting national park values.

The Heads of Agreement provides for several additional works to be considered for approval by the Minister, subject to adequate protection of environmental values (figure 6).

Measures for the continuing protection of Lake Mountain's significant sub-alpine bogs and heathlands are identified in the Draft Lake Mountain Management and Development Plan (ARC & DCE 1990) (section 4.3).

Mount Donna Buang

Mount Donna Buang is an attractive area for snowplay and tobogganing, particularly for young families from Melbourne's eastern suburbs. Winter visitor numbers vary widely with snow conditions. For the period June–September 2001, when snow conditions were poor, about 20 000 visits were made to this key visitor site.

The snow season is short (around six weeks duration) and unpredictable. Peak visitation levels occur on the first few weekends after the first snow falls, when the mountain is usually crowded to capacity. Weekend visitation declines as the season progresses. Weekday visitation is modest throughout the season.

New facilities at the Mount Donna Buang summit have improved visitor comfort and safety in the snow. The toboggan area has been completed and access improved. Three car parks of varying standard below the summit and one toilet block at the Ten Mile car park for the overflow during peak visitation periods. Snow clearing of the access road and car parks is undertaken by VicRoads.

A hot food van and toboggan hire service operate at Mount Donna Buang during the snow season.

Aim

- Provide opportunities for cross-country skiing, tobogganing and snowplay, which are consistent with the protection of park values.

Management strategies

- *Manage the Lake Mountain Ski Trail Zone and Summit Area in accordance with the Lake Mountain Heads of Agreement in partnership with the Lake Mountain Alpine Resort Management Board (table 6).*
- *Protect significant sub-alpine vegetation communities at Lake Mountain from inappropriate facility development (section 4.3).*
- *Monitor the impact of recreation use and developments on the natural values and any cultural values of Mount Donna Buang, and take appropriate actions as necessary.*
- *Consider proposals for development of the following trail and facility in accordance with the Lake Mountain Heads of Agreement, subject to approval by the Minister:*
 - *Long Heath Ski Trail extension;*
 - *a toilet facility at the Forward Patrol Base.*
- *Manage Mount Donna Buang during the snow season as a family-oriented site for snowplay and tobogganing.*

TABLE 6 SKI TRAILS IN THE SKI TRAIL ZONE AND SUMMIT AREA AT LAKE MOUNTAIN

NAME	DISTANCE (ONE WAY)	SKI TRAIL RATING	WALKING	CYCLING
			OUTSIDE SNOW SEASON	OUTSIDE SNOW SEASON
Royston Road / Trail	1.5 km	Intermediate	Yes	Yes
Echo Flat Trail	2.5 km	Beginner	Yes	Yes
Woollybutt Trail	1.5 km	Intermediate	Yes	Yes
Jubilee Trail	6 km	Advanced	Yes	Yes (Part)
Panorama Trail	2.5 km	Intermediate	Yes	Yes (Part)
Long Heath Trail	3 km	Advanced	Yes	No
The Hut Trail	1.5 km	Intermediate	Yes	Yes (Part)
Little Echo Loop	1.5 km	Beginner	—	—
Snow Gum Trail	1.5 km	Beginner	Yes	Yes
Muster Trail	1.8 km	Beginner	Yes	Yes
Home Trail	1 km	Beginner	Yes	No
Triangle Junction–Crossways	0.5 km	Beginner	Yes	No
Snowy Hill Trail	3 km	Intermediate	Yes	No

Notes: Tracks open to cyclists outside the snow season are also open to management vehicles.

Snowy Hill Trail is located mostly within the Lake Mountain Alpine Resort.

5.7 Horse riding

Horse riding in the park is limited to day use of the Bicentennial National Trail (figure 4), which skirts the perimeter of the DWSCA. This trail commences at Healesville and passes through the park on roads and tracks from Donnellys Weir Picnic Area to Mount St Leonard and along a section of the Monda Track before entering State forest. The Trail re-enters the park along sections of the Marysville–Woods Point Road and the Lady Talbot Drive (figures 4 and 6). There is a campsite for horse riders on the Monda Track in adjacent State forest.

Horse riding is not allowed within the DWSCA, except on the Bicentennial National Trail traversing the edge of the park.

In the past, most of the park has been unavailable to horse riding in order to protect water catchments and the sub-alpine environment at Lake Mountain. The steep

slopes and erodible soils of the park are susceptible to compaction and other impacts from horses. There is also the potential to spread weed species via horse droppings into the park, which is reasonably free of weeds.

There are many areas available for horse riding outside the park, including State forest.

Aim

- Provide opportunities for horse riding consistent with the protection of park values.

Management strategies

- Allow horse riding in the park only on the existing Bicentennial National Trail route.*
- Promote the use of weed-free feed for horses.*
- Monitor horse riding activities and undertake appropriate measures if park*

values are being adversely affected or if conflicts arise between users.

5.8 Cycling

Cycling is a minor but increasing use of the park. Some sections of road in the park, including the Ben Cairn section of the Donna Buang Road, present interesting opportunities for cyclists.

Cycling is restricted to public vehicular access roads and tracks, and certain tracks used by management vehicles that include some sections of walking tracks and, outside the snow season, certain ski trails.

Cycling is not permitted on most roads and tracks in the DWSCA in accordance with the Restricted Access Policy (see glossary).

Most walking tracks are not suitable for cycling as they are generally located on erodible soils, or are steep and overgrown.

Aim

- Provide opportunities for cycling consistent with the protection of park values.

Management strategies

- *Permit cycling on roads, tracks and ski trails in accordance with tables 3, 5 and 6.*
- *Do not permit cycling on existing walking tracks except as specified in table 5.*
- *Investigate possible use of the following for cycling:*
 - *the proposed Donnellys Picnic Area-Badger Weir Picnic Area walking track (section 5.5);*
 - *the proposed O'Shannassy aqueduct walking route (section 5.5).*
- *Monitor use of the park by cyclists, and undertake appropriate measures if park values are being adversely affected or if conflicts arise between users.*

5.9 Organised and competitive events

The park hosts a number of organised and competitive events, including ski racing, competitive runs, competitive and group cycling events, and occasional car rallies on public roads within the park.

Up to six organised ski races, staged by state and local sporting associations, are held at Lake Mountain each snow season. The racers use the general ski trail system and can conflict with other non-participating skiers if the trails are crowded.

Biathlon is a competitive Olympic sport combining cross-country skiing with rifle target-shooting. Biathletes currently practise, without rifles, at Lake Mountain, and it is proposed to establish an approved biathlon circuit within the alpine resort adjacent to the park.

Winter skiing or snowshoe events are appropriate provided they do not conflict unduly with other users.

Orienteering and rogaining only occurs, within the Maroondah Catchment Buffer, under permits including conditions agreed to by Melbourne Water and Parks Victoria. These activities are not permitted elsewhere in the DWSCA to protect water resources and other natural values and are not appropriate at Lake Mountain in summer because the sub-alpine heathlands are susceptible to damage. In areas within the Maroondah Catchment Buffer, the activities have potential to damage natural values but use of the trail network as part of an event based outside the park could be acceptable.

Aim

- Provide opportunities for organised and competitive events while minimising conflict with park conservation values and other visitors.

Management strategies

- *Permit organised and competitive events in the park on roads open to the public with appropriate conditions in accordance with Parks Victoria's operational guidelines.*
- *Encourage and authorise the staging of cross-country ski races at Lake Mountain, taking into account environmental impacts and impacts on other visitors.*
- *Encourage organisers of orienteering and rogaining events to base their events outside the park.*
- *Permit orienteering and rogaining activities only on tracks within areas of the*

Maroondah Catchment Buffer not included within the Badger Weir Recreation Development Zone, with conditions according to the Restricted Access Policy and Parks Victoria's operational policies.

5.10 Rock climbing and abseiling, and hang gliding

The granite rock face at Ben Cairn is a popular site for rock climbing and abseiling. The activity to date has had minimal impact on environmental and historical values at the locality.

A hang gliding ramp has been constructed on the Ben Cairn section of the Donna Buang Road, near Mount Donna Buang. Appropriate authorisation of the site needs to be arranged, and issues of tree regrowth management, public safety and structure maintenance need to be addressed.

Aim

- Provide opportunities for rock climbing and abseiling and hang gliding while minimising conflict with park conservation values and other visitors.

Management strategies

- *Allow rock climbing and abseiling to continue at Ben Cairn; monitor impacts and take appropriate action.*
- *Determine the level of commercial tour operations sustainable at Ben Cairn and issue permits as appropriate (section 5.14).*
- *Subject to resolution of public safety and environmental management issues, formalise occupancy and maintenance of the hang gliding ramp with the Victorian Hang Gliding and Paragliding Association.*

5.11 Dogs

Dogs have had little association with traditional use of the area now included in the park. There was a minor association from the use of some former State forest areas and with the Badger Weir Picnic Area and Donnellys Weir Picnic Areas.

Dogs pose a threat to water supply and other natural values, particularly in water supply catchments, and they are a source of conflict

among visitors at visitor sites such as Lake Mountain and Mount Donna Buang.

There are many alternative areas available for uses associated with dogs outside the park, including Maroondah and Upper Yarra Reservoir Parks, municipal reserves and State forest.

Dogs have not been permitted in the park since its proclamation in 1995.

Aim

- Enhance visitors' safety and experience of the park, and protect park values, by prohibiting dogs.

Management strategy

- *Do not permit dogs in the park, except in vehicles in transit through the park on public roads.*

5.12 Fishing

Fishing for introduced trout occurs in the Yarra River downstream from the Upper Yarra Dam, and in the upper Taggerty River. Current levels of use do not appear to be affecting park values.

Fishing is not permitted in streams and rivers in the DWSCA.

Aim

- Provide opportunities for fishing while minimising conflict with park conservation values and other visitors.

Management strategy

- *Monitor levels of fishing and impacts on park values.*

5.13 Commercial services

A number of commercial tourism services and guided leisure activities currently operate in the park, including:

- guided spotlight walks at Badger Weir Picnic Area and in the O'Shannassy Catchment Buffer;
- mountain bike training courses;
- toboggan hire at Mount Donna Buang;
- abseiling at Ben Cairn;

- a cross-country ski school operation within the ski trail zone at Lake Mountain.

The park's natural features and proximity to Melbourne and the tourist destinations in the Yarra Valley and about Warburton make the park attractive for commercial tour operations.

The historic O'Shannassy Lodge within the park is leased as a conference venue, group holiday accommodation and rehabilitation centre (section 7.1).

Aim

- Provide high-quality visitor services by the private sector that are consistent with park management objectives and protection of park values.

Management strategies

- *Permit and manage appropriate commercial operators in accordance with Government policy, the National Parks Act and Parks Victoria's operational policies.*
- *Liaise regularly with commercial operators to ensure that specified service standards and permit conditions are being met, information and interpretation provided is appropriate and park values are being protected.*
- *Encourage commercial operators to liaise with the Wurundjeri and the Taungurung in developing and implementing services relating to Aboriginal culture.*

5.14 Public safety

A visit to the park involves some exposure to the potential risks associated with outdoor activities. Rapid changes in weather, steep terrain and natural hazards present inherent risks to visitors.

Many of the park's facilities have been upgraded in accordance with a public safety risk assessment.

Most recent accidents in the park have resulted from snow-based activities at Lake Mountain and Mount Donna Bung.

Abandoned mineshafts in former gold-mining areas of the park may present a potential hazard to visitors.

Visitor safety needs to be considered when new or upgraded facilities are designed, particularly where visitors may not be very familiar with the risks associated with park environments.

Aims

- Inform visitors of potential safety hazards and risks.
- Maintain safe visitor facilities.
- Assist and co-operate with emergency authorities in emergency situations.

Management strategies

- *Implement the Emergency Response Plan for the park, in co-operation with other relevant authorities.*
- *Use signs and park information to raise park users' awareness of safety issues.*
- *Ensure that staff are adequately trained in emergency procedures and to assist in search and rescue operations.*
- *Maintain safety standards of visitor facilities in accordance with the risk assessment of public facilities.*
- *Assess the risk to visitors from old mineshafts, and undertake appropriate measures to ensure visitor safety.*

6 STRATEGIES FOR COMMUNITY AWARENESS AND INVOLVEMENT

6.1 Community partnerships

Volunteer groups currently make an important contribution to on-ground park management projects. Other groups, such as local historical societies, naturalist groups and individuals, provide valuable resource information on the park.

The Friends of Badger Weir have expanded their focus and are now called the Friends of Yarra Ranges.

Aim

- Encourage and assist volunteer groups to undertake appropriate projects and activities in the park.

Management strategies

- *Maintain existing volunteer activities in the park and encourage further public participation in volunteer groups (section 4.3).*
- *Support the Friends of Yarra Ranges, and encourage the formation of further Friends groups for the park.*
- *Develop a long-term volunteer strategy that incorporates the skills and interests of volunteer groups in park management activities (e.g. Volunteer Guides program).*
- *Encourage and support friends and volunteers to further develop an understanding of the park's values, including significance to Aboriginal people.*

6.2 Community awareness and park neighbours

Before the creation of the park, the areas now included in it were managed by several

different agencies with different objectives. The park is only now beginning to achieve a strong local and regional identity. Uniform signs, facilities and promotions help establish an awareness of the park in the community.

Most of the park is adjacent to State forest under the management of NRE.

The park abuts private land in the Healesville to Warburton area, where major uses include grazing, rural residential housing and a number of tourist-related uses such as accommodation and school camps. Principal issues with neighbours include weed invasion, fire protection measures and illegal access.

Aims

- Increase awareness and knowledge of the park within the local community.
- Maintain good relations with park neighbours.

Management strategies

- *Maintain measures to increase park visitors' and park neighbours' awareness of the park and management arrangements applying to the park.*
- *Improve sign and facility design, and undertake promotion to raise awareness of the park and its contribution to the local and regional community.*
- *Liaise with local communities, including local Aboriginal communities and local landowners, in relation to aspects of planning and managing the park relevant to their interests.*
- *Apply, and encourage the application of, the Good Neighbour Policy to management issues on or near the boundary of the park.*

7 STRATEGIES FOR OTHER ISSUES

7.1 Authorised uses

Certain uses and occupations in the DWSCA are permitted to continue in the park. In accordance with Section 32K of the National Parks Act and the related Catchment Management Agreement (section 2.5), Melbourne Water continues to manage and control water supply structures and certain installations, including dam walls, reservoirs, weirs, tunnels, several fire towers, buildings, fences, gates, roads and tracks in the DWSCA.

Section 32L of the National Parks Act provides for once-only harvesting of introduced softwood plantations in the Maroondah Catchment near the Maroondah Dam by Melbourne Water. Planning and completion of the operation will include measures to protect park and water supply values, including soil and water quality. The areas will be rehabilitated with indigenous vegetation.

Buildings, including communication facilities, in the park include:

- a tower at Mt St Leonard and operated by Telstra carrying the communication facilities of a number of users and including a fire lookout cabin (section 2.5); a lookout; and a compound containing several buildings;
- two towers outside the DWSCA at Mount Victoria above Warburton;
- a small tower on Mount Gregory in the Upper Yarra Catchment used by emergency services authorities;
- a small building at the summit of Lake Mountain, maintained by the Lake Mountain Alpine Resort Management Board to provide communications across the ski field.

Other carriers and authorities co-locate communication facilities on the existing towers, and requests for this use are expected to increase.

VicRoads manages the Black Spur section of the Maroondah Highway and a portion of the Marysville–Woods Point Road under

agreements originally entered into with Melbourne Water (section 2.5).

The historic O'Shannassy Lodge within the park, which housed workers during construction of the O'Shannassy Dam, is leased as a conference venue, group holiday accommodation and rehabilitation centre until 11 August 2006. The buildings are old and their structural viability needs to be assessed.

Camp Duncan, on the north side of the Yarra River near McMahons Creek, was previously leased as a school camp but has not been used for several years. Buildings on the site, which had fallen into disrepair, have been demolished. Several alternative facilities catering for school camps are available nearby (e.g. Camp Reefton, Upper Yarra Reservoir Park and privately run lodges at East Warburton).

At Cambarville, the schoolhouse is still standing, although storms have collapsed the roof, and two houses remain under non-transferable licences. Parks Victoria maintains a small depot for remote park works and storage.

The Melbourne Walking Club has until recently used and maintained the Walter Briggs Hut at Mount Donna Buang under a lease that required reasonable access be given to other community groups. The lease concluded on 28th February 2002. Parks Victoria is to review the hut's cultural significance to determine the hut's appropriateness, the level of use of the hut and, if it is to be retained in the longer term, arrangements for its use and maintenance.

Aims

- Minimise the impact of public utilities and occupations on the park.
- Ensure appropriate use and licensing of occupations and authorised uses.

Management strategies

- *Ensure that all existing public utilities in the park are authorised by a Section 27 consent under the National Parks Act, unless covered by an alternative licence or agreement under the National Parks Act*

or National Parks (Yarra Ranges and other Amendments) Act.

- *Encourage applicants seeking to establish new public utility structures, including communications towers, to seek sites outside the park or, if this is not possible, to co-locate at existing sites.*
- *Permit only the Lake Mountain Alpine Resort Management Board to maintain and use the building and communications equipment at Lake Mountain summit. Encourage relocation of the facilities to the main visitor area should this become feasible.*
- *Liaise with authorities to minimise the impact of structures and uses on park values.*
- *Liaise with Melbourne Water in relation to once-only harvesting and rehabilitation of softwood plantations in accordance with the Catchment Management Agreement, and a plan to be prepared under that Agreement, to ensure protection of park values.*
- *Liaise with the leaseholder to coordinate management of the O'Shannassy Lodge and the surrounding area.*
- *Assess the cultural significance and structural viability of the O'Shannassy Lodge during the term of the current lease.*
- *Do not consider leasing proposals for the O'Shannassy Lodge which could prejudice catchment water quality or fire safety or conflict with Shire Planning Scheme requirements.*
- *Investigate the historic value of the schoolhouse and two houses at Camberville. On cessation of the non-transferable licences on both houses, retain or remove structures as appropriate to retaining the cultural significance of the area.*
- *Maintain Parks Victoria's depot site at Camberville.*
- *Undertake an assessment of the cultural significance and the structural viability of the Walter Briggs Hut. Review the leasing arrangement, in accordance with ministerial directives.*

7.2 Boundaries and adjacent uses

The Yarra Valley/Marysville region is an established and growing tourist area with major nature-based attractions such as the Healesville Sanctuary, Maroondah and Upper Yarra Reservoir Parks, the Warburton Information Centre and the Lake Mountain Alpine Resort. The region's natural and built attractions, together with the park, offer a broad range of recreation and tourist opportunities.

Timber harvesting of the regrowth forests in State forest abutting most of the park's boundaries (figure 2) will be an ongoing operation with possible landscape, access and recreational use implications for the park (NRE 1997a). Some areas of the State forest, particularly around Warburton, Marysville and Toolangi, have a high recreational use. The Armstrong Creek, McMahons Creek, Starvation Creek and Cement Creek areas of State forest are used for water supply by Melbourne Water and are subject to restrictions on public access and other activities (figure 2).

Private land adjacent to the park in the Healesville to Warburton crescent and in the Narbethong and Toolangi areas is used predominantly for grazing and small-scale residential development. Tourist-related developments are likely to be proposed for adjacent private land as the tourist potential of the area is realised. The Shire of Yarra Ranges and Shire of Murrundindi planning schemes recognise the area's natural values and seek to preserve them from inappropriate development.

Additional areas suitable for inclusion in the park include several small inliers in the DWSCA and certain other areas owned by Melbourne Water which were recommended by the LCC (1994) as part of the park.

Aim

- Minimise the adverse impacts of surrounding land uses on park values.

Management strategies

- *Liaise with the Forests Service NRE regarding issues arising in relation to State forest that may impact on park values.*

- *Liaise with the Lake Mountain Alpine Resort Board of Management over the co-ordinated management of the alpine resort and the park at Lake Mountain.*
- *Investigate opportunities to co-ordinate activities and provide complementary services with nearby recreation and tourist providers.*
- *Liaise with the Shires of Yarra Ranges and Murrundindi to protect the park against inappropriate, adjacent land uses, particularly in relation to proposals for developments and proposals that may impact on native vegetation and other environmental values.*
- *Liaise with landowners and local authorities to protect both private property and public land from hazards such as fire and pest plants and animals.*
- *Liaise with local landholders and authorities to address issues affecting the park or adjoining land.*
- *Support acquisition by NRE of appropriate areas for incorporation into the park.*

8 IMPLEMENTATION

This plan provides the strategic framework that governs the development and delivery of all management programs and actions affecting the Yarra Ranges National Park.

The management programs for the park are prepared annually, in accordance with Parks Victoria's Corporate Plan and as a part of statewide, prioritised programs.

The performance of the management plan's implementation will be measured by monitoring and recording the number of strategies implemented to June each year.

Amendments may be made to this management plan from time to time, consistent with an authorised approval process. A partial or complete review of the management plan will be considered in the period from five to ten years after its publication.

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- NRE 1997c *Draft Yarra Ranges National Park Fire Protection Plan*, Department of Natural Resources and Environment, Melbourne.
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- NRE (database) 2000b *Flora Information System*, Department of Natural Resources and Environment, Melbourne.
- VTCC 2001 *Draft Victorian Trails Strategy 2001–2004*, Victorian Trails Co-ordinating Committee, Parks Victoria, Melbourne.
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GLOSSARY

Designated Water Supply Catchment Area (abbreviated to DWSCA)	An area within the Yarra Ranges National Park designated in the National Parks Act and comprising the following sub-areas, as shown on figure 3: Maroondah Catchment, O'Shannassy Catchment, Upper Yarra Catchment, Cement Creek Catchment, Armstrong Creek Catchment, Maroondah Catchment Buffer and O'Shannassy Catchment Buffer. A Catchment Management Agreement (appendix 1) allows Melbourne Water to manage water supply functions within these areas and to determine the necessary restrictions on human access and activity.
Catchment (e.g. Maroondah Catchment)	All that land which drains into a water supply reservoir or diversion weir and which forms a component of the DWSCA.
Catchment Buffer (Maroondah Catchment Buffer, O'Shannassy Catchment Buffer)	Land adjoining a catchment but not draining into the water supply reservoir or diversion weir, and managed as a protection zone for the catchment, reservoir or weir. It forms a component of the DWSCA.
Closed Catchment Policy	This term is used to refer to the management policy, as endorsed by successive State Governments, for the DWSCA. The policy prohibits human habitation, and restricts human access and activity, in the DWSCA, in order to reduce the potential for contamination of water supplies.
Restricted Access Policy	This policy is a part of the Closed Catchment Policy and is determined by Melbourne Water for the DWSCA in accordance with Section 32I of the National Parks Act. It provides for: —no additional public access (including vehicle, walking or horse riding) into Maroondah, O'Shannassy, Upper Yarra, Armstrong Creek and Cement Creek catchments beyond that currently available; —access within the Maroondah and O'Shannassy Catchment Buffers on a limited number of walking tracks in locations and under conditions approved by Melbourne Water, and vehicle and walking access elsewhere in the Maroondah and O'Shannassy Catchment Buffers under a permit system and conditions as determined by Melbourne Water.
Lake Mountain Ski Trail Zone and Summit Area	An area within the park at Lake Mountain which includes the cross-country ski trail system (table 6 and figure 6). Recreation in the Ski Trail Zone and Summit Area is managed during winter by the Lake Mountain Alpine Resort Management Board in accordance with the Lake Mountain Heads of Agreement (section 2.5).
Ecological Vegetation Classes (EVCs)	The components of a vegetation classification system. They are groupings of vegetation communities based on floristic, structural and ecological features (appendix 2).
Central Highlands	A large forested region to the north-east of Melbourne with a high conservation profile. The Central Highlands takes in the foothills and mountains of the Great Dividing Range, from Mount Disappointment in the west, to Mount Baw Baw in the east, from Wandong to Walhalla, from Gembrook to Jamieson. The Yarra Ranges National Park lies within the Central Highlands.

APPENDICES

APPENDIX I GENERAL RESPONSIBILITIES FOR MANAGEMENT ACTIVITIES IN THE DESIGNATED WATER SUPPLY CATCHMENT AREA

In accordance with the Catchment Management Agreement for the DWSKA of the Yarra Ranges National Park, each party is generally responsible for the management activities as allocated in the following table. Regular liaison occurs between the parties on most issues.

MELBOURNE WATER ACTIVITIES

- 1 Establishing policies for human access.
- 2 Controlling and managing security for closed catchment areas (fences, gates, and locks).
- 3 Maintaining existing roads.
- 4 Controlling, managing, operating and maintaining water supply structures and installations.
- 5 Constructing any new water supply structures and installations or augmenting any existing water supply structures and installations.
- 6 Continuing existing hydrological research.
- 7 Executing, commissioning or approving other research on water resource values.
- 8 Harvesting non-native timber.

PARKS VICTORIA ACTIVITIES

- 1 Conserving and managing native flora and fauna.
- 2 Controlling and managing visitors.
- 3 Controlling and managing security for National Park facilities.
- 4 Controlling and managing noxious and environmental weeds, except in or on reservoirs.
- 5 Controlling and managing pest animals.
- 6 Controlling and managing cultural and heritage values.
- 7 Granting and managing leases, licences and other agreements.
- 8 Constructing and maintaining walking tracks.
- 9 Carrying out catchment rehabilitation.
- 10 Executing, commissioning or approving research on national park values.

JOINT ACTIVITIES

- 1 Preparing public information, brochures and signs.
- 2 Patrolling catchment areas.
- 3 Fire protection and suppression. Fire protection is the statutory responsibility of NRE. Melbourne Water assists with fire protection works, detection and first attack.

APPENDIX 2 ECOLOGICAL VEGETATION CLASSES

Some significant Ecological Vegetation Classes found in the Yarra Ranges National Park are described below. For a comprehensive description of all EVCs, see LCC (1994) and NRE (1996b).

Cool Temperate Rainforest

Cool Temperate Rainforest is dominated by Myrtle Beech and Southern Sassafras, which typically form a more or less continuous, dense canopy up to 40 metres high. Scattered emergent eucalypts may be present and Blackwoods may form part of the closed rainforest canopy. The understorey may include abundant ferns and epiphytes such as Hard Water-fern and filmy ferns. Moist conditions and an absence of fire are key determinants of the distribution of Cool Temperate Rainforest, which occurs in damp, protected gullies and on wetter mountain slopes.

Wet Sclerophyll Forest (Wet Forest)

This Ecological Vegetation Class (EVC) is dominated by Mountain Ash which forms tall, uniform stands of trees from 55 to 75 metres in height. An understorey of trees includes Silver Wattle and Blackwood, with a third storey comprising broad-leaved shrubs such as Hazel Pomaderris, Blanket-leaf and Banyalla. Ground-dwelling species include Shade Nettle, Rough Tree-fern and Mountain Clematis. Wet Sclerophyll Forest occurs on protected, higher-elevation mountain slopes with rich well-drained soils. Wildfires are very infrequent.

Montane Wet Forest

This EVC occupies the most protected, usually south-facing, slopes and gullies with deep, fertile, well-drained soils. Pure or mixed stands of Alpine Ash and Shining Gum grow up to 60 metres in height. Common understorey species include Myrtle Beech, Forest Wattle, Soft Tree-fern and Mother Shield-fern.

Montane Damp Forest

Found on protected mountain slopes, this EVC is dominated by pure stands of Alpine Ash at higher altitudes, elsewhere by Mountain Grey Gum, Messmate, Narrow-leaf Peppermint and occasionally Manna Gum. Characteristic understorey species include Rough Coprosma, Elderberry Panax and Sword Tussock-grass.

Riparian Forest

This tall forest tends to occur on the beds and alluvial terraces of swift-flowing streams. It is normally dominated by Manna Gum, with Silver Wattle, Blackwood, Hazel Pomaderris, Victorian Christmas-bush and Prickly Coprosma in the shrub layer. Some ground-dwelling species are Tall Sedge and Fishbone Water-fern.

Wet Sub-alpine Heathland

The occurrence of this vegetation community in the park is restricted to the high-elevation, poorly drained sphagnum bogs and swamps at Lake Mountain. The dominant, low (around 1 metre), dense shrub layer is composed of species such as Candle Richea, Swamp Heath and Mountain Daisy-bush. Associated with the shrubs can be found Alpine Astelia, Spreading Rope-rush and Matted Nertera.

Sub-alpine Woodland

This community forms a woodland or forest which occurs on slopes above 1200 metres, on relatively free-draining soils. Usually dominated by Snow Gum, the understorey may variously consist of grasses and herbs such as Grass Trigger-plant, Mat Raspwort and Mountain Woodruff, or a dense layer of woody shrubs such as Mueller's Bush-pea, Alpine Pepper and Lilac Berry.

APPENDIX 3 THREATENED FLORA

SCIENTIFIC NAME	COMMON NAME	THREATENED STATUS
<i>Brachyscome obovata</i> *	Baw Baw Daisy	r
<i>Carex alsphila</i> *	Forest Sedge	r
<i>Coprosma moorei</i> *	Turquoise Coprosma	r
<i>Cyathea cunninghamii</i> *	Slender Tree-fern	R r+
<i>Derwentia nivea</i> *	Snow Speedwell	R r
<i>Epilobium pallidiflorum</i> *	Showy Willow-herb	v
<i>Calyptochaeta brownii</i> *	Moss	r
<i>Geocalyx caledonicus</i> *	Liverwort	k
<i>Isolepis wakefieldiana</i> *	Tufted Club-sedge	r
<i>Oxalis magellanica</i> *	Snowdrop Wood-sorrel	r
<i>Fissidens dealbatus</i> **	Shining Fissidens	r
<i>Fissidens strictus</i> **•	Moss	r
<i>Hampeella pallens</i> **	Moss	v
<i>Pedinophyllum munoicum</i> **	Southern Pedinophyllum	v
<i>Persoonia arborea</i> *	Tree Geebung	r
<i>Phebalium wilsonii</i> *	Shiny Phebalium	R v+
<i>Thelymitra circumsepta</i> *	Naked Sun-orchid	v
<i>Pterostylis cucullata</i> *	Leafy Greenhood	V v+
<i>Weymouthia cochlearifolia</i> *	Moss	k
<i>Wittsteinia vacciniceae</i> *	Baw Baw Berry	r

Source:

* NRE (database) 2000b.

** D. Meagher, School of Botany. University of Melbourne (pers. comm. 2001)

Threatened Status:

R Species which are rare in Australia but which are not currently considered endangered or vulnerable.

V Vulnerable species not presently endangered but at risk over a longer period.

r Rare in Victoria, but not considered otherwise threatened.

k Poorly known species in Victoria, but suspected to be in one of the categories presumed extinct, endangered, vulnerable, or rare.

v Vulnerable in Victoria, rare, not presently endangered but likely to become so soon as a result of continued depletion.

+ Listed under the Flora and Fauna Guarantee Act.

APPENDIX 4 SITES OF BOTANICAL SIGNIFICANCE

SITE	SIGNIFICANCE	FEATURES
Maroondah Catchment	National	Good quality mature and medium-age Wet Sclerophyll Forest, Cool Temperate Rainforest and Montane Wet Forest. Threatened Species: Slender Tree-fern, Tree Geebung.
O'Shannassy Catchment	National	Large area of ecologically mature Wet Sclerophyll Forest and Cool Temperate Rainforest. Threatened Species: Shiny Phebalium.
Donna Buang/ Myrtle Gully/Ben Cairn	National	Two significant vegetation communities: Rocky Outcrop Scrub at Ben Cairn; mature Cool Temperate Rainforest at Myrtle Gully. Good-quality examples of Montane Wet Forest, Montane Damp Forest, Wet Sclerophyll Forest. Threatened Species: Tree Geebung.
Upper Acheron River Catchment	National	Extensive, relatively undisturbed stands of mature Cool Temperate Rainforest, mature Wet Sclerophyll Forest and Montane Wet Forest.
Cement Creek Catchment	National	Ecologically mature and relatively undisturbed Cool Temperate Rainforest, Wet Sclerophyll Forest and Montane Wet Forest. Threatened Species: Tree Geebung.
Armstrong Creek/ (former) Cumberland Creek Scenic Reserve	State	Mature Wet Sclerophyll Forest including veteran Mountain Ash individuals, Cool Temperate Rainforest, Montane Wet Forest. Site provides a link between the O'Shannassy and Upper Yarra water catchments.
Upper Yarra Catchment	State	Considerable floristic diversity, with representation of at least 7 Ecological Vegetation Classes.
Taggerty River headwaters	State	Botanically significant stands of Cool Temperate Rainforest. Threatened Species: Snowdrop Wood-sorrel and Baw Baw Berry.
Lake Mountain	State	Areas of Damp and Wet Sub-alpine Heathland, and represents the western limit of sub-alpine vegetation in mainland Australia. Threatened Species: Baw Baw Daisy.
Upper Yarra River– Warburton to McMahons Ck	Regional	The western limit of the Mountain Plum-pine. Intact Riparian Forest linked to extensive tracts of relatively undisturbed Wet Sclerophyll Forest, Damp Sclerophyll Forest, Foothill Forest and Heathy Dry Forest.
O'Shannassy River– Yarra River confluence	Regional/State	Site includes a depleted variant of Swampy Riparian Forest dominated by <i>Eucalyptus ovata</i> , with sedges and sphagnum moss abundant in understorey.

Source: Moorrees & Molnar (1992)

APPENDIX 5 THREATENED FAUNA

SCIENTIFIC NAME	COMMON NAME	THREATENED STATUS
Mammals		
<i>Canis lupus dingo</i>	Dingo	DD
<i>Dasyurus maculatus</i>	Spot-tailed Quoll	End+
<i>Gymnobelideus leadbeateri</i>	Leadbeater's Possum	End+
<i>Mastacomys fuscus</i>	Broad-toothed Rat	LR
<i>Miniopterus schreibersii</i>	Common Bent-wing Bat	Vul+
<i>Myotis adversus</i>	Large-footed Myotis	LR
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	Vul+
<i>Pseudomys fumeus</i>	Smoky Mouse	End+
Birds		
<i>Ninox connivens</i>	Barking Owl	End+*
<i>Ninox strenua</i>	Powerful Owl	End+
<i>Nycticorax caledonicus</i>	Nankeen Night Heron	Vul
<i>Phalacrocorax varius</i>	Pied Cormorant	LR
<i>Tyto tenebricosa</i>	Sooty Owl	Vul+
Amphibians		
<i>Litoria verreauxii alpina</i>	Alpine Tree Frog	CEn
Fish		
<i>Gadopsis marmoratus</i>	River Blackfish	DD
<i>Galaxias olidus</i>	Mountain Galaxias	DD
<i>Galaxias fuscus</i>	Barred Galaxias	CE+
Insects		
<i>Canthocamptus dedeckkeri</i>	Harpactacoid Copepod	Ins
<i>Canthocamptus mammillifurca</i>	Harpactacoid Copepod	Ins
<i>Riekoperla darlingtoni</i>	Mt Donna Buang Stonefly	Vul+
<i>Thaumatoperla robusta</i>	Stonefly	R/R

Sources: NRE (database) 2000a

Threatened Status:

CEn Critically endangered

DD Data deficient

End Endangered

Ins Insufficiently known, suspected of being rare or threatened in Victoria

LR Lower risk - near threatened

R/R Restricted in Victoria

Vul Vulnerable

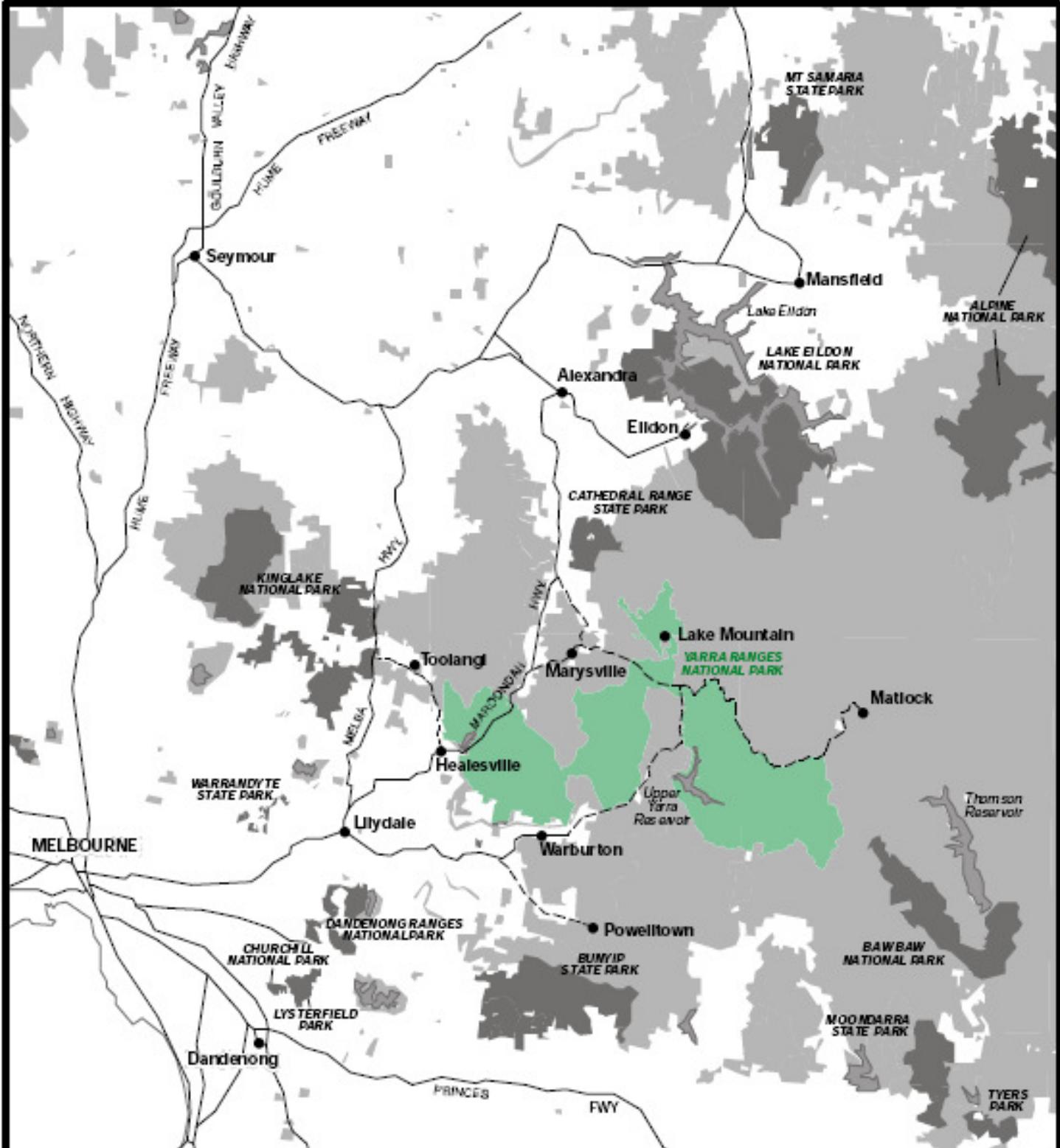
+ Listed under the Flora and Fauna Guarantee Act

APPENDIX 6 MAJOR PEST PLANTS AND ENVIRONMENTAL WEEDS

SCIENTIFIC NAME	COMMON NAME
<i>Acacia decurrens</i>	Early Black Wattle
<i>Acacia elata</i>	Cedar Wattle
<i>Acacia longifolia</i>	Sallow Wattle
<i>Acacia paradoxa</i>	Hedge Wattle
<i>Allium triquetrum</i>	Angled Onion
<i>Arctotheca calendula</i>	Cape Weed
<i>Asparagus asparagoides</i>	Smilax
<i>Asparagus scandens</i>	Asparagus Fern
<i>Asphodelus fistulosus</i>	Onion Weed
<i>Briza maxima</i>	Quaking Grass
<i>Carduus pycnocephalus</i>	Slender Thistle
<i>Cassinia arcuata</i>	Chinese Scrub
<i>Cestrum elegans</i>	Cestrum
<i>Chondrilla juncea</i>	Skeleton Weed
<i>Chrysanthemoides monilifera</i>	Boneseed
<i>Cirsium arvense</i>	Californian Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conium maculatum</i>	Hemlock
<i>Convolvulus arvensis</i>	Bindweed
<i>Coprosma robusta</i>	Karamu
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cotoneaster</i> sp.	Cotoneaster
<i>Crataegus monogyna</i>	Hawthorn
<i>Cyperus rotundus</i>	Nut Grass
<i>Cytisus palmensis</i>	Tree Lucerne
<i>Cytisus scoparius</i>	English Broom
<i>Delairea odorata</i>	Cape Ivy
<i>Erica lusitanica</i>	Spanish Heath
<i>Foeniculum vulgare</i>	Fennel
<i>Genista linifolia</i>	Flax-leaf Broom
<i>Genista monspessulana</i>	Cape Broom
<i>Hakea salicifolia</i>	Willow Hakea

Appendix 6 (cont.)

SCIENTIFIC NAME	COMMON NAME
<i>Hedera helix</i>	English Ivy
<i>Heliotropium europaeum</i>	Common Heliotrope
<i>Hypericum androsaemum</i>	Tutsan
<i>Ilex aquifolium</i>	Holly
<i>Inula graveolens</i>	Stinkwort
<i>Juncus acutus</i>	Spiny Rush
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Onopordum acanthium</i>	Scotch Thistle
<i>Oxalis pes-caprae</i>	Sourso
<i>Passiflora mollissima</i>	Banana Passionfruit
<i>Pinus radiata</i>	Monterey Pine
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Prunus laurocerasus</i>	Cherry Laurel
<i>Pseudoscleropodium purum</i>	Moss
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Reseda luteola</i>	Wild Mignonette
<i>Rubus fruticosus</i> spp. agg.	Blackberry
<i>Salix babylonica</i>	Weeping Willow
<i>Senecio jacobaea</i>	Ragwort
<i>Silybum marianum</i>	Variegated Thistle
<i>Solanum sodomaeum</i>	Apple of Sodom
<i>Tradescantia fluminensis</i>	Wandering Creeper
<i>Ulex europaeus</i>	Gorse
<i>Vinca major</i>	Blue Periwinkle
<i>Watsonia meriana</i> var. <i>bulbillifera</i>	Wild Watsonia



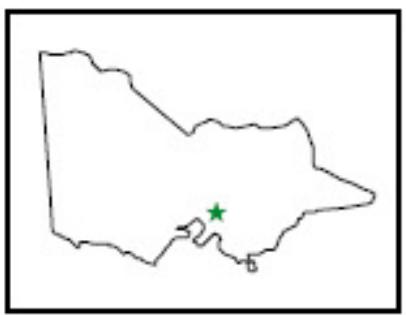
YARRA RANGES NATIONAL PARK

FIGURE 1 REGIONAL LOCALITY PLAN



0 20
G/6549.1 Kilometres

Highway	<input type="checkbox"/>
Other road	<input checked="" type="checkbox"/>
Parks	<input checked="" type="checkbox"/>
Other Public Land	<input checked="" type="checkbox"/>



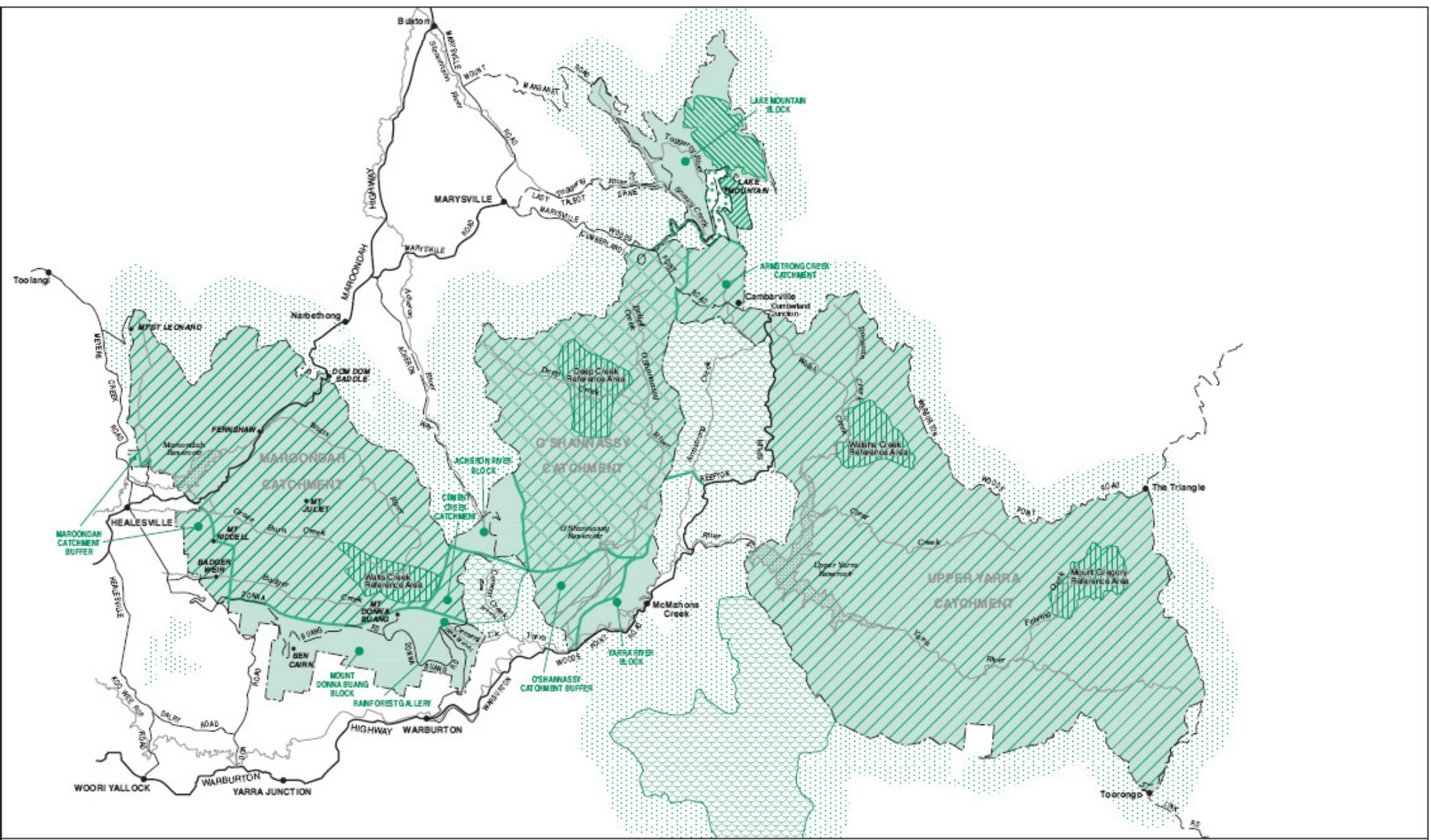
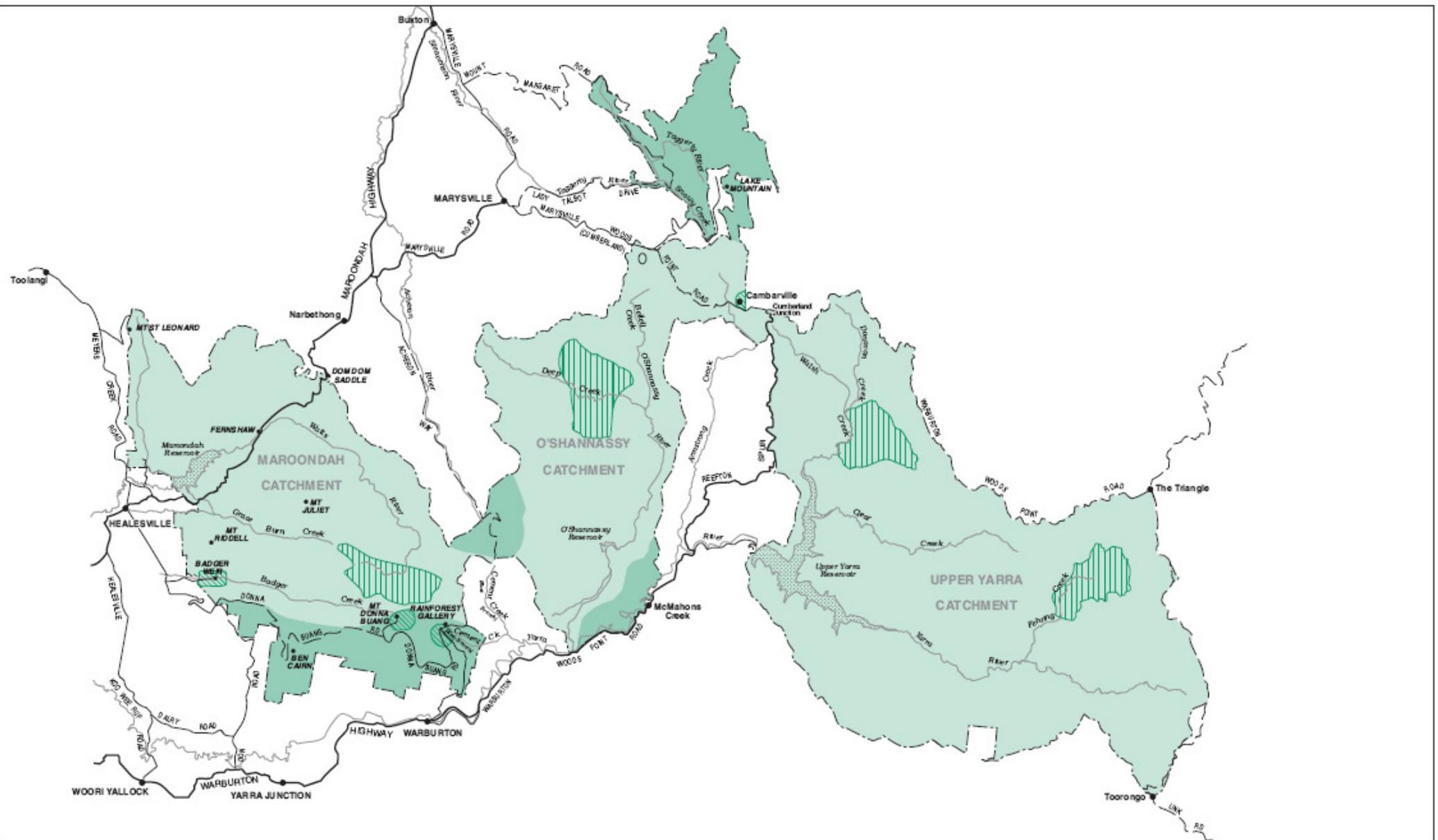


FIGURE 2
YARRA RANGES
NATIONAL PARK
PARK AND ADJACENT LAND TENURE

- Major sealed road
- Minor sealed road
- - Unsealed road
- - Park boundary
- Catchment boundary
- Yarra Ranges National Park
- Designated Water Supply Catchment Area
- Natural Catchment Area
- Reference Areas
- Ski Trail Zone
- Summit Area
- State Forest
- State Forest used for water supply (restricted access)
- Private Land
- Alpine Resort



Zones

- | | |
|-------------------|-------------------------------|
| Major sealed road | Reference Area |
| Minor sealed road | Conservation and Water Supply |
| Unsealed road | Conservation and Recreation |
| Park boundary | Recreation Development |
- Catchment boundary

FIGURE 3
YARRA RANGES
NATIONAL PARK
PARK ZONING



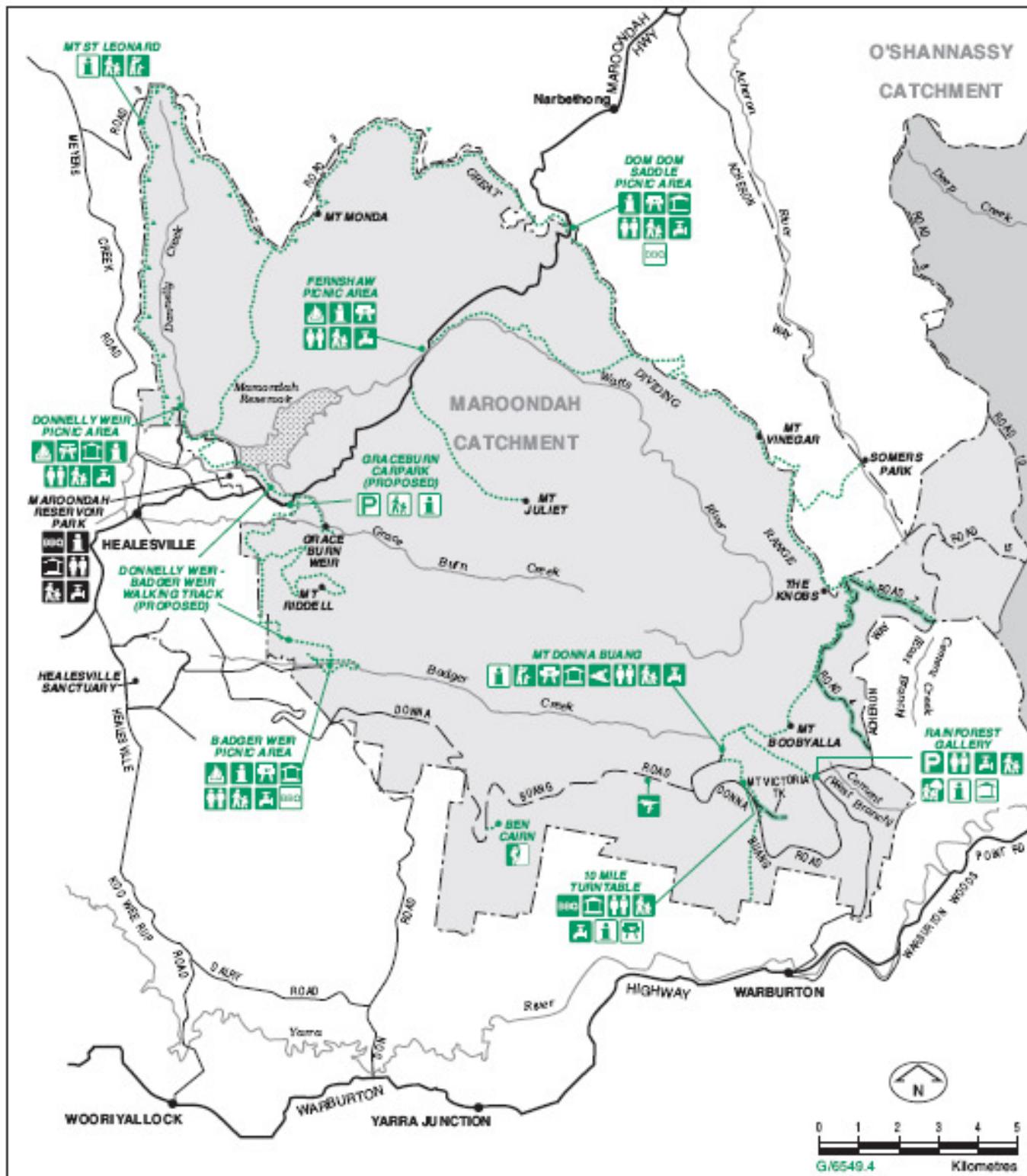


FIGURE 4
YARRA RANGES NATIONAL PARK
VISITOR FACILITIES & ACCESS - MAROONDAH UNIT

EXISTING RECREATION SITES AND FACILITIES				PROPOSED RECREATION SITES AND FACILITIES			
Major sealed road	Absailing/rock climbing	Picnic table	BBQ - electric/gas	Shelter			
Minor sealed road	BBQ - electric/gas	Shelter	Car park				
Unsealed road	Car park	Tree canopy walk	Park information				
Vehicular track	Fire place	Tobogganing	Picnic table				
Park boundary	Hang gliding	Toilet	Note: Black recreation sites and facilities are outside the Yarra Ranges National Park.				
Management Vehicle Only	Lookout	Walking track					
Walking track	Park information	Water supply					
Bicentennial National Trail							

Note: Black recreation sites and facilities are outside the Yuma Range National Park.

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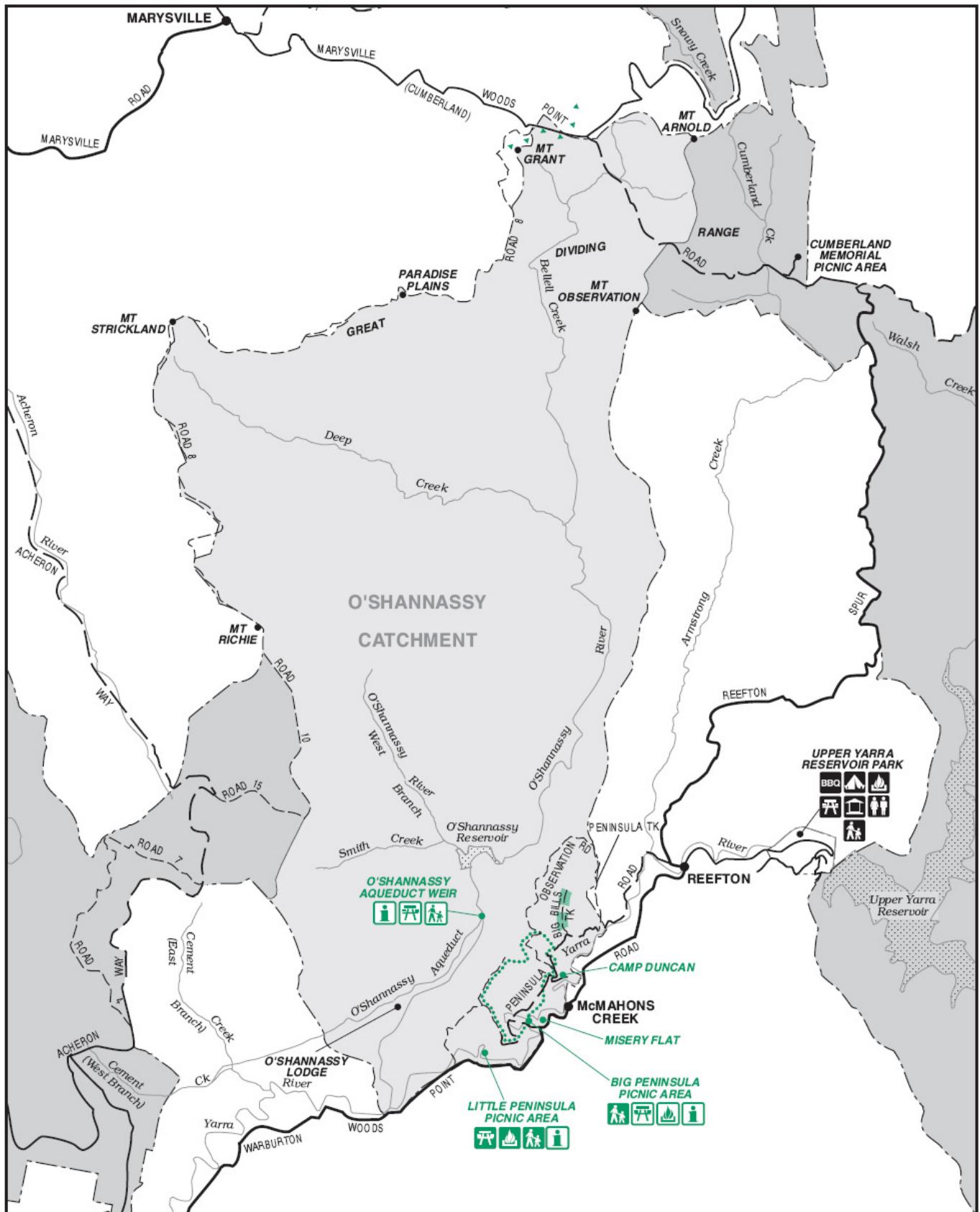


FIGURE 5
YARRA RANGES NATIONAL PARK
VISITOR FACILITIES & ACCESS - O'SHANNASSY UNIT



0 1 2 3 4 5
G/6549.5 Kilometres

Parks
VICTORIA

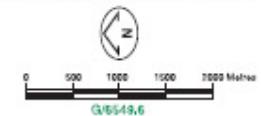
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Land Information Group, 2001.
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FIGURE 6 RA RANGES IONAL PARK

YARRA RANGES NATIONAL PARK

VISITOR FACILITIES & ACCESS - LAKE MOUNTAIN UNIT

VISITOR FACILITIES & ACCESS LAKE MOUNTAIN UNIT



- Major sealed road
 - Minor sealed road
 - Unsealed road
 - Vehicular track
 - Park boundary
 -  Proposed closure
 -  Walking track
 -  National horse trail
 - Ski trails used for walking outside snow season
 - Proposed ski trail
 - Management vehicle track used for cycling and walking outside snow season
 -  Ski Trail Zone
 -  Summit Area

EXISTING RECREATION SITES AND FACILITIES

	BBQ - electric/gas		Shelter
	Cycling		Skiing
	Fire place		Tobogganaging
	Lookout		Toilet
	Park information		Walking track
	Picnic table		Water supply

PROPOSED RECREATION SITES AND FACILITIES

-  Park information
-  Shelter
-  Toilet

Note: Black recreation sites and facilities are outside the Yuma Flamingo National Park.





For more information contact the Parks Victoria Information Centre on 13 1963, or visit www.parkweb.vic.gov.au