

Enfield State Park

November 1998



Management Plan



This Management Plan for Enfield State Park is approved for implementation. Its purpose is to direct management of the Park until the Plan is reviewed. A Draft Management Plan was published in January 1998. Fourteen submissions were received.

Copies of the Plan can be obtained from:

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Cover: The endemic Enfield Grevillea *Grevillea bedgoodiana*. (Photo: Centre for Environmental Management, University of Ballarat.)

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FOREWORD

Enfield State Park was proclaimed as recently as 1995, but the area has been well known to people in the Ballarat district for many years. It is popular for picnics, walks, scenic drives, nature studies, fossicking and other activities.

It has also had nearly 150 years of use as a gold mining area and a source of timber for mines and firewood, and for producing eucalyptus oil. These activities have left many traces which give the Park considerable heritage significance. But despite this history of use, the Park retains many natural values, having 251 native plant species (including 61 orchids) and 170 fauna species, four of them listed under the Flora and Fauna Guarantee Act.

This Management Plan establishes the long-term framework for protecting the Park's important natural and cultural values, and also sets out how facilities will be improved to cater better for visitors.

A large part of the Park was burnt in January 1995. The Plan calls for action to control weeds that may increase following this fire, for the development of an ecologically-based fire management plan, and for research into the impact of fire on flora and fauna, particularly in relation to the regeneration of flora and recovery of fauna since the 1995 fire. Local educational institutions are well placed to carry out this research, and their involvement will be encouraged.

This Plan also encourages liaison and co-operation with adjoining landholders in managing the Park, and supports the establishment of a Friends group and the involvement of other volunteers. I acknowledge and welcome the submissions made by individuals and groups on the Draft Plan; I commend this Approved Plan to you, and look forward to community support and involvement in implementing it.

Marie Tehan MP
Minister for Conservation
and Land Management

APPROVED MANAGEMENT PLAN

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

The Plan provides the basis for the future management of Enfield State Park. It was finalised following consideration of the 14 submissions received on the Draft Plan, which was published in January 1998.

Rod Gowans
**Acting Director of
National Parks**

Mark Stone
**Chief Executive
Parks Victoria**

SUMMARY

Enfield State Park (4400 ha) is an important conservation reserve close to Ballarat and Geelong.

The Park contains a diverse range of flora and fauna, some of which are significant, and also extensive evidence of the mining and forestry activities that were undertaken throughout the area from the late 1850s to the 1960s. Management will concentrate on the conservation of the natural, cultural and scenic features of the Park, and also provide for a range of recreational activities.

The Park is relatively free of pest plants and animals, although regular monitoring and control programs will be required. These control programs will be undertaken in co-operation with adjoining landholders.

The Park is a natural setting for a range of recreational activities which complement opportunities in the rest of the region. It is estimated that the Park attracted some 4500 visitors in 1995–96. Most visitor activity occurs in the vicinity of Surface Point. Upgrading facilities will enhance visitor enjoyment of the Park.

Major management directions are summarised below.

- Significant flora, fauna and other natural and cultural features will be protected, and where appropriate interpreted.
- Pest plants and animals will be controlled or eradicated in co-operation with local land owners and community groups.
- The Park and neighbouring assets will be protected against wildfire.
- The Park will be promoted as an important conservation reserve offering opportunities for natural and cultural heritage appreciation and low impact recreation activities.
- Visitor access and information will be improved.

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1 INTRODUCTION

1.1 Location and planning area

Enfield State Park (4400 ha) is about 110 km west of Melbourne, 75 km north-west of Geelong and 25 km south of Ballarat.

This management plan covers the whole of the State Park including the Enfield Reference Area (100 ha), and has been developed with reference to the Proposed Enfield State Park Draft Management Plan (CFL 1988) and its recommendations.

The planning area does not include the Colac–Ballarat Road, which is excluded from the Park and managed by VicRoads.

1.2 Regional context

Enfield State Park provides opportunities for recreation, nature study and heritage appreciation in a natural setting.

The management and facilities offered by other public land in the region complement those of the Park, and together they offer opportunities for a wide range of visitor experiences.

Enfield State Park adjoins the Enfield State Forest and Berringa Historic Reserve, which present complementary recreational and heritage appreciation opportunities. Other significant parks and reserves (figure 1) include Lal Lal Bungal Historic Area, Creswick Regional Park, Mount Buangor State Park, You Yangs Regional Park, Brisbane Ranges National Park, Mount Erip Flora Reserve, the Jubilee, Golden Stream and Surface Hill Reserves and the Devils Kitchen Geological Reserve. These parks and reserves provide for sight-seeing, bushwalking, camping, heritage appreciation and a range of other activities.

1.3 Significance of the Park

Enfield State 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.

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

Significant features of the Park are listed below.

Natural values

- A range of vegetation types supporting 251 native plant species.
- Four plant species that are considered rare or threatened, including the endemic Enfield Grevillea.
- A major population of the rare Yarra Gum west of Melbourne.
- Diverse understorey flora, including 61 species of orchid.
- Diverse fauna including 126 bird, 23 mammal (including a range of ground-dwelling species), 12 amphibian and 9 reptile species.
- Several significant fauna species, including four species listed under the *Flora and Fauna Guarantee Act 1988* (Vic.).

Cultural values

- A rich gold mining history.
- Many significant historical features, particularly from the gold mining period, from the 1850s to the 1930s.

Tourism and recreational values

- A range of recreational activities in a bushland setting, including picnicking, walking, camping, scientific and nature study, fossicking, horse riding, pleasure driving, interpreting historic features, and orienteering.
- Proximity to the Cities of Ballarat and Geelong.

1.4 Creation of the Park

Enfield State Park was proposed by the former Land Conservation Council (LCC) in the Final Recommendations for the Ballarat Study Area (LCC 1982). The Park was added to Schedule Two B (State Parks) of the National Parks Act as a result of the *National Parks (Yarra Ranges and Other Amendments Act 1995* (Vic.) and proclaimed on 3 August 1995.

1.5 Legislation and guidelines

Enfield State Park is reserved and managed under the provisions of the National Parks Act. The Act requires the Director to preserve and protect the natural condition of the Park and its natural and other features, and, subject to this, to provide for the use of the Park by the public for enjoyment, recreation and education. The Act also provides for appropriate research.

Enfield Reference Area is proclaimed under the *Reference Areas Act 1978* (Vic.) and is managed in accordance with the relevant Ministerial directive and guideline. Within the area, which forms a reference for comparative study purposes, natural processes are to be allowed to continue undisturbed.

Specific LCC recommendations for the Park (LCC 1982) were to:

- protect sites of historical significance;
- permit fossicking and prospecting in accordance with the recommendation on mineral and stone production;
- permit honey production;
- provide for legal access to any freehold land located within the Park.

Enfield State Park is managed in accordance with Parks Victoria guidelines for the management of parks and LCC recommendations, and with other plans and guidelines including:

- Midlands Fire Protection Plan (NRE in prep);
- Code of Practice for Fire Management on Public Land (CNR 1995).

1.6 Park management aims

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

Resource conservation

- Preserve and protect the natural environment.
- 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.

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 and other interested organisations to assist in the management of the Park.

2 STRATEGIC DIRECTIONS

2.1 Park vision

A future visitor to the Enfield State Park finds a Park protecting significant flora and fauna (including a high diversity of orchid species), vegetation communities recovered from the 1995 Berringa wildfire, and significant historic gold mining features.

The Park is well known by visitors from Ballarat and Geelong, and is popular as a bushland retreat with easy access from these cities. It is widely used by day visitors, school groups and campers enjoying an escape from the pressures of urban life, as well as the opportunity to experience and appreciate an area with significant natural and cultural values. Several well-designed visitor facilities are provided.

An increased understanding of ecological processes enhances management of the Park, and underscores the integrated strategy of using fire for both protection and ecological management. Threats from pest plants and animals are minimised in co-operation with adjacent land owners. Sensitive management that is ecologically based, together with the co-operation of the local community (including an active Friends Group), ensure that the Park's natural and cultural values are protected for the enjoyment of future generations.

2.2 Management directions

Major management directions for the Park are outlined as follows.

Resource conservation

- An appropriate balance will be established between conservation, recreation and tourism activities, with priority given to conservation objectives.
- Emphasis will be placed on survey, research and monitoring of the Park's flora, fauna and historical values to establish an increased knowledge base for future management.

- Research into and monitoring of the regeneration of the Park's flora and fauna following the 1995 Berringa wildfire will be encouraged.
- Significant relics of pioneering settlement and resource utilisation will be protected, monitored and interpreted where appropriate.

Park protection

- An ecologically-based fire management plan will promote biological diversity through appropriate fire regimes.
- The Park and neighbouring assets will be protected against wildfire by strategic fuel reduction.
- Pest plants and animals will be controlled or eradicated through a program based on identification of key sites, target species and methods of control.

The Park visit

- Quality visitor facilities will be provided at a limited number of locations, and opportunities for compatible recreational activities, particularly walking and nature-based activities, will be enhanced.
- The present range of recreational activities within the Park will be maintained.
- Ongoing monitoring of visitors will be conducted to better determine numbers and use.
- Information and orientation services will be provided enabling visitors to easily locate the Park and its features and facilities.
- The Park will be promoted locally as an important conservation reserve providing ready access to natural and cultural values and recreational opportunities in a natural environment.

Community awareness and involvement

- Co-operation will be fostered with local Government, other public authorities, local educational institutions, community groups and landholders in conserving the unique natural and cultural values of the Park.
- The development of a Friends Group for the Park will be supported, building on the existing strong community interest for such a group.

2.3 Zoning

A park management zoning scheme has been developed to:

- provide a geographic framework in which to manage the Park;
- indicate which management directions have priority in different parts of the Park;

- indicate the types and levels of use appropriate throughout the Park;
- assist in minimising existing and potential conflicts between uses and activities, or between these and the protection of park values;
- provide a basis for assessing the suitability of future activities and development proposals.

Two management zones apply to the Park: Conservation and Recreation, and Reference Area. In addition a Land Use Designation — Fossicking — is used to designate requirements additional to those of the underlying primary zones.

Table 1 specifies the management zones, overlays, and characteristics, and figure 2 shows their location.

TABLE 1 MANAGEMENT ZONES AND OVERLAYS

	ZONE		OVERLAY
	CONSERVATION & RECREATION	REFERENCE AREA	LAND-USE DESIGNATION — FOSSICKING
AREA/LOCATION	4300 ha, 98 % of Park. All of the Park excluding Reference Area.	100 ha, 2 % of Park. Enfield State Park Reference Area.	2878 ha, 65 % of Park. The area shown in figure 2.
VALUES	Important natural values and scope for recreation opportunities.	Relatively undisturbed representative land types and associated vegetation.	Opportunities for recreational fossicking.
GENERAL MANAGEMENT AIM	Protect less sensitive natural environments and provide for sustainable dispersed recreation activities and small-scale recreation facilities without significant impact on natural processes.	Protect viable samples of one or more land types that are relatively undisturbed for comparative study with similar land types elsewhere, by keeping all human interference to the minimum essential and ensuring as far as practicable that the only long-term change results from natural processes.	Highlight area or sites where special management provisions are needed to provide for a particular non-standard use or activity.
FIRE MANAGEMENT	Fuel reduction burning using minimal impact techniques.	No fuel reduction burning; fire suppression in adjacent zones.	As per underlying management zone.
ACCESS	2WD and 4WD public access generally available.	For approved scientific research.	As per underlying management zone.
SIGNAGE	Directional, identification, interpretation and information signs.	Not necessary.	As per underlying management zone.

3 RESOURCE CONSERVATION

3.1 Geological and landform features

Enfield State Park ranges in elevation from approximately 240 m in the south-west, where Misery Creek leaves the Park, to about 450 m in the north-east. This elevation range creates an interesting contrast in landscapes, from the undulating rises of the north-east through to the steeper dissected valleys of the south-west.

The geology of the Park consists of low and dissected ridges of uplifted and tightly folded Palaeozoic sediments with interbedded slates, sandstones and quartz reefs. The area is known for its gold mineralisation (LCC 1982) and is a popular site for recreational fossicking activities.

A former gravel extraction site, in a tailings dump from a dredging operation immediately to the west of Enfield township, supplied gravel for road works. This site is in a degraded condition and further rehabilitation and revegetation works are required. There is natural regeneration on other former gravel extraction sites.

Aim

- Minimise the impact of visitors and management on susceptible soils and rock formations.

Management strategies

- *Rehabilitate and revegetate the former gravel extraction site immediately to the west of Enfield township.*
- *Prohibit rock, gravel and soil extraction within the Park.*
- *Continue to encourage the natural regeneration of indigenous vegetation on other former gravel extraction sites (section 3.2).*

3.2 Vegetation

Two hundred and fifty-one native species of vascular plants have been recorded in the Park and this diverse native flora is a major

attraction to visitors. The Park has a particularly diverse understorey with 61 orchid species, representing about a quarter of the total orchid flora of Victoria.

The Park contains five major vegetation communities: Red Stringybark, Brown Stringybark, Messmate, Scent Bark and Manna or Swamp Gum along drainage lines. It makes an important contribution to representative conservation of these communities.

The Park has four plant species which are considered rare or threatened (appendix I). These are a Spider-orchid, Broom Bitter-pea, Yarra Gum and Enfield Grevillea. A further 22 species are classified as being 'rare-interesting-restricted' (appendix I) (Beaglehole 1983).

The Park, and the Reference Area in particular, offers considerable opportunities for research into and surveys of the flora and the regeneration of vegetation communities and species following the 1995 Berringa wildfire.

Aims

- Conserve native plant communities in their natural condition, as far as practicable, and maintain genetic diversity.
- Increase knowledge of native flora, especially the distribution and management requirements of significant flora species.
- Provide special protection for significant plant species.

Management strategies

- *Encourage research into and survey of the Park's flora, and incorporate all new information into appropriate computer databases to facilitate park management. Work should be directed at:*
 - *the location and ecology of rare, threatened and significant species;*
 - *fire regime requirements of vegetation communities and specific species;*

- *appropriate ecological fire management works to enhance the biodiversity of vegetation communities, particularly of the understorey.*
- *Supplement, where necessary, the natural regeneration of vegetation of disused gravel and stone extraction sites through plantings of indigenous species (section 3.1).*

3.3 Fauna

One hundred and seventy native species have been recorded in the Park (NRE database 1997a; CFL 1988). There are 126 bird, 23 mammal, 12 amphibian and 9 reptile species.

A number of significant fauna species listed under the Flora and Fauna Guarantee Act have been recorded in the Park (appendix II). These include the Bush Stone-curlew, Common Bent-wing Bat, Brush-tailed Phascogale and Powerful Owl. The threatened Common Dunnart was recorded in the adjoining Enfield State Forest in the late 1970s, and may also occur within the Park.

Other significant fauna recorded from the Park include the Little Forest Bat and Gould's Wattle Bat, which are not recorded in any other location within the Ballarat region (CFL 1988). The Yellow-footed Antechinus, Eastern Pygmy-possum, Eastern False Pipistrelle, Swamp Rat and Spotted Quail-thrush are also significant as they are considered uncommon or restricted in the Ballarat region (CFL 1988).

The Park offers considerable opportunities for research and surveys of the Park's fauna following the 1995 Berringa wildfire.

Aims

- Conserve native animal communities, and maintain genetic diversity.
- Increase knowledge of the Park's fauna, especially the distribution and management requirements of threatened and significant fauna species.

Management strategies

- *Manage Flora and Fauna Guarantee listed species according to approved action statements.*
- *Encourage research into, and undertake survey and monitoring of, the Park's fauna, including:*
 - *developing a monitoring program which focuses on significant species and their habitats;*
 - *identifying appropriate fire regimes for the conservation of faunal species;*
 - *monitoring the effects of wildfire and fire management works on fauna;*
 - *encouraging the participation of a Friends Group, volunteers and local educational institutions in the above.*
- *Incorporate all new information into appropriate computer databases to facilitate park management.*

3.4 Landscape

The Park lies within the West Central Hills Landscape Character Type (Leonard & Hammond 1984).

Two distinct landscapes are contained within the Park. The flat and swampy eastern section is of low scenic quality, whereas the rugged ridge lines and contrasting surrounding plains to the south and west are of moderate scenic value.

Rural residential areas adjoining the Park impact on landscape qualities close to Park boundaries. The former gravel extraction site also has an adverse visual impact over a small area of the Park (section 3.1).

The numerous historic mining features throughout the landscape reflect the long history of resource use, principally alluvial mining.

Aims

- Protect and enhance landscape quality.
- Minimise, rehabilitate, remove or ameliorate undesirable visual intrusions.

Management strategies

- *Ensure that any developments within the Park are in keeping with the character of the natural and cultural landscape, and do not conflict with, or encroach on, internal and external views.*
- *Continue to liaise with the Golden Plains Shire to minimise adverse impacts on views and native vegetation (section 7.2).*

3.5 Cultural heritage

Little is known of the Aboriginal heritage of the area and no Aboriginal cultural sites or artefacts have been recorded in the Park. Neither the Department of Aboriginal Affairs Victoria nor the Ballarat and District Co-operative has any record of Aboriginal use of the Park.

All Aboriginal material and sites 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 Park has a rich and diverse cultural heritage which forms one of the main attractions to visitors. The historic features and the condition of the native vegetation testify to a history of resource utilisation spanning more than 100 years.

The Park was the site of considerable prospecting for gold between the 1850s and the 1930s, when it was known as the Mount Misery Goldfield. Both European and Chinese miners sought gold, and evidence of their mining and horticultural activities can still be found today.

The Park has a heritage plaque commemorating early Chinese settlement of the area (figure 3) and historic trees associated with early settlement (section 4.2).

Mount Misery was primarily an alluvial goldfield, and the locality name Little Hard Hills reflects the features remaining from this alluvial mining. They include shallow sinkings, mullock heaps associated with 10 m deep shafts, open cuts, cuttings and tailings left by

hydraulic sluicing, dredge holes and puddling machines.

Other historic features in the Park include old mining dams, water races, sluiced areas, stone huts, dredge holes, battery foundations, mine shafts, adits, Chinese miners' graveyard and a eucalyptus distillery.

The area that now includes the Park provided forest produce for many years. During the gold rush era, timber was removed for mining supports and firewood, and over the next century it supplied local markets with forest produce, particularly firewood and also eucalyptus oil.

A number of historic places within the Park have been recorded.

There are considerable opportunities to document the cultural heritage of the Park, provide interpretative material, and enhance management of these sites.

Aims

- Improve knowledge and understanding of the Park's Aboriginal and European history.
- Identify and protect significant historic sites and artefacts from damage from vegetation, pest plants or animals, erosion or inappropriate human activity.

Management strategies

- *Identify, manage, protect and interpret significant historic and archaeological sites and features in accordance with Parks Victoria guidelines and in conjunction with Aboriginal Affairs Victoria and Ballarat and District Co-operative.*
- *Encourage local historical societies, the Friends Group and local educational institutions to research, record and collate cultural and historical information relating to past land use activities in the Park.*
- *Record and monitor archaeological and historic sites and relics.*
- *Provide interpretative material at appropriate significant cultural heritage sites.*

- *Liaise with relevant experts when making management decisions affecting any Aboriginal or significant historic places.*

4 PARK PROTECTION

4.1 Fire management

Fire management includes all activities associated with the management of fire-prone public land values, including the use of fire, to meet land management goals and objectives (CNR 1995).

Fire has been a common occurrence within the Park, and large intense fires have occurred every 15 to 20 years over the last 50 years or more. The last major fire was the 1995 Berringa wildfire, which burnt over 90% of the Park (section 3.2). This fire emphasises the importance of an effective fuel management strategy to protect surrounding settlements. The review of the Midlands District Fire Protection Plan proposes that a Zone 1 Fire Management Zone (fuel reduction burning every three years if required) be developed around the Enfield Township to ensure protection of life and property in the event of a future fire.

The impact of fire on flora and fauna is recognised as an important consideration for the ecological management of the Park. Opportunities exist to implement monitoring and fire management programs directed at the regeneration of flora and fauna. An important step will be researching fire history through the development of appropriate information systems such as a park-based geographic information system.

Fire management within the Park is controlled under the Code of Practice for Fire Management on Public Land (CNR 1995) and the Midlands Region Fire Protection Plan (NRE in prep.). Development of a park-based fire management plan is required to provide a greater level of detail for the ecological management of fire within the Park, and to feed information into the Midlands Region Fire Protection Plan.

Aim

- Consistent with the Code of Practice for Fire Management on Public Land:
 - protect life, property and park values from wildfire;

- minimise adverse effects of fire and fire suppression activities;
- conserve and protect natural features, particularly significant communities and rare or threatened flora and fauna species;
- maintain and enhance biological diversity within vegetation communities.

Management strategies

- *Develop an ecologically-based fire management plan for the Park incorporating measures to protect life, property and park values, and promote increased vegetation community diversity through appropriate fire regimes. Ensure protection for existing unburnt areas (or identification of areas to be managed as unburnt) in addition to the Enfield Reference Area.*
- *Implement fire management strategies within the Park consistent with the above Park fire management plan, the Midlands Region Fire Protection Plan and the Code of Practice for Fire Management on Public Land.*
- *Implement a Zone 1 Fire Management Zone surrounding the Enfield Township to protect life and property from future wildfire.*
- *Encourage and support scientific research into the impact of fire on flora and fauna, with particular investigations into the regeneration of flora and recovery of fauna species and communities following the 1995 Berringa wildfire (sections 3.2 and 3.3).*
- *Ensure that Park management staff are appropriately trained in fuel reduction burning techniques and ecological fire management.*
- *Assess the number, location and operational significance of existing fire*

dams and undertake maintenance works as required.

- *Undertake appropriate rehabilitation of earthworks and damaged tracks following wildfire suppression works (section 4.3).*
- *Liaise regularly with the Forests Service, emergency response organisations, CFA brigades, landholders and other groups who have an interest and involvement in fire protection, management and suppression in the Park.*
- *Increase community awareness of fire management issues and fire management works programs within the Park through Ranger liaison.*

4.2 Pest plants and animals

Pest plant and animal species within the Park are mostly limited in distribution and are not of major concern. There is an opportunity to implement control measures to eradicate these pests before they become a major concern.

Many of the weed species are associated with Park boundaries and adjoining cleared land, or with past disturbance, particularly historical mining activities. Regular pest plant and animal control activities are undertaken in co-operation with adjoining landholders through the application of the Good Neighbour program.

Pest plants

Over 50 introduced plant species have been identified within the Park, although the majority of these have limited distribution. Nine major weed species have been identified in the Park: Blackberry, Cape Broom, English Broom, Furze, Slender Thistle, Spanish Heath, Spear Thistle, Variegated Thistle and Sweet Briar. These are designated as Regionally Controlled Weeds (excluding Spanish Heath) and Parks Victoria is responsible for their control.

The impact of the 1995 Berringa wildfire on weed species germination may present problems in the future. Monitoring and control measures should therefore be undertaken to reduce the potential expansion of weed infestations.

The presence of several historic (but non-indigenous) trees, principally associated with historic mining sites, presents a challenge for park management.

Pest animals

Pest animal species recorded within the Park include the Red Fox, Black Rat, European Rabbit, Brown Hare, Feral Cat, Dog, Common Blackbird, House Sparrow and Common Starling. Anecdotal evidence also suggests the presence of goats and deer; however, none has been reported since the 1995 Berringa wildfire. Most are not of major concern and control measures should be largely opportunistic. Foxes are the largest pest animal problem, and there is potential for an increase in the problem if control measures are not undertaken. Control should be based on a co-ordinated baiting program in conjunction with similar programs on adjoining public and private land.

Aims

- Control, and where possible eradicate, pest plants and animals within the Park.
- Minimise the adverse impact of pest plant and animal control activities on park values.

Management strategies

- *Prepare and implement a pest plant and animal control strategy that incorporates monitoring the spread of pest plants and animals. As a priority, target potentially invasive species.*
- *Co-ordinate pest plant and animal control programs with local government organisations, Landcare groups and adjoining landholders through appropriate consultation (section 6.2).*
- *Protect fauna through appropriate control of pest animals, particularly foxes.*
- *Liaise with local historical societies to register and map the locations of historic trees. Assess their significance and threats to the Park and manage as appropriate (section 3.5).*

- *Minimise, or avoid the introduction and spread of, pest plants and soil pathogens by minimising soil disturbance during wildfire suppression, road maintenance and facility development works, and by observing appropriate machinery hygiene procedures (section 4.3).*

4.3 Soil conservation

Soils within the Park consist of shallow duplex soils on steep slopes, stony gradational soils on areas of low gradient and drainage lines (CFL 1988), and fine-textured soil material associated with tailings and mullock heaps.

Maintaining vegetation cover and preventing disturbing influences are essential in minimising the impact of soil erosion. Activities that have an impact on soils include construction, use and maintenance of roads, tracks and walking tracks; fire; rehabilitation works after fire; and disturbance from fossicking activities.

Significant soil erosion can occur during the construction, use and maintenance of roads, tracks and walking tracks. The installation of U-shaped rather than V-shaped table drains, cross-track distribution devices, interception devices, and entrapment sites at the base of slopes can alleviate potential problems.

Vegetation disturbance or removal as a consequence of fire can create significant soil erosion problems (section 4.1). Following fire management works, rapid rehabilitation of fire lines and tracks should be undertaken by appropriately trained staff to prevent these problems (section 4.1).

Uncontrolled activities from fossicking can cause soil erosion through disturbance of vegetation, tailings, mullock heaps and stream-side soil deposits. Such disturbance should be minimised through appropriate consultation with, and delivery of educational material to, fossicking groups (section 5.2.5).

Aim

- Prevent and control soil erosion resulting from visitor and management activities.

Management strategies

- *Liaise with responsible authorities and encourage them to adequately maintain roads traversing the Park to minimise soil erosion (section 5.2.1).*
- *Manage the road and track network and ensure adequate drainage to protect soil and water quality; obtain specialist advice where appropriate (section 5.2.1).*
- *Consider the potential for soil erosion when planning and undertaking all management activities.*

5 THE PARK VISIT

5.1 The Park visitor

Enfield State Park is a large expanse of native forest about 25 km south of Ballarat that is easily accessible via the Ballarat–Colac Road. The Park is popular with visitors from Ballarat and Geelong, and also presents opportunities for day visits from Melbourne.

The Park offers a range of visitor experiences, including:

- low-key recreational activities such as walking, picnicking and pleasure driving;
- opportunities for special interest activities such as fossicking, exploring the Park’s gold mining history and viewing wildflowers.

The 1995 Berringa wildfire destroyed much of the directional signage and other visitor facilities in the Park. Only the facilities at Surface Point have been replaced to date (section 5.3).

The number of visitors to the Park has not been monitored on a regular basis but it is estimated that there were about 4500 visitors in 1995–96. A new visitor monitoring system introduced in 1997 may result in a revision of estimates for Park visits in the future. Information about visitors to the Park from past surveys indicates that the majority are in family groups drawn from the greater Ballarat region. They use the Park for low-key recreation activities on a regular basis with intensive usage during school holiday periods.

Smaller subsets of visitors include bushwalking groups, and those with a special interest in wildflowers and mining history. These groups offer the best potential for increased visitation resulting from a growing interest in natural and cultural heritage tourism.

The major focus of visitor activity is at Surface Point where car parking, picnic and toilet facilities are provided. There is a commitment to provide enhanced visitor facilities and information, but the Park has strong conservation values and it is important to ensure that these values are protected.

The Park is in the Golden Plains Tourism Region and is part of Tourism Victoria’s Goldfields product region. A regional tourism strategy is currently being developed and the input of the Golden Plains Tourism Association will clarify the role of the Park as a visitor destination, as well as highlighting opportunities for linkages with other parks such as Brisbane Ranges National Park.

Providing for the visitor

Enfield State Park will continue to offer visitors opportunities to enjoy a bushland setting for nature-based recreation, and enhance their awareness and knowledge of natural and cultural heritage.

Park management will work to facilitate high quality visitor experiences at the same time as conserving and protecting the Park’s natural and cultural heritage. This will entail improving existing facilities and services.

Significant developments in this respect will be:

- improved signage (particularly from the Ballarat–Colac Road) and visitor orientation at major Park entrances;
- provision of on-site information and interpretative material at Surface Point (section 5.3);
- maintenance of the existing network of walking tracks;
- ongoing monitoring of visitor numbers and an evaluation of visitor needs, satisfaction levels and impacts as a basis for determining future visitor facilities and services.

Aim

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

TABLE 2 SUMMARY OF RECREATION ACTIVITIES

ACTIVITY	CONSERVATION & RECREATION ZONE	REFERENCE AREA ZONE	LAND-USE DESIGNATION - FOSSICKING
Picnicking	Yes	No	Yes
Camping — walk-in dispersed	Yes	No	Yes
Camping — car-based dispersed	YC (5.2.2)	No	YC (5.2.2)
Camping — horse-based	No	No	No
Walking	YC (5.2.3)	No	YC (5.2.3)
Bicycle riding	YC (5.2.7)	No	YC (5.2.7)
Horse riding	YC (5.2.4)	No	YC (5.2.4)
Orienteering/Rogaining	YC (5.2.6)	No	YC (5.2.6)
Fossicking	YC (5.2.5)	No	Yes (5.2.5)
Firewood collecting	Yes	No	Yes
Firewood removal	No	No	No
Hunting	No	No	No
Pleasure driving	YC (5.2.1)	No	YC (5.2.1)
Trail bike riding	YC (5.2.1)	No	YC (5.2.1)
Heritage appreciation	Yes	No	Yes
Dogs — on leashes only	Yes (5.2.8)	No	Yes (5.2.8)

Y	Yes	YC	Conditional – refer to relevant section for details
No	Not appropriate	N/A	Not applicable

Management strategies

- *Permit recreational activities in accordance with table 2.*
- *Provide and maintain a range of facilities and services which highlight, but are in keeping with, the Park's distinctive character (tables 3 and 4 and sections 5.2, 5.3, 5.4).*
- *Apply current market survey findings on visitor profiles, patterns of behaviour, expectations and preferences, to assist in park management.*
- *Liaise with local and regional tourism associations to facilitate the ongoing development and implementation of local and regional tourism strategies.*
- *Establish a program to determine levels of visitation and recreational activity consistent with protecting recreational experiences and park values.*

- *Monitor visitor numbers and use to ensure adequate provision of facilities, consistent with appropriate types and levels of use.*
- *Encourage all visitors to adopt minimal impact techniques and adhere to codes of conduct appropriate to their activity.*

5.2 Visitor recreation activities and facilities

5.2.1 Vehicle access

There are ten major access points into the Park (figure 3). Most access occurs from the Colac–Ballarat Road (maintained by VicRoads), which dissects the Park into eastern and western sections. Access can also be gained through the western boundary along Incolls and Misery Creek roads. Several through-roads are managed co-operatively with the Forests Service (table 3).

TABLE 3 MANAGEMENT OF VEHICLE ROADS AND TRACKS

ROAD/TRACK	CLASS		STATUS		FUTURE MANAGEMENT/COMMENT (UNCHANGED UNLESS INDICATED)
	CURRENT	PROPOSED	CURRENT	PROPOSED	
Berringa–Dereel Road	1	1	O	O	
Berringa–Misery Creek Road	1	1	O	O	
Berringa–Newtown Road	1	1	O	O	
Catchment Boundary Road	2	2	O	O	Not part of Park; managed by PV and Forests Service.
Colac-Ballarat Road	1	1	O	O	Not part of Park; managed by VicRoads.
East Dozed Break Track	3	3	O	O*	4WD touring track; close seasonally.
Enfield Track	3	3	O	O	
Enfield Picnic Ground Road	2	2	O	O	
Grevillea Track	3	3	O	O*	4WD touring access link into East and West Dozed Break Track, close seasonally.
Grubbed Road	1	1	O	O	Not part of Park; managed by PV and Forests Service.
Halls Road	1	1	O	O	
Hansons Road	1	1	O	O	Not part of Park; managed by PV and Forests Service.
Incolls Road	1	1	O	O	
Long Gully Road	1	1	O	O	
Misery Creek Road	1	1	O	O	
Mistletoe Track	2	2	O	O	Not part of Park; on the former Colac-Ballarat road reserve; assess management requirements.
O’Loughlins Road	1	1	O	O	
Old Colac–Ballarat Road	2	2	O	O	Assess management requirements.
Orchid Track	2	2	O	O	Touring access link to East and West Dozed Break Track.
Peppermint Track	2	2	O	O	

Table 3 (cont.)

ROAD/TRACK	CLASS		STATUS		FUTURE MANAGEMENT/COMMENT (UNCHANGED UNLESS INDICATED)
	CURRENT	PROPOSED	CURRENT	PROPOSED	
Proposed Firebreak Track	-	3	-	O*	Proposed track for Zone 1 Fire Management Zone around Enfield Township. 4WD touring track, close seasonally.
Spring Creek Track	3	3	O	MVO	Gate south of intersection with West Dozed Break Track, close north of intersection with West Dozed Break Track to intersection with Orchid Track. Permit horse riding and cycling on this track.
Staffordshire Reef Road	1	1	O	O	
Stringybark Track	2	2	O	O	
Un-named Track 1	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 11	3	3	O	MVO	MVO access to walking track.
Un-named Track 13	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 16	3	3	O	MVO	MVO access to historic sites.
Un-named Track 17	3	3	O	MVO	MVO access to historic sites.
Un-named Track 20	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 3	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 4	3	3	O	O*	4WD track; close seasonally.
Un-named Track 5	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 7	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 8	3	-	O	C	Not required; close and rehabilitate.
Un-named Track 9	2	-	O	C	Not required; close and rehabilitate.
Wattle Track	3	3	O	MVO	MVO access to walking track.
West Dozed Break Track	3	3	O	O*	4WD touring track; close seasonally. Improve drainage at intersection with Orchid Track.

CLASS:

- 1 2WD - all weather
- 2 2WD - dry weather only
- 3 4WD - dry weather only

STATUS:

- MVO Management Vehicle Only
- O Open to public vehicles
- C Closed to all vehicles and walkers
- * Closed seasonally

Pleasure driving and seasonal 4WD touring are available throughout the Park's network of unsealed 2WD all weather access roads and 4WD tracks. Pleasure driving, 4WD driving and trail-bike riding have been popular activities within the Park. Damage to tracks and other areas of the Park has occurred as a consequence of inappropriate use by 4WD vehicles and trail bikes. Many tracks not required for management purposes are dead-end tracks that create a risk during bushfires. The Park has several unused road reserves (section 7.2).

The proliferation of vehicle tracks within the Park is largely the result of unplanned and unco-ordinated development. Some rationalisation and seasonal closure of vehicular access is warranted to conserve the natural and cultural values of the Park.

Aims

- Provide and maintain an appropriate road and track network for visitor use and management purposes.
- Minimise the impact of vehicle use and track management on park values.

Management strategies

- *Manage and permit use of 2WD and 4WD public access roads and tracks, and 'management vehicles only' tracks, as specified in table 3 and figure 3. Close and rehabilitate all other tracks in consultation with the Victoria Association of Four Wheel Drive Clubs.*
- *Modify the management of designated Park tracks in accordance with table 3 and figure 3, and Parks Victoria guidelines.*
- *Encourage responsible use of tracks by recreation vehicle drivers and trail bike riders through education and ranger contact.*
- *Upgrade and standardise road and track signs throughout the Park (section 5.3).*

- *Liaise with the Forests Service regarding the co-operative management and maintenance of roads indicated in table 3.*
- *Liaise with VicRoads to seek roadside signage at appropriate locations on roads leading to the Park, and regarding minimal impact on the Park from maintenance of the Colac-Ballarat Road.*
- *Ensure that all road and track maintenance is undertaken with consideration of the potential for soil erosion (section 4.3) and pathogens introduction and spread (section 4.2).*

5.2.2 Day visits and camping

The Park offers a number of picnicking opportunities, and attracts visitors from Ballarat and Geelong as well as surrounding areas.

Day use facilities (table 4) are provided at the Enfield Picnic Ground (fireplace and toilets), the Surface Point Picnic Ground (fireplace, picnic tables and toilets) and the Long Gully Picnic Ground (fireplace only and proposed picnic table) (figure 3). The Surface Point Picnic Ground is the main visitor destination.

Fires are restricted to fireplaces only. Rubbish bins are not provided in the Park and a 'take your rubbish home' philosophy is encouraged.

No camping facilities are provided, but car-based camping occurs at the picnic areas, primarily at Surface Point. Camping at these picnic grounds is acceptable if camper numbers remain minimal. Dispersed car-based camping is available in the adjoining Enfield State Forest. Camping fees do not apply at present.

The Enfield Picnic Ground is adjacent to several residences and is in a degraded condition which detracts from the natural experience available to visitors elsewhere in the Park. A former gravel extraction site about 1 km to the south, which will be rehabilitated, is a potential site for the provision of car-based camping facilities when

TABLE 4 EXISTING AND PROPOSED RECREATION FACILITIES

SITE	TOILETS	PICNIC TABLES	FIRE PLACES	WATER SUPPLY	PARK INFO.	WALK TRACK	CAMPING
Surface Point Picnic Ground	E	E	E	N	P	E	YC
Enfield Picnic Ground	E*	N	E*	N	N	E*	YC*
Long Gully Picnic Ground	N	P	E	N	N	E	YC

E = existing facility N = no facility P= proposed facility * = to be closed YC = conditional - see section 5.2.2

demand warrants. This site has interesting natural values including an extensive wetland that attracts numerous bird species.

Aims

- Provide facilities for picnicking at key locations throughout the Park.
- Provide opportunities for walk-in dispersed camping in association with the overnight walk on the Enfield Loop Track and throughout the Park.
- Provide opportunities for car-based camping.
- Minimise the potential impacts of camping and picnicking on natural and historic values.

Management strategies

- *Permit picnicking in all areas of the Park except the Reference Area.*
- *Maintain picnic areas at Surface Point, and provide a picnic table and appropriate vehicle barriers at Long Gully Picnic Ground.*
- *Close and rehabilitate the existing Enfield Picnic Ground and redirect visitors to Surface Point and Long Gully Picnic Ground.*
- *Allow dispersed camping throughout the Park (except in the Reference Area Zone), and car-based camping at picnic grounds.*

- *Permit solid fuel fires in fireplaces provided only, and encourage use of gas or liquid fuel stoves.*

- *Permit firewood collection for use by visitors camping and picnicking.*

- *Encourage and promote the philosophies of 'take your rubbish home' and 'minimal impact camping'.*

5.2.3 Bushwalking

The Park offers a number of walking experiences through the provision of three loop tracks (figure 3 and table 5) ranging in length from a 1 km loop around the Surface Point Picnic Ground to a 15 km loop through the Park which is suitable for overnight camping experiences. Walking is permitted on 'management vehicle only' tracks (table 3 and figure 3).

The available walking tracks focus on the major visitor destination at Surface Point. They provide access to most points of interest in the Park and offer the opportunity to experience the Park's natural and cultural values. There are also opportunities for dispersed bushwalking throughout the Park, but because of the public risk posed by abandoned mine shafts, it will be discouraged.

Aims

- Provide opportunities for bushwalking consistent with the objectives of the Park.

TABLE 5 MANAGEMENT OF WALKING TRACKS

NAME	DISTANCE (ONE WAY)	CURRENT STANDARD	ADDITIONAL REQUIREMENTS	FUTURE STANDARD
Enfield Loop Track	15 km	C: moderately steep.	Provide track notes.	C
Surface Point–Long Gully Loop Track	6.6 km	C: moderately steep.	Provide track notes.	C
Surface Point Loop Track	1 km	C: moderately steep.	Provide track notes.	C

STANDARD:

C Track defined through use; may be benched, drained and cleared in sections.

- Minimise any environmental impacts caused by walking.

Management strategies

- *Encourage visitors to stay on walking tracks.*
- *Maintain walking tracks to Category C standard (table 5).*
- *Encourage volunteers to assist in the maintenance of walking tracks (section 6.1).*
- *Erect appropriate signage to warn visitors of the dangers of abandoned mine shafts (section 5.5).*

5.2.4 Horse riding

Horse riding is an occasional activity in the Park and causes few management problems at present. Generally groups are small and any organised activity requires a permit. Horses may cause significant erosion and trampling of vegetation, and can introduce weeds into the Park. Horse riding is permitted within the Park on all public access roads and tracks but not on management vehicle tracks or walking tracks, except the Spring Creek Track (table 3 and figure 3).

Horse-based camping is an inappropriate activity within the Park. There are opportunities for this activity within the adjoining Enfield State Forest.

Aims

- Provide opportunities for recreational horse riding, while minimising the impact of horse riding on park values and other users.
- Protect the Park from the impact of horse-based camping.

Management strategies

- *Permit horse riding only on public vehicle roads and tracks as specified in table 3 and the Spring Creek Track (MVO).*
- *Monitor the impact of horses on track surface condition and vegetation, including the introduction of weeds, and where necessary review access for this activity.*
- *Prohibit camping with horses, and the overnight grazing and feeding of horses, within the Park.*
- *Encourage recreational horse riders to keep to small groups.*
- *Ensure that groups organising endurance rides or other organised events obtain a Group Activity on Public Land Permit before the event.*
- *Provide information on Park roads and tracks available for horse riding on request, and encourage riders to follow the code of conduct for horse riding.*

5.2.5 Fossicking and prospecting

Enfield State Park overlies an area of gold mineralisation, and fossicking is a popular activity both in the Park and the adjoining Enfield State Forest. The former LCC recommended that fossicking should be permitted other than in areas where it may be necessary to protect particular park values.

Fossicking is a popular activity and is generally concentrated along Misery Creek. A Land Use Designation—Fossicking (section 2.3) has been developed to allow access to about 65% of the Park for recreational fossicking. Those areas designated for recreational fossicking are generally defined by recognisable boundaries such as roads, tracks or walking tracks (figure 2). Fossicking is also permitted within a 20 m strip on either side of Misery Creek.

The area available for recreational fossicking may be reviewed if future surveys identify sites of significant flora and fauna, and historic places.

Aim

- Provide for recreational fossicking and protect park values from damage by fossicking activities.

Management strategies

- *Seek gazettal of the fossicking area shown on figure 2 as an area available under section 32D of the National Parks Act for recreational fossicking, subject to conditions of use which protect the natural and cultural values of the Park.*
- *Encourage fossickers to notify the Ranger of intended fossicking activities and encourage low impact activity.*
- *Provide information on the fossicking area and conditions of use, and on alternative opportunities for fossicking in the adjoining Enfield State Forest.*
- *Monitor the use and impact of recreational fossicking within the Park and review the designated fossicking area if necessary.*

- *Control illegal fossicking and off-road vehicle activity through patrol, enforcement and education.*

5.2.6 Orienteering and rogaining

Orienteering and rogaining occasionally occur in the eastern section of the Park. These are generally organised events which may involve large numbers of people. These events can impact on vegetation and on other users of the Park. Management is required to prevent detrimental impacts on the Park's natural values and other Park users.

The presence of numerous mine shafts in the Park presents potential safety hazards (section 5.5).

Although mountain bike orienteering is recognised as a growing sport, there are limited opportunities for this activity on roads and tracks within the Park.

Aim

- Provide for orienteering and rogaining while minimising environmental impacts, conflicts with other recreation activities and public risk.

Management strategies

- *Require organisers of orienteering and rogaining events to obtain a permit and stage events to minimise impacts on park values.*
- *Manage events in accordance with Parks Victoria guidelines, and ensure compliance with permit conditions that adequately protect park values and visitor safety.*
- *Monitor the impact of orienteering events, and where necessary review the availability of sensitive areas of the Park for this activity.*
- *Ensure that organisers of orienteering events impart appropriate safety information to all participants and provide additional facilities for participants where required.*

5.2.7 Cycling

Bicycle riding is an activity that has been increasing in popularity in recent years. Although there has so far been little cycling within the Park, it is expected that the demand for cycling opportunities will increase in the future. A number of vehicle access tracks in the Park offer cycling opportunities.

Aim

- Provide access for cycling while minimising environmental damage and conflicts with other recreation activities.

Management strategies

- *Permit cycling on roads and tracks open to public vehicles and Spring Creek Track (MVO) as specified in table 3 and figure 3, but not on walking tracks or other 'management vehicle only' tracks.*
- *Encourage adoption of the code of conduct for mountain bikes and compliance with Parks Victoria guidelines.*

5.2.8 Dogs

The Park is managed for conservation and recreation. Dogs have the potential to cause conflict with these uses if they are permitted to wander at large.

Aim

- Provide for visitors wishing to bring dogs into the Park while protecting the natural values and visitor experiences in the Park.

Management strategies

- *Continue to permit dogs on leashes in the Park.*
- *Continue to prohibit dogs from the Reference Area.*
- *Encourage responsible dog ownership in the Park.*

5.3 Visitor information, interpretation and education

The provision of visitor information and interpretation material within the Park enables Parks Victoria to increase public awareness of park values and the role of park management. Interpretation aims to foster a positive attitude towards the conservation of natural areas by enhancing visitor empathy, personal attachment and enjoyment.

A Park Note for Enfield State Park is available from Parks Victoria offices. This publication will need to be updated when proposed changes in visitor facilities in the Park are implemented (table 4).

Orientation information, safety information and on-site interpretation are required at the main visitor facilities at Surface Point.

There are opportunities for increased use of the Park by local and regional school groups for nature-based educational activities.

Aims

- Orientate visitors to the Park and its features.
- Increase public awareness of park values and the role of park management, and enhance visitors' enjoyment and understanding of the Park's natural and cultural values.
- Increase the use of the Park for school-based educational activities.

Management strategies

- *Provide adequate visitor orientation and high quality interpretation, particularly of the Park's flora and cultural history.*
- *Ensure that a Park Note is available for visitors and is updated as required.*
- *Provide good directional and safety signage throughout the Park.*
- *Develop on-site interpretation at Surface Point Picnic Ground.*
- *Liaise with local and regional schools to enhance their awareness of the educational values of the Park.*

- *Provide quality customer service through Ranger contact during peak visitor periods and at other times as appropriate.*

5.4 Commercial tourism operations

One commercial operator is licensed to offer wildflower and gold mining history tours. There are further commercial opportunities for tours that interpret the flora and history of the Park, as well as 4WD tours.

Parks Victoria and the Victorian Tourism Operators Association have jointly developed accreditation, management and operational guidelines that aim to ensure economically and environmentally sustainable tourism use of public land, and to promote standards for quality and safe recreational experiences. Accredited tourism operators are well placed to educate their customers to adopt more environmentally sensitive approaches to park use.

Aims

- Provide opportunities for commercial tourism operators consistent with park management objectives.
- Ensure that operators and their customers adopt a responsible attitude to the Park environment.

Management strategies

- *Encourage the provision of a range of commercial tours and guided activities that are consistent with park management objectives.*
- *Ensure that all commercial operators are licensed in accordance with the National Parks Act and are accredited by a recognised industry body.*
- *Ensure that Rangers liaise with commercial tour operators to promote low-impact operations and the delivery of appropriate park management messages.*

5.5 Public safety

The Park contains many mine shafts which present various degrees of risk to Park visitors. Many mine shafts have no features, such as a mullock or tailings heap, that warn of their presence. The risk posed by these mine shafts varies with location, depth and visibility.

There is an old dredged dam in the eastern part of the Park. Some of the banks of this dam are dangerously steep.

Aim

- Minimise risks to Park visitors without destroying natural or historical values.

Management strategy

- *Develop a strategic plan to identify, treat and minimise public risk in recreation and other areas of the Park. Use geological and mining data to map open mine shafts, and specify appropriate treatment to minimise public risk in relation to these shafts and the dredged dam.*

6 COMMUNITY AWARENESS AND INVOLVEMENT

6.1 Friends and volunteers

Friends groups and volunteers are an important asset to the management of parks. These groups provide invaluable assistance through their involvement in projects that may have little or no funding but are still important in the management of parks.

Although there is no Friends Group for Enfield State Park at present, there is strong community support for such a group. Its formation should be supported to involve the community in the management of the Park.

The Park offers considerable opportunities for tertiary students from local educational institutions to undertake research activities within the Park. Students have provided invaluable assistance in collecting natural and cultural resource information in the past, and their continued involvement should be encouraged.

Aims

- Extend the use of volunteer groups assisting with management of the Park.
- Encourage relevant research that will assist with the management of the Park.

Management strategies

- *Facilitate the formation of, and support, a Friends Group for the Park.*
- *Develop and implement a long-term volunteer program which uses the skills and interests of volunteer groups in undertaking park management activities.*
- *Liaise with local and other appropriate academic institutions to foster research which assists with developing knowledge relevant to management of the Park.*

6.2 Community awareness and Park neighbours

The Park is primarily bordered by rural-residential allotments and the Enfield State Forest. Agricultural enterprises are predominantly sheep and cattle grazing. Several local Landcare groups are in operation near the Park.

These neighbours have a mutual interest with Parks Victoria in many management issues, including fire management and pest plant and animal control. Liaison and co-operation with adjoining landholders are essential and will be fostered. Parks Victoria will also encourage and promote awareness of environmental management practices and park values among Park neighbours.

Aims

- Increase public awareness of park management activities.
- Maintain and enhance liaison with adjoining landholders, and encourage their increased co-operation in the management of the Park.
- Encourage sound conservation and land management practices on land adjoining the Park.

Management strategies

- *Maintain liaison with local community groups and land owners, and involve them in relevant aspects of planning and managing the Park.*
- *Apply, and encourage the application of, the Good Neighbour Policy to management issues on or near the boundary of the Park.*
- *Encourage an increased community awareness program of best environmental practices and park values through the local media and interpretative programs.*

7 OTHER ISSUES

7.1 Authorised and other uses

7.1.1 Apiculture

Apiculture has been a traditional use of the area. The former LCC recommended that it should continue in the Park (LCC 1982). There is a maximum of three apiary sites for use within the Park (figure 2). The adjoining Enfield State Forest has a further eight sites, and a new site will be incorporated into the adjacent Berringa Historical Reserve.

All apiary sites within the Park are located in an area rarely used by visitors. Use of sites has been low following the 1995 Berringa wildfire but is expected to increase as vegetation regenerates.

Aims

- Allow apiculture in accordance with LCC recommendations.
- Minimise the impact of apiculture on park values.

Management strategies

- *Continue to permit and manage apiculture in accordance with Parks Victoria guidelines.*
- *Continue to permit use of three apiary sites within the Park, but do not allow the use of any new sites.*

7.1.2 Military training

The Park is occasionally used for military training activities. These include survival and navigation training. In the past, several training exercises using pyrotechnic devices occurred in the area. This activity is now undertaken in the adjoining Enfield State Forest. Such use is not appropriate within the Park, given its conservation values.

Aim

- Permit military training activities in a manner that minimises the effect on park values.

Management strategies

- *Continue to permit minimal impact military activities such as survival and navigation training in accordance with Parks Victoria guidelines.*
- *Monitor the impact of military activities on park values (sections 3.2, 3.3 and 3.5), and where necessary liaise with appropriate authorities to redress any problems.*

7.1.3 Grazing

Grazing occurs along a narrow stream frontage in the south-west of the Park. Before the proclamation of the Park this activity was licensed under Section 130 of the *Land Act 1958* (Vic.). Grazing is inappropriate in the Park, particularly as the area currently grazed includes a watercourse. A process is under way to phase out grazing within a two-year period from the release of the Approved Plan.

Aim

- Phase out grazing to protect park values.

Management strategies

- *Phase out grazing within two years of the release of this Plan.*
- *Until grazing is phased out, control stocking rates to protect park values, soils and water quality (section 4.3).*

7.2 Boundaries and adjacent uses

Enfield State Park has a boundary about 60 km long. Many of the Park's management problems are related either directly or indirectly to boundary issues (section 4.2).

There is concern that threats to the ecological processes and natural values of the Park may originate from development, subdivisions and land use practices on adjoining land.

Parts of Hansons, Springycreek and Catchment Boundary roads are not aligned with their road reserves. Mistletoe Track, on the former

Colac-Ballarat road reserve, is managed as part of the Park.

There is informal access through the Park to a number of private allotments bordering the Park (figure 3), and in many instances boundary fences are of poor quality.

Aim

- Minimise conflicts between park values and adjoining land.

Management strategies

- *Liaise with the Golden Plains Shire with respect to applications for development on adjoining freehold land that have the potential to adversely affect the Park, e.g. views and native vegetation.*
- *Identify road alignment anomalies, and seek closure of appropriate unused road reserves and their inclusion in the Park.*
- *Liaise with the Golden Plains Shire regarding the provision of legal access to adjacent landholders who are currently using Park tracks as temporary access.*
- *Where legal access is not available, negotiate the terms for continued access through the Park with adjacent landholders.*
- *Liaise with adjoining land owners regarding the maintenance or replacement of boundary fencing.*

8 IMPLEMENTATION

A three-year rolling implementation program will be prepared for the Park to ensure efficient implementation of this Plan. Priorities for management are identified in table 6 as an initial step in this process.

TABLE 6 PRIORITY MANAGEMENT STRATEGIES

MANAGEMENT STRATEGIES	SECTION IN PLAN
Resource conservation	
Determine appropriate fire regimes for the conservation of flora and fauna.	3.2, 3.3
Implement action statements for Flora and Fauna Guarantee Act listed species.	3.3
Park protection	
Develop and implement an ecologically-based fire management plan.	4.1
Prepare and implement a pest plant and animal control strategy.	4.2
The Park visit	
Provide adequate visitor orientation, safety information, and on-site interpretation at Surface Point Picnic Ground.	5.3
Maintain walking tracks.	5.2.3
Encourage visitors to adopt minimal impact techniques.	5.1
Develop a strategic plan for the identification, treatment and minimisation of public risk in recreation and other areas of the Park.	5.5
Community awareness and involvement	
Increase awareness of fire management issues and works programs within the Park.	4.1
Facilitate the formation of and support a Friends Group.	6.1
Develop and implement a volunteer program.	6.1
Involve local community groups and land owners in relevant aspects of planning and managing the Park.	6.2
Monitoring and research	
Encourage research into flora and fauna species.	3.2, 3.3
Encourage research into, and monitor the regeneration of, the flora and fauna after fire.	4.1
Monitor visitor numbers and use.	5.1
Encourage research into and collation of cultural and historical information.	3.5
Record and monitor cultural and historic sites and relics.	3.5
Monitor the spread of pest plant and animal species.	4.2
Monitor the impact of military activities.	7.1.2

REFERENCES

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- NRE (database) 1998a *Atlas of Victorian Wildlife*, Department of Natural Resources and Environment, Melbourne.
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APPENDIX I SIGNIFICANT FLORA

SCIENTIFIC NAME	COMMON NAME	STATUS
<i>Acacia lanigera</i>	Woolly Wattle	Locally significant
<i>Acianthus caudatus</i>	Mayfly Orchid	Locally significant
<i>Acianthus exsertus</i>	Gnat Orchid	Locally significant
<i>Caladenia</i> aff. <i>patersonii</i>	Spider Orchid	k
<i>Caleana major</i>	Large Duck-orchid	Locally significant
<i>Callistemon sieberi</i>	River Bottlebrush	Locally significant
<i>Crassula colorata</i>	Dense Crassula	Locally significant
<i>Cryptostylis subulata</i>	Large Tongue-orchid	Locally significant
<i>Daviesia genistifolia</i>	Broom Bitter-pea	r
<i>Dicksonia antarctica</i>	Soft Tree-fern	Locally significant
<i>Drosera planchonii</i>	Climbing Sundew	Locally significant
<i>Eucalyptus yarraensis</i>	Yarra Gum	Rr
<i>Eutaxia microphylla</i>	Common Eutaxia	Locally significant
<i>Gleichenia microphylla</i>	Scrambling Coral-fern	Locally significant
<i>Grevillea bedgoodiana</i>	Enfield Grevillea	Rv
<i>Gynatrix pulchella</i>	Hemp Bush	Locally significant
<i>Hakea</i> sp. (ex. <i>H. sericea</i> sensu Willis 1972)	Bushy Hakea	Locally significant
<i>Hypericum japonicum</i>	Matted St John's Wort	Locally significant
<i>Lepidosperma filiforme</i>	Common Rapier-sedge	Locally significant
<i>Lindsaea linearis</i>	Screw Fern	Locally significant
<i>Lobelia gibbosa</i>	Tall Lobelia	Locally significant
<i>Olearia erubescens</i>	Moth Daisy-bush	Locally significant
<i>Prasophyllum morrissii</i>	Bearded Orchid	Locally significant
<i>Pratia pedunculata</i>	Matted Pratia	Locally significant
<i>Pterostylis plumosa</i> s.l.	Bearded Greenhood	Locally significant
<i>Thelymitra flexuosa</i>	Twisted Sun-orchid	Locally significant

SOURCE: NRE (database) 1998b; Beaglehole (1983)

STATUS:

k	unknown - resolution pending, likely to be vulnerable or endangered
R	rare in Australia
r	rare in Victoria
v	vulnerable in Victoria

APPENDIX II SIGNIFICANT FAUNA

SCIENTIFIC NAME	COMMON NAME	STATUS
Mammals		
<i>Antechinus flavipes</i>	Yellow-footed Antechinus	Locally significant
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Locally significant
<i>Chalinolobus gouldi</i>	Gould's Wattled Bat	Locally significant
<i>Vespadelus vulturinus</i>	Little Forest Bat	Locally significant
<i>Miniopterus schreibersii</i>	Common Bent-wing Bat	v, L
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	v, L
<i>Falsistrellus tasmanienis</i>	Eastern False Pipistrelle	Locally significant
<i>Rattus lutreolus</i>	Swamp Rat	Locally significant
Birds		
<i>Burhinus grallarius</i>	Bush Stone-curlew	e, L
<i>Cinclosoma punctatum</i>	Spotted Quail-thrush	Locally significant
<i>Ninox connivens</i>	Barking Owl	e, N
<i>Ninox strenua</i>	Powerful Owl	e, L

SOURCE: NRE database 1998a

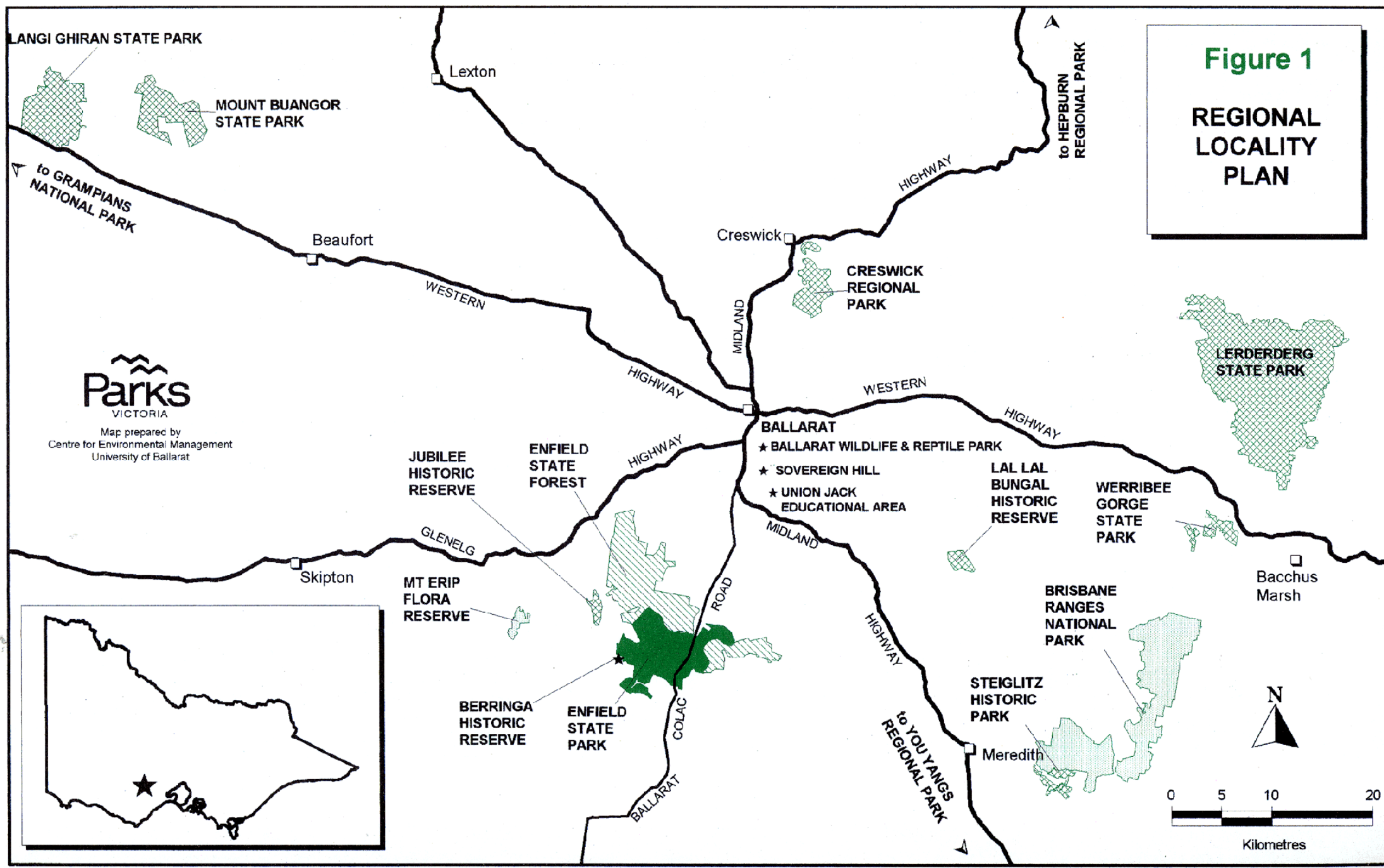
STATUS (NRE 1998):

e endangered in Victoria
v vulnerable in Victoria

L listed under the Flora and Fauna Guarantee Act
N nominated for listing under the Flora and Fauna Guarantee Act

Figure 1

REGIONAL LOCALITY PLAN



Parks
VICTORIA

Map prepared by
Centre for Environmental Management
University of Ballarat

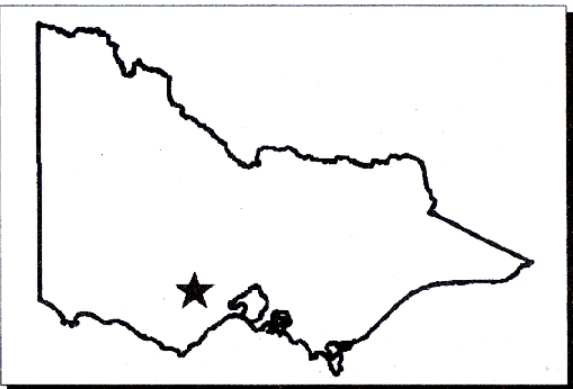


Figure 2

ENFIELD STATE PARK

MANAGEMENT ZONING AND AUTHORISED USES

- 2WD road - all weather
- 2WD road - dry weather only
- 4WD track - dry weather only
- Walking track

MANAGEMENT ZONING

- Conservation & Recreation Zone
- Reference Area Zone
- Land-use designation - Fossicking; note that a 20 metre strip either side of Mount Misery Creek is included in the area available for fossicking.

- Apiary site



Map prepared by
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University of Ballarat

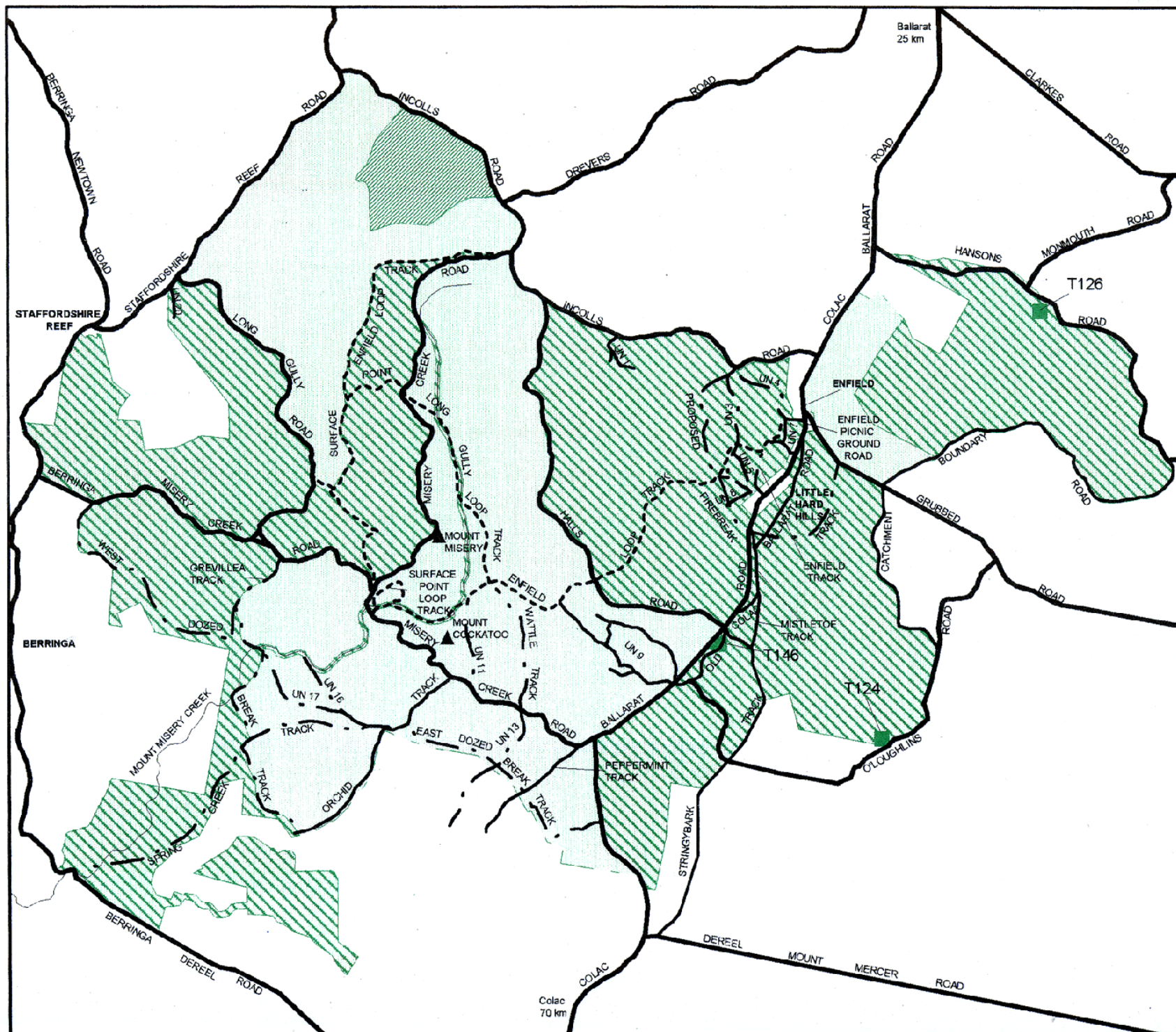
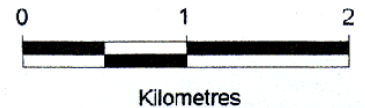


Figure 3 ENFIELD STATE PARK RECREATION AND ACCESS

- 2WD road - all weather
- 2WD road - dry weather only
- 4WD track - dry weather only
- Walking track

ACCESS MODIFICATIONS

- Proposed MVO track
- Proposed seasonal closure
- Proposed close and revegetate

RECREATION FACILITIES

- | | EXISTING | PROPOSED |
|-----------------|----------|----------|
| Toilets | | |
| Walking track | | |
| Fireplace | | |
| Historic marker | | |
| Picnic table | | |
| Information | | |



Map prepared by
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