

## 16 Regional parks, nature conservation reserves, and historic and cultural features reserves

*Regional parks, and reserves for nature conservation and historic and cultural features designate public land for particular uses. General recommendations for each of the three categories are made in this chapter, as well as information and recommendations for specific parks and reserves.*

### C Regional parks

A regional park is an area of public land, readily accessible from urban centres or a major tourist route, set aside primarily to provide recreation for large numbers of people in natural or semi-natural surroundings. Regional parks are generally of at least 1 000 ha and are managed by NRE, through Parks Victoria.

Regional parks have significant value for nature conservation as habitat, for representation of Box–Ironbark vegetation, as well as for their cultural heritage features in particular areas. Regional parks are included as part of the conservation reserve system.

The fragmentation of Box–Ironbark public land and hence its high extent of boundary with private land, and its closeness to many towns, provides an accessible setting for everyday forest use for ‘local recreation’; for walking, riding, running, and exercising dogs. Regional parks have some development for informal recreation; some existing parks are intensively used. They often have vehicle and walking tracks, riding trails, viewing platforms, picnic and barbecue facilities, fireplaces, toilets and interpretation material. These parks are generally available for a range of recreation activities, including orienteering, horse riding on open tracks, prospecting and gemstone seeking. Regional parks do not include sportsgrounds with constructed arenas, or sites exclusively used for one recreation activity. Such recreation areas are described in Section J in Chapter 18.

Park management plans are prepared to guide land managers. These plans identify zones with different management needs, areas with specific environmental or heritage values requiring protection, locations for facilities, and necessary management actions.

### *Other uses*

In relation to mining, these parks are recommended to be ‘restricted Crown land’ under the *Mineral Resources Development Act 1990*. The parks may be used for mineral exploration and mining, subject to the approval of the Minister for Environment and Conservation. Major mining proposals may require an environment effects statement and compliance with obligations under native title legislation. Refer to Chapter 7 for a full explanation.

Apiculture and recreational prospecting generally continue, subject to management plan provisions. Bee sites should be located away from recreation nodes. Grazing is not usually permitted in these parks.

Felling of dead trees for firewood and collection of fallen wood from the ground reduce habitat and are not permitted. Other timber products are similarly not available. Some domestic firewood may be produced from the recommended parks as a by-product of ecological management (see Chapter 4).

### *Additional regional park areas*

Eaglehawk Regional Park at Bendigo is to be included, with state forest and township land around Bendigo, in the recommended Bendigo Regional Park. Another new regional park is recommended at St Arnaud. A substantial addition is recommended to the Ararat Regional Park and a small addition is recommended to the Maryborough Regional Park.

The ECC endorses the existing regional parks at Beechworth (Historic Park), Mt Alexander and Hepburn. Reef Hills Regional Park at Benalla is now recommended as a state park.

Some of these public land areas were not considered by the Land Conservation Council in previous investigations, as they were in cities or towns, and therefore excluded from consideration under the relevant legislation.

### GENERAL RECOMMENDATIONS FOR REGIONAL PARKS

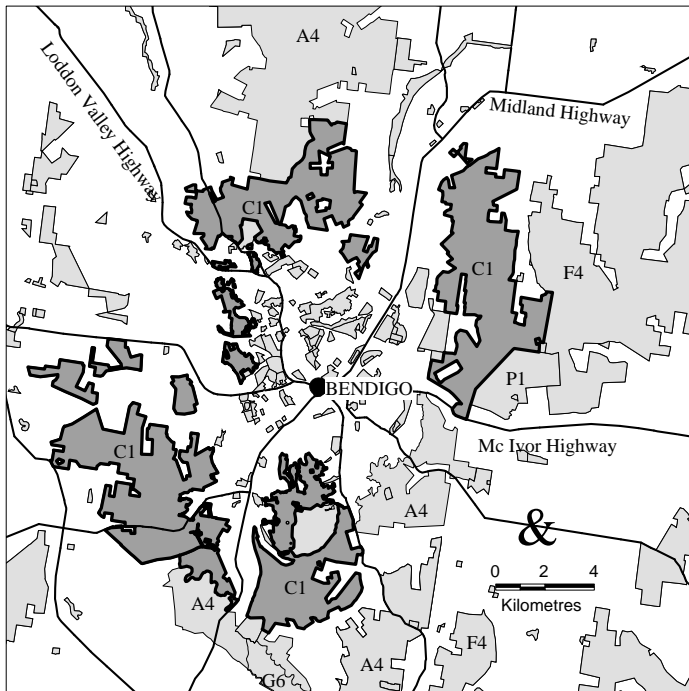
#### C Regional parks shown on Map A (numbered C2 to C7):

- (a) be used:
    - (i) for informal recreation associated with the enjoyment of natural surroundings by large numbers of people;
    - (ii) to conserve biodiversity and natural features; and
    - (iii) to protect significant historic sites and Aboriginal cultural sites and places;
  - (b) the following activities generally be permitted
    - (i) bushwalking, car touring, picnicking and camping;
    - (ii) nature observation, bird watching and visiting historic features;
    - (iii) orienteering and rogaining;
    - (iv) horse, mountain and trail bike riding on formed roads only;
    - (v) research, subject to permit;
    - (vi) exploration and mining, subject to the approval of the Minister for Environment and Conservation
    - (vii) apiculture on licensed sites, where consistent with the primary uses above and park management requirements;
    - (viii) recreational prospecting and gemstone-seeking, where consistent with the primary uses above and park management requirements, but not where they would disturb protected archaeological relics;
    - (ix) other recreational activities in accordance with a management plan;
- and:
- (c) timber harvesting, grazing and car rallies not be permitted;
  - (d) these parks be subject to management plans to protect biodiversity and significant features;
  - (e) in accordance with the ecological management strategy recommended in Recommendation R12 (Chapter 4), dense eucalypt regrowth be thinned to enhance the growth of retained trees;
  - (f) unused road reserves be added to adjoining parks where appropriate;
- and:
- (g) regional parks be permanently reserved under the *Crown Land (Reserves) Act 1978*, and managed by the Department of Natural Resources and Environment, except where otherwise specified.

Notes: 1. Should ecological management (recommendation (e) above) require removal of wood from parks, that wood may be sold.  
2. Implementation of recommendations and land management should allow flexibility for minor boundary adjustments.

## C1 Bendigo Regional Park

An enlargement of the Bendigo area, showing recommendations around the city including this recommended regional park and the recommended Greater Bendigo National Park, is provided as Map D of this report.



*The residents of Bendigo are fortunate to live in a large modern rural city that is surrounded closely on all sides by extensive Box–Ironbark forests. The recommended regional park, together with the recommended Greater Bendigo National Park (see A4), would make Bendigo a ‘city within a park’. This location has large areas of indigenous vegetation, which provides a key part of the visitor experience, for example seasonal wildflower displays. The area also contains Aboriginal cultural values and many historic features and associations with gold mining.*

### Benefits of the park

#### *Biodiversity conservation*

The recommended Bendigo Regional Park is an area of high flora and fauna conservation values. It would protect populations of the pink-tailed worm-lizard which is nationally endangered. It would also protect habitat for 15 other threatened flora and fauna species.

#### *Recreation and tourism*

The park would be managed in conjunction with the recommended Greater Bendigo National Park, although different provisions would apply for particular uses. These parks would stimulate awareness and appreciation of the diverse range of features offered by bushland in and around Bendigo. Parts of the recommended regional park are already popular with locals for activities such as bushwalking, horse riding, nature observation, cycling and picnicking. It includes much of the established Bendigo Bushland Trail.

Increasingly, the park would be expected to become popular with ‘heritage tourists’ due to its array of significant sites, many of which are linked by trails and roads that allow easy access. Wildflower displays and the opportunity to enjoy passive recreational activities in a natural setting would also attract tourists.

### Location

The park, along with the recommended Greater Bendigo National Park, surround Bendigo effectively creating a ‘city within a park’. It incorporates many parcels of public land for which coordinated management is a high priority.

The recommended park covers 8 745 ha—comprising the existing Eaglehawk Regional Park (833 ha); Whipstick uncommitted land (823 ha); parts of the existing Wellsford, Mandurang, and Marong State Forests (2 616 ha, 1 100 ha, and 2 200 ha respectively); Diamond Hill Historic Reserve (450 ha); part of Crusoe-Big Hill Water Production area (230 ha) and several nature conservation reserves, bushland reserves, township and other small parcels (493 ha total). Commonwealth land at Longlea (see P1 page 98) abuts the eastern boundary.

## Environmental values

### *Biodiversity*

The recommended park and immediately adjoining public land support pink-tailed worm-lizard (part of the only known Victorian population), populations of several threatened species, including key sites for swift parrot and brush-tailed phascogale, two sites of botanical significance for Williamson's and Ausfeld's wattle, sweet quandong and cane spear-grass, and several fauna refuges.

The recommended park would contribute significantly to representation of Alluvial Terraces Herb-rich Woodland, and Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic EVCs.

Sections of forest within the recommended park contain a remarkable diversity of plant species, particularly within the understorey. In Winter and Spring these plants provide an impressive wildflower display.

### *Heritage*

The recommended park contains:

- features of old mines such as the Moon and New Moon groups, Lightning Hill group, Virginia Hill group, and Prince of Wales group around Eaglehawk;
- New Carshalton Co. and Spargoes Pyrites Works in West Bendigo;
- Diamond Hill Historic Reserve contains numerous old shafts, mullock heaps, footings of crushing plants, tailings, sluice sites, old shelters and other features. It also contains the Glasgow and Golconda group mine sites;
- features of the Coliban Water Supply System especially at the Crusoe and No. 7 Reservoirs; and
- the Mandurang and Wellsford forests have been recorded as having social and aesthetic community heritage values.

## Aboriginal interests

There are several Aboriginal sites and places in this recommended park. The local Aboriginal people have a strong continuing relationship with the land in this area. The protection of any Aboriginal cultural sites and places is the main priority for traditional owners.

The local Aboriginal community was supportive of the ECC's general recommendations for regional parks; however, they made some specific comments in relation to some permitted uses. For example, many believe that tourism operators and prospectors should undertake cross-cultural training to ensure they show respect for, and understand the procedures to follow when locating Aboriginal sites and places.

The need for adequate surveys and systematic assessment of Aboriginal cultural sites and places, in conjunction with traditional owners, in parks and reserves is a priority in this area. Traditional owners seek a role in the process of authorising tourism, scientific and commercial activities.

The local Aboriginal community has a good working relationship with mining companies in the area.

## Community views

Strong local support for establishment of a Greater Bendigo National Park, comprising most or all of the public land around Bendigo, was evident at public consultative meetings and in submissions received following the release of the Draft Report. Support for the regional park as proposed, or for the public lands close to Bendigo was also evident. There was strong support for continued opportunities for a wide range of local recreation uses, including activities more appropriate for a regional park adjoining a large city, than a national park.

The mining industry is keen to maintain access to the most prospective areas for gold exploration, production and associated infrastructure, especially goldfields that historically have been some of the richest in the world.

## Current and future uses

The recommended park embraces public land close to Bendigo, which is popular for a wide range of recreational activities, including some that reflect its near urban setting. The recommended Greater Bendigo National Park (A4) includes areas generally further from the central city with an array of significant biodiversity values, and which is less intensively used for recreation.

The ECC considers this recommended regional park to be ideally located to meet the demands of the Bendigo community and to provide a buffer for the surrounding recommended Greater Bendigo National Park. The recommended regional park itself does not warrant national park status,

although it would also provide protection for natural values. Firewood harvesting would no longer be permitted, however surrounding state forests, such as Wellsford, remain available for both firewood and other timber harvesting. Opportunities for organised pest control shoots may arise at the discretion of the land manager.

### ***Apiculture***

There are 8 permanent and 16 temporary bee sites distributed through the recommended park.

### ***Mining***

Historically, the Bendigo goldfields were some of the richest in the world, from the great gold rush of the 1850s through to the second half of the 20<sup>th</sup> century. The area is still highly prospective for gold and consequently there are four mining licences within the area of the recommended regional park. In particular, Bendigo Mining NL holds mining and exploration licences across much of the Bendigo area including parts of the park, and has the potential to become a significant gold producer in Victoria. The Carshalton Portal to its underground mine, and the New Moon site are recommended as earth resources areas adjoining the park. Four other exploration licences cover much of the remaining park area.

Mining and exploration would be permitted in the recommended park, subject to the approval of the Minister for Environment and Conservation, and in accordance with recommendations in Chapter 7, and the *Mineral Resources Development Act 1990*.

Underground mining requires surface infrastructure. Sites for substantial infrastructure may be required for the production stage of mining. This would require separate approval from the government. The principles and guidelines in Chapter 7 should also apply. Sites for minor infrastructure such as air shafts and vents may be located in the park if necessary, but its intrusion should be minimised.

### ***Extractive industries***

There are two extractive industry work authorities within the recommended park. The existing work authorities would continue and new extractive industries may be permitted, subject to the approval of the Minister for Environment and Conservation and in accordance with recommendations in Chapter 7, and the *Extractive Industries Development Act 1995*.

### ***Prospecting***

Parts of the recommended park, notably the Eaglehawk Regional Park and Marong State Forest, are of moderate to high interest for prospectors.

### ***Recreation and tourism***

Abundant natural and historical values close to Bendigo provide outstanding recreational opportunities. Popular activities include use of the Bendigo Bushland Trail, nature study, bushwalking, orienteering, prospecting, gemstone-seeking, picnicking, bicycle riding, horse riding (on formed roads) and walking dogs.

Heritage-based tourism would be expected to become increasingly popular with the establishment of the recommended park.

### ***Timber harvesting***

The net current state forest area covered by the recommended park is 5 340 ha. This is 4.2% of the total area currently available for timber harvesting.

Commercial timber harvesting would not be permitted in the recommended park. However, extensive areas of state forest nearby (F4) remain available for timber harvesting (see Chapter 17).

Domestic firewood collection would not be permitted in the recommended park. Firewood permits are currently issued for the collection of fallen timber from parts of the recommended park, particularly in the Wellsford State Forest.

For local residents, opportunities for domestic firewood collection would remain in the adjacent state forest. Some domestic firewood may also be produced from the park as a by-product of thinning for ecological management (see Chapter 4).

### ***Water production***

Spring Gully Reservoir catchment, designated for water production, adjoins the recommended park, and contributes valuable habitat to complement the park, but will continue to be unavailable for public access.

Coliban Water is currently reviewing its system through the 'Aqua 2000' project, and the management of any dams not required in future. Crusoe and Number 7 Reservoirs may not be required. Crusoe in particular has high potential for passive water-based recreation. Crusoe Reservoir and its immediate surrounds could be managed separately from the recommended regional park as a community recreation and tourism focus point, and

the City of Greater Bendigo has expressed interest in such use and managing this area.

Crusoe and Number 7 Reservoirs also have significant historical features associated with outlets, spillways and early water treatment works, which should be protected. Measures to ensure safety of these dam walls should aim at maintaining the highest practical safe water level.

### Management issues

As with other areas to be managed as parks or reserves close to towns, this recommended park would have several management needs, such as interpretative signs and establishment of appropriate facilities at suitable sites, track

management and control of a minor rubbish dumping problem.

A proposal to extend Bendigo Airport north-south runway to the south is under consideration. The runway and its associated safety area would affect the recommended park. If this proceeds the affected areas should be excised from the park and designated 'services and utilities area'.

The Aboriginal community expressed a desire to be more involved in park management, the location and protection of Aboriginal cultural sites and places, and any interpretation developed as a result. Consultation with traditional owners and participation in public land and water management are encouraged by the ECC (see Chapter 5).

## RECOMMENDATIONS

**C1** The 8 745 ha Bendigo Regional Park shown on Map A:

- (a) be used to:
  - (i) provide opportunities for recreation and education associated with the enjoyment and understanding of natural environments and heritage features;
  - (ii) provide for appropriate recreation facilities;
  - (iii) conserve and protect biodiversity and natural features;
  - (iv) protect significant historic sites and Aboriginal cultural sites and places;
- (b) generally permit the following activities:
  - (i) bushwalking, picnicking and camping;
  - (ii) car touring, trail bike riding and horse riding on formed roads;
  - (iii) nature observation, bird watching and visiting historic features;
  - (iv) orienteering and rogaining;
  - (v) other recreational activities in accordance with a management plan;
  - (vi) exploration and mining, subject to the approval of the Minister for Environment and Conservation (see Note 1);
  - (vii) metal detecting (prospecting), except in designated zones defined in a park management plan;
  - (viii) apiculture on traditionally licensed sites, subject to park management requirements;
  - (ix) walking dogs on leads; and
  - (x) research, subject to permit;

and:

- (c) in accordance with the ecological management strategy recommended in Recommendation R12 in (Chapter 4), dense eucalypt regrowth be thinned to enhance the growth of retained trees;
- (d) harvesting of forest products, grazing by domestic stock, hunting and the use or carrying of firearms, and car rallies not be permitted; and
- (e) subject to the 'Aqua 2000' project confirming Crusoe and No. 7 Reservoirs are not required for future water supply purposes, and completion of associated works, these reservoirs and their surrounds be managed as a community recreation and tourism focal point (see Notes 2 & 3).
- (f) the park be permanently reserved under the *Crown Land (Reserves) Act 1978*, and managed by the Department of Natural Resources and Environment. (see Note 4)

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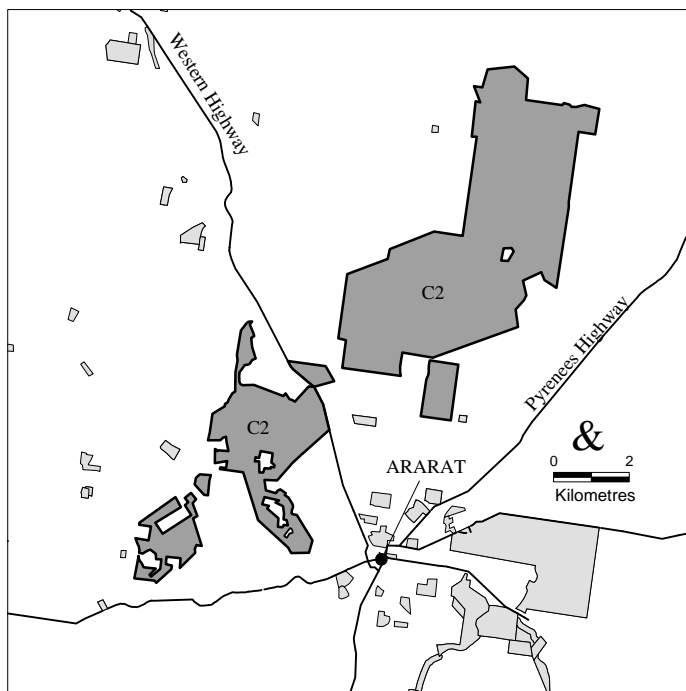
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- Notes:
1. Underground mining requires infrastructure for the production stage. Location of substantial infrastructure in the park would require separate approval from the government. The principles and guidelines in Chapter 7 should apply. Minor surface infrastructure such as air shafts and vents may also be required. Sites for such infrastructure may be located in the park if necessary, however its intrusion should be minimised.
  2. Certain public land areas now managed by Coliban Water are to be transferred to NRE under these recommendations. Coliban Water should continue to manage storages and channels in the park associated with the supply of water to Bendigo and surrounding towns. In particular: 20 m wide easements/reserves are located along the Spring Gully and Specimen Hill channels, and a short section of the Main Coliban Channel; a 50 m wide easement/reserve lies along the Sandhurst access road and pipelines; and appropriate easements/reserves adjoin the Sandhurst Pipeline, Eppalock Pipeline and other Coliban Water channels and pipelines providing domestic water supply. The park managers and Coliban Water should jointly prepare a management plan for areas with water supply infrastructure, as appropriate.
  3. On completion of the 'Aqua 2000' project, measures to ensure the safety of Crusoe and No. 7 Reservoirs should aim to maintain the highest practical safe water level, and protect historic features.
  4. The area around Crusoe and Number 7 Reservoirs could be separately managed by the City of Greater Bendigo as committee of management, if appropriate.
  5. Part of the park south of Bendigo Airport is under consideration for a runway extension and an associated safety area. If this proceeds, the affected area should be excised from the park and designated services and utilities area, and an isolated area of forest south-west of the rifle range managed as a natural features reserve – bushland area. Alternative public access to the park should be ensured in this location.

### **Information Sources**

- Bannear (1993a).  
 Context Pty Ltd (1999).  
 CFL (1989b).  
 Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.  
 Davies (1992).  
 Davies and Riley (1993).  
 Mirimbiak Nations Aboriginal Corporation (2000).  
 National Parks Service (1996a).  
 Scientific Advisory Committee, Flora and Fauna Guarantee (1996).  
 Stone (1996a).  
 Stone (1996b).

## C2 Ararat Regional Park



*The recommended Ararat Regional Park has both recreational potential and environmental significance. It provides scenic views as it lies on a low ridge of the Great Dividing Range and offers opportunities for local recreation such as picnics, bird watching, wildflower viewing and half day walks. The recommended park also supports the threatened powerful owl.*

### Benefits of the park

#### ***Biodiversity conservation***

The recommended Ararat Regional Park would protect large old tree sites, two threatened species and areas of two threatened EVCs.

#### ***Recreation and tourism***

The park would provide opportunities for driving, walking, nature observation and picnicking. Several scenic view points overlook both forested and rural settings.

#### **Location**

The recommended Ararat Regional Park covers 3 671 ha—comprising the existing Ararat Hills Regional Park (1 000 ha) north-west of Ararat, plus Dunneworthy State Forest (2 550 ha), and uncommitted Crown land (121 ha) to the north of Ararat.

### Environmental values

#### ***Biodiversity***

The park would contribute significantly to representation of four EVCs, notably Grassy Woodland, and Alluvial Terraces Herb-rich Woodland (the largest patch in the study area).

At least two threatened species have been recorded in the recommended park—powerful owl and buloke. See Appendix 1 for the conservation status of threatened species.

#### ***Large old tree sites***

The recommended park contains three large old tree sites, predominantly of yellow gum, totalling 644 ha.

### Aboriginal interests

There are Aboriginal sites and places in this recommended park. The protection of Aboriginal cultural sites and places is the main priority for traditional owners. There is need for the systematic assessment of Aboriginal cultural sites and places, in conjunction with traditional owners.

Aboriginal groups are concerned about the potential impact of increasing tourism on significant cultural sites. They believe that tourism operators should have to undertake cross-cultural training to ensure respect for Aboriginal sites and places, and to understand the procedures to follow when locating any sites. Traditional owners seek a role in the process of authorising tourism, scientific and commercial activities.



An application for a native title determination has been lodged with the National Native Title Tribunal including some of the recommended park area.

### **Community views**

Submissions following the Draft Report were equally divided between those supporting the recommended park, those proposing that the park be upgraded to state park status, and those opposing the park. Submissions opposed to the recommended park mostly supported continued firewood collection for domestic supply and fire protection.

Those specifically supporting the park addition referred to the important EVC representation, large old tree sites and the relatively good condition of Dunneworthy forest. Some supported reservation of the area but proposed it be a state park to give greater emphasis to conservation and protect it from threatening uses.

Other submissions suggested making specific provision for prospecting and orienteering respectively and establishing plantations on cleared public land to assist with future firewood supplies for Ararat.

### **Current and future uses**

The recommended inclusion of Dunneworthy in the reserve system is seen as necessary by the ECC because of its important EVC representation, but this area does not warrant state park status.

#### ***Apiculture***

There are three permanent and two temporary bee sites in the recommended regional park.

#### ***Mining***

Three exploration licences cover two thirds of the area of the recommended Ararat Regional Park.

Mining and exploration would be allowed in the recommended park, subject to the approval of the Minister for Environment and Conservation, and in accordance with recommendations in Chapter 7, and the *Mineral Resources Development Act 1990*.

#### ***Recreation and tourism***

The recommended park has three established picnic areas, two lookouts and several other accessible high points, particularly in the existing park, with impressive views towards the Grampians, Pyrenees and Langi Ghiran. Over much of the recommended addition to the park, large yellow gum and yellow box trees are features of attractive forests on gentle

slopes, and there is potential for half-day walks through the area.

There are significant goldfields, of continuing interest to prospectors, parallel to the Western Highway, in and adjoining the existing Ararat Regional Park, but virtually no history of shafts or alluvial diggings in the Dunneworthy area.

Prospecting and orienteering are generally permitted in regional parks.

#### ***Timber harvesting***

The net available productive forest area covered by the recommended Ararat Regional Park is 2 003 ha. This is 1.6% of the total area currently available for timber harvesting. The annual harvest in Dunneworthy State Forest has averaged 12 cubic metres for fencing timbers for each of the past five years. Commercial timber harvesting would not be permitted in Ararat Regional Park.

The West Regional Forest Agreement proposed that most of this area be made a Special Protection Zone and that a Special Management Zone would apply to the remainder.

Domestic firewood permits were issued for the collection of fallen timber from the Dunneworthy Forest. Approximately 410 cubic metres each year has been removed under these permits. Domestic firewood collection would not be allowed in future. Some domestic firewood may be produced from the recommended park as a by-product of thinning for ecological management (see Chapter 4). Locally, opportunities for domestic firewood collection remain in the Pyrenees and Mt Cole State Forests. The Rural City of Ararat, and other relevant organisations, could consider use of uncategorised public land east of Green Hill Lake for a woodlot plantation.

### **Management issues**

#### ***Ecological thinning***

Parts of the Dunneworthy Forest area are characterised by dense stands of relatively small trees. Intense competition may be preventing individual trees from reaching their normal mature stature and the area should be a high priority for ecological management.

## **RECOMMENDATIONS**

- C2**
- (a) The Ararat Regional Park of 3 671 ha shown on Map A be used in accordance with the general recommendations for regional parks on page 152; and
  - (b) in accordance with the ecological management strategy recommended in Recommendation R12 in (Chapter 4), dense eucalypt regrowth be thinned to enhance the growth of retained trees

## **Information Sources**

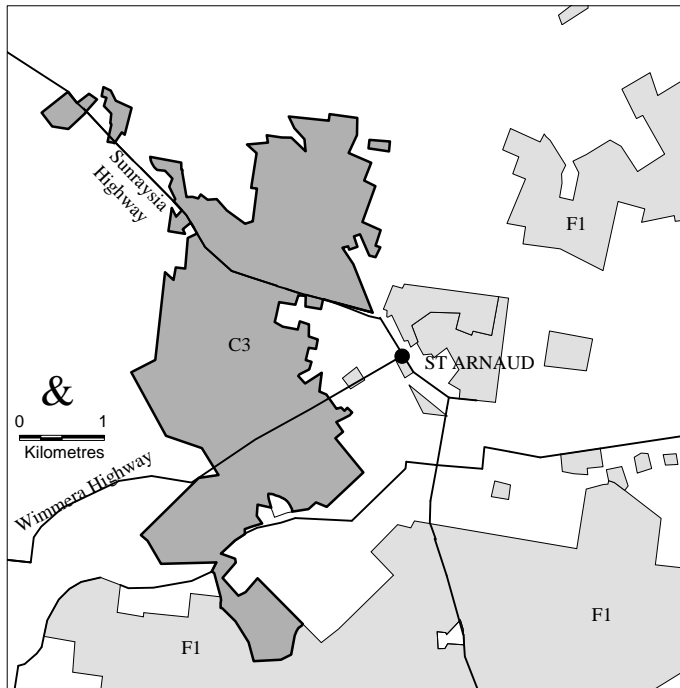
Commonwealth of Australia and State of Victoria (2000).

Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.

Holland and Cheers (1999).

Mirimbiak Nations Aboriginal Corporation (2000).

## C3 St Arnaud Regional Park



*The St Arnaud community already enjoys features of the recommended St Arnaud Regional Park—the outlook over the town, picnics at View Point, numerous walking and riding tracks, the Wax Gardens, the forest setting, historic mining sites and Bakery Hill settlement and the old reservoir. Creation of a regional park would see coordinated planning and management, improved facilities, consistent information services that would establish the park identity and increase visitor use and appreciation of the distinctive Box-Ironbark forests.*

### Benefits of the park

#### *Biodiversity conservation*

The recommended St Arnaud Regional Park supports one threatened fauna species, and one threatened plant species.

#### *Recreation and tourism*

View Point provides scenic views of St Arnaud township and surrounding countryside. The recommended park is important for local recreation, field naturalist studies, historic site appreciation and prospecting. The old town reservoir provides scope for aquatic activities.

### Location

The recommended park covers 957 ha—comprising four township blocks around St Arnaud, including the View Point and Bell Rock areas, a bushland reserve, two small historic and cultural features reserves and 28 ha around the Wax Gardens in state forest.

### Environmental values

#### *Biodiversity*

The recommended St Arnaud Regional Park would provide habitat for threatened species, including swift parrot and cane spear grass.

The recommended park supports a notable stand of grass trees at View Point and a good population of sticky boronia at Bell Rock.

#### *Heritage*

The recommended park contains several significant historic mining sites:

- New Bendigo Company, St Arnaud Gold Mining Company, Brownings Luck Company, and several nearby mines;
- New Bendigo diggings and settlement, Chinese village, and school site; and
- Kershaws charcoal site.

## Aboriginal interests

The traditional owners support the protection of this area. They are concerned about major increases in tourism, because of the potentially increased risk of damage to cultural and environmental values.

Aboriginal groups expressed a need for cultural heritage surveys and cross-cultural training for users such as tourism operators and prospectors. They seek a role in the process of authorising tourism, scientific and commercial activities.

An application for a native title determination has been lodged with the National Native Title Tribunal including the recommended park.

## Community views

Submissions regarding the proposed park included those supporting the park and those proposing additions to the park. Several submissions proposed upgrading it to national or state park status. There were also submissions received opposing the park, including opposition to any further exclusion from prospecting in this area.

A suggested addition was the Wax Gardens area which includes a fenced area, developed with paths, signs and an interpretation board.

Those opposing the park were concerned about:

- opportunities for future firewood collection reduced by this park, the Stoney Creek Nature Conservation Reserve and the recommended St Arnaud Range National Park; and
- access for camping, hunting and prospecting.

Many in St Arnaud use firewood for heating and cooking and alternatives are, for some, too expensive or unavailable.

## Current and future uses

The ECC considers that this recommended park is well located to provide local recreation in a natural setting and protection for biodiversity and cultural heritage values. Upgrading this park to a higher status is not justified.

### *Apiculture*

There is one permanent site and two temporary bee sites distributed in the recommended park.

### *Mining*

Two exploration licences cover the entire recommended St Arnaud Regional Park. Mining and exploration would be permitted in the recommended park, subject to the approval of the Minister for Environment and Conservation, and in accordance with recommendations in Chapter 7, and the *Mineral Resources Development Act 1990*.

### *Prospecting*

The recommended park and its immediate surroundings contain the most significant gold diggings in the St Arnaud region. These diggings are of moderate to high interest to prospectors. The area of the park would remain available for prospecting. Care should be taken to ensure historic and Aboriginal cultural sites are not damaged.

### *Recreation and tourism*

The local community and visitors currently use the scenic lookout at View Point and the picnic spots. The area is also used for bushwalking, cycling, horse riding, nature observation and picnicking.

Camping access in this relatively small area would be determined by the land manager. Hunting is permitted in the state forest areas immediately south of the recommended park.

### *Timber harvesting*

The net available productive forest area covered by the recommended St Arnaud Regional Park is estimated to be 500 ha. This is 0.4% of the total area currently available for timber harvesting. Commercial timber harvesting would not be permitted in the park.

Approximately 400 cubic metres per annum of domestic firewood is currently removed under permit from the park area. Domestic firewood collection would not be allowed in future. Some domestic firewood may be produced from the recommended park as a by-product of thinning for ecological management (see Chapter 4). Locally, timber can be obtained from Moolerr (North St Arnaud Range) Forest (see F1).

Recognising that the provision of firewood is a significant issue, the ECC has reduced the size of a recommended nature conservation reserve at Stoney Creek to allow a larger area of state forest to remain available.

## Management issues

As with other areas to be managed as parks or reserves close to towns, this recommended park

would have several management needs such as interpretation signs, establishment of appropriate facilities at suitable sites, track management and control of a minor rubbish dumping problem.

### RECOMMENDATION

**C3** The St Arnaud Regional Park of 957 ha shown on Map A be used in accordance with the general recommendations for regional parks on page 152.

### Information Sources

Bannear (1994a).

Bannear (1997).

Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.

Mirimbiak Nations Aboriginal Corporation (2000).

Stone (1999c).

## Existing regional parks and minor changes

### C4 Maryborough Regional Park

Situated between the Paddys Ranges State Park and Maryborough township, this park is noted for its impressive wildflowers and avifauna and has developed tracks for local informal recreation.

Several submissions were received on this park. Predominantly these recommended enlarging the park by adding other state forest areas in and adjoining the old town boundary. It was claimed that much of the forest within the Maryborough township boundary is not used for timber production or firewood collection and therefore there should be no major opposition. Additions would also assist in the creation of eco-tourism opportunities by effectively surrounding the town with a regional park.

The ECC has recommended an addition of 226 ha, which increases the size of the park to 524 ha. The additions consist of Crown land in the former town boundary of Maryborough and small areas of adjoining state forest. The recommended additions provide Pyrenees Highway frontage and access to the park. The forest is substantially intact with low levels of weed invasion or other disturbance. A popular picnic area beside the Goldfields Reservoir, on Shire of Central Goldfields land, should be managed in conjunction with the recommended park extension. This township land was not included in forest productive area calculations for timber. An exploration licence includes the park and recommended addition.

#### RECOMMENDATION

- C4** The area of 226 ha shown on Map A be added to the Maryborough Regional Park and the 524 ha park be used in accordance with the general recommendations for regional parks on page 152.

### C5 Mt Alexander Regional Park

New studies since publication of the ECC's Resources and Issues Report (1997) have identified vegetation types and large old tree sites at Mt Alexander.

Most of the slopes carry a distinct community of Granitic Hills Woodland EVC, otherwise found in the north-east at Warby Range and Mt Pilot. It is dominated by manna gum, messmate, long-leaf box, river red gum and yellow box trees. Around Mt Alexander this EVC has been substantially cleared.

Mt Alexander is the only known site for the nationally endangered plant—southern shepherd's purse. This reserve also provides important habitat for powerful owl. The whole of Mt Alexander, except for the pine plantation, has been identified as

a high-quality large old tree site, the third largest in the study area. Mt Alexander has four active quarries producing high quality grey granite for monumental and building purposes. This stone splits readily, takes a good polish and has low wastage. Extraction rates should remain low, and opportunities for relocation on private land should be explored.

Historic features of significance include relics of a former silkworm farm and a Valonia oak plantation established to produce acorn tannin for hides. Both are located in the Mt Alexander pine plantation, now managed by Hancock's Victorian Plantations, but to be returned after harvest and revegetation for inclusion in the park. These historic features are to be protected.

#### RECOMMENDATION

- C5** The 1 240 ha Mt Alexander Regional Park:
- (a) be used in accordance with the general recommendations for regional parks on page 152; and
  - (b) be managed taking into account new information on EVCs and large old trees.

## C6 Hepburn Regional Park

This park is mainly located around Daylesford, outside the Box–Ironbark study area. A small area (59 ha) of this park at Mt Franklin is within the Box–Ironbark study area boundary. This area is of social and historical significance as an early natural beauty and recreation spot.

Mt Franklin is an extinct volcano with a large crater. The mountain was part of the Loddon Aboriginal Protectorate and is still highly significant to

Aboriginal people. It is also significant for its early association with pastoral settlement. Apart from some quarrying in the past, the crater area has been managed as a recreation area for nearly a hundred years. The mountain is also recognised for its scientific value and forms part of an important group of volcanic landforms in Victoria.

No change is recommended to the park's status or uses.

### RECOMMENDATION

**C6** The Hepburn Regional Park of 59 ha (part of the park) be used in accordance with the general recommendations for regional parks on page 152.

## C7 Beechworth Regional Park

This park is mainly located around Beechworth, with some sections occurring outside the Box–Ironbark study area. An area of 606 ha is within the Box–Ironbark study area boundary. Currently Beechworth Park is scheduled and managed under the *National Parks Act 1975* and is known, and signposted, as Beechworth Historic Park. About 52 ha of this park, around Woolshed Falls, is recommended for inclusion in the Chiltern–Pilot National Park.

The park contains several EVCs representing a diverse range of vegetation and habitat types,

including Valley Grassy Forest and Granitic Hills Woodland/Rocky Outcrop Shrubland/Herbland Mosaic.

It also provides habitat for nine threatened flora and fauna species, including brush-tailed phascogale, square-tailed kite, barking owl, turquoise parrot, bandy bandy, Dookie daisy, hairy hop-bush, delicate love-grass and yellow hyacinth-orchid.

Beechworth Regional Park incorporates a small section of Reedy Creek and is contiguous with the recommended Chiltern–Pilot National Park.

### RECOMMENDATION

**C7** The Beechworth Regional Park of 606 ha shown on Map A be managed in accordance with the general recommendations for regional parks on page 152, but retained on Schedule 3 of the *National Parks Act 1975*.

## Former Regional Parks

The **Reef Hills Regional Park** at Benalla is now recommended as a state park (see Chapter 15, B4).

**Eaglehawk Regional Park** at Bendigo is to be included in the recommended Bendigo Regional Park (see Chapter 16, C1).

**One Tree Hill Regional Park** at Bendigo is to be included in the recommended Greater Bendigo National Park (see Chapter 15, A4).

## D Nature conservation reserves

Outstanding natural values make some public lands highly significant for their botanical or wildlife populations and habitats, or both. The reserves below contain examples of indigenous vegetation with considerable floristic or habitat value in a natural or relatively natural state. The primary land use of the areas identified below is for nature conservation. They are set aside to conserve locations with plant species that may be rare or threatened and/or, plant associations or communities that are of particular conservation significance and/or valuable habitat for populations of significant indigenous fauna.

Nature conservation reserves, together with the existing and recommended new parks, make up the core of the protected areas system. They are recommended to be securely reserved and managed primarily to conserve and protect indigenous plant or animal species, communities or habitats. They vary in size but most aim to represent communities or EVCs.

Public appreciation and education about their values is encouraged. Passive recreation activities are also encouraged, particularly those—such as nature study and walking—associated with appreciation of the area. Orienteering, rogaining, other low impact recreation, and camping in the larger reserves, would generally be permitted, subject to management requirements. In some reserves zones for walking dogs on leads may be identified by the land managers.

The values of nature conservation reserves vary but include: occurrences of individual rare or threatened plant species; representative, diverse or intact examples of particular communities; limit-of-range sites; remnants of largely modified land systems; places with recorded presence of rare or threatened fauna or diverse faunal assemblages; and representative examples of habitat.

Chapter 4 (Nature conservation) outlined the crucial need for indigenous plant and animal conservation across the study area. The recommendations in this chapter will contribute to the conservation of many of our most threatened plants and animals. Plant and animal species listed in the descriptions below are of conservation significance and are generally threatened (see Appendix 1).

Previous Land Conservation Council investigations recommended establishment of some 33 flora or flora and fauna reserves across the study area. Many of these are now recommended as nature conservation reserves. The status, objectives of management, and permitted uses of flora and fauna reserves and nature conservation reserves, are similar. Several former wildlife reserves that have been classified as ‘game refuges’ are now recommended as nature conservation reserves. A number of new or enlarged nature conservation reserves are also recommended.

Grazing, harvesting of forest products, hunting (except where organised by the land managers for pest control) and the use and carrying of firearms would not be permitted in these areas. Regarding the forest resource that will become unavailable, as a result of the new reserves, the area of high and medium productivity forest included in each reserve is expressed below as a percentage of the net high and medium productivity forest area currently available for timber harvesting.

Nature conservation reserves are commonly small and have sensitive values. Collection of fallen wood from the ground reduces habitat and is not appropriate. However, from the larger reserves, in particular, some domestic firewood may be produced as a by-product of thinning for ecological management (see Chapter 4). In particular reserves, certain other uses are specifically not permitted, to protect sensitive values.

As with regional parks, these reserves are recommended to be ‘restricted Crown land’ in relation to mining under the *Mineral Resources Development Act 1990*. Mineral exploration and mining may therefore be permitted, subject to the approval of the Minister for Environment and Conservation. Major mining proposals may require an environment effects statement.

Since the Draft Report, the proposed Little Tottington and Eppalock Nature Conservation Reserves are no longer recommended, and the Stoney Creek, Waanyarra and Whroo Nature Conservation Reserves have been substantially reduced in size. Mt Sugarloaf has been increased and several small new nature conservation reserves are recommended.



**GENERAL RECOMMENDATIONS FOR NATURE CONSERVATION RESERVES**

**D** Nature conservation reserves shown on Map A (numbered D1 to D68) be used to:

- (a) conserve and protect species, communities or habitats of indigenous animals and plants;
- (b) protect Aboriginal cultural sites and places;
- (c) protect historic features in specific reserves where noted;
- (d) provide for educational and scientific study if consistent with (a) above, and in ways that minimally affect the area;
- (e) provide for passive recreation such as nature study and picnicking, and other recreational activities subject to management requirements, where they are consistent with (a) above, or as otherwise specified;

and:

- (f) low impact exploration for minerals, planned to minimise any impacts on biodiversity values, be permitted with the approval of the Minister for Environment and Conservation, except in the area of the existing Deep Lead Flora and Fauna Reserve (see Recommendation D2);
- (g) mining be subject to Government decision on individual proposals;
- (h) recreational prospecting and gemstone-seeking be permitted except:
  - (i) in areas where it may disturb protected archaeological relics or adversely affect significant natural and community heritage values, and
  - (ii) where specified for particular reserves below;
- (i) grazing, harvesting of forest products, hunting and the use of firearms not be permitted, except as provided for in defined circumstances in other recommendations;
- (j) designated site or dispersed camping be permitted in appropriate locations in the larger reserves (for example Wychitella and Waanyarra), where this will not adversely affect the biodiversity values of the reserve;
- (k) apiculture be permitted except where specified, and subject to:
  - (i) the outcome of research into the ecological impacts of this industry, and
  - (ii) management requirements;
- (l) in accordance with the ecological management strategy recommended in Recommendation R12 (Chapter 4), dense eucalypt regrowth be thinned to enhance the growth of retained trees;
- (m) unused road reserves be added to adjoining nature conservation reserves where appropriate; and
- (n) unless otherwise specified, they be permanently reserved under the *Crown Land (Reserves) Act 1978*, and managed by the Department of Natural Resources and Environment.

## D1 Existing nature conservation reserves

It is recommended that seventeen of the existing flora reserves and flora and fauna reserves (as listed below) be retained but designated as nature conservation reserves. They will be used for effectively the same purposes as previously.

### RECOMMENDATIONS

**D1** The existing flora and fauna reserves, and flora reserves described below and listed in Appendix 11 be re-designated as nature conservation reserves, and used in accordance with the general recommendations for nature conservation reserves on page 167.

### Flora and fauna reserves

Mt Bolangum (2 930 ha)

Mt Hope (106 ha)

Note: The Mt Hope reserve is of local historical significance mainly for its notable role in the Thomas Mitchell expedition.

### Flora reserves

Hard Hills (15 ha)

Gowar (120 ha)

Gowar South (23 ha)

Dalyenong West (16 ha)

Alex Chisholm (16 ha)

Inglewood (1 200 ha)

Walmer South (15 ha)

Walmer (13 ha)

Metcalf (300 ha)

Dohertys Pine (Rochester West) (10 ha)

Runnymede (240 ha)

Costerfield (10 ha)

Gobarup (300 ha)

Big Hill (Longwood) (62 ha)

Upotipotpon (5 ha).

## D2–D68 Recommended new or enlarged nature conservation reserves

Recommended new or enlarged nature conservation reserves are described below. Full descriptions are provided of three major reserves, with short descriptions of the others.

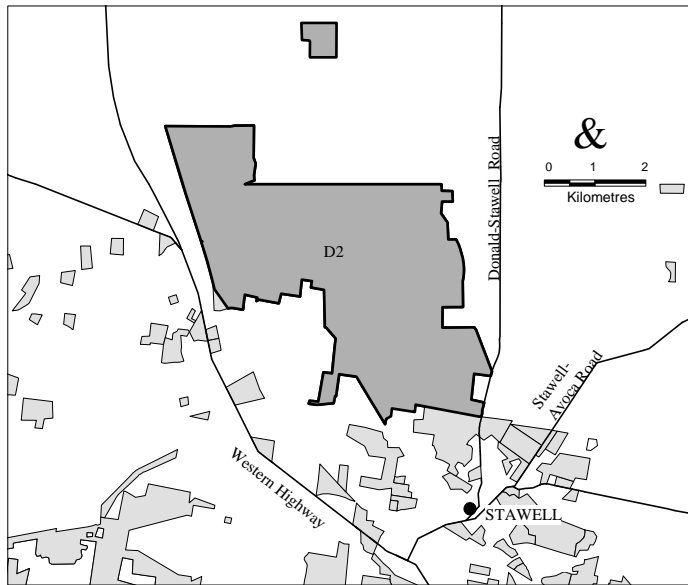
### *Aboriginal interests*

Aboriginal groups indicated that there are numerous known cultural sites and places in existing and recommended nature conservation reserves.

Traditional owners support the protection of these sites and expressed a need for cultural heritage surveys in these reserves. Cross-cultural training was proposed for users, such as field naturalists, tourism operators and prospectors, to ensure respect for Aboriginal sites and places and so that they understand the procedures to follow when sites are located.

Applications for native title determinations have been lodged with the National Native Title Tribunal including some of the recommended nature conservation reserve areas.

## D2 Deep Lead Nature Conservation Reserve



*The recommended Deep Lead Nature Conservation Reserve (1 823 ha) is one of the most important sites for nature conservation in Victoria. It supports at least 21 threatened species, including three plant species not found anywhere else.*

### Benefits of the reserve

#### *Biodiversity conservation*

The recommended Deep Lead Nature Conservation Reserve would significantly improve protection of the outstanding biological diversity of this compact area; most notably, the exceptional number of threatened and non-threatened plant species, especially orchids which are highly susceptible to disturbance.

#### Location

The recommended Deep Lead Nature Conservation Reserve includes the main block of public land north of Stawell, extending north from within the township boundary, together with the small isolated Germanina Mine block a few kilometres further north again. The reserve covers 1 823 ha—comprising the existing Deep Lead Flora and Fauna Reserve (1 120 ha), ‘The Ironbarks’ Hardwood Production Area (390 ha), Deep Lead Education Area (260 ha), Germanina Mine Bushland Reserve (33 ha), and the Three Jacks Sanctuary (20 ha). The existing Deep Lead Flora and Fauna Reserve is scheduled and managed under the *National Parks Act 1975*. It is recommended that the reserve, including the existing flora and fauna reserve, extend to a depth of 100 metres only below the surface.

### Environmental values

#### *Biodiversity*

The flora of this recommended reserve is of exceptional species-richness, particularly in orchid species, partially reflecting the unusual overlap of environmental characteristics near the junction of the Greater Grampians, Goldfields and Wimmera bioregions (see Map 4.1 in Chapter 4).

The recommended reserve is a significant site for tawny spider-orchid (only known site), Pomonal leek-orchid (only known site), grass-lily *Caesia* sp. aff. *calliantha* (undescribed—only known site), McIvor spider-orchid (one of three known sites) and squirrel glider (the most important site for the small isolated Stawell area population).

At least 16 other threatened species, including at least six nationally threatened species, are also found in the area.

The recommended reserve would make a significant contribution to the representation of Alluvial Terraces Herb-rich Woodland, Heathy Woodland, and Sedge-rich Woodland (largest and highest quality patch in the study area).

It contains the largest and highest quality example of Box–Ironbark Forest EVC in the Wimmera bioregion, and at the western extent of its range.

### ***Heritage***

Named for its succession of deep lead mines, the recommended reserve contains several historic mining and related sites, including the relatively undisturbed and intact alluvial mining landscape of the Four Post Diggings site and the Darlington and Germania Mine sites.

### **Community views**

Many submissions mentioned the Deep Lead area, including 'The Ironbarks', and highlighted its flora and fauna values. There was considerable support for the protection of the areas containing Box-Ironbark communities, particularly sensitive areas with high ground layer diversity. Several submissions proposed greater protection from mining and that all exploration and mining proposals affecting the reserve be subject to independent public scrutiny. A number of submissions proposed that this reserve be upgraded to national or state park status to protect outstanding flora values.

Several submissions supported the continuation of mining and prospecting in the reserve. There was opposition to the reserve based on potential restrictions placed on mining and prospecting.

### **Current and future uses**

The ECC is recommending additions to the existing Deep Lead Flora and Fauna Reserve to protect the exceptional species richness and diversity of plant species in the area, particularly as a key site for a high number of threatened species.

### ***Apiculture***

There are two permanent bee sites and one temporary site distributed through the recommended nature conservation reserve area.

### ***Mining***

There are no mines operating in the area of the recommended Deep Lead Nature Conservation Reserve. However, Victoria's largest gold mine, the Stawell Gold Mines underground mine, is a short distance to the south and the mine's line of reef extends under the recommended reserve. Both the existing Deep Lead Flora and Fauna Reserve and the new area recommended for nature conservation reserve are covered by a current exploration licence.

Surface exploration may be allowed in areas recommended for addition to the existing Deep Lead Flora and Fauna Reserve, in accordance with recommendations in Chapter 7, and subject to approval by the Minister for Environment and Conservation, in accordance with the *Mineral Resources Development Act 1990*. Surface mining would not be permitted in the recommended reserve.

Exploration and mining more than 100 metres below the surface would be outside the recommended reserve and subject to the standard provisions for unrestricted Crown land. Mining under the reserve may require surface infrastructure such as air shafts and vents within the recommended reserve. Such infrastructure should be kept to a minimum but not unreasonably excluded from the reserve.

### ***Prospecting***

The Deep Lead area is of some interest to prospectors because of its gold history but the proportion of shallow alluvial gold found in the area is low relative to other more favoured Box-Ironbark goldfields. Prospecting is a significant threat to populations of threatened orchids and other herbaceous plants at Deep Lead Nature Conservation Reserve and would not be permitted. Partial exclusion of prospecting from specific parts of the recommended reserve would not be feasible in this case. Compliance with partial exclusion would be difficult for the land manager to achieve and unlike other parts of the study area, rare herbs are widespread at Deep Lead and continue to be discovered in new locations. In addition, recovery of some species will require weed-free undisturbed sites into which they can expand.

Prospecting will be allowed in other Box-Ironbark public land blocks near Stawell.

### ***Timber harvesting***

'The Ironbarks' contains 346 ha of productive forest. However, under a Flora and Fauna Guarantee Action Statement for McIvor spider-orchid, timber harvesting is currently prohibited. The nearby Glynwylln State Forest and part of Illawarra State Forest remain available for commercial timber harvesting.

Domestic firewood permits are currently issued for the collection of small volumes of fallen timber for 'pensioner firewood' only. Domestic firewood collection would no longer be allowed in 'The Ironbarks'. Some domestic firewood may be produced from the recommended reserve as a by-product of ecological thinning (see Chapter 4). Locally, alternative opportunities for domestic firewood collection would remain in Glynwylln and Illawarra State Forests.

The West Regional Forest Agreement identifies this area as a Special Protection Zone.

### **Recreation**

Adjoining Stawell and the Western Highway, the recommended Deep Lead Nature Conservation Reserve is currently a moderately popular destination for passive and active bush recreation, including tourism and recreation associated with its significant nature conservation values which are well known to field naturalists. The existing reserve receives about 1 700 visitors each year.

## **Management issues**

### **Tracks**

Minor tracks render areas unsuitable for orchids and also increase off-road vehicle movements which can destroy orchid sites. Unused minor tracks should be permanently closed and rehabilitated where necessary. Public use of other minor tracks should be minimised and continued effort would be required to minimise all off-road vehicle movements.

### **Protection of orchid populations**

The diversity of orchids at Deep Lead attracts many orchid fanciers, particularly in Spring, requiring careful management to prevent trampling of sites. Illegal collection of rare orchids, and firewood collection and associated damage by vehicles, are significant threats to orchid populations. Visible ranger presence and active management are required to minimise damage.

## **RECOMMENDATIONS**

- D2**
- (a) The Deep Lead Nature Conservation Reserve area of 1 823 ha shown on Map A be used in accordance with the general recommendations for nature conservation reserves on page 167;
  - (b) the nature conservation reserve extend to a depth of 100 metres only below the surface,
  - (c) surface mining not be permitted (see Note below);
  - (d) prospecting not be permitted;
  - (e) the area of the existing Deep Lead Flora and Fauna Reserve, to a depth of 100 metres, remain in Schedule 4 of the *National Parks Act 1975*; and
  - (f) new sections of the recommended Deep Lead Nature Conservation Reserve be reserved under the *Crown Land (Reserves) Act 1978*.

Note: Ground more than 100 metres below the surface would be outside the recommended Deep Lead Nature Conservation Reserve. The administrative arrangements for any future exploration or mining in these areas would be the same as those which apply generally to unrestricted Crown land. Exploration or mining in these areas may intrude into the recommended nature conservation reserve, only in accordance with standard provisions applying to nature conservation reserves or Schedule 4 *National Parks Act 1975* areas, as appropriate. However, the location within the recommended nature conservation reserve of minor infrastructure associated with underground mining, notably air shafts and vents, should not be unreasonably denied. At the same time intrusion of such infrastructure should be minimised.

### **Information Sources**

Backhouse and Jeanes (1995).

Commonwealth of Australia and State of Victoria (2000).

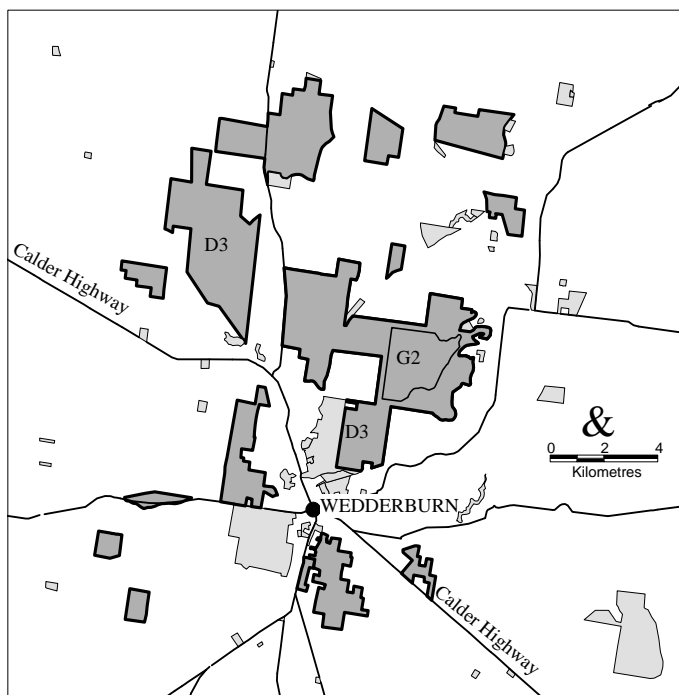
Context Pty Ltd (1999).

Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.

Hills and Boekel (1996).

Venn (1992).

## D3 Wychitella Nature Conservation Reserve



*The recommended Wychitella Nature Conservation Reserve encompasses one of the most significant areas of Box-Ironbark mallee in Victoria with diverse and unusual flora and fauna communities, including the only remaining population of malleefowl in the study area and at least 12 other threatened species.*

### Benefits of the reserve

#### *Biodiversity conservation*

The recommended Wychitella Nature Conservation Reserve would secure protection of habitat for the only remaining population of malleefowl in the study area. The reserve would also protect the distinctive flora and fauna of the Wedderburn mallee block, including another 12 threatened species and unusually rich communities of mallee eucalypts, birds and reptiles.

#### *Recreation and tourism*

This reserve will continue to be one of the most popular destinations in Victoria for prospecting, as well as remaining popular for bird watching and picnicking.

### Location

The recommended reserve surrounds the town of Wedderburn, extending north to Wychitella. It covers 6 300 ha—comprising Wychitella Flora and Fauna Reserve (3 470 ha), Wedderburn Eucalyptus Oil Production Area (1 904 ha), bushland reserves (454 ha), The Granites Scenic Reserve (330 ha), Mt Egbert Education Area (90 ha), public land water

frontages (32 ha) and various uncommitted public land parcels (20 ha). The 460 ha Korong Vale Reference Area (G2) is not part of the recommended reserve although it is geographically within it.

### Environmental values

#### *Biodiversity*

The recommended Wychitella Nature Conservation Reserve contains flora and fauna assemblages of biogeographic significance, including the co-occurrence of four mallee tree species, a large number of reptile species and the most diverse suite of mallee-dependent bird species in the study area.

This area contains 13 threatened species including malleefowl (the only population in the study area; formerly widespread), Kamarooka mallee, dainty phebalium, cane spear-grass, sweet quandong, sikh's whiskers (orchid) and woodland blind snake.

The recommended Wychitella Nature Conservation Reserve would contribute significantly to representation of four EVCs—Grassy Woodland, *Low Rises* Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic and Broombush Mallee (35% of the extent of this EVC is in the conservation reserve system).

## Community views

The majority of responses on this reserve were in favour of adding surrounding state forest areas to the reserve and proposed that this area then be upgraded to a national or state park. Predominantly they referred to the need to protect the outstanding biodiversity values, including unique and diverse flora and fauna assemblages, wildflower displays including many species of orchids and the presence of threatened species including the last remaining malleefowl population in the study area. Several also called for the removal of perceived detrimental activities, namely mining and prospecting.

Several submissions advocated that links be incorporated between reserve fragments, corresponding with the recommended 'Conservation Management Networks' (see Chapter 4 and Appendix 12) and that strategically located private land be purchased to achieve this.

Several submissions opposed the proposed reserve, including eucalyptus oil producers, specifically opposing the reduction in harvest areas. Others opposing the reserve included prospectors wanting to ensure continued access. Other submissions proposed that existing access for miners and prospectors be maintained because they are apprehensive about the perceived inconsistent application of land managers' discretion. Continuation of existing camping access was sought. It was also proposed that orienteering be added as a listed recreational activity.

## Current and future uses

Despite the undoubted biodiversity values of the area, the ECC believes that, given its size and fragmented nature, the most appropriate reservation status is that of nature conservation reserve. The ECC considers however that this recommended reserve is essential to secure protection for the only remaining population of malleefowl in the study area and to promote recovery of a range of species. Its significance to the conservation of distinctive flora and at least 13 threatened species justifies the reservation of areas previously available to eucalyptus oil producers.

### *Apiculture*

There are 27 temporary and one permanent bee sites distributed through the recommended reserve.

### *Eucalyptus oil harvesting*

Currently, eucalyptus oil harvesting occurs over approximately 140 ha in the Wedderburn Eucalyptus Oil Production Area (1 904 ha).

As detailed in Chapter 12, eucalyptus oil harvesting is a significant threat to the existence and ultimate recovery of threatened and other species. In particular, malleefowl populations require large contiguous areas of suitable habitat. Eucalyptus oil harvesting would not be permitted in the Wychitella Nature Conservation Reserve.

Two areas of state forest near Wedderburn have not been included in the reserve and remain as state forest to be available for eucalyptus oil harvesting.

### *Grazing*

About half the 32 ha of public land water frontage recommended to be included in the reserve is currently licensed for grazing. Grazing by domestic stock will not be allowed.

### *Mining*

There are six current mining licences in the area of the recommended Wychitella Nature Conservation Reserve, and three exploration licences cover around one half of the recommended reserve area. Mining and exploration may be permitted in the recommended Wychitella Nature Conservation Reserve, subject to the approval of the Minister for Environment and Conservation, and in accordance with recommendations in Chapter 7, and the *Mineral Resources Development Act 1990*.

### *Prospecting*

The Wedderburn public lands are one of the most favoured prospecting areas in Victoria with prospecting tourism making a very significant contribution to the local economy. Several thousand visitors per year are attracted here. The significance of the area to prospectors is recognised and access to the additional reserve areas is recommended to continue. Prospecting activities should continue to be monitored and land managers should retain the power to exclude prospecting where this conflicts with the reserve's values.

### *Recreation and tourism*

The recommended reserve is well suited for low-impact and nature-based recreation as it surrounds the town of Wedderburn and contains scenic features at Mt Egbert (The Granites), diverse flora

and fauna, several historic features such as the former Government battery and established picnic areas.

Orienteering is generally permitted in nature conservation reserves and camping may be permitted in designated areas subject to the land manager's approval.

### ***Timber harvesting***

Most of the Wedderburn forests recommended for addition to the reserve consist of Broombush Mallee EVC, and are unproductive for wood products. However, 418 ha of high productivity forest is included—0.3% of the total area currently available for harvesting.

The main forest area at Wedderburn, with Box-Ironbark Forest EVC (total area 393 ha) and another 470 ha with mallee and Box-Ironbark species, remains available for wood production and domestic firewood. Kingower and Moliagul State Forests remain available for commercial timber harvesting and domestic firewood collection.

## **Management issues**

### ***Adjacent freehold land***

Although the recommended Wychitella Nature Conservation Reserve is fragmented, the public land blocks are largely linked by freehold land with substantially intact native vegetation. Management for nature conservation in the recommended reserve would be enhanced by cooperative arrangements with adjacent private landholders (as recommended in Chapter 4).

Support for the 'Conservation Management Network' concept is encouraging, and will require community and landholder support.

### ***Erosion***

Some tracks within the recommended reserve are severely eroded leading to habitat degradation.

### ***Introduced pests***

Red foxes and feral cats prey upon malleefowl and their eggs, as well as other native fauna, while rabbits damage soil and vegetation. Continuing control of these introduced species is a high priority in the recommended reserve.



**Malleefowl**

The malleefowl was once widespread around mallee patches through the central-west of the study area and as far south as the Brisbane Ranges. It no longer occurs south or east of the Wedderburn area. The next closest population is found 100 km to the northwest. The major conservation objective for the malleefowl in Victoria is to double the population size in the 20 years from 1994. If the malleefowl is to avoid extinction as a Box-Ironbark species, let alone recover, significant active management will be required. Providing long-term security of habitat for the Wedderburn population is an urgent prerequisite for such management.



## RECOMMENDATIONS

- D3**
- (a) The 2 830 ha area recommended for addition to the existing Wychitella Flora and Fauna Reserve be used in accordance with the general recommendations for nature conservation reserves on page 167; and reserved under the *Crown Land (Reserves) Act 1978*;
  - (b) prospecting continue to be permitted in these recommended additions; and
  - (c) the existing Wychitella Flora and Fauna Reserve remain reserved as at present.

## Information Sources

Bannear (1997).

Benshemesh (1994).

Butler (1997).

CFL (1988).

Context Pty Ltd (1999).

Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.

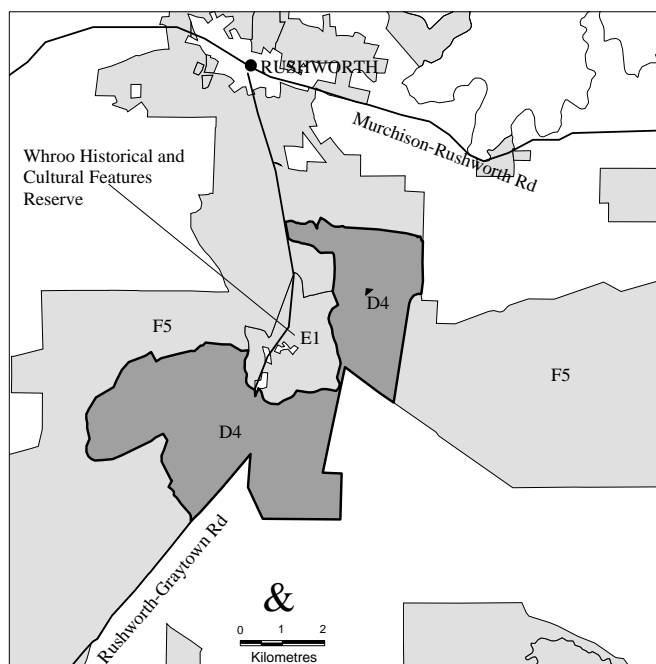
Gell (1985).

Simpson *et al.* (1988).

Stone (1979).

Stone (1997).

## D4 Whroo Nature Conservation Reserve



*The recommended Whroo Nature Conservation Reserve supports a range of threatened flora and fauna species. The co-occurrence of four threatened orchids is of particular interest. It is of national significance as it is a key site for swift parrot and supports four other threatened fauna species and six threatened flora species.*

### Benefits of the reserve

#### *Biodiversity conservation*

The recommended Whroo Nature Conservation Reserve would protect ten threatened species.

#### *Recreation and tourism*

The recommended reserve area is popular with prospectors and offers bird watching opportunities.

### Location

The 2 298 ha of Rushworth State Forest surrounding Whroo Historic Area (E1) is recommended to become Whroo Nature Conservation Reserve.

### Environmental values

#### *Biodiversity*

Flora and fauna assemblages of significance include the co-occurrence of four threatened greenhood orchid species, Kamarooka mallee, swift parrot, squirrel glider, grey-crowned babbler and bush stone-curlew.

The recommended reserve contains two complete fauna refuge sites and part of one other site.

#### *Heritage*

Aside from the excellent natural values, the recommended reserve has significant social, historic,

aesthetic and Aboriginal cultural heritage values which should be protected.

### Community views

Many submissions were strongly in support of including this area as part of a large consolidated national park in the Rushworth-Heathcote area. There were proposals to consolidate the previously proposed Mt Black State Park, Mt Ida Nature Conservation Reserve, Whroo Nature Conservation Reserve and linking state forest into such a park. Some submissions were from national park supporters proposing other combinations of additional reserves to be included in a large national park. Several submissions specifically supported the nature conservation reserve recommendation, however, they wanted the reserve enlarged to include additional Broombush Mallee EVC areas.

Many submissions clearly opposed the recommendation and largely supported continued access, particularly to timber resources. Concern was raised about the future of the local timber and eucalyptus oil plantation industries, access to firewood, a perceived increase in fire danger and community access. Others opposed the recommendations because of potential restrictions placed on car rallies. Some submissions sought specific provision for orienteering. Several submissions called for no

further exclusions from prospecting and mining and it was suggested that exploration and small-scale mining be permitted, subject to satisfactory environment effects statement outcomes.

Local Aboriginal people were concerned to maintain unrestricted access to the area for traditional ceremonial practices.

### Current and future uses

The ECC is recommending that this area be added to the reserve system for its significant natural values and to protect the habitat of ten threatened species. Importantly, this reserve remains connected to the recommended Heathcote-Graytown National Park by contiguous areas of state forest.

The recommended reserve has been reduced by 1600 ha since the Draft Report, such that a substantial additional area remains as available state forest for local timber production.

#### *Apiculture*

There are 5 permanent and 2 temporary bee sites distributed through the recommended nature conservation reserve area.

#### *Eucalyptus oil harvesting*

Currently, eucalyptus oil harvesting occurs over approximately 70 ha of the Rushworth State Forest (F5) surrounding Whroo Historic Area. Forty hectares to the west of Whroo Historic Area (E1) would remain available for eucalyptus oil harvesting.

As detailed in Chapter 12, eucalyptus oil harvesting represents a significant threat to the existence and ultimate recovery of a number of threatened and other species within the recommended Whroo Nature Conservation Reserve. Harvesting would not be permitted within the recommended reserve. Most areas recommended to be included in the reserve would be subject to a six-year phase out period, except that harvesting should cease immediately from Cheong's and two nearby small

patches, totalling 7 ha. Note that several areas cut for eucalyptus oil are now recommended to be excluded from this reserve.

#### *Mining*

There are two exploration licences covering all the recommended reserve. Mining and exploration may be allowed in the recommended reserve, subject to the approval of the Minister for Environment and Conservation, and in accordance with recommendations in Chapter 7, and the *Mineral Resources Development Act 1990*.

#### *Prospecting*

Many prospectors visit the Whroo public lands. No changes are recommended for prospecting in this area.

#### *Recreation*

Car rallies are generally not permitted in nature conservation reserves and there are large areas of state forest surrounding the reserve where this activity may occur. Orienteering is generally permitted in nature conservation reserves.

#### *Timber harvesting*

The net available productive forest area covered by the recommended Whroo Nature Conservation Reserve is about 1 540 ha. This is 1.2% of the total net forest area currently available for timber harvesting. Commercial timber harvesting would not be permitted in Whroo Nature Conservation Reserve. The adjacent Rushworth State Forest (F5) remains available for commercial timber harvesting.

Approximately 420 cubic metres of domestic firewood per annum is currently collected under permit from the area. Domestic firewood collection would no longer be permitted. Some domestic firewood may be produced from the recommended reserve as a by-product of thinning for ecological management (see Chapter 4). Locally, opportunities for domestic firewood collection remain in the Rushworth State Forest.

## RECOMMENDATIONS

- D4** The recommended Whroo Nature Conservation Reserve area of 2 298 ha be reserved under the *Crown Land (Reserves) Act 1978*, and used in accordance with the general recommendations for nature conservation reserves on page 167.

### Information Sources

Backhouse and Jeanes (1995).  
Butler (1997).  
Context Pty Ltd (1999).

Data on threatened species from the Flora Information System and the Atlas of Victorian Wildlife.  
Mirimbiak Nations Aboriginal Corporation (2000).  
Stone (1987).

## D5–D68 Other recommended nature conservation reserves

### D5 Lonsdale

This 759 ha block north-west of Stawell incorporates existing uncommitted land (state forest) characterised by high quality, species-rich, open grassy woodland with large, widely-spaced yellow box and river red gum trees. It provides habitat for several threatened species, notably rising star guinea-flower, hairy tails, corkscrew spear-grass, squirrel glider, barking owl, swift parrot, painted honeyeater and bush stone-curlew. It contributes to representation of *Western Goldfields* Heathy Woodland, Plains Grassy Woodland and Grassy Woodland EVCs.

NRE described Lonsdale as a ‘community forest’—commercial operations were excluded, although domestic firewood collection was allowed under permit. The net available productive forest area covered by the recommended Lonsdale Nature Conservation Reserve is 413 ha. This is 0.3% of the total net productive forest area currently available for timber harvesting. The West Regional Forest Agreement identifies Lonsdale as a Special Protection Zone.

### D6 Illawarra

This 580 ha block is part of a hardwood production block (state forest) west of Stawell. River red gum, yellow box and yellow gum trees dominate the overstorey. It includes two large old tree sites and one fauna refuge site, and provides habitat for swift parrots. It contributes to representation of Sedge-rich Woodland and Plains Grassy Woodland EVCs.

The net available productive forest area covered by the recommended Illawarra Nature Conservation Reserve is approximately 410 ha. This is 0.3% of the total net productive forest area currently available for timber harvesting. The *West Regional Forest Agreement* identifies the eastern part of Illawarra as a Special Protection Zone. The western part of Illawarra State Forest, and Glynwylln State Forest, remain available for timber harvesting.

### D7 Jallukar

This 1 165 ha block west of Ararat, currently hardwood production (state forest), is characterised by high-quality, species-rich, open woodland with large yellow gum, yellow box and river red gum

trees. A large old tree site occupies the entire block and the site provides habitat for threatened species, notably corkscrew spear-grass and barking owl. It contributes to representation of Plains Grassy Woodland, Heathy Woodland, Alluvial Terraces Herb-rich Woodland and Creekline Grassy Woodland EVCs.

NRE described Jallukar as a ‘community forest’, being a local domestic firewood source. The net available productive forest area is 292 ha. This is 0.2% of the total net productive forest area currently available for timber harvesting. The western parts of Illawarra State Forest, and other small local forests, remain available for timber harvesting. The West Regional Forest Agreement identifies Jallukar as a Special Protection Zone.

### D8 Morrl Morrl

This 1 991 ha block incorporates the existing Morrl Morrl Flora Reserve (191 ha) and hardwood production (1 800 ha state forest) northwest of Navarre. The predominant trees are grey box, red ironbark, yellow box and yellow gum. A large old tree site occupies almost the entire block and the site provides habitat for threatened species; notably, spreading eutaxia, veined spider-orchid, powerful owl, barking owl and swift parrot. It contributes to representation of several vegetation communities, including Grassy Woodland, *Western Goldfields* Heathy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs.

NRE described the Morrl Morrl block as a ‘community forest’. It was previously a domestic firewood source for Stawell, but commercial firewood operations are excluded. The net available productive forest area covered by the recommended Morrl Morrl Nature Conservation Reserve is 1 206 ha. This is 0.95% of the total net productive forest area currently available for timber harvesting. The West Regional Forest Agreement identifies Morrl Morrl as a Special Protection Zone.

### D9 Joel Joel

This 260 ha block east of Stawell incorporates the existing Joel Joel Bushland Reserve (257 ha) and a road reserve on its southern boundary (3 ha). It is characterised by open forest with many mature grey

box trees and provides habitat for threatened species; notably, buloke, swift parrot and powerful owl. It contributes to representation of various vegetation communities, including Grassy Woodland EVC.

### **D10 Navarre**

This 4 ha block west of Navarre contains a scattering of large yellow gum trees and is characterised by diverse, high quality vegetation. It incorporates an area of uncategorised public land and provides habitat for threatened species, notably spreading eutaxia and buloke. It contributes to representation of Grassy Woodland EVC.

### **D11 Big Tottington**

This 2 120 ha block is in a hardwood production area (state forest) north of Navarre, with high quality vegetation and grey box, yellow box and yellow gum the predominant trees. It incorporates two large old tree sites and two fauna refuges and provides habitat for threatened species; notably, swamp diuris, powerful owl and swift parrot (key site). It contributes to representation of several vegetation communities, including Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVC.

The net available productive forest area covered by the recommended Big Tottington Nature Conservation Reserve is 1 383 ha. This is 1.1% of the total net productive forest area currently available for timber harvesting.

**Little Tottington**, proposed as a nature conservation reserve in the Draft Report, is now recommended as state forest, increasing the available productive area. Its biodiversity values are to be protected in state forest management (see Recommendation F1)

### **D12 Landsborough Hill**

This 1 044 ha block north of Landsborough incorporates hardwood production area (state forest) with yellow box, long-leaf box, red stringybark and red box being the predominant trees. It includes two large old tree sites and two fauna refuges and provides habitat for powerful owl and swift parrot. It contributes to representation of several vegetation communities in the reserve system.

The net available productive forest area covered by the recommended Landsborough Hill Nature Conservation Reserve is 795 ha. This is 0.6% of the

total net productive forest area currently available for timber harvesting. The West Regional Forest Agreement identifies this area as a Special Protection Zone.

### **D13 Landsborough**

This 3 314 ha block, with large yellow box, red stringybark, long-leaf box and red box trees, includes the existing 1 831 ha Landsborough Flora and Fauna Reserve and 1 483 ha of hardwood production (state forest). It incorporates five large old tree sites and provides habitat for the powerful owl. It contributes to representation of several vegetation communities, including Valley Grassy Forest/*Slopes Box* Grassy Woodland Complex and Alluvial Terraces Herb-rich Woodland EVCs.

The net available productive forest area covered by the recommended Landsborough Nature Conservation Reserve is approximately 1 090 ha. This is 0.9% of the total net productive forest area currently available for timber harvesting.

### **D14 Stoney Creek**

Stoney Creek is a 605 ha block in hardwood production area (state forest) south of St Arnaud, with yellow gum, yellow box and grey box the predominant trees. It includes part of one fauna refuge and provides habitat for threatened species; notably, Goldfields grevillea, swift parrot and powerful owl. It contributes to representation of several vegetation communities, including Grassy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs.

The net available productive forest area covered by the recommended Stoney Creek Nature Conservation Reserve is about 390 ha. This is 0.3% of the total net productive forest area currently available for timber harvesting. In the Draft Report this reserve was proposed to be 1 600 ha. It has been reduced to provide additional available area for timber production in response to views in submissions.

### **D15 Stuart Mill**

Stuart Mill is a 2 480 ha block in state forest south of St Arnaud. It includes two large old tree sites and two fauna refuges. It provides habitat for threatened species; notably, powerful owl and squirrel glider. It contributes to representation of several vegetation communities, including Grassy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs.

Significant historical features are the puddler at Carapooee West, and Swantons battery and cyanide vats, which are to be protected.

The net available productive forest area covered by the recommended Stuart Mill Nature Conservation Reserve is 1 417 ha. This is 1.1% of the total net productive forest area currently available for timber harvesting.

### **D16 Redbank**

Redbank is a 1 176 ha block in uncommitted land (state forest) northwest of Avoca. It includes two large old tree sites and provides habitat for the threatened broad-lip leek-orchid. It contributes to representation of several vegetation communities, including Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic and Valley Grassy Forest EVCs.

The net available productive forest area covered by the recommended Redbank Nature Conservation Reserve is 945 ha. This is 0.7% of the total net productive forest area currently available for timber harvesting.

### **D17 Dalyenong**

This 2 570 ha block with large grey box and yellow gum trees, incorporates the existing Dalyenong Flora Reserve (1 450 ha) and 1 120 ha of hardwood production area (state forest), west of Bealiba. A large old tree site occupies almost the entire addition and two fauna refuges are also present. It is a key site for swift parrot and provides habitat for other threatened species; notably, powerful owl, barking owl and woodland blind snake. It contributes to representation of several vegetation communities, including Grassy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs.

The net available productive forest area covered by the recommended Dalyenong Nature Conservation Reserve is 1 015 ha. This is 0.8% of the total net productive forest area currently available for timber harvesting. Several small sugar gum plantations are present. These may be harvested in the future, and should be revegetated with indigenous species using seed of local provenance.

### **D18 Tunstalls**

Tunstalls is a 1 640 ha block in hardwood production area (state forest) north of Bealiba. It includes one large old tree site and two fauna

refuges and provides important habitat for swift parrot (key site). It contributes to representation of several vegetation communities, including Grassy Woodland EVC.

The net available productive forest area covered by the recommended Tunstalls Nature Conservation Reserve is 1 388 ha. This is 1.1% of the total net productive forest area currently available for timber harvesting.

### **D19 Wehla**

This 312 ha block incorporates the Wehla Historic Reserve (62 ha) and 250 ha of hardwood production area (state forest). It includes two fauna refuges and provides habitat for swift parrot. It contributes to representation of several vegetation communities, including Alluvial Terraces Herb-rich Woodland EVC.

The net available productive forest area covered by the recommended Wehla Nature Conservation Reserve is 83 ha. This is less than 0.1% of the total net productive forest area currently available for timber harvesting.

### **D20 Moliagul**

Moliagul is a 530 ha block that incorporates existing state forest. It includes two large old tree sites and one fauna refuge and provides habitat for powerful owl and is a key site for swift parrot. It contributes to representation of several vegetation communities.

The net available productive forest area covered by the recommended Moliagul Nature Conservation Reserve is 404 ha. This is 0.3% of the total net productive forest area currently available for timber harvesting.

### **D21 Lexton**

This is a 243 ha block in a hardwood production area (state forest), north of Lexton. It has large yellow box, long-leaf box, grey box and river red gum trees. A large old tree site occupies the entire block and three fauna refuges are also present. It contributes to representation of several vegetation communities, including Creekline Grassy Woodland and Alluvial Terraces Herb-rich Woodland EVCs.

The net available productive forest area covered by the recommended Lexton Nature Conservation Reserve is 60 ha. This is less than 0.1% of the total net productive forest area currently available for timber harvesting.

## D22 Bung Bong

Bung Bong is a 420 ha block in hardwood production (state forest) area, east of Avoca. It provides habitat for the threatened weak daisy, and contributes to representation of several vegetation communities, including Alluvial Terraces Herb-rich Woodland EVC.

The net available productive forest area covered by the recommended Bung Bong Nature Conservation Reserve is 168 ha. This is less than 0.1% of the total net productive forest area currently available for timber harvesting.

## D23 Talbot

This 174 ha block is in hardwood production area (state forest), southwest of Maryborough. It is characterised by species-rich vegetation and large old eucalypts. It includes one fauna refuge and provides habitat for threatened species; notably, trailing hop-bush and clover glycine. It contributes to representation of several vegetation communities, including Alluvial Terraces Herb-rich Woodland and Creekline Grassy Woodland EVCs.

The net available productive forest area covered by the recommended Talbot Nature Conservation Reserve is 118 ha. This is less than 0.1% of the total net productive forest area currently available for timber harvesting.

## D24 Caralulup

Caralulup is a 1 400 ha block in uncommitted land (state forest), south of Maryborough. It includes two large old tree sites and two fauna refuges. It provides habitat for powerful owl and brush-tailed phascogale and contributes to representation of several vegetation communities, including Alluvial Terraces Herb-rich Woodland, Grassy Woodland and Creekline Grassy Woodland EVCs.

The net available productive forest area covered by the recommended Caralulup Nature Conservation Reserve is 757 ha. This is 0.6% of the total net productive forest area currently available for timber harvesting.

## D25 Dunach

This 494 ha block is in a hardwood production area (state forest), south of Maryborough. It includes one fauna refuge, and provides habitat for several threatened species; notably, sharp midge-orchid, scented bush-pea, square-tailed kite, painted

honeyeater, swift parrot and brush-tailed phascogale. It contributes to representation of several vegetation communities, including Alluvial Terraces Herb-rich Woodland and Grassy Woodland EVCs. It also contains the well preserved, but abandoned, Charlie's Steam House site which should be protected. It has historic and scientific significance due to its association with the production of eucalyptus oil.

The net available productive forest area covered by the recommended Dunach Nature Conservation Reserve is 150 ha. This is 0.1% of the total net productive forest area currently available for timber harvesting.

## D26 Timor

Timor is a 735 ha block in hardwood production area (state forest) north of Maryborough. It has a species-rich understorey and one fauna refuge and provides habitat for threatened species; notably, Williamson's wattle, and leafy templetonia, and includes swift parrot key sites. It contributes to representation of several vegetation communities, including Grassy Woodland EVC.

The net available productive forest area covered by the recommended Timor Nature Conservation Reserve is 539 ha. This is 0.4% of the total net productive forest area currently available for timber harvesting.

## D27 Havelock

This 1 779 ha block is in hardwood production area (state forest), north of Maryborough. It has a species-rich understorey, and includes one large old tree site and four fauna refuge sites while providing habitat for threatened species; notably, small milkwort, spreading eutaxia and leafy templetonia, and includes key sites for swift parrots. It contributes to representation of several vegetation communities, including Grassy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs.

The net available productive forest area covered by the recommended Havelock Nature Conservation Reserve is 1 545 ha. This is 1.2% of the total net productive forest area currently available for timber harvesting.

## D28 Waanyarra

Waanyarra is a 2 927 ha block that contains high quality vegetation. It incorporates the existing Tarnagulla Flora Reserve (1 152 ha), hardwood production area (state forest) (1 630 ha), and township land (145 ha). It includes three fauna refuge sites and provides habitat for threatened species; notably, cane spear-grass, dainty phebalium, swamp diuris and powerful owl, and includes key sites for the swift parrot. It contributes to representation of several vegetation communities, including *Northern Goldfields* Heathy Woodland, Grassy Woodland and Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic EVCs. It also contains a eucalyptus distilling site of historic and scientific significance which should be protected.

The net available productive forest area covered by the recommended Waanyarra Nature Conservation Reserve is about 1 290 ha. This is 1.0% of the total net productive forest area currently available for timber harvesting.

A number of submissions expressed support for the protection of the area within the reserve as proposed in the ECC's Draft Report. Some believed the area more worthy of state park status due to its large size and biodiversity values, and perceptions that the area was being damaged by mineral exploration and mining activities.

Opposition came from timber cutters and recreational prospectors who wanted continued access. The area was identified as being part of a significant goldfield. Others called for the area to remain state forest to limit restrictions on prospecting and camping.

Significant amendments have been made to the recommended reserve in response to submissions from user groups. The ECC has recommended a considerably smaller area than the 6 307 ha reserve proposed in the Draft Report. Timber harvesting would continue in a larger area of state forest and prospectors would continue to have access.

## D29 Mt Korong

This 465 ha block east of Wedderburn incorporates the existing Mt Korong Scenic Reserve and is characterised by steep, rocky granite hills that provide diverse reptile habitat. The site also provides habitat for threatened species; notably, Deane's wattle, inland pomaderris and turquoise parrot.

## D30 Mysia

This 4 ha site north-east of Wedderburn incorporates existing uncategorised public land and represents a significant remnant of Northern Plains Grassland EVC. It provides habitat for threatened species; notably, pale spike-sedge, hairy tails, long eryngium, Rohrlach's bluebush, bottle bluebush and dwarf bluebush. It contributes to representation of Plains Grassy Woodland EVC.

## D31 Bells Swamp

This 10 ha site incorporates the Bells Swamp Wildlife Reserve, near Eastville. It supports good stands of river red gum. It contributes to representation of Plains Grassy Woodland EVC.

## D32 Leichardt

This 33 ha site incorporates the existing Bullock Creek Streamside Reserve north-west of Bendigo, and is characterised by grassy woodland and riparian vegetation in good condition. It contributes to representation of Plains Grassy Woodland EVC.

## D33 Wilsons Hill

This 21 ha site incorporates part of the existing Wilsons Hill Bushland Reserve near Marong, and provides habitat for threatened species, notably, cane spear-grass and leafy templetonia. It contributes to representation of various vegetation communities, including Grassy Woodland EVC.

## D34 Shelbourne

Shelbourne is an 840 ha block in hardwood production area (state forest) west of Bendigo. It is a key site for brush-tailed phascogale, swift parrot and contributes to representation of several vegetation communities.

The net available productive forest area covered by the recommended Shelbourne Nature Conservation Reserve is 712 ha. This is 0.6% of the total net productive forest area currently available for timber harvesting.

## D35 Muckleford

Muckleford is a 543 ha block in hardwood production area (state forest), south of Maldon. It includes three fauna refuge sites, and provides habitat for several threatened species; notably, weak daisy, crimson spider-orchid and brush-tailed phascogale, and includes a key site for swift parrots. It contributes to representation of several



vegetation communities, including Alluvial Terraces Herb-rich Woodland EVC. It also has recorded social and historic community heritage values.

The net available productive forest area covered by the recommended Muckleford Nature Conservation Reserve is 397 ha. This is 0.3% of the total net productive forest area currently available for timber harvesting.

### **D36 Kaweka**

This 3 ha block within Castlemaine township was originally private land donated by the owner to the Crown, to be kept as a wildflower reserve. This reserve has a committee of management that actively manages the block. It is a representative example of Heathy Dry Forest EVC that includes an intact understorey of high quality.

### **D37 Fryers Ridge**

This 2 149 ha block near Taradale incorporates the existing Fryers Ridge Flora Reserve (1 427 ha), 586 ha of hardwood production area (state forest), and 136 ha beside the adjoining aqueduct. The addition has two large old tree sites, and provides habitat for several threatened species; notably, clover glycine, dwarf geebung, broad-lip leek-orchid, maroon spider-orchid, naked beard-orchid, Fryerstown grevillea and creeping grevillea. It contributes to representation of several vegetation communities, including Valley Grassy Forest EVC.

The net available productive forest area of durable species covered by the recommended Fryers Ridge Nature Conservation Reserve is 65 ha; much of the remaining hardwood production area has mixed species forest.

### **D38 Taradale**

This 191 ha block incorporates the existing Taradale Bushland Reserve. It provides habitat for several threatened species; notably, brush-tailed phascogale, mat flax-lily, crimson spider-orchid, Williamson's wattle, naked beard-orchid, early golden moth, Fryerstown grevillea, creeping grevillea, and tall wallaby-grass. It contributes to representation of several vegetation communities.

Several submissions referred to the current biodiversity-orientated management of remnant Box-Ironbark vegetation on private land adjoining this reserve, and its use as a wildlife corridor to Metcalfe State Forest.

### **D39 Pilchers Bridge**

This 2 274 ha block incorporates the existing Pilchers Bridge Flora and Fauna Reserve (620 ha) and 1 654 ha of uncommitted land (state forest), south-east of Bendigo. It includes one large old tree site and seven fauna refuges and provides habitat for several threatened species; notably, powerful owl, bush stone-curlew, swift parrot (key site) and brush-tailed phascogale. It contributes to representation of several vegetation communities, including Valley Grassy Forest and Creekline Grassy Woodland EVCs.

The net available productive forest area covered by the recommended Pilchers Bridge Nature Conservation Reserve is 853 ha. This is 0.7% of the total net productive forest area currently available for timber harvesting.

### **D40 Salomon Gully**

This 20 ha site in Bendigo incorporates the existing Salomon Gully Flora Reserve (19 ha) and a small adjacent parcel of township land (1 ha). It contains a diverse and relatively intact understorey which includes Ausfeld's wattle.

Part of this reserve may be required for surface infrastructure associated with underground mining.

### **D41 Jackass Flat**

The existing Jackass Flat Flora Reserve (54 ha) has been extended with several parcels of township land (17 ha in total) to create this 71 ha site in Bendigo. It contributes to representation of various vegetation communities, including Grassy Woodland and Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic EVCs.

### **D42 Whipstick**

Eighty-three hectares of former freehold land was recently presented to the Crown in exchange for public land lost to mining near Fosterville. This block is recommended as a nature conservation reserve abutting the existing Whipstick State Park. The block contains populations of grey-crowned babbler and Williamson's wattle.

### **D43 Mt Sugarloaf**

This 660 ha block is in hardwood production area (state forest) east of Bendigo. It has species-rich vegetation and widely-spaced large trees. It includes one fauna refuge and provides habitat for several

threatened species; notably, buloke, clover glycine and brush-tailed phascogale. It also includes a prominent strike ridge in Ordovician sandstone of regional geological and geomorphological significance. It contributes to representation of several vegetation communities, including Heathy Woodland EVC. It also has recorded social community heritage values.

The net available productive forest area covered by the recommended Mt Sugarloaf Nature Conservation Reserve is about 500 ha. This is 0.4% of the total net productive forest area currently available for timber harvesting. This area has been increased from 455 ha since the Draft Report, to avoid the difficulty of managing small areas of state forest around the margin.

#### **D44 Axedale**

These blocks, totalling 3 ha, are adjacent to the former railway reserve adjoining Axedale cemetery. They are recommended as a nature conservation reserve to complement the existing Axedale Flora and Fauna Reserve on City of Greater Bendigo land. These blocks provide habitat for several threatened species; notably, grey-crowned babbler. Together these blocks will contribute to the representation of the threatened Grassy Woodland EVC in the reserve system.

Eppalock Nature Conservation Reserve, proposed in the Draft Report, is now recommended as state forest. Its biodiversity values are to be protected in state forest management (see Recommendation F4).

#### **D45 Crosbie**

This 2 060 ha block incorporates hardwood production and uncommitted land (state forest), north of Heathcote. It includes five large old tree sites and three fauna refuges. It provides habitat for several threatened species; notably, Ausfeld's wattle, regent honeyeater, grey-crowned babbler, powerful owl and the westernmost extent of a squirrel glider population which extends north-east into New South Wales. It is also a key site for swift parrot. It contributes to representation of several vegetation communities, including Grassy Woodland and Alluvial Terraces Herb-rich Woodland EVCs.

The net available productive forest area covered by the recommended Crosbie Nature Conservation Reserve is 1 265 ha. This is 1.0% of the total net productive forest area currently available for timber harvesting.

#### **D46 Spring Plains**

This 1 315 ha block is in hardwood production area (state forest), south of Heathcote. It includes one large old tree site and provides habitat for several threatened species; notably, swift parrot and powerful owl. It contributes to representation of several vegetation communities in the reserve system including Creekline Grassy Woodland EVC.

The net available productive forest area covered by the recommended Spring Plains Nature Conservation Reserve is about 840 ha. This is 0.7% of the total net productive forest area currently available for timber harvesting.

#### **D47 Tooborac**

Tooborac is a 330 ha block of state forest, north of Pyalong. It includes one large old tree site and two fauna refuges. It provides habitat for the powerful owl and contributes to representation of several vegetation communities.

The net available productive forest area covered by the recommended Tooborac Nature Conservation Reserve is 75 ha. This is less than 0.1% of the total net productive forest area currently available for timber harvesting.

#### **D48 Spring Creek**

Spring Creek is a 401 ha site that incorporates part of the existing Mt Black Flora Reserve (58 ha) and 343 ha of Rushworth–Heathcote State Forest, west of Nagambie. It includes one large old tree site and one fauna refuge and provides habitat for several threatened species; notably, powerful owl, brush-tailed phascogale and squirrel glider. It contributes to representation of several vegetation communities, including Creekline Grassy Woodland EVC.

The net available productive forest area covered by the recommended Spring Creek Nature Conservation Reserve is 137 ha. This is 0.1% of the total net productive forest area currently available for timber harvesting.

#### **D49 Murchison-Rushworth Disused Railway**

This 69 ha site incorporates part of the disused rail reserve between Murchison and Rushworth. It contains vegetation of high conservation significance, provides an important link between remnant vegetation patches on public land, and parts contain fauna refuges. The reserve also

provides habitat for threatened species; notably, grey-crowned babbler and Ausfeld's wattle. It contributes to representation of various vegetation communities, including Plains Grassy Woodland, Grassy Woodland, Gravelly-Sediment Broombush Mallee/Box–Ironbark Forest Mosaic, and Alluvial Terraces Herb-rich Woodland/Plains Grassy Woodland/Gilgai Wetland Mosaic EVCs. With its recorded natural and historic values, this reserve may also provide opportunities for the establishment of a rail (walking) trail in the future.

### **D50 Mangalore**

This 78 ha reserve, listed as an existing nature conservation reserve in the Draft Report, is now recommended as an expanded reserve to incorporate boundary changes as a result of the duplication of the Goulburn Valley Highway. The duplication removed 1.5 ha from the western boundary, but 14 ha of former freehold land with indigenous vegetation adjoining the eastern perimeter was added. Threatened species recorded in or adjacent to the recommended reserve include swift parrot, brush-tailed phascogale, squirrel glider, bush stone-curlew and shiny wallaby-grass, and declining woodland birds such as Gilbert's whistler and hooded robin also occur there.

### **D51 Arcadia**

Located east of Arcadia, this existing 8 ha bushland reserve provides habitat for several threatened species; notably, leafy templetonia, yellow-tongue daisy and bush stone-curlew. This block contributes to the representation of the endangered Plains Grassy Woodland EVC in the reserve system.

### **D52 Gum Swamp**

This 16 ha shallow wetland with river red gums, incorporates the existing Gum Swamp Wildlife Reserve north of Euroa. It contributes to representation of several EVCs, including Plains Grassy Woodland in the reserve system.

### **D53 Tamleugh**

These blocks, totalling 22 ha, consolidate adjacent bushland reserves at Tamleugh. They provide habitat for several threatened species; notably, white cypress-pine, leafy templetonia, grey-crowned babbler, bush stone-curlew and squirrel glider. The recommended reserve contributes to the representation of various vegetation communities in the reserve system, including Grassy Woodland EVC.

### **D54 Shire Dam Swamp**

The 25 ha existing Shire Dam Swamp Wildlife Reserve, north-west of Violet Town is recommended as a nature conservation reserve. This shallow swamp contains river red gum and grey box trees. It contributes to representation of Plains Grassy Woodland/Gilgai Wetland Mosaic EVC in the reserve system.

### **D55 Gowangardie**

This 3 ha reserve south of Gowangardie incorporates two separated parcels of crown land, the existing Gowangardie Flora Reserve (2 ha) and the bushland reserve to the south (1 ha). Together these blocks are recommended as a nature conservation reserve recognising their importance in providing habitat for several threatened species; notably, bush stone-curlew, grey-crowned babbler, squirrel glider and leafy templetonia. These blocks contribute to the representation of Alluvial Terraces Herb-rich Woodland EVC in the reserve system and also contain a disjunct occurrence of Broombush Mallee EVC that includes green mallee.

### **D56 Caniambo**

This 11 ha existing bushland reserve, located south-east of Gowangardie, contains significant flora values, notably small scurf-pea and slender tick-trefoil. The block also provides habitat for the grey-crowned babbler and contributes to the representation of Alluvial Terraces Herb-rich Woodland EVC and Plains Grassy Woodland EVC in the reserve system.

### **D57 Baddaginnie**

This 15 ha existing bushland reserve, west of Benalla, has significant flora values, providing habitat for several threatened species, including leafy templetonia and swamp billy-buttons. The block also provides habitat for the threatened squirrel glider. It contributes to the representation of Plains Grassy Woodland/Gilgai Wetland Mosaic EVC in the reserve system.

### **D58 Nathalia**

This 183 ha site along the Broken Creek, from Narioka Reserve west of Nathalia to Paynes Bridge east of Numurkah, contains wide tree cover in some sections and historical values. It incorporates an existing streamside reserve (22 ha), an area of public land water frontage (154 ha), and the Narioka

recreation reserve (7 ha). It includes some areas carrying mature trees with good quality understorey. It supports regionally significant plant species and provides potential habitat for superb parrot. It provides habitat for spreading eutaxia and contributes to representation of Pine Box Woodland/*Riverina Plains* Grassy Woodland Mosaic EVC, and Plains Grassy Woodland/Gilgai Wetland Mosaic EVC.

### **D59 Numurkah**

This 638 ha reserve, comprising four sections, incorporates a large area of public land water frontage along Broken Creek and the lower reaches of Nine Mile Creek (521 ha), a streamside reserve (80 ha), a section of the Numurkah–Picola disused railway line (19 ha), Naringaningalook bushland reserve (9 ha), the existing Numurkah rifle range (6 ha) and recreation reserve (3 ha). Some areas retain vegetation cover of regional significance including mature trees and good quality understorey. This recommended reserve provides habitat for several threatened species, including squirrel glider, leafy templetonia, small scurf-pea, tough scurf-pea, long cryngium, buloke and mallee golden wattle. It contributes to representation of Creekline Grassy Woodland, Plains Grassy Woodland/Gilgai Wetland Mosaic, Plains Grassy Woodland and Pine Box Woodland/*Riverina Plains* Grassy Woodland Mosaic EVCs.

### **D60 Yabba South**

Yabba South is a 31 ha block north-west of Dookie incorporating an existing bushland reserve. It provides habitat for various rare and threatened species, including corkscrew spear-grass, spurred spear-grass, leafy templetonia and leafy wallaby-grass. It also contributes to representation of Plains Grassy Woodland and Pine Box Woodland/*Riverina Plains* Grassy Woodland Mosaic EVCs.

### **D61 Wattville**

This 39 ha site along the Nine Mile Creek north-east of Dookie has a wide water frontage, mature trees and mostly native groundcover. It incorporates an area of public land water frontage and provides a rare example of a natural creek system. It provides habitat for several threatened species; notably, white cypress-pine, spurred spear-grass and swift parrot. It is an important historical site and contributes to representation of Plains

Grassy Woodland and Creekline Grassy Woodland EVCs in the reserve system.

### **D62 Boxwood**

This 52 ha block on hilly terrain east of Dookie supports extensive open woodland of grey box and red box trees, and includes buloke. It contributes to representation of the highly depleted Grassy Woodland EVC. This block incorporates the existing Boxwood Historic Reserve. Historic features are the result of a limestone mine worked in the 1930s and include an exploration shaft, adit, the foundations of a crushing plant and remnants of a kiln. These sites are to be preserved. A series of open cuts along a calcite vein are also of geological interest.

### **D63 Youarang**

This 217 ha block is situated along the Broken Creek and comprises four sections. It consolidates 173 ha of public land water frontage and two existing bushland reserves (44 ha). The reserve is characterised by old growth woodland, mature trees and mostly native understorey. It provides habitat for threatened species, including spreading eutaxia, southern cane-grass, buloke, leafy templetonia and spurred spear-grass, and has historic values. It contributes to representation of Creekline Grassy Woodland, Plains Grassy Woodland and Plains Grassy Woodland/Gilgai Wetland Mosaic EVCs in the reserve system.

### **D64 Tungamah**

This 883 ha reserve consolidates public land water frontages (165 ha), the existing Tungamah Swamp and Rowan Swamp wildlife reserves (536 ha), a bushland reserve (20 ha), streamside reserve areas (22 ha) and a further 140 ha of public land including uncategorised public land, road reserves and other small parcels. This recommended reserve provides habitat for many threatened species, including red-chested button-quail, barking owl, grey-crowned babbler, plains leek-orchid, bluish raspwort, buloke, woolly buttons, small scurf-pea, pale spike-sedge, smooth minuria, leafy templetonia and spurred spear-grass. It contributes to the representation of Creekline Grassy Woodland, Grassy Woodland, Plains Grassy Woodland/Gilgai Wetland Mosaic and Plains Grassy Woodlands EVCs in the reserve system.

## D65 Mt Meg

Mt Meg consists of eight existing bushland reserves which, with the existing Mt Meg Flora Reserve, form the recommended Mt Meg Nature Conservation Reserve (total area 440 ha). Nine threatened species have been recorded in these blocks, including narrow goodenia, umbrella grass, scaly greenhood, northern sandalwood, bush stone-curlew, and carpet python (key site). Although these public land blocks are scattered, there is much native vegetation on freehold land linking them. This district, known as the Chesney Vale Hills, may be well suited as a location for a Conservation Management Network (see Recommendation R14 in Chapter 4).

## D66 Wangaratta Common

Wangaratta Common is a 74 ha block located within the Wangaratta township and currently managed as a conservation reserve. It consists of two distinct segments—28 ha of *River Red Gum* Grassy Woodland and 46 ha of *Northern Plains Eastern Grassland (wet)*. Although not strictly Box-Ironbark vegetation communities, the grassland EVC in particular is highly depleted and significant.

The woodland section is dominated by river red gum, including several large trees. The grassland section provides habitat for purple diuris and small chocolate-lily, both of which are threatened.

## D67 Cookinburra

This 88 ha block west of Wodonga incorporates the existing Indigo Upper Bushland Reserve and supports a large population of the vulnerable smooth Darling-pea. It contributes to representation of several vegetation communities, including Grassy Woodland EVC.

## D68 Fell Timber Creek

This 144 ha block west of Wodonga incorporates land previously owned by the Albury–Wodonga Development Council, recently handed over to the Victorian Government. The whole reserve is 245 ha, part of which is outside the study area. It contains steep hills with rock exposures and a high-quality ground flora. The vulnerable smooth Darling-pea is present, as are various vegetation communities, including Grassy Woodland and Valley Grassy Forest EVCs. This area is managed as part of the McFarlanes Hill unit in the Albury–Wodonga regional parklands.

## RECOMMENDATIONS

**D5–D68** The recommended reserves listed and described above be used in accordance with the general recommendations for nature conservation reserves on page 167.

## Information Sources

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## E Historic and cultural features reserves

The Box–Ironbark public lands have a rich and interesting background. After a long Aboriginal history, the area was settled and mostly cleared by European colonists. Many uses or activities have affected the landscape: gold rushes and continued mining; timber harvesting for firewood, mine timbers, sleepers and fencing; apiculture; eucalyptus oil and charcoal production; water supply; roads and railways. More recently, issues of soil erosion and conservation, military training, nature conservation and tourism have had effects on the area.

Locations with obvious connections to historical activities or events, such as relics or even just recorded associations, allow visitors to understand and appreciate past land uses, and gain a different perspective on current activities. Several studies have been carried out in the Box-Ironbark study area, within the original West RFA boundary, with the support of the Commonwealth Government. These identified and systematically assessed the significance of historic places and cultural heritage across the Box–Ironbark landscape.

The following recommendations designate the areas that are:

- most significant;
- represent a major historic or cultural theme; or
- provide opportunities for community education about historic activities and events.

These areas are recommended as historic and cultural features reserves recognising that their primary land use is to protect historic and cultural features and extend public knowledge.

Other historic and cultural features are contained in parks, other reserves and state forest. Such places should be recognised when managed primarily for other purposes. Certain significant features have been specifically identified in the detailed descriptions of those sites.

The historic and cultural features reserves are available for a range of recreation activities where these do not adversely affect the historical and cultural features. With expert advice, land managers will prepare management plans to guide management and use. These plans identify zones with different management needs, areas with

specific heritage or environmental values requiring protection, and necessary management actions.

As with the regional parks, these recommended reserves are to be ‘restricted Crown land’ in relation to mining, under the *Mineral Resources Development Act 1990*. Mineral exploration and mining may be permitted, subject to the approval of the Minister for Environment and Conservation.

The Land Conservation Council recommended, and Government approved, nine historic areas and 36 other historic reserves in its various earlier investigations covering the Box–Ironbark area, including 12 historic and cultural features reserves in the *Historic Places South-western Victoria Special Investigation*. Additional material about relevant sites has been collected for this investigation.

Historic mining sites which provide the physical traces of the 1850s gold rush are fragmented and relatively few. Much of the gold rush landscape has been transformed or obliterated either by natural events, or by settlement, forest operations, and/or subsequent phases of gold mining. Gold-bearing quartz reefs have been repeatedly reworked, while extensive areas of the most fruitful alluvial tracts have been removed by hydraulic sluicing. The recommendations below include significant mining sites with features from the initial gold rushes, later stages of mining and secondary processing of the ore.

Chapter 5 of this report discusses and makes recommendations relating to Aboriginal cultural sites and places, and Chapter 6 discusses non-indigenous cultural heritage, including guidelines for the management of cultural heritage values and general recommendations.

### Community views

The protection of significant historic and cultural features received considerable attention in public submissions. Examples of such features were Aboriginal sites and places, particular cultural landscapes, historic Chinese mining and settlement sites, historic mines and mining sites, structures such as bridges and buildings, and relics of past timber harvesting operations.

There was significant support for greater emphasis on managing and protecting historic and cultural features. Many submissions strongly supported the

establishment of a national park in the Castlemaine area, in part to recognise the significant cultural heritage and historic features of the Mount Alexander Diggings. This is addressed in detail in Chapters 6 and 15.

Many submissions proposed specific sites or structures in their area for inclusion in historic and cultural features reserves. Some proposed that sites be enlarged to adequately protect them from active uses on adjoining public land. It was also proposed by a number of people that appropriate interpretive signage should be mandatory at all historic and cultural features reserves.

### **Achieving a balance**

Protection of significant historic and cultural features in the study area is achieved through recognition in zoning or prescriptions in state forest or inclusion of sites in parks or reserves, followed by appropriate management. The primary focus in this category is the establishment of historic and cultural features reserves. These measures would augment the protection relics and objects now have under the *Heritage Act 1995*, the *Archaeological and Aboriginal Relics Preservation Act 1972* and the (Commonwealth) *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

The ECC's recommendations would contribute substantially towards establishing a system of high-level parks and reserves that would protect these areas and their important features. Acknowledging the significant community support and the value of the features in the Castlemaine area, the ECC has recommended the establishment of the Castlemaine Diggings National Heritage Park (see NHP1 Chapter 15). Not only would this recommended park recognise and protect this highly significant cultural heritage landscape and natural values but it would also provide a unique opportunity for the development of tourism based on interpretation of these features.

Management plans should be prepared, in accordance with the Burra Charter, for the recommended places.

The ECC did not systematically assess townships for historic buildings and structures on public land. Accordingly in this investigation, the ECC has not made recommendations to include any such places in historic and cultural features reserves. Numerous buildings in townships across the study area, particularly those from the gold era, are of historic merit—some have been assessed and are included on the Victorian Heritage Register or the National Trust Register. Heritage studies of towns and municipalities that have not been assessed would be valuable, to ensure that significant buildings are appropriately managed. Some buildings are noted in other ECC recommendations in Chapter 18 dealing with community use areas and services and utilities.

The ECC has recommended the enlargement of some reserves to adequately protect them from operations on adjoining public land.

In addition to the features included in other parks and reserves, the important Maldon, Moliagul, Percydale and Whroo goldfields and 32 existing historic areas and reserves are recommended to be retained as historic and cultural features reserves. Some 15 new historic and cultural features reserves are also recommended. In addition, the ECC has identified and listed 14 significant features in state forest, and numerous other features, which should be protected through the forest management planning process or by prescription.

Since the Draft Report, the ECC has recommended that the status of several historic sites be altered. The area containing the Pearl, Pearl East and Stanfield Mine workings area is mostly now uncategorised public land, with the historic features and their immediate surrounds recommended to be protected by the land managers. The Woodbrook Road Bridge is recommended to be protected by the managers of the railway and road at the site, and Dysart Siding has been removed as it is not on public land.

## GENERAL RECOMMENDATIONS FOR HISTORIC AND CULTURAL FEATURES RESERVES

Historic and cultural features reserves shown on Map A (numbered E1–E30) be used:

- (a) primarily, to protect places with significant historic values, including remnant historical features such as buildings, structures, relics or other artefacts;
- (b) (i) to conserve indigenous flora and fauna, except where incompatible with protecting the above values, and  
(ii) to provide opportunities for recreation and education, where appropriate in the context of present use and management;
- (c) to provide protection for, where present:
  - (i) cultural values, including aesthetic and social values, and
  - (ii) scenic landscape and natural values;

and:

- (d) low impact exploration for minerals, planned to minimise any impacts on significant cultural heritage values, be permitted with the approval of the Minister for Environment and Conservation (see Note 2);
- (e) mining be subject to Government decision on individual proposals (see Note 2);
- (f) prospecting and gemstone-seeking be permitted except in areas where they may disturb protected archaeological relics or adversely affect Aboriginal cultural values or significant historic features;
- (g) timber harvesting not be permitted;
- (h) the re-use of buildings, including for community uses, be permitted where appropriate, with any modifications subject to the approval of the land manager;
- (i) conservation management plans or conservation and action strategies for the historic and cultural features be prepared by the land manager;
- (j) unused road reserves be added to adjoining historic and cultural features reserves where appropriate;
- (k) the areas referred to in recommendations E1 to E16 be permanently reserved under the *Crown Land (Reserves) Act 1978*, and managed by the Department of Natural Resources and Environment;

and:

- (l) the areas referred to in recommendations E17 to E31 be protected through forest management planning and managed by the Department of Natural Resources and Environment.

- Notes:
1. The reserves consist either of the relevant Crown parcel alone, or in broadacre public land, the area of the features to be protected plus, generally, the area within 100 m (for areas of state significance) or 50 m (for areas of regional significance) of the features. Larger or smaller radii may be appropriate in some cases; this should be determined in management plans specific to the site.
  2. In relation to exploration and mining proposals, provisions for a buffer around specific features, principles for consideration of particular proposals, and where appropriate compensation, are to be determined by Government. Surface infrastructure such as air shafts and vents may be required for underground mining. Sites for minor infrastructure may be located in these reserves if necessary, provided historic features are not damaged and intrusion is minimised.
  3. The ECC is aware of a proposal for Bendigo Regional Institute of TAFE to carry out a management planning project using several historic mining sites around Bendigo, considering issues such as renewed mining, protection of historic features, promotion and interpretation, visitor use and management, safety, fire and pest plant control, and future use and ownership, within the framework of the ECC's recommended uses.
  4. While NRE is identified as the land manager, in several cases sites are now or could be managed by other State Government bodies, by local government and/or by committees of management. Provided the historic and cultural features are protected, such arrangements are appropriate. Expert advice should be sought from relevant heritage organisations such as NRE Historic Places Section and Heritage Victoria.
  5. The historic and cultural features reserves E7 – E14 are located in urban Bendigo. Owing to their small size, they are not labelled on Map A or Map D. The ECC holds Crown descriptions of these blocks.



## E1 Existing historic and cultural features reserves

Thirty two existing historic areas and reserves are recommended to be retained, but designated as historic and cultural features reserves. They will be used for effectively the same purposes as previously.

### Historic and cultural features reserves

- Hand in Hand Cyanide Works, Deep Lead (8 ha) (includes the Band of Hope Mine Workings)
- Leviathan Cyanide Works, Stawell (5 ha)
- North Magdala Co. Mine, Stawell (0.2 ha)
- Moonlight/Magdala Mine, Stawell (3 ha)
- Oriental Co. Mine, Stawell (1 ha)
- Three Jacks Co. Mine, Stawell (1 ha)
- Great Western Lead Mine, Great Western (5 ha)
- Long Gully Shallow Lead, Armstrong (11 ha)
- Bell Rock Co. Mine, St Arnaud (3 ha)
- Lloyd's whip shaft and mud-brick structure, Stuart Mill (13 ha)

### Historic areas

- Percydale (1 272 ha)
- Moliagul (1 010 ha)
- Maldon (2 520 ha)
- Whroo (490 ha)

### Historic reserves

- Glendhu, south of Landsborough (40 ha)
- Landsborough (16 ha)

- Lower Homebush, north-east of Avoca (1 ha)
- Nine Mile, west of Wedderburn (12 ha)
- Tipperary Hill, north-west of Maryborough (5 ha)
- Timor, north of Maryborough (7 ha)
- Simson, north of Maryborough (5 ha)
- Majorca, south-east of Maryborough (16 ha)
- Kong Meng, north of Majorca (20 ha)
- Goldsborough, north-west of Dunolly (7 ha)
- McIntyre, north of Moliagul (38 ha)
- Rheola Hill, Rheola (72 ha)
- Gooseberry Hill, east of Dunolly (1 ha)
- Wild Dog Diggings, east of Dunolly (24 ha)
- Wanalta Weir, west of Rushworth (5 ha)
- Bailieston, north-west of Nagambie (111 ha)  
Note: the northern parcel has been revoked.
- Murchison Water Water trust pump, south of Murchison (1 ha)
- Chiltern Valley Extended Mine, west of Chiltern (10 ha)

#### Notes:

1. The remaining 49 ha of the former Fosterville historic reserve is recommended to become state forest. The most significant historic features present in this reserve were archaeologically recorded before being removed for the Fosterville open cut mine.
2. Several of the above historic areas and reserves have recorded community heritage values (historic, natural, social aesthetic, Aboriginal); for example, the Maldon, Moliagul and Whroo Historic Areas and Timor Historic Reserve.

### RECOMMENDATION

**E1** The existing historic and cultural features reserves, historic areas and historic reserves described above and listed in Appendix 11 be used in accordance with the general recommendations for historic and cultural features reserves on page 190.

## **E2–E16 Recommended historic and cultural features reserves**

### **E2 Alma Lead Cyanide Works**

This 11 ha site at Timor testifies two main periods of cyaniding, from approximately 1897 to World War One and from circa 1937 to the mid-1950s. The site consists of large raised sand dumps with four, poorly preserved seven metre diameter cyanide vat depressions and some small concrete mounting beds.

### **E3 Bristol Hill**

The 26 ha Bristol Hill Reserve at Maryborough has social, historic and aesthetic values. The primary features are the 1932/33 memorial lookout tower, trees and landscaping. The octagonal reinforced concrete tower has a spiral stair of bluestone from the old Maryborough Gaol. It was built to commemorate gold mining pioneers of the district. Located on a prominent hill immediately west of Maryborough, it is a popular tourist site. Open cuts and remnants of mullock heaps and whim platforms reflect mining history of the site. The Shire of Central Goldfields manages this reserve.

### **E4 Janevale Monier Bridge**

This bridge, constructed over the Loddon River at Laanecoorie in 1911 (0.5 ha), was one of the earliest concrete bridges in Victoria. It is of national significance as a rare and early example of reinforced concrete technology. The bridge is associated with the pioneering concrete firm Monier, and the innovative engineer Sir John Monash. The braced concrete trestles demonstrate a transition from earlier arched concrete bridges to modern beam and pylon construction. Management of this bridge could be delegated to the Shire of Loddon, which maintains the road.

### **E5 Pickpocket Diggings**

These 5 ha diggings at Strangways, south of Newstead, feature relatively undisturbed cement workings with remains of an extensive, shallow open cut. Several collapsed adits and large dumps of washed gravel and pebbles are present. A Chinese water race lies around the hill above the open cut.

### **E6 South Frederick the Great**

This 13 ha mine site at Sebastian failed to prove remunerative and operated only from 1935 to 1938. Features at the site include: a capped shaft still

surrounded by its mullock paddock; concrete foundations of a ten-head battery; and a circular concrete pad, probably a stand for a gas-producer cylinder. The latter documents important technology in the construction and use of gas-producers for mining in the 1930s.

### **E7 Deborah Company**

Deborah Company at Golden Square, Bendigo (0.5 ha) features remnants of well preserved mining artefacts including: a winding engine and steel poppet-head with tubular legs; a workshop with engine blocks; and a twenty-head battery containing concrete machinery footings, floors and engine beds.

The intact chimney stack adds further interest. The mine is capped and is not used commercially, however Bendigo Mining NL has plans to re-open the mine in 2001, to a depth of 600 metres.

### **E8 North Deborah**

North Deborah at Bendigo (1 ha) contains well preserved mine foundations, including a winding engine site with poppet-head, over a shaft covered by a metal grille, three concrete winding engine beds, and an intact nine-metre high circular chimney stack built with hand made bricks. The mine operated commercially from 1937 to 1945. Although the mine is uncapped, it is used by Bendigo Mining NL for ventilation and de-watering of Central Deborah mine.

### **E9 Central Deborah Tourist Mine**

This 0.5 ha tourist mine at Golden Square, Bendigo, operated commercially from 1939 to 1954, yet now acts as a tourist attraction, managed by the Bendigo Trust. It consists of a winding engine site with well preserved and restored features including a winder, air compressor foundations, portions of the ore bin, sections of mine buildings, an air receiver and boiler, and a poppet-head. Parts of the mine measure 300 metres in depth.

### **E10 Victoria Hill**

This 14 ha site at Victoria Hill, West Bendigo, contains features representing several stages of gold mining, including Ballerstedts which has long narrow open cut remains from one of Bendigo's premier mines in the late 1850s/60s, and Lansells

180, containing well preserved late 19<sup>th</sup> century mine foundations. Victoria Hill has been interpreted and is managed as a historic reserve. In addition, the adjoining area containing a poppet-head and Central Nell Gwynne Mine relics is included.

### **E11 Royal George Company**

This 16 ha Royal George Company mine site at Sparrowhawk consists of a concrete winding engine bed with protruding mounting bolts, foundations of a chimney stack, and a collapsed shaft with scattered bricks and remnants of a baling pond. A mullock heap thirty metres long and eight metres high extends from the shaft.

### **E12 Comet Shaft, KK Shaft, and Comet Diggings**

The 7 ha site, the Comet Hill reef workings and mine at Bendigo, dating from the 1850s/60s until 1913, demonstrates a sequence of mining over time, with remains of winding engine beds, a filled shaft, mullock heap, and an open-cut present. The KK Shaft has the remains of an H-shaped brick engine bed with protruding bolts, and a tailings dump.

### **E13 Johnson's Nos. 1 & 2 Mines and Golden Age Mine, Garden Gully**

The Johnson's Nos. 1 & 2 mines represent one of Bendigo's main mines from the 1870s, with the winding engine beds demonstrating three phases of use from 1870 to the 1920s. The 13 ha site has remains of a powder magazine, other buildings, a dam, and mullock heap. The Golden Age Mine has well preserved winding engine beds, a stone wall, mullock heaps, and there are fragmentary remains of the Princess Dagmar Mine.

### **E14 Chinese Diggings**

The Chinese Diggings site at White Hills, Bendigo was worked from 1852 to the 1930s. Numerous well preserved round and rectangular shafts remain of the sinkings through the hard cemented white alluvial gravels here. This 4 ha site contains most of the remaining shafts near Bendigo associated with Chinese miners.

### **E15 Echuca & Waranga Trust Irrigation Pump & Channel**

The United Echuca & Waranga Water Trust was formed in 1881. The Trust's surviving pump structure, at the junction of Stuart Murray Channel and Goulburn River, is of state significance for its role in early irrigation. It is the oldest known irrigation pump housing in Victoria, and is rare for its age and type. It is also one of the first major designs of the noted engineer Stuart Murray. This 5 ha site consists of a brick shaft 13.7 metres deep with timbered water tunnel, sluice gate and concrete engine and boiler bases.

### **E16 Days Mill**

Days Mill, south of Murchison, is probably the best preserved and most complete example of a stone flour mill from the 19<sup>th</sup> century, operating from the 1860s to the late 1890s. The 5 ha site also contains a wide range of domestic and farm buildings and artefacts, assembled by one family over three generations. These provide a record of farming and flour milling as well as rural life in Victoria. Days Mill is also recognised as having significant historic and social community heritage values.

## **RECOMMENDATIONS**

**E2–E16** The recommended reserves described above be used in accordance with the general recommendations for historic and cultural features reserves on page 190.

## **E17–E30 Historic and cultural features in state forest**

The ECC has identified the following sites in state forests as having historic and cultural values. These sites and their values should be protected through forest management planning.

### **E17 Wet Patch Lead**

This 1.5 ha site, Wet Patch Lead in the Pyrenees Ranges, contains puddling machine hut sites, and associated dams and dumps of gravel. At the head of the gully are well preserved original shallow alluvial workings.

### **E18 Three Grain Gully**

This 1.5 ha site, Three Grain Gully at Moliagul, is one of the sites in the area between Moliagul and Dunolly which, after gold was discovered in 1855, became known as Inkerman diggings. They were rushed for gold several times over the years. The first Inkerman Rush in July 1855, was associated with Three Grain Gully. The remains of alluvial workings consist of a wide band of sinkings and mounds stretching for about 2.5 km. The sinkings are well-defined, intense, and located in a distinct band. A cemetery was established next to the site. The earliest marked grave in the cemetery is dated May 1859.

### **E19 Bet Bet Lead**

This 1.5 ha site was worked periodically between 1854 and early in the 20<sup>th</sup> century. The site has a rare puddler, the only one of its design found in the central Victorian goldfields.

### **E20 Almedia Reef**

This 1.5 ha site, Almedia Reef at Dunolly, contains the remains of 22 stone structures ranging from surface mounds to fireplaces. It also contains dumps of 19<sup>th</sup> century rubbish from settlements associated with mining. Remnants of reef workings, including open-cutting, several shafts (filled in) and small mullock heaps, are also present.

### **E21 Wild Duck Lead Diggings**

This 1.5 ha site, Wild Duck Lead Diggings at Dunolly, contains an unusually well preserved puddler. The outer mound of the puddler is approximately 3.5 metres wide and is raised about one metre above ground level. The puddler is in good condition, with the edges of the inner mound and puddling trench still precisely cut. This

appearance suggests that it was used during the 20<sup>th</sup> century, probably during the 1930s. This puddler is important for estimating the age of more weathered and older, mid to late 19<sup>th</sup> century puddlers.

### **E22 Possum Gully Cement Workings**

Possum Gully Cement Workings at Amherst contain a variety of relics documenting alluvial mining operations. These include a long stretch of cement lead workings along the gully, with some distinct shaft sinkings through the cement cap, open-cutting and tunnelling. The 2.5 ha site also contains puddling dams connected with the cemented lead workings, and a weathered puddler on a well-preserved site.

### **E23 White Horse Gully**

This gully at Maryborough is an interesting reference point for studying the evolution of shallow alluvial mining. The 2.5 ha site has an embankment marking the interface between ‘new’ and ‘old’ alluvial mining landscapes. To the north is a bare rehabilitated gully, recently extensively strip-mined, and to the south is an old, extensively surfaced or puddled gully.

### **E24 Battery Dam and Bull Gully Eucalyptus Distilling Site**

This 5 ha site at Maryborough had a gold mining history of alluvial and cyanide extraction. A battery and subsequent eucalyptus distilling site were also located here. This site documents the sequence of uses through time, including alluvial gold mining (puddling machine site), quartz gold processing (battery site), and distillation of eucalyptus oil (four distillation vats and condensing pits of an unusual construction). The name Thomas Rice is synonymous with the discovery of gold in Maryborough; the ruins of his house have been identified by the local community, as being culturally significant. Aboriginal, historic, and social community heritage values have been recorded here.

### **E25 North German Gully**

This 2.5 ha site at Majorca contains three weathered puddlers. The largest, 20 ft in diameter is the least weathered and has a pronounced inner mound and deep puddling trench with sheer sides. This site illustrates the continuity of puddling, and how certain gullies and dams tended to be favoured puddling locations.

## E26 Gardners Gully

This 1.5 ha site, Gardners Gully at Muckleford, features a puddler, a bank of washed gravel and remains of a single-roomed mud brick house. The 19<sup>th</sup> century weathered puddler is 22 ft wide and adjoins a massive bank of washed gravel. This bank, presumably an accumulation from a succession of puddlers, measures 50 metres long, 20 metres wide and stands 2 metres high.

## E27 Thornhill Reef

This 1.5 ha site, Thornhill Reef at Green Gully, was reputed to be the most successful 19<sup>th</sup> century quartz mining operation in the Muckleford area, operating from 1856 to the late 1880s. The site has historical and scientific significance, derived mainly from the survival of different kiln types. It is the only mine so far discovered where there is a range of small below ground kilns and large above ground quartz roasting kilns. This range may provide evidence of the evolution of the quartz treatment process. It is a rich archaeological site. The site has two largely intact roasting kilns in a structure 16 metres by 4 metres, and 4 metres high. There are also five below-ground kilns of varying shapes and sizes. A mullock heap may contain another roasting kiln.

## E28 Green Gully

Green Gully (1.5 ha) at Muckleford contains rare remnants from shallow reef mining and four partly bulldozed mullock paddocks with numerous shallow shafts, and alluvial sinking artefacts.

## E29 Welcome Reef Mine Site

This 1.5 ha site, at Redcastle, was the richest in the area. It retains considerable integrity and illustrates operations of a late 19<sup>th</sup> century gold mine. It contains a shaft and flattened mullock paddock, remains of a blacksmith's shed with a stone forge, a poppet-head leg, battery stumps, stone floor and footings, arrangement of bedlogs and iron bolts for a stone boiler setting, and a stack base from the former boiler house.

## E30 Poverty Diggings

Poverty Diggings at White Hills (1.5 ha), Rushworth, contains the remains of two puddling machines. One, protected by a swamp, is quite well preserved but requires some management. There is also a large embankment of washed gravel surrounding the puddler, possibly indicating the scale of operation of puddling.

### RECOMMENDATIONS

**E17–E30** The areas described above, which have historic and cultural significance, be protected through the NRE forest management planning process.

## E31 Other historic sites in state forest

Various other historic features occur within state forests. Those of at least regional significance should be protected through the forest management planning process or by prescription during forest operations.

### RECOMMENDATION

**E31** The historic sites in state forests listed in Chapter 17 be protected through the forest management planning process or through prescriptions during forest operations.

### Information Sources

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