

PROPOSED RECOMMENDATIONS

MELBOURNE STUDY AREA

**LAND CONSERVATION COUNCIL, VICTORIA
MELBOURNE, FEBRUARY 1975**

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INTRODUCTION

The publication of proposed recommendations for the Melbourne study area is the second of the steps the Land Conservation Council takes to "carry out investigations and make recommendations to the Minister with respect to the use of public land in order to provide for the balanced use of land in Victoria" (*Land Conservation Act 1970*).

Procedures

The first step was the publication of the descriptive report on the study area on 10th April, 1974. In the following 60 days, the Council received submissions on the future uses of the public land from 408 organizations and individuals, representing a wide range of interests. After considering the submissions and visiting most parts of the study area, the Council has prepared these proposed recommendations. These will be distributed to all who made submissions, and their publication will be followed by another 60-day period for further submissions. After this the Council will prepare final recommendations for presentation to the Minister and Parliament.

Layout

This volume contains written recommendations and maps. The recommendations are grouped under major use headings, such as Parks, Hardwood Production, and so on. The pocket at the back contains 16 maps. Map A, at the scale of 1 : 250,000, covers the whole study area, and gives a broad view of the recommendations. It includes a key to 12 sheets, which cover the study area at the scale of 1 : 100,000, and which show the recommendations in greater detail. The remaining three sheets show detailed zoning for two parks and another area. Maps showing the boundaries of the recommendations in greater detail are held in the Land Conservation Council.

Land uses

Table 1 summarizes the proposed recommendations in terms of the major forms of use. It is important to realise that for each primary use there are a number of compatible secondary uses. In addition to stating the best uses for the land, the recommendations indicate what is considered to be the most appropriate form of tenure for the land and the most appropriate management authority.

The Council recommends the establishment of a comprehensive system of 25 State and regional parks to serve the population centres of Melbourne, Geelong, and the western Latrobe Valley. The creation of a large multi-purpose park, containing all the public land in the Yarra Valley, is also recommended. The Council recommends the creation of reference areas and education areas covering the wide range of land types found in the study area, and wildlife reserves for a number of sites containing valuable faunal habitats. Large tracts are recommended for timber production.

This publication contains new policies for the use of public land on the coast, water frontages, and roads, and for land used for water supply and the production of gravel and sand.

TABLE I.
RECOMMENDED PUBLIC LAND USE.

Recommended land use.	Area (ha)	Percentage of all land in study area.	Percentage of public land
State parks	122 400	5	14
Regional parks	16 500	<1	2
Multi-purpose park	113 400	4	13
Reference areas	9 000	<1	1
Wildlife, flora and fauna reserves	23 500	<1	3
Water production*	23 600	<1	3
Hardwood production	319 400	12	37
Softwood production	17 300	<1	2
Other recreation and conservation areas	14 500	<1	2
Education areas	3 300	<1	<1
Agriculture	1 500	<1	<1
Mineral and stone production	5 700	<1	<1
Utilities and survey	12 100	<1	1
Uncommitted	181 600	7	21

* this is a minimum figure, exact area as yet undetermined.

Where a given area of land is subject to demands from competing uses, it is not possible to satisfy them all. However, these recommendations attempt to achieve balance in providing for the present needs of most forms of use while retaining flexibility and the opportunity to adjust to future changes in the demands upon land. They do so by placing as much of the public land as possible under forms of use that do not have a major impact on the natural ecosystem, and by placing areas into the "uncommitted land" category. Flexibility in planning is essential, since land use should be reviewed periodically as community needs and technology change.

General recommendations

These recommendations qualify those in the body of the text. The Council recommends that :

- I. The authorities responsible for managing and protecting the public land be given the resources necessary for the task.
- II. For fire protection purposes, public land that is not State forest be declared "protected public land" under the *Forests Act 1958*.

In its previous recommendations the Council proposed certain arrangements for protecting the public land from fire. These arrangements have now been incorporated into an amendment to the *Forests Act 1958*. The amendment creates the designation "protected public land", which consists of public land that is not State forest or national park. The Forests Commission is responsible for carrying out work for prevention and suppression of fire in State forests and national parks and in protected public land, but in protected public land this work can be undertaken only with the agreement of the managing authority.

- III. As the boundaries of many of the areas referred to in the recommendations have not been precisely surveyed, they may be subject to minor modification, road excisions, and other adjustments that may become necessary.
- IV. Where areas of public land are not specifically referred to in these recommendations, present legal uses and tenures continue.

- V. The recommendations in this publication do not change the status of roads, passing through or abutting public land, which are at present declared roads under the *Country Roads Act 1958*.

The Council wishes to stress the need for adequate management and protection of public land, as it has made its recommendations on the assumption that sufficient manpower and finance will be provided for the appropriate managing authority. If these resources are not provided, the Council's recommendations cannot be effectively implemented. There is an urgent need to make additional field staff and finance available, particularly to the National Parks Service. The Council recommends that the present legal status and management of public land in each case be retained until the recommended authorities have the capacity to manage each area. It recognises that in some cases existing legislation will have to be amended in order to effectively implement the recommendations in this volume.

- Note (1) Part of the former Shire of Berwick became the City of Berwick and therefore excluded from the study area, on 1st October, 1973. The Council has made no recommendations on the small area of public land in the former Shire.
- (2) The Shire of South Barwon became a city, and therefore excluded from the study area, on 6th December, 1974. The former Shire contains some areas of public land that have significance for nature conservation and recreation. These were described in the Council's initial report, and recommendation concerning their future use had been prepared before the change in status occurred. In view of these circumstances, recommendations concerning land in the City of South Barwon are included in this publication.

A. PARKS

The number of people participating in recreation activities in natural surroundings is increasing rapidly, and the Council believes that participation will continue to increase. However, the area of natural land available for these activities is decreasing and it is essential to allocate land to them now, before alienation and clearing further reduce the resources available.

A park is here defined as "an area of land in a natural or semi-natural condition, reserved because of its scenery, floral and faunal content, historical interest, or other features, which is used by the public primarily for open-space recreation and education". This definition encompasses many different types of parks, the main differences arising from variations in size and content and the types and intensity of uses to which they are subjected.

Definitions of different types of park are needed to clarify the main purpose for which a park is created. Such definitions will help planners, managers, and users of parks. In addition it is desirable to zone areas within parks for ease of management. This publication presents recommendations concerning parks in terms of the uses to which the land should be put. Parks have also been placed into categories, according to the scheme of classification suggested below.

The categories are not to be confused with the existing terminology of national park, forest park, etc., which mainly denotes tenure and the managing body rather than the types of purpose for which they are to be used. For instance, some of the present national parks are more akin in character and purpose to a state or regional park than to the national park of nation-wide significance outlined in the classification.

PARK CATEGORIES

National park

An extensive area of public land, of nation-wide significance because of its outstanding natural features and diverse land types, set aside primarily for public enjoyment, education, and inspiration in natural environments in such a manner and by such means as will leave the natural environment unimpaired for the enjoyment of future generations.

The conservation of native flora, fauna, and other features would be an essential part of national park management. Interpretative facilities would be provided. Development of facilities would be limited to a very small portion of the park. Activities would largely consist of sightseeing and the observation of flora, fauna, and other natural features. Wilderness areas, which are large undisturbed tracts of land used for solitude and primitive unconfined forms of recreation, could be within a national park. It is envisaged that there would be only a few national parks within Victoria.

State park

An area of public land, containing one or more land types, set aside primarily to provide for public enjoyment, education, and inspiration in natural environments.

State parks should include samples of each major land type not already represented in national parks. Interpretative services would be provided. Development of facilities would be limited to a very small portion of the park. Activities would largely consist of sightseeing and the observation of flora, fauna, and other natural features.

Regional park

An area of public land, readily accessible from urban centres or a major tourist route, set aside primarily to provide open-space recreation in natural or semi-natural surroundings for large numbers of people.

These parks would be intensively developed for passive recreation such as picnicking and walking for pleasure and could include reasonable vehicular access. Although natural beauty would enhance their value, proximity to an urban centre is more important than natural attributes. Other uses, such as timber harvesting, fossicking, and stone extraction, may be permitted where they are compatible with the primary use.

Multi-purpose park

An area of public land set aside to provide recreational and educational experiences in natural surroundings, in which other activities such as water production, hardwood timber production, stone extraction, hunting or grazing are permitted where these form a part of, do not substantially conflict with, or supplement the primary object. *Victoria contains areas where, although recreation is an appropriate primary use of land, it is not desirable, economically possible, or necessary to wholly exclude other uses that would be unacceptable in national or State parks. (In the Melbourne study area, the only park in this category is the Yarra Valley Multi-purpose Park, where water production is a most important use.)*

LIST OF PROPOSED PARKS.

A1	State park	..	..	..	..	..	Angahook
A2	" "	..	..	..	..	..	Brisbane Ranges
A3	" "	..	..	..	..	..	Lerderderg
A4	" "	..	..	..	..	..	Fryers Ridge
A5	" "	..	..	..	..	..	Kinglake
A6	" "	..	..	..	..	..	Cathedral Range
A7	" "	..	..	..	..	..	Lake Mountain
A8	" "	..	..	..	..	..	Eildon
A9	" "	..	..	..	..	..	Baw Baw
A10	" "	..	..	..	..	..	Moondarra
A11	" "	..	..	..	..	..	Bunyip
A12	" "	..	..	..	..	..	French Island
A13	" "	..	..	..	..	..	Cape Schanck-Arthurs Seat
A14	Regional park	..	..	..	..	..	You Yangs
A15	" "	..	..	..	..	..	Steiglitz
A16	" "	..	..	..	..	..	Hepburn
A17	" "	..	..	..	..	..	Macedon
A18	" "	..	..	..	..	..	Wandong
A19	" "	..	..	..	..	..	Yea River
A20	" "	..	..	..	..	..	Fraser
A21	" "	..	..	..	..	..	Tyers
A22	" "	..	..	..	..	..	Crossover
A23	" "	..	..	..	..	..	Mt. Worth
A24	" "	..	..	..	..	..	Dandenongs
A25	" "	..	..	..	..	..	Warrandyte
A26	Multi-purpose park	..	..	..	..	..	Yarra Valley

STATE PARKS
Specific Recommendations

A1 Angahook

That the land (3 300 ha) shown on the maps be used to :

(a) provide opportunities for recreational and educational experience related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

and that :

(c) the following roads in the park should remain open to traffic—Bambra, Breakfast Creek No. 2, and Distillery Creek

(d) the area of the stone quarry not be increased, and it eventually be closed and that it be permanently reserved under section 14 of the *Land Act* 1958, and be managed by the Forests Commission.

Most of the important landscape features occurring between Anglesea and Lorne are represented in this park. It contains typical examples of open forest and heathy woodland occurring in the eastern Otways, particularly those that have developed on a variety of parent materials in the greater-than-700-mm annual rainfall zone.

Note that the adjoining land in the Corangamite study area is of a similar nature, and will be considered for addition to the park.

A2 Brisbane Ranges

That the land (9 900 ha) shown on the maps be used to :

(a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

(c) supply water and protect catchments

and that :

(d) emphasis be given to the conservation of the park's rich flora (see descriptive report)

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

This park includes the steeply dissected slopes of the Rowsley fault scarp (a prominent landscape feature visible from many areas west of Melbourne) and remnants of flat plateau terrain. It also includes the Werribee Gorge, a feature of particular geological interest. It supports a rich flora in which open forest I-II of messmate stringybark, red stringybark, broad-leaf peppermint, red ironbark, and their associated species are prominent.

Due to their history, the forests in this park are not in their natural condition. It is envisaged that, to create more diverse and representative forests, some manipulation by means of timber harvesting will be necessary and some minor forest produce will be available. This applies to parks **A3** and **A4** also.

A3 Lerderderg

That the land (12 700 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect catchments

and that :

- (d) special emphasis be placed on maintaining this area's diverse mammal fauna

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

The main feature of this park is the gorge of the Lerderderg River. The park includes open forest I-III in which messmate stringybark, narrow-leaf peppermint, red stringybark, broad-leaf peppermint, red ironbark, and their associated species are prominent.

The comments concerning the condition of the forests made under **A2** apply here also.

A4 Fryers Ridge

That the land (1 400 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect catchments

and that :

- (d) emphasis be given to conserving the park's rich flora (see descriptive report)
- (e) existing mining exploration licences held over the area continue

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

This park contains examples of the land types found in the northern foothills of the Divide where they have developed on Ordovician sediments. It supports open forest I-II in which red stringybark, broad-leaf peppermint, and their associated species predominate. The park includes many historic relics of past gold-mining activities. The comments concerning the condition of the forests made under **A2** apply here also. Note that adjoining land of a similar nature in the North Central study area will be considered for addition to the park.

A5 Kinglake

That the land (11 500 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

(c) supply water and protect catchments

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

The chief features of this park are fern gullies, waterfalls, and panoramic views across the cleared lowlands. It includes plateau and dissected terrain supporting open forest I-IV in which mountain ash, messmate stringybark, red stringybark, broad-leaf peppermint, and associated species are prominent.

A6 Cathedral Range

That the land (3 600 ha) shown on the maps be used to :

(a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

and that :

(c) during periods of high fire danger the managing authority close the Little River gorge area to the public

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

The rocky razor-back ridge of the Cathedral Range is the main feature of this park. Other features include the gorge of the Little River as it drops from the Cerberean Plateau and the river flats downstream. The park supports open forest I-IV in which messmate stringybark, manna gum, red stringybark, broad-leaf peppermint and their associated species are prominent.

A7 Lake Mountain

That the land (2 400 ha) shown on the maps be used to :

(a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

(c) supply water and protect water catchments

and that :

(d) emphasis be placed on the conservation of the park's rich flora

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

This park is the closest sub-alpine area to Melbourne and supports a rich flora of typical alpine and sub-alpine species, a number of which occur no further west on the Australian mainland.

A8 Eildon

That the land (25 500 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect catchments

and that :

- (d) emphasis be placed on maintaining this area's diverse mammal fauna
- (e) existing mining exploration leases held over the area continue

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the National Parks Service.

The steeply dissected Enterprise Range and Rocky Spur, together with the scenic and recreational attractions of the Eildon water storage, are the main features of this park. It supports open forest I-III in which messmate stringybark, narrow-leaf peppermint, red stringybark, narrow-leaf peppermint and their associated species are prominent.

A9 Baw Baw

That the land (13 300 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect water catchments

and that :

- (d) existing grazing leases be cancelled
- (e) no further villages be developed on the plateau
- (f) no skiing facilities be developed on the Thomson side of the plateau
- (g) further ski runs may be developed adjacent to the present village
- (h) the proposed road from Rocky Knob to Baw Baw village not be built
- (i) mining exploration and mining by underground methods be permitted in the highly mineralized zone in the east of the Thomson River, under conditions drawn up by the Mines Department and the National Parks Service

and that it be reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

The Baw Baw plateau has high botanical significance and exceptional opportunities for bushwalking and cross-country skiing. The park includes the granite plateau areas, steep slopes of Mt. Erica, and examples of the steeply dissected terrain of the Thomson and Aberfeldy valleys. It supports a complex of sub-alpine vegetation and a range of open forest types in which alpine ash, mountain ash, messmate stringybark, red stringybark, silvertop, and their associated species are prominent.

A10 Moondarra

That the land (8 500 ha) shown on the maps be used to ;

- (a) provide opportunities for recreational and educational experience related to enjoying and understanding natural environments
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect catchments

and that :

- (d) the small softwood plantations (totalling about 500 ha) in the vicinity of the Moondarra Reservoir not be extended, and the future use of the land be reviewed at the end of the rotation
- (e) the habitat of *Microtis biloba* be preserved

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

The chief features of this park are the healthy woodlands and other examples of land types that have developed on the Tertiary and Palaeozoic sediments of the Moondarra plateau. It supports healthy woodlands of broad-leaf peppermint and yertchuk, and open forest I-III in which silvertop, messmate stringybark, and their associated species are prominent.

It is recognized that, because of the location of this Park in relation to the S.E.C. brown coal open cuts, special fire-protection plans will have to be drawn up and implemented by the National Parks Service, Forests Commission, and the S.E.C.

A11 Bunyip

That the land (21 200 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments.
- (b) conserve and protect the natural ecosystems
- (c) supply water and protect catchments

and that :

- (d) gravel extraction in the park cease
- (e) the significant plants listed in the descriptive report be protected
- (f) particular emphasis be placed on maintaining the area's rich mammal fauna

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the National Parks Service.

This park contains a wide range of land types and a rich fauna and flora, including a number of species endemic in the Melbourne study area. It supports heathy woodland of broad-leaf peppermint and silver-leaf stringybark, and open forest II-IV in which mountain ash, messmate stringybark, silvertop, and associated species are prominent.

A12 French Island

That the land (7 700 ha) shown on the maps be used to :

- (a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments
 - (b) conserve and protect the natural ecosystems
- and that :
- (c) the park be zoned to protect swamp, saltmarsh, heathy woodland, and messmate stringybark open forest I plant communities, the potoroo, and the Australian pelican and short-tailed shearwater rookeries
 - (d) an area of 102 ha (owned by the S.E.C.) be incorporated into the park as it contains the only substantial relic of messmate stringybark open forest I and is a breeding area for the white-breasted sea eagle.
 - (e) the prison farm buildings be used as the administration and information centre for the park, and to provide accommodation for visitors
 - (f) access to the Island be by boat, and the use of motor vehicles should be limited to the provision of management and essential services
 - (g) gravel and sand resources on public land be exploited for local use only and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

The Council recognizes that :

- * the deep water in the western arm of Western Port Bay has great potential for port development
- * the availability of land and energy and the proximity of the Melbourne market make the land around the western arm suitable for industrial development
- * only limited areas of uncommitted water frontage suitable for port development remain on the mainland
- * the topography of the Bay makes the western side of French Island well suited to the development of a deep-water port.

However the Council re-affirms the following points :

- * French Island has outstanding significance for nature conservation and recreation, as it contains large areas of public land relatively free from human influence, which have a diverse flora and fauna. Viable examples of heath woodland, saltmarsh, and mangrove communities occur on the island. On the mainland, very little of the formerly widespread heath woodland remains, and the saltmarsh and mangrove communities are under threat from industrial development and recreation pressure. On the Island these communities contain a diverse fauna. Birds are well represented, with many waders and one of the two known Victorian pelican rookeries on the northern shore. Differences between the mammal fauna of the Island and that of the mainland are of great scientific interest.
- * The shores of the Island form ideal boundaries for a park, with the waters of the bay forming a natural buffer zone.
- * All the public land on the Island should become a State park.

* Industrial development should be confined to the mainland. Of the approximately 13 km of frontage to deep water on the mainland, only about 5·6 km is still available for industrial use. The remainder has been committed to use by four companies and two public utilities. The Council believes that the future use of this land should be reviewed, and that planning should ensure that all areas on the mainland with a frontage to deep water are fully utilized for port development.

If future needs for port development on the Victorian coastline render it imperative to use the western coast of French Island, the particular conservation value of the island as a whole would be considerably reduced, and certain specific wildlife values would be lost. However, all the remaining public land on the island could form a State park, provided :

(a) any port development is restricted to the minimum essential area

(b) the essential causeway connects with the north-west corner of the island.

The Council considers that no further alienation of land on the island should be permitted, and that in the above circumstances consideration should be given to repurchasing for State park purposes, all land now alienated in the area not required for port development.

A13 Cape Schanck–Arthurs Seat

That the land (1 400 ha) shown on the maps be used to :

(a) provide opportunities for recreational and educational experiences related to enjoying and understanding natural environments

(b) conserve and protect the natural ecosystems

and that :

(c) the managing authority take particular care to protect the localities on the coast listed in Appendix 2

(d) the coast from Point Nepean to Cape Schanck be a Scenic Coast (see recommendations on Scenic Coasts on page 64)

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

Currently comprising 13 scattered blocks in the southern part of the Mornington Peninsula, this park will be augmented by a land acquisition programme currently in progress. It includes the steep timbered slopes of Arthurs Seat with commanding views out over Port Phillip Bay, and the outstanding scenic coast from London Bridge, Gunnamatta, Cape Schanck, to Flinders. The areas acquired, together with the several small blocks already included, will connect these two major areas by linking them down the undulating spine of the peninsula through a predominantly rural landscape.

REGIONAL PARKS

The value of a regional park can be greatly enhanced by private enterprise on adjacent private property. Services provided may be in the nature of accommodation (caravan park, camping area, motels, cabins) and/or shopping facilities (food-stuffs, camping accessories, etc). The range of recreation activities in the area may also be extended to include shooting, participation in farming activities such as livestock-handling and tractor-driving, viewing of wildlife in enclosures, and so on.

Specific Recommendations

A14 You Yangs

That the land (1 900 ha) shown on the map be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above

and that :

- (c) honey production be permitted in the park
- (d) emphasis be placed on maintaining the present rich avifauna and protecting the remaining colonies of *Pterostylis truncata*
- (e) production of poles, fencing material, firewood, and other minor forest produce be permitted where this does not conflict with (a), (b), and (d)
- (f) sand and gravel extraction should be restricted to the areas zoned for this purpose

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

Isolated granite peaks offering panoramic views of the surrounding plains are the main feature of this park, which is readily accessible from both Geelong and Melbourne.

A15 Steiglitz

That the land (300 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above

and that :

- (c) buildings and other features of historic interest be preserved
- (d) fossicking in the areas used at present be permitted to continue, after consultation with the relevant authorities

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

This area of moderately dissected stringybark forest with heathy understorey lies close to Geelong and Melbourne. Its features include early mining relics, an old cemetery, spring wild-flower displays, and Sutherlands Creek.

A16 Hepburn

That the land (2 900 ha) shown on the plan be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above
- (c) supply water and protect catchments

and that :

- (d) timber-harvesting be permitted, in order to enhance the recreational value of the area by creating a forest of mature trees
- (e) special prescriptions for fire protection be drawn up for this park because of its location

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

This area of grassy to heathy forest adjoins Hepburn Springs and is close to Ballarat and Melbourne. Features include mineral springs, early mining relics, and Sailors Creek, Sailors Falls, and Mt. Franklin.

A17 Macedon

That the land (2 300 ha) shown on the map be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above

and that :

- (c) water catchments in the park be protected
- (d) emphasis be placed on protection of the mountain ash, alpine ash, silver-leaf stringybark, and white sallee stands and their associated species
- (e) continued utilisation of timber from existing softwood plantations be permitted where methods, intensity, and locality do not conflict with primary uses
- (f) the landscape values of the Range as viewed from the surrounding lowlands be protected
- (g) the park be zoned by the managing authority as set out in the guidelines in Appendix I and as indicated in general terms on the map

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

The main Macedon Range forms headwater areas for 15 proclaimed water supply catchments, from which domestic water is reticulated to Macedon, Mount Macedon, Gisborne, Sunbury, Riddells Creek, Romsey, Lancefield, and Woodend. For the most part these domestic water supplies are not treated at present, and the supply authorities are therefore concerned that no health hazard should result from any recreational developments in the catchments. Although not legally restricted, public access to parts of these catchments, particularly reservoirs and offtakes, is discouraged by the water trusts. For instance, the Macedon Water Trust fenced an area around McDonald and Turritable reservoirs 2 years ago, and has recently sought to have the fence extended, which indicates the conflict between water production and recreation.

The Macedon area is a popular destination for day tourists from Melbourne, the main attraction being the Memorial Cross and the Camels Hump and adjacent picnic and barbeque areas. Most of the visitors to these areas engage in pleasure driving, picnicking, and sight-seeing. However, bushwalking, orienteering, horse-riding, and rock-climbing are increasing in popularity. It has been estimated that the number of visitors to this area in 1975 will be of the order of 140 000. Over-crowding already occurs in the vicinity of the Memorial Cross and the Camel's Hump.

On and around the Macedon range there is a wide diversity of both natural and man-made environments. The natural environments, which vary from foothill mixed-species forests through mountain ash forests to sub-alpine woodland, support a variety of recreational uses. Many sight-seers are attracted by the ornamental gardens in and around Macedon, and orienteering, horse-riding, and picnicking are popular in the mature pine plantations.

A18 Wandong

That the land (500 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above

and that :

- (c) timber-harvesting continue as an aid to the primary objectives
- and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

The dissected forested country on the steep western slopes of the Disappointment Plateau affords good views out across the plains to Mount Macedon and the Mount William range. It is easily accessible from Wandong and the Hume Freeway, and contains scenic drives to Mount Disappointment and Strath Creek Falls.

A19 Yea River

That the land (200 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments

- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above

and that it be permanently reserved under section 14 of the *Land Act 1958*, and managed by the National Parks Service.

The Yea River and forested flats and slopes are the chief features of this park, which adjoins the Yea–Yarra Glen Road.

A20 Fraser

That the land (3 900 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above
- (c) supply water and protect catchments

and that it be permanently reserved under section 14 of the *Land Act 1958*, and managed by the National Parks Service.

This park overlooks Lake Eildon and offers views of the Alps. It includes farmland that was once cleared and supports a large population of kangaroos. It is readily accessible from the Maroondah and Goulburn Valley Highways.

A21 Tyers

That the land (1 100 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above
- (c) supply water and protect catchments

and that it be permanently reserved under section 14 of the *Land Act 1958*, and managed by the National Parks Service.

This area of shrubby forest borders the Tyers River gorge close to the Latrobe Valley population centres. Features include the Moondarra reservoir, the Tyers River, and views across the Latrobe Valley. The park adjoins the proposed Wirilda tourist project, which is to be developed on private property with government assistance.

A22 Crossover

That the land (400 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments

- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

This area of shrubby forest lies close to Melbourne and the Latrobe Valley and the main Melbourne access to the Baw Baw plateau. Features include pleasant bushland, tree-fern gullies, the old Noojee railway, popular fishing streams, and proximity to the Tarago River.

A23 Mount Worth

That the land (200 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments.
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above and that :
- (c) emphasis be given to protecting the remnants of the natural vegetation and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

This public land forms the nucleus of a regional park close to Warragul. Features include scenic views across the Latrobe Valley and the dissected terrain of the Strzeleckis to the sea, waterfalls, and fern gullies.

A24 Dandenongs

That the land (2 700 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above.
- (c) supply water and protect catchments.

and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the Forests Commission.

The site of the proposed Silvan No. 2 reservoir should be included in the regional park until the area is required for water supply purposes.

This major recreation area lies right on the edge of Melbourne. It comprises a diverse landscape of urban, rural, and bushland elements. The high peaks and ridgelines offer views in many directions—towards the mountains, the Yarra Valley, Melbourne, and the Bay. The park itself consists of many blocks of public land, mostly forested, and varying from peppermint stringybark open forest II–III to mountain ash open forest IV and dense fern gullies. The steep escarpment in Devonian volcanics at Mount Dandenong is included, as is the undulating and hilly forested country on the plateau. The availability of restaurants, nurseries, market gardens, art galleries and craft shops adds to the attraction of the area.

A25 Warrandyte

That the land (100 ha) shown on the maps be used to :

- (a) provide opportunities for open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural environments.
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above and that the land be permanently reserved under section 14 of the *Land Act* 1958, added to the existing Warrandyte Park, and managed by the National Parks Service.

Detailed description of the areas :

- (a) The Jumping Creek Reserve (that part which falls within the study area).
- (b) The Jumping Creek Scout Reserve (unreserved Crown land to the north-west of a).
- (c) The Public Purposes Reserve on the western bank of the Yarra River, north of Crown Allotment 24 of Section 4a, Parish of Nillumbik.
- (d) The Public Purposes Reserves comprising the river frontages on the north bank of the Yarra River, between Crown Allotment 5 of Section 7, and the southern extremity of Crown Allotment 21A, of Section 4, Parish of Nillumbik ; and on both sides of Stony Creek between the Research—Warrandyte Road and the Yarra River.

YARRA VALLEY MULTI-PURPOSE PARK

Planning policy for the Yarra Valley adopted by the Government in September, 1971 states that the whole of the catchment upstream from Warrandyte “ shall be planned as an open-space system for nature conservation and recreation, with provision, where appropriate, for primary production and forestry ” and that planning of the area “ shall take account of the potential of the area for water catchment purposes ”.

The Council believes that all public land in the Yarra Valley should be reserved and ultimately used as a multi-purpose park under unified management. This belief depends on the achievement of this aim without detriment to the vital use of the area as a water supply catchment. The Council has considered in particular the following aspects.

Water

Catchments covering 76 325 ha in the headwaters of the Yarra supply Melbourne with about 245 000 Ml of water each year—about 70 per cent. of its current consumption. When necessary the water is chlorinated before entering the suburban reticulation system. In addition, seven catchments covering about 4 800 ha (including some 1 600 ha of private property) supply water for the townships of Gembrook, Cockatoo, Emerald, Menzies Creek, Clematis, Healesville, Warburton, Millgrove, Warburton East, Woori Yallock, Launching Place, Yarra Junction, and Wesburn. Water from the Don River (whose catchment includes a large proportion of private farmland) is clarified before use in Launching Place. When necessary, water from all of the catchments is chlorinated.

The Government's decision to build the Yering Weir and Sugarloaf storage will mean that prior to 1980 about 213 300 ha, including 124 400 ha of public land, upstream from Yering will become a catchment supplying Melbourne with water. Present land use in this catchment includes residential, intensive agriculture, grazing, timber production, recreation, and quarrying. Water from the catchment will be fully treated (clarification, filtration, and chlorination) before entering the reticulation system.

Recreation

The Yarra Valley has a diverse landscape that provides some of the finest scenery and opportunities for inland recreation close to Melbourne. Its value for recreation is enhanced by its close proximity to the northern and eastern suburbs and ready access from the Maroondah and Warburton Highways.

Popular recreation activities in the Valley include driving for pleasure, picnicking, bushwalking, fishing, fossicking, canoeing, nature study, photography, camping, sight-seeing, horse-riding, trail-riding, and adventure camps. The popularity of the area is clearly reflected in the large numbers who use the M.M.B.W. picnic grounds (about 525 000 annually) and visit the Healesville Sanctuary (about 350 000 annually). The policy of keeping Melbourne's catchments closed has given much of the Yarra Valley a very high value for recreational activities requiring solitude and environments free from the obvious hand of man. The catchment areas contain the most extensive virgin stands of mountain ash (the world's tallest hardwood species) on the Australian mainland. These stands are an attraction of international appeal, and are only 70 km from Melbourne.

Nature conservation

The Yarra Valley has a very high value for nature conservation, as it contains a wide range of vegetation types that have developed on plateau and dissected terrain formed on a number of different igneous and sedimentary rocks. These vegetation types support a rich flora and correspondingly rich fauna.

Of particular importance are five species of plant endemic or almost endemic in the Melbourne study area (*Carex alsophila*, *Persoonia arborea*, *Astelia australiana*, *Acacia nano-dealbata*, and *Wittsteinia vacciniaceae*), and two species of very localized distribution in Victoria (*Gahnia grandis* and *Lepidosperma tortuosum*). Leadbeaters possum, a species thought to be extinct until it was rediscovered in 1961, is found throughout the open forest IV areas of the Valley. A number of other animals closely associated with the ash forests are well represented (see descriptive report).

The Maroondah and O'Shannassy catchments, which have been closed to public access and to timber utilization since the late 1880s, and to a lesser extent the Upper Yarra catchment, which has been closed since the late 1940s, offer unique opportunities for reference areas of forested land types that elsewhere have been utilized, mainly for timber but also for agriculture and recreation.

Timber

The importance to the State's timber industry of the ash forests, and in particular the regrowth resulting from the 1926 and 1930 wildfires, was stressed in the descriptive report. The Yarra Valley contains about 25 per cent. of these ash forests and 35 000 ha (22 per cent.) of the State's ash regrowth.

The smallness of the volume of timber produced from the valley at present (about 20 000 m³ per year) is due partly to the policy of not permitting logging in the catchments supplying water to Melbourne, and partly to the fact that large areas of regenerating forests have not yet reached merchantable age. These catchments support 45 000 ha of ash-type forest, including 26 000 ha of regrowth (about 16 per cent. of the State's total).

If used primarily for timber production, the Valley would be capable of producing a sustained yield of timber of the order of 1.0 million m³ per year—more than half the current annual hardwood production from the whole State. In addition to this high capability, the ash forests of the Valley have considerably enhanced value for timber production because they occur on relatively flat terrain and are close to Melbourne. Utilization of the forests could be carefully planned and controlled to avoid conflict with recreation, conservation, and water values.

Other uses

Public land within the Yarra Valley is currently used for many other purposes, such as quarrying, rubbish disposal, organized sport, etc. It is not the intention of the following recommendations to exclude any existing uses.

Catchment Management

At present 62 500 ha of public land supplying Melbourne with water is reserved solely for water harvesting (with nature conservation being a very valuable incidental use). It undoubtedly has a very high value for water production ; it also has a very high value for recreation and for timber production.

The principal water-production areas of Victoria are also its principal timber-producing areas, and so the Yarra Valley is not unique in this regard. Harvesting of timber in accordance with prescriptions approved by the Soil Conservation Authority, in consultation with the land management agency and the water supply authority, is common practice in catchments throughout the State, including those supplying water to Geelong, Bendigo, the Latrobe Valley, the Mornington Peninsula, and many smaller towns such as those mentioned above in the Yarra Valley. The Council's policy recommendations regarding the use and management of water catchments are given on page 40.

The Melbourne and Metropolitan Board of Works, while not holding that the concept, of multiple use is wrong (particularly in relation to timber production), believes that research is needed to provide the scientific facts upon which to base a sound policy before any marked change is applied to the current situation.

The Board has begun publishing results of its hydrological work at Coranderrk, which started in 1954. It is also engaged in a 14-catchment study at North Maroondah and associated work. The Soil Conservation Authority, the Forests Commission, and the State Rivers and Water Supply Commission are engaged in a joint project at Reefton.

In 1968, the government directed that the hydrology research work currently being undertaken by the above bodies be pursued, with the aim of producing results by 1979 to enable a decision to be taken with respect to catchment management policy for Melbourne.

The Board has maintained that increased recreational use of the catchments would increase the likelihood of disease being spread through the water supply. It is unwilling to take this increased risk until comprehensive treatment facilities are available throughout the integrated system in lieu of the current system of limited sterilization by chlorination.

Common practice in other catchments in the State is to exclude public use of the storages and their environs while allowing free access to the outer catchment areas. The Council's policy is that multiple use should be permitted, with safeguards and controls, on the State's catchments.

However, in view of the need for comprehensive treatment of the water supply in the future, the imminence of results from hydrological research, the ability of areas outside the catchments (and outside the Yarra Valley) to provide most of the immediate timber and recreational needs and the varied tenure and control of the public land, the Council believes that progress towards the unified management of the Yarra Valley can only be achieved in a number of stages. In addition, such a staged approach would be more appropriate to accommodating any emotional issues within the community with respect to Melbourne's water supply.

The first stage, as recommended below, should be implemented as soon as possible. The recommendations for the second stage will be made by the Council when the research results are available and after suitable investigation and consideration of submissions as indicated in the *Land Conservation Act 1970*.

Specific Recommendations

A26 (1.0) That the land (113 400 ha) in the Yarra Valley indicated on the maps be a multi-purpose park used to :

- (a) provide opportunities for open-space recreation and education in natural environments
- (b) protect and conserve the native animals and plants and landscape
- (c) produce hardwood timber

1.1 That use and management of this park take particular account of the existing and potential use of the area as water catchment.

The above recommendations for use are based on the Statement of Planning Policy for the Yarra Valley adopted by the Government in September, 1971.

Note : The Council proposes that the catchments within the study area be investigated by the Soil Conservation Authority, and where appropriate recommended for proclamation to the Land Conservation Council.

- 1.3 That the park eventually be under unified management.
- 1.4 That the whole park be reserved under section 14 of the *Land Act 1958*.
- 2.0 That, pending unified management of the park, the areas shown on the map be managed by the Melbourne and Metropolitan Board of Works and the Forests Commission respectively.
- 2.1 That an interim advisory committee be formed consisting of one representative from each of the Soil Conservation Authority (Chairman), Department of Crown Lands and Survey, Fisheries and Wildlife Division, Forests Commission, Melbourne and Metropolitan Board of Works, and National Parks Service.

2.2 That the functions of the committee be :

- (i) to advise the managing authorities and other bodies concerned with the park, in order to ensure that management throughout the park is consistent with the aims of the park
- (ii) to liaise with the proposed Yarra Valley Planning Authority on matters of mutual concern, especially with respect to landscape preservation and development of recreation.

3.0 That the Council supports the proposal of the Melbourne and Metropolitan Board of Works to conduct a feasibility study leading to a short-term investigation of the effects of low-intensity recreational use on water quality. The Council supports participation of private interest groups and appropriate government departments in this work.

4.0 That, pending a review of land use in the park after 1979, the land in the park be used as set out in the zones described below and indicated in general terms on the map.

4.1 Reference area

That the land within this zone be used to maintain the ecosystem (permitting natural processes to continue with a minimum of human interference) for scientific study related to the impact of Man's activities on similar ecosystems.

4.2 Intensive recreation

That the land within this zone be used to :

- (a) provide open-space recreation and education for large numbers of people, related to the enjoyment and understanding of natural and semi-natural surroundings
- (b) protect and conserve the natural ecosystems to the extent that this is consistent with (a) above.

4.3 Recreation and hardwood

That the land within this zone be used to :

- (a) provide open-space recreation, especially along the roads and tracks
- (b) produce hardwood timber and other forest produce as defined in the *Forests Act 1958*, in a manner having due regard for landscape values, as seen from main roads through the forests and from the major roads outside the forests
- (c) conserve native animals and plants.

Note : Parts of this zone would be closed to recreation and logging while water is being harvested by the Melbourne and Metropolitan Board of Works.

4.4 Intensive hardwood production

That the land within this zone be used to :

- (a) produce hardwood timber
- (b) conserve native animals and plants, and provide open space recreation to the extent compatible with (a) above.

Note : Parts of this zone would be closed to recreation and logging while water is being harvested by the Melbourne and Metropolitan Board of Works.

4.5 Restricted recreation

That the land within this zone be used to :

- (a) provide open-space recreation for walkers, but not camping
- (b) conserve native animals and plants, and protect the landscape.

4.6 Education area

That the land within this zone be used to provide opportunities for field teaching aimed at promoting an understanding of natural environments.

4.7 Scenic landscape

That the land within this zone be used to protect an outstanding part of the Yarra Valley landscape, and produce hardwood timber and provide recreation only where this can be done with due regard to landscape values.

Note : The inclusion of the O'Shannassy aqueduct in this zone is dependent upon it being withdrawn from service within the next few years. This will be possible when the water it now carries is diverted into the new Yarra Valley Conduit. The aqueduct could then be converted into a magnificent scenic road with associated recreation areas.

4.8 Bushland area

That the isolated parcels of land within this zone be used to :

- (a) maintain the local character and quality of the landscape
- (b) provide opportunities for passive recreation such as picnicking and walking.

4.9 Hydrological research area

That the land within this zone be used to carry out experiments and investigations to provide information on the relative effects of different types of silvicultural and utilization techniques on the volume and timing of water yield under various conditions of soil, climate, and topography, and to provide a venue and opportunity for public education.

4.10 Storage and diversion works

That the land within this zone be used to store and distribute water and to provide the associated services and buildings.

4.11 Restricted zone

That the land within this zone continues to be managed in accordance with government policy, in order to :

- (a) protect water catchments
- (b) maintain the stability of the land and its usefulness for all possible future uses
- (c) conserve native flora and fauna.

4.12 Healesville Sanctuary

That the land within this zone continue to be used for education and recreation related to observing native fauna.

Mt. Worth—exchange of land.

Council reiterates the following recommendation which is made in South Gippsland Study Area, District 1 :—

That 400 ha in the Parish of Tong Bong be considered for future exchange for lands currently held by APM Forests Pty. Ltd. adjacent to the Morwell National Park and the proposed Mt. Worth regional park.

This was recommendation 3c in South Gippsland District 1 Final Recommendations published in October 1973 and the area of public land involved was shown on Plan 2 of that publication. The land at Mt. Worth held by APM Forests Pty. Ltd. is allotment 61A and parts of 61B and 21 in the Parish of Allambee, and appears on Map 12 of these recommendations.

Organ Pipes Geological Monument.

That the area of about 65 ha south of allotment 10, Parish of Tullamarine and shown on Map 6 be used to provide opportunities for educational and recreational activities related to enjoying and understanding natural features, and that it be permanently reserved as a geological monument under section 14 of the *Land Act* 1958 and managed by the National Parks Service.

The principal feature of this area is the "Organ Pipes" a particularly good example of basalt columns exposed beside Jacksons Creek.

The area is of additional importance as it includes some of the best remnants of the native flora which formerly covered the basaltic plains and gorges west of Melbourne.

B. REFERENCE AREAS

Reference areas are areas of public land containing viable samples of one or more land types that are, wherever possible, relatively undisturbed. These are reserved as a reference, to which those concerned with changing and managing land for either productive or aesthetic purposes may refer when attempting to solve problems arising from use of the land.

Reference areas would normally be typical examples of land types that have been extensively developed elsewhere for productive uses such as agriculture or softwood production. The course and effects of human alteration and utilisation of the land can be measured against these relatively stable natural areas. The areas should be viable and a buffer zone should surround each. Most developed regions have few suitable areas remaining.

In common with references and standards used in other fields, these areas must not be tampered with and natural processes should be allowed to continue undisturbed.

Access should be restricted and experimental manipulation should not be permitted. Reference areas will enable continued study of natural features and processes, for example fauna, flora, hydrology, and nutrition. These studies are important in increasing our knowledge of the ecological laws and processes on which Man's survival may ultimately depend.

The preservation of some species in the long term requires the setting aside of areas free from human interference (in the form of productive or recreational use of the land). These areas preserve a valuable pool of genetic material—Man often uses wild species to genetically strengthen inbred races of domestic plants and animals—and the future use of gene pools will probably expand far beyond this.

In recommending the creation of reference areas, the Council foresees the need for new legislation to specify the status of these areas and for the establishment of an advisory committee to determine the broad policy for their management.

Note that the selection of the reference areas listed here is based on our current knowledge of the land types in the study area, and that additional areas will be needed as better information on ecology and land-use problems becomes available. The best basis for selecting reference areas are land systems surveys, in which the features of climate, geology, topography, soils, and native vegetation are integrated. At present such surveys cover only a small proportion of the study area.

Policy Recommendations

- B(i)** That, because of restrictions on their use and to help ensure their viability, reference areas be surrounded by a buffer zone. (These zones could be, for example, part of a park, forest area, or wildlife reserve in which the aim of management would include prevention of any damage to the reference area.)
- B(ii)** That the authority managing the buffer zone control the enclosed reference area, and that the delineation of buffer zones be by joint agreement between the managing authority and the advisory committee.

Specific Recommendations

- B1-22** That the areas listed below and shown on the maps be used to maintain the ecosystem (permitting natural processes to continue with a minimum of human interference) for scientific study related to the impact of Man's activities on similar ecosystems, and that they be reserved for scientific reference.
- B1** Durdidwarrah (125 ha)
Tertiary sediments ; flat ; open forest I-II manna gum, white sallee, rainfall 700 mm ; elevation 380-360 m.
- B2** Stony Creek (270 ha)
Ordovician sediments ; strongly dissected ; open forest I-II brown stringybark, messmate stringybark, broad-leaf peppermint ; rainfall 600 mm ; elevation 380-260 m.
- B3** Musk Creek (125 ha)
Ordovician sediments ; moderately dissected ; open forest I-III messmate stringybark, narrow-leaf peppermint, broad-leaf peppermint, manna gum ; rainfall 1 100-1 000 mm ; elevation 700-640 m.
- B4** Ruths Gully (200 ha)
Ordovician sediments ; strongly dissected ; open forest II-III messmate stringybark, narrow-leaf peppermint, broad-leaf peppermint ; rainfall 1 000-900 mm ; elevation 640-425 m.
- B5** Ah Kows Gully (440 ha)
Ordovician sediments ; strongly dissected ; open forest I-II broad-leaf peppermint, red stringybark, messmate stringybark, eurabbie ; rainfall 700 mm ; elevation 580-270 m.
- B6** Pyrete Range (360 ha)
Ordovician sediments ; strongly dissected ; open forest I-II broad-leaf peppermint, red stringybark ; rainfall 700 mm ; elevation 360-250 m.
- B7** Stony Creek (420 ha)
Devonian granite ; plateau ; open forest III-IV messmate stringybark, some mountain ash ; rainfall 1 000-1 200 mm ; elevation 760-530 m.
- B8** Disappointment (1 090 ha)
Devonian granite ; plateau and slopes ; open forest IV mountain ash ; rainfall 1 000-1 200 mm ; elevation 750-240 m.
- B9** Joey Creek (250 ha)
Devonian sediments ; plateau and slopes ; open forest II-III messmate stringybark, narrow-leaf peppermint ; rainfall 1 000 mm ; elevation 520-300 m.
- B10** Yan Yean (north) (100 ha)
Silurian sediments ; moderate slopes ; open forest I candlebark, red stringybark ; rainfall 700 mm ; elevation 260-220 m.
- B11** Yan Yean (south) (300 ha)
Quaternary sediments ; flat ; open forest I-II, grassy woodland white sallee, swamp gum ; rainfall 700 mm ; elevation 220-200 m.

- B12** Watts River (240 ha)
Devonian volcanics ; plateau ; open forest IV mountain ash (mature) ; rainfall 1 200–1 400 mm ; elevation 1 200–790 m.
- B13** Deep Creek (720 ha)
Devonian volcanics ; plateau and slopes ; open forest IV mountain ash (regrowth and mature), alpine ash ; rainfall 1 400 mm ; elevation 1 370–670 m.
- B14** Walsh Creek (1 050 ha)
Devonian sediments ; strongly dissected ; open forest I–III broad-leaf peppermint, silvertop, messmate stringybark ; rainfall 1 400 mm ; elevation 930–400 m.
- B15** Mount Gregory (770 ha)
Devonian sediments ; plateau ; open forest IV alpine ash (regrowth) ; rainfall 1 400 mm ; elevation 1 050–475 m.
- B16** Bennie Creek (250 ha)
Devonian granite ; plateau and slopes ; open forest IV mountain ash (regrowth) ; rainfall 1 000–1 200 mm ; elevation 930–670 m.
- B17** Diamond Creek (330 ha)
Devonian granite ; moderate slopes ; heathy woodland silverleaf stringybark, broad-leaf peppermint ; rainfall 1 000 mm ; elevation 440–90 m.
- B18** Hawthorn Creek (470 ha)
Devonian sediments ; moderate slopes, open forest III silvertop, brown stringybark, messmate stringybark, mountain ash ; rainfall 1 200 mm ; elevation 580–270 m.
- B19** Baw Baw (80 ha)
Devonian granite ; plateau ; sub-alpine complex ; rainfall 1 400 mm ; elevation 1 430–1 370 m.
- B20** Eaglehawk Creek (570 ha)
Tertiary sediments—Silurian sediments ; plateau and slopes ; open forest II–III silvertop, brown stringybark, yertchuk, eurabbie ; rainfall 1 000 mm ; elevation 360–180 m.
- B21** French Island (north) (570 ha)
Quaternary sediments ; flat ; heathy woodland (wet)—mangroves—salt-marsh ; rainfall 700–1 000 mm ; elevation 15 m—sea level.
- B22** French Island (east) (290 ha)
Quaternary sediments ; flat ; heathy woodland (dry) ; rainfall 700–1 000 mm ; elevation 75 m—sea level.

C. WILDLIFE RESERVES

While some of Australia's animals have adapted to the changes in the environment brought by European Man, the populations of many have seriously declined, and a few have become extinct.

The conservation of fauna depends on conservation of habitat, and in Victoria the public lands contain large areas of diverse natural habitats. While most forms of land use on public land—such as timber production and park use—are compatible to a considerable degree with conservation of habitat, it is necessary to set some areas aside specifically for conserving fish and wildlife, and for developing wildlife conservation techniques.

These areas are selected, firstly for conservation of species that are harvested or directly utilized by the community, such as ducks. Secondly, they may contain the habitat of endangered species. Thirdly, they may include areas that have particular wildlife values (such as specialized breeding grounds), a high species diversity, or educational or scientific interest.

Policy Recommendation

- C(i) That the Fisheries and Wildlife Division be permitted, in consultation with the management authority, to manipulate the habitats in certain areas within parks and hardwood forests in order to develop wildlife conservation techniques. (Areas such as the Pyrete Ranges, the Marysville Forest, and the Eildon, Bunyip, and French Island Parks have been suggested.)

Specific Recommendations

C1 Lake Modewarre

That the area of 300 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

Lake Modewarre, on the basaltic plains, is a popular area for fishing and duck-shooting. It is intended that these recreational uses be allowed to continue.

C2 Browns Swamp

That the area of 30 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

This reserve is a shallow lake on the basalt plains and provides habitat for waterbirds.

C3 Lake Connewarre

That the area of 3 100 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that particular care be taken to protect the sites of special conservation significance on the coast, as listed in Appendix 2, that are within this reserve and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

This reserve on the flood-plain of the lower Barwon River enlarges an existing reserve, and includes Lake Conneware, Reedy Lake, and Lake Murtragurt. It is a very important link in the chain of swamps along the east-west flight line of migratory waterfowl.

C4 Lonsdale Lakes

That the area of 150 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that be permanently reserved under section 14 of the *Land Act 1958* and be managed by the Fisheries and Wildlife Division.

This reserve includes Lake Victoria and several small areas of wetland that have a high value as feeding and breeding areas for waterfowl.

C5 Swan Bay—Edwards Point

That the area of 2 700 ha indicated on the map be used primarily to conserve native animals (including marine fauna), and for public education and recreation where this does not conflict with the primary aim, and that particular care be taken to protect the sites of special conservation significance on the coast, as listed in Appendix 2, that are within this reserve

that it be excised from the Port of Port Phillip as defined under section 7 of the *Marine Act 1958*

and that the Fisheries and Wildlife Division be the responsible authority for the area under the *Motor Boating Act 1961*

that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

This reserve includes two existing reserves, and together with those at Mud Island and the Spit forms particularly valuable feeding and resting area for waterfowl and intercontinental migratory waders. Saltmarsh and dune vegetation at Edwards Point is one of the few known winter refuges of the endangered orange-bellied parrot. Swan Bay itself supports a rich fauna and provides a sheltered breeding ground for many marine species.

C6 Mud Island

That the area of 500 ha indicated on the map continue to be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act 1958* and be managed by the Fisheries and Wildlife Division.

This is an existing reserve, and comprises three low islands, some 10 km off the Queenscliff coast. Together with the Swan Bay and the Spit reserves, it forms a very important feeding and resting area for waterfowl and intercontinental migratory waders. The islands support one of the two breeding colonies of white-faced storm petrels in Victoria.

C7 St. Leonards

That the area of 24 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This reserve consists of a small lake and surrounding saltmarsh. It has a high value as a feeding and resting area for waders.

C8 The Spit

That the area of 300 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that the Melbourne and Metropolitan Board of Works be consulted on matters affecting the security of the adjoining sewerage farm.

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division

The Spit and adjacent foreshore is regarded as being the most important feeding ground for migratory waders in Victoria. It is also one of the few known winter refuges of the endangered orange-bellied parrot.

C9 Serendip

That the area of 250 ha indicated on the map continue to be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

Serendip is Victoria's principal wildlife research station.

C10 Freshwater Swamp

That the area of 8 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This small reserve supports some river red gums and lignum, and could be managed to provide valuable wetland habitat for waterfowl.

C11 Homewood

That the area of 15 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This small island in the Goulburn River supports some river red gums and could be managed to provide a sheltered breeding area for waterfowl and other fauna.

C12 Molesworth

That the area of 30 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This reserve includes river red gums and billabongs adjoining the Goulburn River, and could be managed to provide wetland habitat and breeding areas for waterfowl.

C13 Snobs Creek

That the area of 200 ha indicated on the map be used primarily for the production of native and sporting fish, and for public education and recreation where this does not conflict with the primary aim

and that reasonable public access to the Snobs Creek Falls be maintained

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This reserve includes the Snobs Creek Fish Hatchery and Research Station, and a buffer strip 200 m wide extending about 6 km upstream along both banks of Snobs Creek. The buffer has been included in the reserve in order to safeguard the water supply to the Hatchery.

C14 Yellingbo

That the area of 160 ha indicated on the map continue to be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

This is an existing reserve which supports the only remaining colonies of the helmeted honeyeater—Victoria's only endemic bird species. A number of arboreal mammal species are also found in the area. Additional habitat on freehold land will have to be purchased to ensure the viability of the reserve.

C15 Western Port

That the area of 10 000 ha indicated on the map be used primarily to conserve native animals (including marine fauna), and for public education and recreation where this does not conflict with the primary aim

that the Fisheries and Wildlife Division be the responsible authority for the area under the *Motor Boating Act* 1961

and that in managing the reserve due regard is given to the importance of Tooradin, Warneet, and Cannons Creek as centres for water-based recreation

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division

This reserve includes Quail and Chinaman Islands, which are already wildlife reserves, the adjoining mangrove-lined foreshores between Tyabb and Yallock Creek, and the northern tidal flats of Western Port Bay. The reserve is an important breeding ground for marine animals, and provides feeding and resting areas for large numbers of waterfowl and migratory waders. Quail Island supports good examples of manna gum woodlands.

C16 Phillip Island (inland)

That the area of 230 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

These three isolated blocks of public land support good populations of koala. They are of great tourist value, as they are readily accessible to the public.

C17 Rhyll Swamp

That the area of 160 ha indicated on the map continue to be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that particular care be taken to protect the sites of special conservation significance on the coast, as listed in Appendix 2, that are within this reserve.

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

The Rhyll Swamp is an important waterfowl area, supporting breeding colonies of spoonbills, ibis, and cormorants. It is also a feeding and resting area for migratory waders.

C18 Seal Rocks

That the area of 2 ha indicated on the map continue to be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that particular care be taken to protect the sites of special conservation significance on the coast, as listed in Appendix 2, that are within this reserve.

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

This small rocky outcrop at the mouth of Western Port Bay is the site of one of the breeding colonies of the Australian fur seal in Victoria.

C19 Phillip Island (Coastal)

That the area of 450 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim

and that it be permanently reserved under section 14 of the *Land Act 1958* and managed by the Fisheries and Wildlife Division.

This includes an existing reserve, and contains a number of flourishing colonies of the little penguin and short-tailed shearwater. It is of great tourist value, as it is readily accessible to the public.

C20 Newhaven Swamp

That the area of approximately 45 ha indicated on the map be used primarily to conserve native animals, and for public education and recreation where this does not conflict with the primary aim.

and that the area used for rubbish dumping not be expanded, and eventually be rehabilitated and included in the reserve.

and that it be permanently reserved under section 14 of the *Land Act* 1958 and managed by the Fisheries and Wildlife Division.

The Newhaven Swamp is an important area for native animals, especially for water-birds. The area in the east occupied by a caravan park is not included in this proposed reserve.

D. WATER PRODUCTION

Catchments in the study area are vital to the well-being of the State, providing all the water used in Melbourne, Bendigo, and the Latrobe Valley and much of that used in Geelong. These centres include more than 80 per cent. of Victoria's population and a large proportion of its industry. In addition, the catchments provide all the water used in Bacchus Marsh and Werribee irrigation districts and contribute much of that used in the Goulburn and Gippsland irrigation districts.

Current management

Within the study area, however, there are long-standing inconsistencies in management policies for water catchments. The Melbourne and Metropolitan Board of Works has a general policy of total exclusion of the public from its catchments in order to prevent pollution of Melbourne's water supply.

However, this exclusion is by no means total. For example, a number of roads open to the public run through the Board's catchments: these include Maroondah Highway, the Acheron Way, Cumberland Road, Muddy Creek Road, Big Creek Road, and Reefton Spur Road. The Board does not exclude the public from the Cumberland Scenic Reserve and the portion of the Lake Mountain Reserve within the Armstrong Creek catchment. It operates the Fernshaw recreation reserve (open to the general public) within the Maroondah catchment; and this catchment also contains defined walking tracks open to the public. The Board has approximately 130 km of open aqueducts, of which 30 km are located between storage reservoirs and the metropolitan area. The latter pass through agricultural land and some pollution is unavoidable. Action has been and will continue to be taken by the Board to modify the impact of these situations. In the case of the Moondarra catchment, which supplies the Latrobe Valley with water, there are no restrictions at present on other land uses in the catchment. However, the public are excluded from the reservoir itself and from its environs. This is in contrast to the Tarago catchment, which supplies the Mornington Peninsula, where the catchment, reservoirs, and environs are all open to the public. In fact the Tarago Reservoir itself is largely surrounded by farmland. However, consideration is now being given to excluding the public from the environs of the reservoir.

The Council considers that sterilization of drinking water is inevitable, even with optimum land use in catchments.

Land use planning

The Council notes that the degree of land use planning varies between catchments. Detailed land use prescriptions exist for nearly all catchments within the study area, which have been proclaimed under the *Land Conservation Act 1970* and/or the *Soil Conservation and Land Utilization Act 1958*. Concern for the adverse effects caused by undesirable changes in land use and management practices generally on freehold land has resulted in 39 of the 97 water supply catchments in the study area being proclaimed under section 22 (1) of the *Soil Conservation and Land Utilization Act 1958*, and in the preparation of land use determinations for 24 of these. The use of all land within these areas is subject to specification by notice issued by the Soil Conservation Authority or by determination made by the Authority after consultation with the Land Conservation Council.

The Council maintains that all domestic catchments within the study area should be investigated by the Soil Conservation Authority and, where appropriate, recommended for proclamation by the Land Conservation Council, in order to ensure a uniform procedure for land use planning within these areas.

Multiple use

The Council, recognizing that the prime water-producing areas of the State coincide with the principal mountain and forested areas, and that inland water bodies are a major attraction for recreation, believes that wherever possible there should be multiple use of catchments. Where recreational use of storages is permitted it must be carefully controlled to ensure adequate protection of water quality, and responsibility for this must remain with water supply authority.

It is realized that the optimum combination of land uses for catchments must vary from one land type to another, depending on the manner in which the environmental variables of climate, parent material, topography, soils and organisms are inter-related. The Council is aware that a particular use may not impair the quantity, frequency, or quality of water yield in one instance, whereas in another its effect may be profound.

Treatment

The Council is aware that it is possible to improve the quality of water by treatment at a cost. It must, however, be recognized that the higher the quality of raw water the cheaper and more efficient the treatment is and, in most cases, the more acceptable the end-product. Thus it is vital that the quantity and timing of yield be safeguarded and that the catchment be protected from soil erosion. It is recognized that:

- (a) Although yield per unit area from dry catchments is relatively low, the environment of such catchments is particularly susceptible to disturbance. In this case if natural vegetation is disturbed, even in a minor way, turbidity of water can occur as well as increased salinity combined with a general decline of the environment.
- (b) Yield per unit area from wet catchment is high and in general the environment is moderately resistant to disturbance. It is possible to permit some alteration of the soil and vegetation without impairing the quality, frequency, or quantity of the water yield.

Within the Melbourne study area, four broad classes of water catchments can be defined

These are:

- (a) sub-alpine, e.g. the Baw Baws
- (b) mountain, e.g. Healesville
- (c) wet foothill, e.g. Hurstbridge
- (d) dry foothill, e.g. Malmsbury

The management prescriptions for other land uses within these catchments must differ from one class to another. Activities that have little impact on the physical quality of water in one class of catchment, may in another seriously impair water quality and must therefore be strictly controlled or forbidden. For example, activities such as hiking, orienteering, and horse-riding may be permitted in (b) and (c) and only to a very limited extent in (a) and (d).

The implementation of proper management of land uses within catchments is of prime importance, and recognition must be given to the greater-than-normal need for high levels of protection. Implementation of any recommendations for public land within catchments will require recognition that water catchment values such as water yield, quality, and flow regime are of prime concern. The necessity for research to provide guidelines for such management is recognized.

Additional water needs for domestic purposes and for stock and irrigation may require the construction of additional water storages. Specific areas cannot be reserved for this purpose until the need has been reasonably established and possible sites are investigated. The Council notes the deliberations currently taking place on proposals for additional water storages in the Yarra basin at Watson's Creek, in the Latrobe basin at Willow Grove and Blue Rock, and in the Bunyip basin at Back Creek, Longwarry North, and Heath Hill.

Policy Recommendations

- D(i)** That in most situations it is not necessary for a water supply authority to control and manage all land in its water catchment. Though this does not necessarily preclude water supply authorities from being so involved.
- D(ii)** That, in all cases where a number of other products are required from a catchment supplying water used for domestic, industrial, or irrigation purposes, the catchment be proclaimed under section 22 (1) of the *Soil Conservation and Land Utilization Act 1958* and also under section 5 (1) (b) of the *Land Conservation Act 1970*.
- D(iii)** That the water supply authority control and manage all storage areas, diversion works, and associated facilities required for the distribution of water.
- D(iv)** That the following areas be permanently reserved under section 14 of the *Land Act 1958* for water supply purposes and should be managed by the water supply authority in consultation with the Soil Conservation Authority:
- (a) all storage areas, diversion works, and associated facilities required for the distribution of water
 - (b) a buffer strip of sufficient width to prevent direct pollution, to filter overland flow of water, and to control access, around all diversion works and the full-storage level of all reservoirs
- The width of the buffer would vary to suit differences in ground slope, soil type, vegetation cover, adjoining land use, and type of facilities available for treating the water.
- The water supply authority would be advised by the Soil Conservation Authority which activities should be permitted on the above areas, and could then delegate particular aspects of management to other public authorities as appropriate.
- D(v)** That public authorities managing land within a proclaimed catchment should consult and co-operate with the water supply authority and the Soil Conservation Authority regarding location, timing, and type of management activities in the catchment. This is the current practice in most cases.
- D(vi)** That, where the Soil Conservation Authority has issued a land use notice or made a determination after consultation with the Land Conservation Council, the various public authorities managing the land and the water supply authorities implement these determinations.

- D(vii) That in cases where the Council's recommendations cause control and management of catchment areas to change from a water supply authority to a land management authority and where this results in a loss of income to the water supply authority, the new management authority should pay adequate compensation or negotiate some other mutually acceptable arrangement.
- D(viii) That, where there is an increasing intensity of multiple land use in catchments, water supply authorities provide, at the earliest possible time, facilities for sterilization of all drinking water.

Specific Recommendations

D1-D24 That in the case of the following catchments, which have been proclaimed and for which land use determination has been made, all public land required for water storage, diversion works, and associated facilities, together with the buffer strip defined in the land use determination and those allotments specified below, be permanently reserved under section 14 of the *Land Act* 1958 (after consultation with the Soil Conservation Authority) for water supply purposes, and that it be managed by the appropriate water supply authority.

- D1 Goodmans Creek diversion, State Rivers and Water Supply Commission, 100 m buffer.
- D2 Merrimu reservoir, State Rivers and Water Supply Commission, 100 m buffer, the reserve to include the following allotments of public land : Parish of Merrimu—east of 4, north of 17 ; Parish of Coimadai—north of 83 and 87, south of 86 ; and other land at present owned by the State Rivers and Water Supply Commission.
- D3 Djerriwarrah reservoir, Melton Waterworks Trust, 20 m buffer, the reserve to include the following allotments—Parish of Yangarook 59K and 59L.
- D4 Upper and lower Tylden reservoirs, Kyneton Waterworks Trust, 40 m buffer.
- D5 Kitty English and Bowden Road reservoirs, Macedon Waterworks Trust, 40 m buffer.
- D6 North west Macedon offtakes and storages, Woodend Waterworks Trust, 20 m buffer.
- D7 Smokers and Falls Creeks offtakes, Woodend Waterworks Trust, 20 m buffer.
- D8 Garden Hut reservoir, Lancefield Waterworks Trust, 20 m buffer.
- D9 Turritable and Macdonalds reservoirs and Turritable Creek Offtake, Mount Macedon Waterworks Trust, 40 m buffer.
- D10 Stony Creek offtake, Mount Macedon Waterworks Trust, 40 m buffer.
- D11 Stony reservoir, Macedon Waterworks Trust, 40 m buffer, the reserve to include the following Crown Reserves : Parish of Kerrie (*Gazette* numbers 1929-4098, 1969-34.)
- D12 Barringo Creek offtake, Sunbury and Gisborne Waterworks Trust, 20 m buffer.
- D13 Upper Bollinda Creek offtake and storage, Romsey Waterworks Trust, 20 m buffer.
- D14 Lower Bollinda Creek offtake, Sunbury Waterworks Trust, 40 m buffer.
- D15 Charlies Creek, Sunbury Waterworks Trust, 40 m buffer.
- D16 Upper Main Creek offtake, Riddells Creek Waterworks Trust, 20 m buffer.
- D17 Lower Main Creek, Sunbury Waterworks Trust, 40 m buffer.
- D18 Hazel and Harpers Creeks offtakes, Kilmore Waterworks Trust, 40 m buffer.
- D19 Micks Creek offtake, Healesville Waterworks Trust, 20 m buffer.
- D20 Healesville diversion, Healesville Waterworks Trust, 60 m buffer.
- D21 McCreas Creek offtake, Gembrook Cockatoo and Emerald Waterworks Trust, 60 m buffer.
- D22 Bunyip River offtake, State Rivers and Water Supply Commission, 20 m buffer.
- D23 Upper Tarago diversion, Warragul Waterworks Trust, 100 m buffer.
- D24 Tarago reservoir, State Rivers and Water Supply Commission, 100 m buffer.

D25-D93 That in the case of the following catchments, for which no land use determination has yet been made, the present tenure and management of public land should continue for the time being. Once the determination has been made all public land required for water storages, diversion works and associated facilities, together with the buffer strip defined in the determination and those allotments specified below, be permanently reserved under section 14 of the *Land Act* 1958 for water supply purposes and be managed by the appropriate water supply authority.

- D25 Moorabool River diversion, Bannockburn Waterworks Trust.
- D26 Upper and Lower Stony Creek reservoirs, Geelong Waterworks and Sewerage Trust.
- D27 Bostock reservoir, Geelong Waterworks and Sewerage Trust, the reserve to include the following : Parish of Moorabool West, east of allotment 8A, east and south of allotment 4A of section 1.
- D28 Korweinguboora reservoir, Geelong Waterworks and Sewerage Trust.
- D29 Colbrook reservoir, Ballan Waterworks Trust.
- D30 Pykes Creek reservoir, State Rivers and Water Supply Commission.
- D31 Lerderberg diversion, State Rivers and Water Supply Commission.
- D32 Melton reservoir, State Rivers and Water Supply Commission.
- D33 Rosslynne reservoir, State Rivers and Water Supply Commission.
- D34 Rösslynne (Riddell Creek diversion) State Rivers and Water Supply Commission.
- D35 Jim Crow diversion, Yarra Junction Waterworks Trust.
- D36 Wombat reservoir, Daylesford Waterworks Trust.
- D37 Bullarto reservoir, Daylesford Waterworks Trust.
- D38 Upper Coliban reservoir, State Rivers and Water Supply Commission, the reserve to include the following : Parish of Burke Gazette 1956 page 4268.
- D39 Lauriston reservoir, State Rivers and Water Supply Commission.
- D40 Malmsbury reservoir, State Rivers and Water Supply Commission, the reserve to include the following : Parish of Burke :
Gazette 1881-2900 west of allotment 66
Gazette 1868-321 north of allotment 9A of 3
Gazette 1941-4286 east of allotment 10Q
Gazette 1882-2304 adjoining and east of 1941-4286
 Parish of Lauriston
Gazette 1968-321 west of 291
- D41 Coliban River diversion, Malmsbury Waterworks Trust.
- D42 Mollisons Creek diversion, Pyalong Waterworks Trust.
- D43 Goulburn River diversion, Seymour Waterworks Trust.
- D44 Falls Creek reservoir, Seymour Waterworks Trust.
- D45 Yea River diversion, Yea Waterworks Trust.
- D46 Rubicon River diversion, Thornton Waterworks Trust.
- D47 Eildon reservoir, State Rivers and Water Supply Commission. The reserve to include the following allotments 1.5 ha north west of allotment 59A, Parish of Howqua and that part of allotment 33, Parish of Howqua West above the water level.
- D48 Brewery Creek diversion, Woods Point Waterworks Trust.
- D49 Steavenson River diversion, Marysville Waterworks Trust.
- D50 Beauty Spot reservoir, Marysville Waterworks Trust.
- D51 Sunday Creek diversion, Broadford Waterworks Trust.
- D52 Hellhole diversion, Melbourne and Metropolitan Board of Works.
- D53 Mud Creek diversion, Melbourne and Metropolitan Board of Works.
- D54 Stony Creek diversion, Melbourne and Metropolitan Board of Works.
- D55 Silver Creek diversion, Melbourne and Metropolitan Board of Works.
- D56 Wallaby Creek diversion, Melbourne and Metropolitan Board of Works.
- D57 Toorourrong reservoir, Melbourne and Metropolitan Board of Works.
- D58 Yan Yean reservoir, Melbourne and Metropolitan Board of Works.
- D59 Running Creek reservoir, Hurstbridge Waterworks Trust.
- D60 Yering Weir, Melbourne and Metropolitan Board of Works.
- D61 Donnellys Creek diversion, Melbourne and Metropolitan Board of Works.
- D62 Sawpit Creek diversion, Melbourne and Metropolitan Board of Works.
- D63 Maroondah reservoir, Melbourne and Metropolitan Board of Works.
- D64 Grace Burn diversion, Melbourne and Metropolitan Board of Works.
- D65 Coranderrk Creek diversion, Melbourne and Metropolitan Board of Works.
- D66 Don River diversion, Woori Yallock—Launching Place Waterworks Trust.
- D67 Yannathan Creek diversion, Warburton Waterworks Trust.
- D68 Cement Creek diversion, Melbourne and Metropolitan Board of Works.
- D69 O'Shannassy reservoir, Melbourne and Metropolitan Board of Works.
- D70 Armstrong (West) diversion, Melbourne and Metropolitan Board of Works.
- D71 Armstrong (East) diversion, Melbourne and Metropolitan Board of Works.
- D72 Upper Yarra reservoir, Melbourne and Metropolitan Board of Works.
- D73 McMahons Creek diversion, Melbourne and Metropolitan Board of Works.
- D74 Starvation Creek diversion, Melbourne and Metropolitan Board of Works.
- D75 Four mile Creek diversion, Warburton Waterworks Trust.
- D76 Britannia Creek diversion, Yarra Junction Waterworks Trust.

- D77 Thomson (Stages 1 and 2) diversion, Melbourne and Metropolitan Board of Works.
- D78 Thomson (Stage 3), Melbourne and Metropolitan Board of Works.
- D79 Trigger Creek diversion, Erica Waterworks Trust.
- D80 Moondarra reservoir, Latrobe Valley Water and Sewerage Board
- D81 Yallourn storage, State Electricity Commission.
- D82 Narracan Creek diversion, Moe Waterworks Trust.
- D83 Sunny Creek diversion, Trafalgar Waterworks Trust.
- D84 Rollo Creek reservoir, Yarragon Waterworks Trust.
- D85 Deep Creek diversion, Noojee Waterworks Trust.
- D86 Labertouche Creek offtake, Drouin Waterworks Trust.
- D87 Back Creek, State Rivers and Water Supply Commission.
- D88 Beaconsfield reservoir, State Rivers and Water Supply Commission, the reserve to include the following allotments :
Parish of Pakenham *Gazette* 1878 page 313, 1125 and 1879, 2814.
- D89 Ruby Creek reservoir, Leongatha Waterworks Trust.
- D90 Bellview and Coalition Creek storages, Korumburra Waterworks Trust.
- D91 Lance Creek reservoir, State Rivers and Water Supply Commission.
- D92 Tennants Creek reservoir, Westernport Waterworks Trust.
- D93 Bunyip River diversion, Koo-wee-rup Waterworks Trust.

D94-98 That in the case of the following off-river storages, the storages and their associated reserves remain under their existing tenure and control. In these cases no proclamation is necessary.

- D94 Greendale reservoir, Melbourne and Metropolitan Board of Works.
- D95 Sugarloaf reservoir, Melbourne and Metropolitan Board of Works.
- D96 Silvan reservoir, Melbourne and Metropolitan Board of Works.
- D97 Cardinia reservoir, Melbourne and Metropolitan Board of Works.
- D98 Devil Bend reservoir, State Rivers and Water Supply Commission.

Note : The Melbourne study area includes parts of the catchments of four storages that are situated outside its boundary. These are Cairn Curran reservoir on the Loddon River, Lake Eppalock on the Campaspe, Lake Nagambie on the Goulburn, and Cowwarr Weir on the Thomson. The catchments of Cairn Curran and Eppalock have been proclaimed.

Addenda

The following diversion points should be added to the list of specific recommendations D25-D93 on page 42 :—

- D45 (a) Goulburn River diversion, Alexandra Waterworks Trust
- D47 (a) Delatite River diversion, Mansfield Waterworks Trust

E. HARDWOOD PRODUCTION

Timber from the hardwood forests of the study area has played an important part in the State's development since the earliest days of European settlement. About two-thirds of Victoria's high quality forests are found in the study area, and their proximity to the major markets and relatively flat terrain on which they occur considerably enhance their value.

The most important species are mountain ash, alpine ash, and messmate stringybark. Other species include shining gum, mountain grey gum, narrow-leaf peppermint, and silvertop.

The hardwood industry based on the study area currently utilizes about 650,000 m³ of timber annually, and more than 3,000 persons are directly employed in the harvesting and initial processing of this timber. Sawlogs and pulpwood in roughly equal quantities account for more than 95 per cent. of this volume. The remainder is made up of veneer logs, poles, and other minor products.

Forests in the study area must provide all the timber required for Hardboards Australia Limited under the *Forests (Pulpwood Agreement) Act 1959* and the bulk of that required for Australian Paper Manufacturers under the *Forests (Pulpwood Agreement) Acts, 1961 and 1966*.

Historically all of the forested lands in the study area (with the exception of the catchment areas at Wallaby Creek, Maroondah, and O'Shannassy) have been exploited for timber. As traditionally practised, hardwood production has been compatible with many other uses, such as conservation of flora and fauna, and many types of outdoor recreation. It has also been a flexible use, allowing the possibility of later adaption to many other uses.

However, as the community increasingly places constraints on timber production in order to protect floral, faunal, recreational, water catchment, and landscape values, so the area available for timber production decreases. Logging is not permitted in reference areas, nor in many parks. As a consequence it is necessary to increase the productivity of the areas to be used for timber production, and their capability for non-timber uses will decline.

The Council believes that most of Victoria's timber requirements could be produced from intensively managed forests covering a much smaller area than the present extensively managed forests. Intensive management is the accepted practice with softwood production and other forms of primary production; in the case of hardwood production it has the advantage of reducing the costs involved in roading, harvesting, regeneration, protection, and management. Although there would still be a general constraint to maintain the productivity of these areas, short rotations, changes in species or genetic strains, application of fertilizers, and extensive clearing would be permitted. Areas of flat terrain with a high capability for hardwood timber production (such as the Black Range, Cerberean and Gregory plateaus), where conflict with landscape, recreational, and catchment values would be minimal, would be suitable for intensive management.

The Council realizes that, although some areas of ash-type species are intensively managed at present, the extension of this type of management to significant areas of forest can be achieved only in the long term. Thus many existing forests, which have generally resulted from past fires and logging activity and whose productivity is far below

their potential, must continue to be used to meet existing and foreseeable needs, and in these recommendations hardwood timber production remains the primary use over large parts of the study area. However, constraints are imposed, and the Council defines areas where particular non-timber values must be protected.

Specific Recommendations

E1-E16 That the areas listed below and shown on the maps be used :

- (a) primarily to produce hardwood timber in a manner having due regard for landscape values as seen from the main roads outside the forest and that:
- (b) major secondary uses be to:
 - (i) provide opportunities for open-space recreation and education
 - (ii) conserve native plants and animals, and provide opportunities for the development of wildlife conservation techniques
 - (iii) produce honey, forage, gravel, sand, and other forest produce as defined in the *Forests Act 1958*
- (c) water production values be recognized; and that particular values as listed below be protected by means of reserves under section 50 of the *Forests Act 1958*, or by management prescriptions prepared, in the case of fauna, in consultation with the Fisheries and Wildlife Division
- (d) areas within water catchments be used for water supply and to protect the catchments.

and that the areas remain or become reserved forest managed by the Forests Commission.

E1 Bungal Forest (400 ha)

E2 Wombat Forest (38 000 ha)

- (a) That the conservation of the following animals be provided for in management prescriptions, in consultation with the Fisheries and Wildlife Division:
 - wombat
 - eastern grey kangaroo
 - great glider
 and species requiring hollows in trees.
- (b) That the conservation of the following plants be provided for in management prescriptions:
 - Grevillea repens*
 - Pultenaea weindorferi*
 - P. muelleri* var *reflexifolia*.
- (c) That the following feature and its environs be reserved for recreation under section 50 of the *Forests Act 1958* :
 - Lyonville mineral springs
- (d) That the natural environment of the Blue Mountain Lookout be preserved.

- (e) The Council has no objection to the proposal made by the Trentham Tourist Development and Secondary Industry Development Committee to use 35 ha in this forest as a "colonial park".

E3 Cobaw Forest (2 500 ha)

E4 Tallarook Forest (4 900 ha).

- (a) That the conservation of the eastern grey kangaroo be provided for in management prescriptions, with the Fisheries and Wildlife Division.
- (b) That landscape values of the forested escarpments as viewed from the Hume Highway be maintained.

E5 Mt. Disappointment Forest (16 000 ha).

- (a) That the following scenic features and their environs be reserved for recreation under section 50 of the *Forests Act* 1958:
Murchison Falls
Strath Falls.
- (b) That the natural environment of the Mt. Disappointment Lookout be preserved.
- (c) That landscape value of the forested escarpments as viewed from the Hume Highway be maintained.

E6 Toolangi Forest (6 600 ha)

- (a) That the Sylvia Falls and environs be reserved for recreation under section 50 of the *Forests Act* 1958.
- (b) That the western half of Crown allotment 54A (Crown land) be exchanged for the eastern half of the freehold allotments 54B and 54C, Parish of Tarrawarra North (50 ha).

E7 Murrindindi Forest (16 400 ha).

- (a) That the following scenic features and their environs be reserved for recreation under section 50 of the *Forests Act* 1958:
Murrindindi Falls
Wilhelmina Falls.
- (b) That the natural environs of the Murrindindi Road and Mt. Despair Lookout be protected.

E8 Black Range Forest (7 200 ha)

E9 Marysville Forest (22 300 ha).

- (a) That the conservation of the following animals be provided for in management prescriptions, in consultation with the Fisheries and Wildlife Division:
Leadbeaters possum
other species closely associated with mountain ash forest.

- (b) That the following scenic features and their environs be reserved for recreation under section 50 of the *Forests Act* 1958;
- Keppels Falls
 - Steavenson Falls
 - Keppels Lookout
 - De La Rues Lookout
 - Red Hill
- (c) That the natural environs of the Talbot Drive and Acheron Way be protected.
- (d) That the landscape values of the forested escarpments as viewed from the Maroondah Highway be maintained.
- E10** Rubicon Forest (31 800 ha)
- (a) That the conservation of the following animals be provided for in management prescriptions in consultation with the Fisheries and Wildlife Division.
- Leadbeaters possum
 - other species closely associated with mountain ash forest.
- (b) That the following scenic feature and environs be reserved for recreation under section 50 of the *Forests Act* 1958:
- Mt. Torbreck
- (c) That the landscape values of the forested escarpments as viewed from the Maroondah Highway and Goulburn Valley Highways be maintained.
- E11** Big River Forest (36 200 ha)
- That the conservation of stands of *Eucalyptus neglecta* in Frenchmans Creek be provided for in management prescriptions.
- E12** Thomson Forest (35 500 ha)
- (a) That the conservation of the following animals be provided for in management prescriptions in consultation with the Fisheries and Wildlife Division:
- Leadbeaters possum
 - smoky mouse.
- (b) That the relics of mining in the Jordan River Valley be preserved.
- (c) That the environs of north and south Cascade Creeks be protected.
- (d) That the landscape seen from Cast Iron Point be preserved.
- (e) That fossil sites at McAdams Gap be preserved.
- E13** Tarago—Latrobe Forest (43 600 ha)
- (a) That the conservation of the following animals be provided for in management prescriptions in consultation with the Fisheries and Wildlife Division:
- Leadbeaters possum
 - broad-toothed rat
 - other species closely associated with mountain ash forest.

- (b) That the conservation of the following plants be provided for in management prescriptions:
Carex alsophila
Persoonia arborea
Tetratheca stenocarpa.
- (c) That the open grassland on the Tooronga Plateau as seen from the Tooronga Road and the track to Mt. Toorongo be maintained for its scenic value.
- (d) That the following scenic features be reserved for recreation under section 50 of the *Forests Act* 1958:
 Tooronga Falls
 Cascade Creek Falls
- (e) That the natural environment of the Spion Kop and Mt. Toorongo Lookouts, and Mt. Beenak and Seven-acre Rock be preserved.
- (f) That the historically interesting timber tramways in the Ada River Valley be preserved.

E14 Neerim East Forest (6 400 ha)

E15 Tanjil—Tyers Forest (33 500 ha).

- (a) That the conservation of the tiger cats in the Willow Grove area be provided for in management prescriptions in consultation with the Fisheries and Wildlife Division.

- (b) That the natural environs of the Mt. Baw Baw road be protected.

E16 Boola Boola Forest (18 100 ha).

That the landscape values of the Thomson River and Tyers River gorges be protected.

This area includes public land outside the Melbourne Study Area in the parishes of Toongabbie North and Boola Boola, about which Council deferred making a recommendation when considering the South Gippsland Study Area, District 1.

Note : In addition to areas mentioned above 30 000 ha of forest in the Yarra Valley Multi-purpose Park are zoned for hardwood production or recreation and hardwood production.

F. SOFTWOOD PRODUCTION

The report on the Melbourne study area briefly summarised social and other benefits derived from softwood plantations, industry requirements for the plantation resource, and forecasts of future demand. It also outlined the provisions of the Commonwealth-State Softwood Forestry Agreement, scheduled for review in 1976. Under this Agreement, the Australian government provides finance to help the States to meet target softwood planting rates.

The Melbourne study area includes the central development zone and parts of three other zones selected by the Forests Commission of Victoria within which sufficient wood resources can be provided to supply perpetual and efficient wood-based industries.

Industry and Plantation Requirements

Ballarat Zone

The softwood plantations in this zone provide wood for local saw-milling and wood-preserving industries, in addition to a particle-board factory operated by A. V. Wehl Industries Ltd. at Ballarat. Legislation passed in 1969 guarantees that the Forests Commission will meet the supply requirements of the particle-board industry (i.e. 18 000 m³ of softwood in 1974 increasing to 48 000 m³ by 1989). A. V. Wehl is planning for further expansion of its softwood-based industry. At present, available softwood supplies in the Ballarat Zone are augmented from the Otways Zone.

Up to December, 1974 approximately 8 980 ha net had been planted to softwoods. The Forests Commission has a requirement to plant a further 15 300 ha in the zone to meet its target of 24 280 ha. Accordingly it has requested that sufficient public land to enable 3 400 ha net of softwood plantings (to be established by 1983) be set aside in the Melbourne study area for this purpose. The specific recommendations below set aside sufficient land to plant 1 616 ha net (47.5 per cent.).

Central and Benalla/Mansfield Zones

The softwood plantings in the combined zones are planned to support a large integrated industry, including a pulp mill and sawmills. The establishment of a planned resource of 60 000 ha of softwood is still in the early stages and no commitments to industry have been made. To date (December, 1974) approximately 10 620 ha have been planted, leaving a requirement for a further 49 380 ha. The Forests Commission requested that sufficient land in the north-eastern study area (district 2) be made available to meet its present planting rates at Warrenbayne and Wrightley from 1974 to 1983 inclusive. The final recommendations for that study area met this requirement in full, and an area sufficient to establish 7 400 ha net of plantation was delineated. This included some land purchased by the Forests Commission.

In the recommendations below the Council has allocated enough land in the Melbourne study area to establish a further 3 950 ha to 1983. The combined area (11 350 ha) would enable the Forests Commission to achieve 74 per cent. of its proposed plantings to 1983. The Council believes that the remainder (approx. 4 000 ha) should be met by purchase of private property.

Latrobe Zone

The softwood plantings in this zone will supplement wood supplies from the large plantation resource of Australian Paper Manufacturers Ltd. (A.P.M.) and the large State eucalypt resource in eastern Victoria. Major expansion of pulp and paper

manufacture at A.P.M.'s Maryvale mill has been assured by the *Forests (Wood Pulp Agreement) Act 1974*, which guarantees long-term supplies of both softwood and hardwood pulpwood by the Forests Commission. Under this Act the softwood supply commitment will increase from the present level of 8 500 m³ per annum to 100 000 m³ in the year 2000.

In order to meet this commitment and provide for sawmilling and other associated industries in the Latrobe Valley, the Forests Commission requires a total of at least 28 000 ha of softwood plantation to be established within the zone.

At present (December, 1974) approximately 7 050 ha net of plantations have been established. In its submission, the Forests Commission requested that the present plantings (61 ha) in the Shady Creek Area be expanded to total 1 300 ha by 1983 and options kept open for further plantings in the area after that year, and further that a planting programme be initiated in the Mount Tanjil area to total 400 ha by 1983 with options kept open for further plantings after that year. The areas made available under the specific recommendations below are based on a combined planting rate of 160 ha net per annum for the nine years 1975 to 1983 inclusive, and will meet the Forests Commission requirements in full from public land.

Planning period

Provision is made in these recommendations for land for planting of softwoods in the area until 1983, thus allowing a planning period of nine years for the establishment of softwoods. However, finance for softwood plantings depends to some extent on the Commonwealth-State Softwood Forestry Agreement, which is scheduled for review in 1976 and possibly again in 1981. If substantial changes are made in the Agreement, it will be necessary to review these recommendations, particularly the area of land provided for softwood planting in 1982 and 1983. The Council will consider making land available for softwood planting after 1983 in sufficient time to allow reasonable preparation for such plantings.

Plantation Planning Guidelines

The impact of large plantations of softwoods on the natural environment can be lessened by retaining selected areas of native vegetation and by adhering to catchment prescriptions laid down by the relevant management authorities, where applicable. The guidelines set out below apply to the establishment of plantations on public land in this study area. They have been adapted from those prepared and used by the Forests Commission. Obviously planning plantations in this way increases their total area. Allowances for this have been made in calculating the areas allocated to softwood planting.

Non-government Plantations

The Council's general policy is that public land may be considered for private softwood planting if a company shows its preparedness to undertake a planting programme using purchase private land and if the use of this public land would consolidate the project. Further, any public land would be made available in the form of leases.

Policy Recommendations

- F(i) That funds be made available to the Forests Commission for the purchase of alienated land for softwood planting in zones where the area of public land recommended for softwood planting by this Council does not meet the Commission's requirements.

- F(ii)** That, where these areas fall within water supply catchments, the land be used for water supply and catchment protection.
- F(iii)** That the planning and establishment of softwood plantations on public land follow the procedures and practices outlined below.

No continuous plantation unit should exceed 1 400 ha without obvious break-up areas retained as native forest. Large samples (100–200 ha) of all vegetation types in the area should be retained. Where possible, several types should be combined in one unit. The unit may be sited to improve the appearance of the plantation, or to combine with unsuitable land to form a range of habitats for wildlife. Units may also include stands of native hardwood managed for timber production. While logging and fuel-reduction burning need not be prohibited in areas where native vegetation is retained, it is important that the amenity and recreational values of these areas be protected. Any utilization, including that carried out prior to clearing, should be carefully controlled, and slash, snig tracks, and landings cleaned up. No retained area should be fuel-reduced in entirety in any one year.

Native vegetation should be retained for a minimum width of 40 m from each bank along minor streams and 80 m from each bank along major streams, and such areas should be maintained free of exotic vegetation. This is in line with other Council recommendations that all wetlands on public land be conserved. These strips of retained native vegetation should be kept free of bulldozed material, and windrows should be swept back from them to protect them from hot burns. They should be linked to areas of native forest wherever possible, to allow movement of wildlife.

Landscape values adjacent to highways and main roads should be maintained or enhanced, with preference given to landscapes clothed with native forests. On minor through-roads, a visually diverse environment should be maintained by plantings (preferably of native and local species). Where plantations are to be established adjoining private property, consideration should be given to reasonable requests by the landowners for the retention of native vegetation along boundaries.

Specific Recommendations

- F1** That the present plantations continue to be used for the production of softwood products and the provision of other goods and services compatible with this primary use, as well as providing opportunities for education and recreation, and that they be reserved forest.
- F2–F15** That the areas indicated on the maps be used for softwood production and that they be reserved forest.

Ballarat Zone

- | | | |
|-----------|--------------|------------|
| F2 | Spargo Creek | (210 ha) |
| F3 | Bells Reef | (390 ha) |
| F4 | Basalt | (1 120 ha) |
| F5 | Macedon | (300 ha) |

Central and Benalla/Mansfield Zones

F6	Kinglake West	(300 ha)
F7	Pheasant Creek	(290 ha)
F8	Mt Robertson	(1 385 ha)
F9	Acheron 1	(230 ha)
F10	Acheron 2	(850 ha)
F11	Acheron 3	(1 040 ha)
F12	Acheron 4	(600 ha)

Latrobe Zone

F13	Neerim East	(420 ha)
F14	Shady Creek	(820 ha)
F15	Mt. Carmel	(630 ha)

Proposed plantation areas in the Ballarat Zone (**F2-F5**) are in proclaimed water catchment areas and are subject to specification by notice or determination made by the Soil Conservation Authority.

G. FOREST AREA

When making recommendations on land for softwood plantations, the Council has recognized that their establishment constitutes a major change from any natural ecosystems they replace. Further, it realises that softwood production is a long-term endeavour and that restoration of soft wood plantations area to a natural condition is difficult. Adjacent areas of public land that have high nature conservation and/or landscape values thus play an important role in maintaining a local balance in land use. Because of their locations, these areas are also critical for fire protection of the softwood resource and therefore must also be managed for this purpose. Such land has been designated forest area.

Specific Recommendation

- G1** That the area of 4 300 ha indicated on the map be used for:
- (a) conservation of fauna and flora, and preservation of scenic values
 - (b) protection of the adjacent area recommended for softwood production
 - (c) low-intensity hardwood production, recreation, education, forest grazing, honey production, and mining where these activities do not conflict with (a) above
 - (d) water supply and catchment protection where these areas be within water supply catchments
- and that it be reserved forest.

H. FLORA AND FAUNA RESERVES

FLORA RESERVES

These areas are significant because they contain diverse species or associations of native plants.

Specific Recommendations

H1–H2 That the areas indicated on the maps and described below be used to conserve particular species or associations of native plants:

Map 11

- H1** Approximately 160 ha, being the Botanic Gardens and Public Recreation Reserve, allotment 22A, Parish of Sherwood—to be managed by the Department of Crown Lands and Survey. Sand removal from the area is to cease and excavated areas are to be revegetated with species native to the site.
- H2** Approximately 2.5 ha being the temporary cemetery reserve bordered by allotments 25A, 25B, 26C, Parish of Kongwak—to be used to preserve bog mallee (*Eucalyptus kitsoniana*) and managed by the Department of Crown Lands and Survey.

FLORA AND FAUNA RESERVES

These areas are significant because they contain diverse species or associations of native plants and animals.

H3–H26 That the areas shown on the maps and described below be used to conserve native plants and animals.

Map 2

- H3** Approximately 216 ha being allotments 19, 19A, and 19B, Parish of Goldie—to be managed by the Department of Crown Lands and Survey.
- H4** Approximately 40 ha on the Goulburn River adjacent to allotments 46, 11B, and 12C, Parish of Ghin Ghin—to be managed by the Fisheries and Wildlife Division to conserve a remnant of river red gum woodland and associated water-fowl habitat.

Map 3

- H5** Approximately 486 ha being allotments 32A, 33, 34, and 34A, Section B, Parish of Switzerland—to be managed by the Department of Crown Lands and Survey.
- H6** Approximately 583 ha being allotments 31, 31A, 32, and 47, Parish of Yarck—to be managed by the Department of Crown Lands and Survey.
- H7** Approximately 405 ha being allotments 30C and 68B of Section C, Parish of Gobur, together with the timber reserve to the north—to be managed by the Department of Crown Lands and Survey.
- H8** Approximately 40 ha being the temporary recreation reserve, and 0.8 ha being the temporary reserve for native flora, north of allotments 4 and 5, Parish of Alexandra—to be managed by the Department of Crown Lands and Survey.

Map 5

- H9** Inverleigh Common—see section below.

Map 7

- H10** Approximately 20 ha north of Stevenson's Creek, adjoining allotments 31A and 26, Parish of Sutton—to be managed by Fisheries and Wildlife Division.
- H11** Approximately 36 ha comprising the State forest adjoining allotment 70, Parish of Pakenham—to be managed by the Forests Commission.
- H12** Approximately 20 ha comprising the public purposes reserve, adjoining Cardinia Creek west of the Beaconsfield-Emerald Road, Parish of Pakenham—to be managed by the Department of Crown Lands and Survey.

Map 9

- H13** Approximately 48 ha adjoining the Alcoa lease area north of allotments 20A, 20B, 12A, 12, and 13, Parish Angahook—to be managed by the Forests Commission. (See Anglesea lease area, recommendation R23.)
- H14** Approximately 1,000 ha adjoining the Alcoa lease area west and south of allotments 41A, 40A, 39A, 38, 37, 36, 47, 49A, 49B, and 49C, Parish of Jan Juc including the 69-ha water reserve, but excluding the proposed 140-ha education area—to be managed by the Forests Commission. (See Anglesea lease area, recommendation R23.)
- H15** Approximately 120 ha north-east of the township of Breamlea, including the recreation reserve extension—to be used for the conservation of coastal wetland flora and fauna and managed by the Fisheries and Wildlife Division. (See Appendix 2: Sites of Special Conservation Significance on the Coast.)
- H16** Approximately 0.5 ha being the departmental water reserve adjacent to allotment 1A of section 173, Parish of Bellarine—to be used for the conservation of swamp and grassland flora and fauna, and managed by the Fisheries and Wildlife Division.

Map 10

- H17 Approximately 3.7 ha in the north east of allotment 44A of section 2, Parish of Bellarine—to be used for the conservation of swamp and grassland flora and fauna and managed by the Fisheries and Wildlife Division.
- H18 Approximately 48 ha comprising the southern portion of the temporary recreation and public purposes reserve, township of Portarlington—to be used for the conservation of grassland and the short-nosed bandicoot and managed by the Fisheries and Wildlife Division. (See Appendix 2 : Sites of Special Conservation Significance on the Coast.)
- H19 Approximately 63 ha being the 102nd section reserve, allotments 5A and 5B, Parish of Flinders—to be managed by the National Parks Service.
- H20 Approximately 27 ha, being the public purposes reserve north of allotment 156, Parish of Kangerong—to be managed by the National Parks Service.
- H21 Approximately 32 ha reserved for the preservation of native flora and fauna adjoining allotments 107 and 108A, Parish of Bittern—to be managed by the National Parks Service.
- H22 Approximately 1.6 ha, being the public recreation reserve adjoining allotment 58, Parish of Moorooduc—to be managed by the Department of Crown Lands and Survey.

Map 11

- H23 Approximately 142 ha being the Crown land and adjoining unmade and unused roads, east of the Bass Highway and west of allotments 216B, 216C, and 169A, Parish of Corinella—to be managed by the Fisheries and Wildlife Division.
- H24 Approximately 202 ha being allotments 219B, 96B, and 96C, Parish of Corinella, except for 40 ha comprising the gravel reserve and part of the gravel reserve extension north and east to 20 m from the creek, plus the area covered by extractive industries lease No. 16—to be managed by the Fisheries and Wildlife Division.
- H25 Approximately 36 ha along the Hurdy Gurdy Creek adjacent to allotments 1,100, 100A, 103, and 103A, on the north side, and allotments 102, 96A, and 108 on the south side, Parish of Corinella—to be managed by the Fisheries and Wildlife Division.

Map 12

- H26 Approximately 5.7 ha north of allotments 3, 4, 5, 6, 7, 8, 9, and 10 of section 14, Township of Trafalgar, Parish of Yarragon—to be managed by the Department of Crown Lands and Survey to conserve a remnant of the Moe swamp vegetation.

Inverleigh

The 1 000 ha block of public land at Inverleigh supports the only viable remnant of the region's original vegetation of manna gum and river red gum woodlands. At least 24 orchid and 13 lily species, as well as the little sword-sedge (a very uncommon and localized Victorian plant), are known to grow on this relatively small tract of land. The eastern grey kangaroo and koala are known to inhabit the area.

The block has a high value for conserving the natural character of the landscape, as it is surrounded by cleared agricultural land. Recreational potential lies mainly in nature study—viewing the wildflower displays in spring and the eastern grey kangaroos and koalas. Recreational pressure is likely to increase, as the area is readily accessible from Geelong.

Shallow deposits of sands and ferruginous sand and gravel occur in the area and these materials have been stripped from approximately 65 ha of the public land. Half of this area has been rehabilitated and planted with eucalyptus species not indigenous to the area.

The deposits in the region have not been worked out, and shallow deposits still occur outside the area of public land.

About one hectare in the south-east is used as a rubbish depot, but the dumping of rubbish in the vicinity is not fully controlled.

Firewood, posts, and poles are cut from the areas of native woodland. The Council notes that the area is close to Geelong and therefore under pressure for recreation, and recognizes the importance of the gravel and sand deposits. However, the conservation value of the land type remaining in this area is extremely high, and Council believes that the area should be retained in a natural state.

Specific Recommendation

- H9** That the land (1 050 ha) shown on the maps be used to conserve the native plants and animals and that :
- (a) the 1·2-ha temporary rubbish depot on the southern boundary of the reserve be phased out of use and the area rehabilitated and revegetated with local native species.
 - (b) gravel and sand extraction be continued in the designated area of 8 ha on the southern boundary of the reserve and that this area should not be extended ; upon completion of the sand and gravel extraction, the area should be rehabilitated and revegetated with local native species.
 - (c) the eucalypt plantations on areas already rehabilitated be used for timber products and the areas eventually revegetated with local native species ;
- and that the area be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service.

I. BUSHLAND RESERVES

These pieces of land, relatively small and frequently isolated, carry remnants of native vegetation, providing diversity in predominantly agricultural regions.

Specific Recommendations

II-I120 That the areas indicated on the maps and described below be used to:

- (a) maintain the local character and quality of the landscape
- (b) provide opportunities for passive recreation such as picnicking and walking and that they be reserved under section 14 of the *Land Act* 1958.

Expansion of existing recreation facilities or new development should be permitted only where this does not conflict with the primary aim.

Map 1

- I11 Approximately 3.0 ha north of allotment 6x, Parish of Bullarto—to be managed by the Department of Crown Lands and Survey.
- I12 Approximately 1 ha east of allotment 2c of Section 17, Parish of Wombat—to be managed by the Department of Crown Lands and Survey.
- I13 Approximately 6.1 ha on Leitchs Creek south of allotment 18f, Parish of Holcombe—to be managed by the Department of Crown Lands and Survey.
- I14 Approximately 4.9 ha north of allotment 73, Parish of Holcombe—to be managed by the Department of Crown Lands and Survey.
- I15 Approximately 6 ha being allotment 8c east of allotment 3a, Section A, Parish of Holcombe—to be managed by the Department of Crown Lands and Survey.
- I16 Approximately 1.0 ha north-west of allotment A17 of Section F, Parish of Trentham—to be managed by the Forests Commission.
- I17 Approximately 1.6 ha north-east of allotment A17 of Section F, Parish of Trentham—to be managed by the Forests Commission.
- I18 Approximately 3.6 ha adjacent to allotments 38 and 39a, Parish of Coliban—to be managed by the Department of Crown Lands and Survey.
- I19 Approximately 2.4 ha adjacent to allotment 29c, Parish of Coliban—to be managed by the Department of Crown Lands and Survey.
- I110 Approximately 1.6 ha adjacent to allotment 2a of Section 1a, Parish of Burke—to be managed by the Department of Crown Lands and Survey.
- I111 Approximately 1.2 ha north-east of allotment 12f of Section 4, Parish of Burke—to be managed by the Department of Crown Lands and Survey.
- I112 Approximately 4.9 ha north of allotment 4 and west of allotment 2b of Section 2, Parish of Burke—to be managed by the Department of Crown Lands and Survey.
- I113 Approximately 2.6 ha on Kangaroo Creek east of allotment 12a of Section 3, Parish of Burke—to be managed by the Department of Crown Lands and Survey.
- I114 Approximately 47 ha south of allotment 10b, Parish of Langley—to be managed by the Department of Crown Lands and Survey.
- I115 Approximately 4.2 ha adjacent to allotment 2a of Section D, Parish of Woodend—to be managed by the Department of Crown Lands and Survey.

Map 2

- I116 Approximately 1.2 ha adjacent to allotments 3c and 3e, Parish of Cobaw—to be managed by the Department of Crown Lands and Survey.
- I117 Approximately 3.2 ha north of allotment 32, Parish of Baynton—to be managed by the Department of Crown Lands and Survey.
- I118 Approximately 0.8 ha south-west of allotment 5 of Section 11, Parish of Baynton—to be managed by the Department of Crown Lands and Survey.
- I119 Approximately 4.9 ha east of allotment 73L of Section 1, Parish of Baynton—to be managed by the Department of Crown Lands and Survey.
- I120 Approximately 6.1 ha on the Northern Highway adjacent to allotments 9d, 9b and 13 of Section B, Parish of Tooborac—to be managed by the Department of Crown Lands and Survey.
- I121 Approximately 4.0 ha abutting the Wallan-Romsey Road west of allotment 62c, Parish of Wallan Wallan—to be managed by the Department of Crown Lands and Survey.
- I122 Approximately 2.8 ha west of allotment 100g, Parish of Morandring—to be managed by the Department of Crown Lands and Survey.
- I123 Approximately 3.9 ha being the road and water reserve south of allotment 74b and 74e, Parish of Broadford—to be managed by the Department of Crown Lands and Survey.

Map 2—continued.

- I24** Approximately 4.0 ha (including the stream frontage permanently reserved for public purposes) on Dabyminga Creek west of allotments 6A, 10A, 13, 11, 11A and 17 of Section 6, Parish of Kerrisdale—to be managed by the Department of Crown Lands and Survey.
- I25** Approximately 117 ha on Dabyminga Creek west of allotment 10A, Parish of Kerrisdale—to be managed by the Department of Crown Lands and Survey.
- I26** Approximately 9.3 ha of allotment 27A, Parish of Lowry—to be managed by the Department of Crown Lands and Survey.
- I27** Approximately 22 ha being the Departmental water reserve adjacent to allotments 12 and 13, Parish of Puckapunyal—to be managed by the Department of Crown Lands and Survey.
- I28** Approximately 18 ha west of allotment 38A, Parish of Northwood—to be managed by the Department of Crown Lands and Survey. Regeneration of native vegetation should be encouraged on the parts now cleared.
- I29** Approximately 68 ha west of allotment 27, Parish of Mangalore—to be managed by the Department of Crown Lands and Survey.

Map 3

- I30** Approximately 3.2 ha bordering Break O'Day Creek being allotment 34A, Parish of Flowerdale—to be managed by the Department of Crown Lands and Survey.
- I31** Approximately 7 ha east of allotment 91, Parish of Yea—to be managed by the Department of Crown Lands and Survey.
- I32** Approximately 71 ha being allotment 19, Parish of Murrindindi—to be managed by the Forests Commission.
- I33** Approximately 112 ha being allotment 16E, Parish of Worrour—to be managed by the Department of Crown Lands and Survey.
- I34** Approximately 35 ha on Hughes Creek in allotment 5, Parish of Dropmore—to be managed by the Department of Crown Lands and Survey.
- I35** Approximately 113 ha being allotments 19 and 20, Parish of Switzerland—to be managed by the Department of Crown Lands and Survey.
- I36** Approximately 6 ha being allotment 7c of Section E, Parish of Dropmore—to be managed by the Department of Crown Lands and Survey.
- I37** Approximately 124 ha being allotment 41A of Section 1, Parish of Molesworth—to be managed by the Department of Crown Lands and Survey.
- I38** Approximately 1 ha west of the cemetery north of allotment 10b, Parish of Gobur—to be managed by the Department of Crown Lands and Survey.
- I39** Approximately 2.4 ha south of the Cathkin-Alexandra railway, west of allotment 66, Parish of Alexandra—to be managed by the Department of Crown Lands and Survey.
- I40** Approximately 27 ha being allotments 19b and 19c, Township of Alexandra—to be managed by the Department of Crown Lands and Survey. The areas used for the sanitary and rubbish depots are not to be expanded and these areas should be eventually rehabilitated.
- I41** Approximately 22 ha being allotment 11 of Section A, Parish of Maintongoon—to be managed by the Department of Crown Lands and Survey.

Map 4

- I42** Approximately 24 ha south east of allotment 82A, B2, Parish of Loyola—to be managed by the Department of Crown Lands and Survey.
- I43** Approximately 111 ha being allotments 150 and 150b, Parish of Loyola—to be managed by the Department of Crown Lands and Survey.

Map 5

- I44** Approximately 8.9 ha adjacent to allotments 1, 2 and 3 of Section G, Parish of Wabdallah—to be managed by the National Parks Service.
- I45** Approximately 2.1 ha south of allotment G1 north of allotments B16 and H2, Parish of Durdidwarrah—to be managed by the Department of Crown Lands and Survey.
- I46** Approximately 15 ha north of allotment 23 of Section B, Parish of Cargerie—to be managed by the Department of Crown Lands and Survey. Regeneration of native vegetation should be encouraged on the parts now cleared.
- I47** Approximately 397 ha west of allotments 18, 19, 19A, 19B, 34, Parish of Bamganie—to be managed by the National Parks Service.
- I48** Approximately 230 ha south and east of allotments 55H, 55L, 55J, 28c, and 28b, Parish of Meredith and the adjoining 24 ha west of allotments 10A, 10, 9, Section Y, Parish of Moreep—to be managed by the National Parks Service.
- I49** Approximately 10 ha north of allotment 13 and 15, Parish of Moreep—to be managed by the National Parks Service.
- I50** Approximately 49 ha north of allotments 81A and 81B, Parish of Yangardook—to be managed by the Forests Commission.
- I51** Approximately 2 ha adjacent to allotments 7 and 10 of Section 11, Parish of Wurdi Youyang—to be managed by the Department of Crown Lands and Survey.

Map 6

- I52** Approximately 6.5 ha south of allotments 19P and 19A, Parish of Yangardook—to be managed by the Department of Crown Lands and Survey.
- I53** Approximately 2.4 ha on Kororoit Creek west of allotment A of Section 21, Parish of Kororoit—to be managed by the Department of Crown Lands and Survey.
- I54** Approximately 41 ha within the township of Bulla—to be managed by the Department of Crown Lands and Survey. It should be stabilised and replanted with native vegetation.
- I55** Approximately 24 ha north of allotments 90A, 90, 95 and 96 of Section D, Parish of Greensborough—to be managed by the Department of Crown Lands and Survey.

Map 7

- 156 Approximately 23 ha on the west side of Diamond Creek within the Township of Queenstown (St. Andrews) plus land south-west of allotments 7, 8 and 9 of Section 6, Township of Queenstown, Parish of Queenstown—to be managed by the Department of Crown Lands and Survey. The permissive occupancy on the latter should be cancelled.
- 157 Approximately 6.5 ha being allotments 13 and 12, and parts of allotments 11, 10, and 9 west of St. Andrews—Panton Hill road, Parish of Queenstown—to be managed by the Department of Crown Lands and Survey.
- 158 Approximately 21 ha east of St. Andrews being allotments 8, 9, 10, 11, 12, 13, 14, 15 of Section 10 and allotments 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12 and the land adjoining the west of allotments 12, 22, 23, 24 and the land west of allotment 24 all of Section 9, Township of Queenstown—to be managed by the Department of Crown Lands and Survey.
- 159 Approximately 16 ha in Salters Rush Gully adjacent to allotments 41A, 42A, 43, 44, 44B, 39, 40 and 40A of Section C, Parish of Queenstown—to be managed by the Department of Crown Lands and Survey.
- 160 Approximately 20 ha adjacent to allotments 33 and 40A of Section C, and 36, 36D and 44 of Section A, Parish of Queenstown—to be managed by the Department of Crown Lands and Survey. The permissive occupancy should be cancelled.
- 161 Approximately 122 ha east of Smiths Gully west of allotment 12 of Section A, Parish of Queenstown—to be managed by the Department of Crown Lands and Survey. Exploration and underground mining on One Tree Hill may continue, and gravel extraction is not to extend beyond the area already disturbed.
- 162 Approximately 25 ha being allotment 48 and the adjacent water reserve, Parish of Sutton, but not including the aqueduct easement—to be managed by the Department of Crown Lands and Survey.
- 163 Approximately 33 ha with the township of Toolangi, north and west of allotment 65, Parish of Tarrawarra north and the adjoining permanent public purposes reserve on both banks of the Yea River (except for an area of approximately 2.5 ha east of and adjoining allotments 24, 25, 26, 27, and 28 within the township of Toolangi)—to be managed by the Forests Commission.
- 164 Approximately 42 ha (including the temporary Mechanics Institute and Free Library Reserve) adjacent to allotment 19, Parish of Tarrawarra—to be managed by the Department of Crown Lands and Survey.
- 165 Approximately 8.5 ha being the temporary quarry reserve north-east of allotment 33, Parish of Mooroolbark (except for an area of approximately 0.8 ha occupied by the quarry in the south-east of the proposed reserve,)—to be managed by the Department of Crown Lands and Survey.
- 166 Approximately 4 ha being the Public Recreation Reserve in the south of the Township of Wandin Yallock—to be managed by the Department of Crown Lands and Survey.
- 167 Approximately 3 ha adjacent to allotment 100, Parish of Wandin Yallock—to be managed by the Department of Crown Lands and Survey.
- 168 Approximately 9 ha (including the stream frontage permanently reserved for public purposes) on Cardinia Creek west of allotments 70 and 71, Parish of Pakenham—to be managed by the Department of Crown Lands and Survey. The permissive occupancy should be cancelled.
- 169 Approximately 11 ha south-east of allotment 149, Parish of Pakenham—to be managed by the Department of Crown Lands and Survey.
- 170 Approximately 0.8 ha traversed by the Toomuc Valley road east of allotment 200, Parish of Pakenham—to be managed by the Department of Crown Lands and Survey.
- 171 Approximately 3.2 ha on Toomuc Creek east of allotment 65, Parish of Gembrook—to be managed by the Department of Crown Lands and Survey.
- 172 Approximately 35 ha on the old Gembrook road west of allotments 17N and 17S, Parish of Nar Nar Goon—to be managed by the Department of Crown Lands and Survey.
- 173 Approximately 20 ha adjacent to allotments 100, 114 and A22, Parish of Gembrook—to be managed by the Department of Crown Lands and Survey.
- 174 Approximately 9.5 ha (the temporary reserve for the preservation of native flora adjoining allotments 24, 25, 21K), Parish of Gembrook—to be managed by the Department of Crown Lands and Survey.
- 175 Approximately 4 ha north of allotment 16A, Parish of Gembrook—to be managed by the Department of Crown Lands and Survey.
- 176 Approximately 3.8 ha bordered by allotments 132J and 132G, Parish of Nar Nar Goon—to be managed by the Department of Crown Lands and Survey.
- 177 Approximately 8 ha north west of allotment 195, Parish of Nar Nar Goon (except for the water channel easement)—to be managed by the Department of Crown Lands and Survey.
- 178 Approximately 20 ha adjacent to allotment 132K, Parish of Nar Nar Goon—to be managed by the Department of Crown Lands and Survey.
- 179 Approximately 1 ha (the departmental quarry reserve and the adjoining unused access road west of allotment 50 of Section U), Parish of Kooweerup East—to be managed by the Department of Crown Lands and Survey. Rubbish dumping should be stopped.
- 180 Approximately 11 ha on Cannibal Creek adjacent to allotments 92A, 39 and 39A, Parish of Bunyip—to be managed by the Department of Crown Lands and Survey.
- 181 Approximately 5.7 ha being the camping and water reserve south east of allotment 39, Parish of Bunyip—to be managed by the Department of Crown Lands and Survey.
- 182 Approximately 45 ha being the water frontage on both sides of Labertouche Creek adjacent to allotments 119B, 119C, and 122B, Parish of Jindivick—to be managed by the Department of Crown Lands and Survey. Regeneration of native vegetation should be encouraged on the parts now cleared.
- 183 Approximately 2.8 ha being the western part of the cemetery reserve east of the Township of Whiskey Creek, adjacent to allotment 50A, Parish of Drouin West—to be managed by the Department of Crown Lands and Survey.

Map 7—continued

- 184 Approximately 4.6 ha west of allotment 5, Parish of Jindivick—to be managed by the Forests Commission.
- 185 Approximately 1.6 ha south of Rokeby adjacent to allotment 31D, Parish of Drouin East—to be managed by the Department of Crown Lands and Survey.
- 186 Approximately 3.6 ha being the recreation reserve north east of allotment 36A, Parish of Nayook—to be managed by the Department of Crown Lands and Survey.

Map 8

- 187 Approximately 9.1 ha adjoining allotments 163E, 163F, 164C and 164B, Parish of Neerim—to be managed by the Forests Commission. The walking track from Noojee to the historic railway bridge is to be maintained.
- 188 Approximately 9 ha being allotment 33B of Section A, Parish of Neerim East—to be managed by the Department of Crown Lands and Survey.
- 189 Approximately 22 ha adjacent to allotments 1, 2, 3, 3B and 6 of Section C, Parish of Moondarra—to be managed by the National Parks Service

Map 9

- 190 Approximately 1.6 ha being the state school reserve east of allotment 19F, Parish of Angahook—to be managed by the Forests Commission.

Map 10

- 191 Approximately 2 ha being allotment 17c, Parish of Flinders—to be managed by the Department of Crown Lands and Survey.
- 192 Approximately 2.4 ha south-west of allotment 66A, Parish of Balnarring—to be managed by the Department of Crown Lands and Survey.
- 193 Approximately 3.6 ha adjacent to allotments 19 and 20c, Parish of Kangerong—to be managed by the Department of Crown Lands and Survey.
- 194 Approximately 4 ha adjacent to allotment 54 B2, Parish of Balnarring—to be managed by the Department of Crown Lands and Survey.
- 195 Approximately 6.5 ha north of allotment 39, Parish of Balnarring—to be managed by the Department of Crown Lands and Survey.
- 196 Approximately 4 ha comprising the southern portion of the recreation reserve adjacent to allotments 33A and 34A, Parish of Bittern—to be managed by the Department of Crown Lands and Survey.
- 197 Approximately 3.2 ha known as Kirton Reserve on the Mornington-Tyabb road north of allotment 10 of Section 23, Parish of Moorooduc—to be managed by the Department of Crown Lands and Survey.
- 198 Approximately 2 ha adjacent to allotment 32, Parish of Langwarrin—to be managed by the Department of Crown Lands and Survey.
- 199 Approximately 5.6 ha adjacent to allotments 37, 39, 40, 41 and 42, Parish of Phillip Island—to be managed by the Department of Crown Lands and Survey.

Map 11

- 1100 Approximately 3.2 ha on the Bass Highway south of the cemetery reserve and allotment 212A, Parish of Corinella—to be managed with the unused sections of the adjoining cemetery reserve and unused road reserve to the north by the Department of Crown Lands and Survey.
- 1101 Approximately 28 ha in the Township of Grantville plus the adjacent unused roads south of allotments 176A and 176, Parish of Corinella, plus the adjacent water frontages on both sides of Colbert Creek—to be managed by the Department of Crown Lands and Survey.
- 1102 Approximately 11 ha adjoining allotments 78A, 78C, and 45, Parish of Lang Lang—to be managed by the Department of Crown Lands and Survey. Regeneration of native vegetation should be encouraged on the parts now cleared.
- 1103 Approximately 2 ha adjacent to allotment 44A, Parish of Lang Lang—to be managed by the Department of Crown Lands and Survey. The remaining pine trees should be removed and native vegetation encouraged to regenerate.
- 1104 Approximately 10 ha adjacent to allotment 60, Parish of Yannathan—to be managed by the Department of Crown Lands and Survey.
- 1105 Approximately 14 ha on King Parrot Creek adjacent to allotments 123 and 72, Parish of Drouin West—to be managed by the Department of Crown Lands and Survey.
- 1106 Approximately 8 ha adjacent to the railway reserve south of allotments 146, 64, 64A, 65 and 66, Parish of Drouin West—to be managed by the Department of Crown Lands and Survey.
- 1107 Approximately 1.2 ha on King Parrot Creek adjacent to allotments 143 and 130, Parish of Drouin West—to be managed by the Department of Crown Lands and Survey.
- 1108 Approximately 7.7 ha being the temporary public park and recreation reserve, Parish of Korumburra, and the adjacent water frontage on both sides of Coal Creek—to be managed by the Department of Crown Lands and Survey. The tipping of rubbish should be phased out and the area rehabilitated.
- 1109 Approximately 6.9 ha being the southern $\frac{3}{4}$ of the gravel reserve west of allotment 25B, Parish of Kongwak—to be managed by the Department of Crown Lands and Survey. Regeneration of native vegetation should be encouraged on the parts now cleared.

Map 12

- 1110 Approximately 7.3 ha adjacent to allotments 117E, 117C, Parish of Warragul—to be managed by the Department of Crown Lands and Survey.
- 1111 Approximately 31 ha south of allotment 7D of Section C, Parish of Tanjil East—to be managed by the Department of Crown Lands and Survey.

*Map 12—continued**Yarra Valley Multi-Purpose Park Map*

- I112** Approximately 20 ha, being the Public Park Reserve south of A11, Section 4, Parish of Gembrook (except for the school pine plantation in the north west corner and the recreation area in the north east corner)—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I113** Approximately 75 ha being the Public Purposes Reserve north of allotment 103, Parish of Gembrook—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I114** Approximately 1 ha adjoining the western side of allotment 6, Parish of Nangana—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I115** Approximately 400 ha east of allotments 7, 7A, 8 and 9, Parish of Nangana and including allotment 71, Parish of Beenak—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I116** Approximately 150 ha, being allotments 70 and 72A, Parish of Beenak—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I117** Two areas totalling approximately 4·5 ha south and west of allotment 65N and at the south of allotment 65P, Parish of Woori Yallock—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park (See Specific Recommendation A26 4·8.)
- I118** Approximately 1·8 ha being allotments 1A, 2, 3 and 4 of Section IV, Township of Britannia Creek, Parish of Warburton—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I119** Approximately 5 ha in the north of the township of Britannia Creek, Parish of Warburton—to be managed by the Forests Commission, as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)
- I120** Approximately 500 ha east of allotments A7, A8, 50 and A9, and west of allotments 61C, 61D, 59A, 60, 50A, 50c and 49A, all in Section C, Parish of Gracedale, including the land along the aqueduct except for the aqueduct easement—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26 4·8.)

J. COASTS

The coastal zone within the study area extends over a distance of 500 km representing one-third of the State's coast. This resource will come under vastly increased recreation pressures.

In formulating these recommendations for public land along the coast, the Council is aware that coasts represent a dynamic zone of interaction between land and sea encompassing fragile environments. It notes that the present system of management of coastal areas leaves much to be desired. In its present state, management is fragmented and often disorganized and in some cases is contributing to deterioration of coastal land. There are currently many small agencies concerned with coastal management—for example, more than 30 exist around Port Phillip Bay. The Council considers that it would be beneficial if the number of such agencies was reduced.

As well as planning the wise use of coastal public land, the Council recognizes the necessity to preserve in their present condition sections of the coastline that are representative examples of the various coastal systems occurring within the study area. In making the following recommendations, the Council recognizes that the land within a city, town, or borough is outside its jurisdiction. However, irrespective of this, it is suggested that these recommendations are appropriate for all public land that abuts the sea and is used for recreation.

COASTAL RESERVES

A coastal reserve is an area of public land in the coast set aside primarily for public recreation, education, and inspiration in coastal environments.

Areas specifically reserved for some other purpose (national park, State park, wildlife area, or harbour) would not be included in the coastal reserve.

Policy Recommendations

- J(i) That except where otherwise stated public land on the coast be coastal reserve set aside primarily for nature conservation and recreation and reserved under section 14 of the *Land Act* 1958.
- J(ii) That the seaward boundary of coastal reserves be low-water mark and that the managing authority have jurisdiction over the seabed and inshore waters to 600 metres offshore.
- J(iii) That there be careful, detailed planning in order to minimize disturbance of natural environments and that coastal public land be zoned in order to:
 - (a) provide opportunities for open-space recreation for large numbers of people, and also low-intensity recreation related to the enjoyment and understanding of nature
 - (b) protect and conserve natural ecosystems, and geomorphological, archaeological, and historic features, for public enjoyment and inspiration and for education and scientific study
 - (c) ensure the conservation of both aquatic and terrestrial fauna and flora
 - (d) protect and conserve the natural characteristics of the coastal landscape
 - (e) provide facilities for shipping, fishing, and boating, together with the necessary navigation aids.

- J(iv)** That the management authority for the coastal reserve be the Department of Crown Lands and Survey, or the Port Phillip Authority in the case of Port Phillip Bay.
- J(v)** That coastal reserves be managed according to the policies developed by the management authority in consultation with the Soil Conservation Authority and the municipalities. Where possible, the policies should be implemented by the municipalities.
- J(vi)** That all works to be implemented by the Committees of Management on the coastal reserve be approved (prior to implementation) by the Department of Crown Lands and Survey, or the Port Phillip Authority in the case of Port Phillip Bay.
- J(vii)** That other government agencies concerned with coastal development (such as the Ministry for Tourism and the Department of Youth, Sport and Recreation) or with coastal maintenance (such as the Ports and Harbours Branch of the Public Works Department) should consult with the management authority before authorizing any expenditure for the implementation of coastal works.
- J(viii)** That, in order to rectify or prevent soil erosion on coastal public land, the Soil Conservation Authority may, after consultation with the managing authority, recommend that the Governor-in-Council proclaim certain sections of the coast with a view to carrying out such reclamation and stabilization measures as are necessary and determining appropriate land uses and management practices.
- J(ix)** The Council recommends that the management policies for the coastal reserve should recognize the following principles:
- (a) That, generally, new roads should not be sited along the coast but rather should be located far enough back in the hinterland to avoid damaging sensitive environments or impairing the scenic qualities of coastal landscape.
 - (b) That any major coastal development projects be subject to a detailed environmental study prior to commencement by the body proposing such development. Examples of such projects would include proposals for jetties, marinas, mining, sea walls, etc.
 - (c) That occupation of coastal public land by private individuals or organizations should, subject to the decisions of the management authority, be phased out. This would necessitate the eventual removal of private bathing boxes, boat sheds, moorings, etc. It would also mean that the foreshore should not be used for football grounds, tennis courts, scout halls, amusement parks, etc., but that certain coast-oriented uses such as yacht clubs and surf clubs should be permitted subject to the conditions laid down by the management authority.
 - (d) That future camp and car park sites and access roads should not be located on sensitive foreshore areas and that consideration be given to relocating some such existing sites. Where there is no suitable public land available, consideration should be given to acquisition of freehold land.

- (e) That on land that is privately owned to high water mark:
- (i) where there is no form of public access, such access should be provided across this land and along the foreshore by negotiation with the owner, or by acquisition
 - (ii) where private rights-of-way exist, where necessary these should be converted to public rights-of-way
 - (iii) where public rights-of-way are obstructed by privately constructed walls, buildings, fences, etc., such obstructions should be removed.

Specific Recommendations

- J1-J3** That the land shown on the maps be used primarily for recreation and nature conservation
and that the management authorities take particular care to protect the localities listed in Appendix 2 for their geological, floral, faunal, archaeological, historical or landscape significance
and that it be permanently reserved under section 14 of the *Land Act* 1958.
- J1** Lorne to Queenscliff
(a) That this land be managed by the Department of Crown Lands and Survey
- J2** Port Phillip Bay
(a) That this land be managed by the Port Phillip Authority
- J3** Flinders to Cape Patterson and Islands in Westernport
(a) That this land be managed by the Department of Crown Lands and Survey.

SCENIC COASTS

A scenic coast is a coastline of outstanding natural beauty that remains in a relatively unspoilt state, and is used for public recreation, education, and inspiration in such a manner that its scenic qualities are unimpaired. The designation of scenic coast applies irrespective of land tenure.

Policy Recommendations

- J(x)** That parts of the coastline of outstanding landscape quality be designated scenic coasts, and that legislation aimed at protection of such coasts be introduced.
- J(xi)** That such areas should be used primarily for public enjoyment, education, and inspiration in natural, rural, or historic coastal surroundings in a manner which will leave the landscape unimpaired.
- J(xii)** That in situations where freehold land is involved it be zoned by the appropriate authority in such a manner that it is managed in a way compatible with the aims of management of public land on scenic coasts.

Specific Recommendations

- J4** That the coast from Lorne to Torquay be designated a scenic coast, and that planning and management of the area give special emphasis to the protection of the outstanding landscape qualities of this coastline.
- J5** That the coast from Point Nepean to West Head, Flinders, be designated a scenic coast, and used as set out for **J4** above.
- J6** That the coast from Griffith Point, San Remo, to Black Head, Kilcunda, be designated a scenic coast, and used as in **J4** above.

K. WATER FRONTAGES AND STREAMSIDE RESERVES

WATER FRONTAGES

Frontages of public land exist along many streams in the study area. They may either have a surveyed boundary, which usually gives the frontage an irregular shape, or be a uniform strip of specified width (varying in particular instances from 20m to 60m) along each bank. The frontage may be absent or discontinuous where alienation of land adjoining the stream took place before 1881. The banks and bed of the stream (which are normally covered by water) do not form part of the frontage and are under the control of the State Rivers and Water Supply Commission.

Water frontages are valuable for nature conservation, as they provide corridors for movement of nomadic and migratory species, and frequently support native plants and animals that are no longer found in surrounding areas. They are also valuable for recreation, as they provide access to extensive lengths of streams and lake shores.

Large numbers of water frontage licences are issued to the occupiers of adjacent private land. An occupier may be required to obtain a water frontage licence if the boundary between this property and the water frontage is not fenced. Most importantly the licence permits access to water, but it also allows the licensee to graze stock on the frontage.

Grazing may conflict with conservation of the vegetation, particularly the regeneration of certain native tree species, although in certain situations it is useful in controlling noxious weeds. The locations of water frontages are shown on the Parish plans available to the public from the Central Plan Office in the Department of Crown Lands and Survey. However, recreational activities other than through travel are currently not permitted on licensed water frontages.

The following recommendations do not apply to proclaimed roads located on water frontages. However, where the width of a proclaimed road located on the water frontage has not been defined, only the minimum amount of land should be excluded from the frontage.

Policy Recommendations

- K(i)** That water frontages be used to :
- (a) conserve native flora and fauna
 - (b) maintain the local character and quality of the landscape
 - (c) where appropriate provide opportunities for open-space recreation except where other uses are specifically recommended
- K(ii)**
- (a) That the management of all water frontages should remain under the control of the Department of Crown Lands and Survey.
 - (b) That all water frontages (except as in (c) below) should remain or become permanently reserved under section 14 of the *Land Act* 1958 and that they be protected public land or protected forest as appropriate under the provisions of the *Forests Act* 1958.
 - (c) That where an existing water frontage adjoins or lies within an area of public land set aside as park, water reserve, wildlife reserve, reserved forest, or streamside reserve, the water frontage be incorporated as part of the reserve it adjoins, or through which it passes.

- K(iii)**
- (a) That legislation be amended to permit public use of all water frontages, licenced or unlicenced.
 - (b) That public use for recreation should be restricted to non-damaging activities such as walking, picnicking, and fishing, and that potentially damaging activities such as camping and use of motor vehicles and motorised recreation vehicles not be permitted.
 - (c) That the Department of Crown Lands and Survey be consulted prior to the construction of roads or the erection of buildings on water frontages.
- K(iv)**
- (a) That the Department of Crown Lands and Survey continue to issue water frontage licences where appropriate.
 - (b) That licence-holders be required to provide gates or stiles in any fences crossing water frontages.
 - (c) That water frontages held under licence not be cultivated (except with the approval of the Department of Crown Lands and Survey) and that, in proclaimed water supply catchments, the Soil Conservation Authority be consulted to ensure that approval to cultivate is in accordance with land use determinations affecting the water frontage made under the *Soil Conservation and Land Utilisation Act 1958*.
 - (d) That removal of living vegetation only be permitted for the control of noxious weeds, silvicultural treatment, by stock grazing under licence, and for the protection of the stream.
 - (e) That where necessary to permit regeneration of indigenous flora, or to protect the water supply, licence-holders be required to fence off and exclude stock from some parts of the licensed areas. Alternatively, the licence should be cancelled and the land-holder required to fence the property boundary.
 - (f) That where the water frontage licence is cancelled for the reasons outlined in (iv) (e) above, the former licence-holder continue to have the right to draw water.
- K(v)**
- (a) That where there is no other access to freehold allotments, vehicular access via water frontages be permitted subject to conditions imposed by managing authority.
 - (b) That attempts be made to acquire private land, particularly along major streams that have discontinuous or no public land frontage.
- K(vi)**
- (a) That no works involving changes to the bed and banks of streams be undertaken unless the authority responsible for the works carefully assesses and accepts responsibility for the consequences of the works on the indigenous vegetation, faunal habitats, and recreation values of the the stream or lake.
 - (b) That where such works will affect the water frontage the Department of Crown Lands and Survey be consulted.

Specific Recommendations

K1–K40 That the areas shown on the maps and described below be used to:

- (a) conserve native flora and fauna
- (b) maintain the local character and quality of the landscape
- (c) where appropriate, provide opportunities for open space recreation

and that they be permanently reserved for public purposes under section 14 of the *Land Act* 1958 and be managed by the Department of Crown Lands and Survey.

These areas adjoin streams or lakes, or existing permanent reserves, but are not currently reserved.

Map 1

- K1** Approximately 3.2 ha on Jim Crow Creek being allotment 31 of Section 6 Parish of Franklin.
- K2** Approximately 0.5 ha adjoining Kangaroo Creek between allotments 54 and 53B, Parish of Burke.
- K3** Approximately 2 ha adjoining Kangaroo Creek between allotments 52 and 53A Parish of Burke.
- K4** Approximately 1.6 ha adjoining Kangaroo Creek between allotments 59 and 66, Parish of Burke.

Map 2

- K5** Approximately 40 ha adjoining Deep Creek adjacent to allotments 129, 130A, 130B, 131, 132, 132A, 145, 145C, 144B and 145L, Parish of Broadford.
- K6** Approximately 51 ha on Dabyminga Creek adjacent to allotments 129, 130A, 130B, 131, 132, 132A, 145F, 145C, 144B and 145L, Parish of Broadford.

Map 3

- K7** Approximately 16 ha on the Goulburn River adjacent to allotments 14D, 15B, 16B, and 17B, Parish of Ghin Chin.
- K8** Approximately 1 ha adjoining King Parrot Creek south of allotment 132 adjacent to allotments 131 and 131A, Parish of Windham.
- K9** Approximately 30 ha on Hughes Creek adjacent to allotments 14, 15, 16B and 16A, Parish of Tarcombe.
- K10** Approximately 4 ha adjoining the Goulburn River, west of allotment A10, Parish of Switzerland.
- K11** Approximately 20 ha on the Goulburn River adjacent to allotments 23 and 22, Parish of Killingworth.
- K12** Approximately 3.2 ha comprising two parcels of land adjoining the Yea River, adjacent to allotments 66A and 67C, Parish of Killingworth.
- K13** Approximately 1.2 ha on the Yea River adjacent to allotment 47, Parish of Yea.
- K14** Approximately 32 ha on the Yea River adjacent to allotments 43, 44, 42C, 45, 47 and 46A, Parish of Murrindindi.
- K15** Approximately 89 ha on the Goulburn River adjacent to allotments 14, 21, 22 and 24 of 5, Parish of Molesworth.
- K16** Approximately 2.8 ha adjoining Horne Creek adjacent to allotments 23, 30A, 39, 29 and 28 of Section B, Township of Yarck, Parish of Yarck.
- K17** Approximately 0.5 ha adjoining Godfrey Creek between allotments 10 and 10H, Parish of Gobur adjacent to the road to the west of Gobur Township.

Map 5

- K18** Approximately 10 ha on Yarrowee River adjacent to allotments 28A, 28K, 28D, 28C, and 4 of Section A, Parish of Bamganie.
- K19** Approximately 10 ha on Yarrowee River and Cargerie Creek adjacent to allotments 25 and 26 of Section A, Parish of Bamganie.
- K20** Approximately 8 ha adjoining Woodborne Creek adjacent to allotments A36 and 18 of A, Parish of Bamganie and allotments 154A, 155 and 156B, Parish of Meredith.
- K21** Approximately 16 ha on the Moorabool River adjacent to allotments 30, 30A, 15D, 15C, 50D, 50C, 22 and 37F, Parish of Durdidwarrah.
- K22** Approximately 4 ha adjoining Reillys Creek between allotments 44 and 44A, Parish of Beremboke.
- K23** Three areas totalling approximately 8 ha adjoining the Moorabool River adjacent to allotments 2, 4 and 68K, Parish of Bungeeltap.
- K24** Approximately 8 ha on Parwan Creek to the north of allotments 3 and 4 of Section B, Parish of Parwan.

Map 6

- K25** Approximately 0.8 ha adjoining Toolern Creek adjacent to allotments 1 and 2A, Parish of Kororoit.
- K26** Approximately 0.8 ha adjoining Toolern Creek being the quarry reserve adjacent to allotment 3A, Parish of Kororoit.
- K27** Approximately 0.8 ha adjacent to the stream frontage reserve on Diamond Creek adjoining allotments 23A and 23 of Section C, Parish of Greensborough.

Map 7

- K28** Approximately 1 ha on Diamond Creek adjacent to allotments 2, 35 of Section 10 and 2 of Section 6, Township of Queenstown.
- K29** Approximately 7 ha comprising the Public Purposes Reserve north of allotments 20 and 56 of Section D, and the Public Purposes and Road Reserve east of allotment 13B of Section D, Parish of Gembrook.

Map 8

- K30** Approximately 2 ha adjoining the Tanjil River north west of allotment 9A, Section E, Parish of Tanjil.
- K31** Approximately 405 ha on the Tanjil River adjoining allotments 9, 9c, 8b, 8a, 7, 6, 5A and 5B of Section E; 41, 43, 44, 45, 46, 47, 48, 68c, 72A, and 50, Parish of Tanjil.

Map 11

- K32** Approximately 6 ha adjoining the Bass River and railway line south of allotment 17, Parish of Jeetho.
- K33** Approximately 1.6 ha adjoining the Bass River north west of allotment 19, Parish of Jeetho.
- K34** Approximately 3.2 ha adjoining the Lang Lang River adjacent to allotment 33A, Parish of Poowong.
- K35** Approximately 6.5 ha on Coalition Creek east of the Township of Kardella and south of allotments 34B, 34L, 34M, 34D and 34H, Parish of Korumburra.

Map 12

- K36** Approximately 6.5 ha on the Tarwin River west branch, being the temporary public purposes reserve west of allotment 17, Parish of Allambee East, and adjoining water frontage.
- K37** Approximately 12 ha on Narracan Creek adjoining allotments 84, 85D, 86 and 87, Parish of Moe.

Yarra Valley Multi-Purpose Park Map.

- K38** Three areas totalling approximately 8 ha south of allotment 62J, west of allotment 62D, and north-west of allotment 61A, Parish of Woori Yallock—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26.)
- K39** Approximately 1.6 ha on the Yarra River between allotments 42A and 43, Parish of Woori Yallock—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park.
- K40** Approximately .02 ha on the Yarra River being allotment 28C, Parish of Warburton—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Specific Recommendation A26.)

STREAMSIDE RESERVES

Streamside reserves are areas of public land immediately adjacent to streams, which are to be used for recreation and nature conservation.

Specific Recommendations

K41–K89 That the areas shown on the maps and described below be used to:

- (a) provide passive recreation, such as picnicking, walking, and camping where this is permitted by the managing authority
- (b) conserve fauna and flora
- (c) maintain the local quality and character of the landscape
- (d) provide grazing, at the discretion of the management authority

provided that these uses do not conflict with the use of the area for water supply, and that they be reserved under section 14 of the *Land Act 1958*,

and that they be managed by the Department of Crown Lands and Survey.

It is intended that streamside reserves incorporate any existing reserves for public purposes along streams.

Every effort should be made to retain any native trees on these reserves, and to encourage regeneration or restoration where the vegetation has been depleted or destroyed.

Responsibilities for the management of individual reserves may be delegated by the Department of Crown Lands and Survey to committees of management, provided the objects set out above are met.

Map 1

- K41** Approximately 6.5 ha south of allotments 38, 43A and 45, Parish of Wombat—to be managed by the Department of Crown Lands and Survey.
- K42** Approximately 5 ha adjacent to allotments J, O and N, Township of Franklinford, Parish of Franklin—to be managed by the Department of Crown Lands and Survey.
- K43** Approximately 1.2 ha being allotment M, Township of Franklinford, Parish of Franklin—to be managed by the Department of Crown Lands and Survey.
- K44** Approximately 1.2 ha adjacent to allotments 11 and 30, Section 14, Parish of Franklin—to be managed by the Department of Crown Lands and Survey.
- K45** Approximately 1 ha being the departmental water reserve adjoining the Midland Highway west of allotment 19 of Section 7, Parish of Yandoit—to be managed by the Department of Crown Lands and Survey.
- K46** Approximately 9.1 ha on the Campaspe River being the water reserve north-west of allotment J of Section 56, Parish of Lauriston—to be managed by the Department of Crown lands and Survey.
- K47** Approximately 4.9 ha on the Campaspe River west of Section 15, Township of Carlsruhe—to be managed by the Department of Crown Lands and Survey.
- K48** Approximately 1.3 ha on Milkingyard Creek adjacent to allotment 80F, Parish of Tylden—to be managed by the Department of Crown Lands and Survey.
- K49** Approximately 5.2 ha on the Stockyard Creek adjacent to allotments 63A, 63B and 63C, Parish of Trentham—to be managed by the Department of Crown Lands and Survey.
- K50** Approximately 0.7 ha east of allotment 103H, Parish of Trentham—to be managed by the Forests Commission.

Map 2

- K51** Approximately 2 ha on Bolinda Creek adjacent to allotments 10 and 11 of Section A, Parish of Monegeeta—to be managed by the Department of Crown Lands and Survey.
- K52** Approximately 6 ha on Deep Creek being the temporary water reserve east of allotment 50, Parish of Lancefield—to be managed by the Department of Crown Lands and Survey.
- K53** Approximately 3.8 ha on Deep Creek east of allotments 25 and 38, Parish of Lancefield—to be managed by the Department of Crown Lands and Survey.
- K54** Approximately 7 ha on Deep Creek being temporary water reserve east of allotment 5, Parish of Lancefield, on the Kilmore to Lancefield road—to be managed by the Department of Crown Lands and Survey.
- K55** Approximately 7.3 ha on No. 3 Creek east of allotment 93B, Parish of Goldie—to be managed by the Department of Crown Lands and Survey.
- K56** Approximately 2 ha on Hamilton's Creek adjacent to allotments 126 and 127, Parish of Moranding—to be managed by the Department of Crown Lands and Survey.
- K57** Approximately 2.8 ha adjoining Hamilton Creek adjacent to allotments 139 A1 and 134B, Parish of Moranding—to be managed by the Department of Crown Lands and Survey.
- K58** Approximately 3.7 ha on Hamilton's Creek adjacent to allotment 155, Parish of Moranding—to be managed by the Department of Crown Lands and Survey.
- K59** Approximately 4.5 ha on Hamilton's Creek, and adjacent to allotment 170, Parish of Moranding—to be managed by the Department of Crown Lands and Survey.
- K60** Approximately 6.5 ha on Mollison Creek adjacent to allotments 9A, 8 and 4F, of Section F, Parish of Glenaroua—to be managed by the Department of Crown and Lands Survey.
- K61** Approximately 2.4 ha on Gardiners Creek adjacent to allotments 4 of Section 1, and 6 and 7 of Section 2, Parish of Panyule—to be managed by the Department of Crown Lands and Survey.

Map 3

- K62** Approximately 1.6 ha on Hughes Creek adjacent to allotments 21B and 24, Parish of Tarcombe—to be managed by the Department of Crown Lands and Survey.
- K63** Approximately 17.5 ha being the temporary public recreation reserve and the adjoining water frontage south of allotments 67A, 67B, 68A and 69A, Parish of Killingworth—to be managed by the Department of Crown Lands and Survey.
- K64** Approximately 1.6 ha on Spring Creek adjacent to allotments 215A and 215B, Parish of Yea—to be managed by the Department of Crown Lands and Survey.

Map 5

- K65** Approximately 69 ha adjoining the Yarrowee River west of allotments 30C, 30G, 29C, 24 B1, 23A, 6A, 6B, 5A, 5B2, 2A and 2B, Parish of Cargerie—to be managed by the Department of Crown Lands and Survey.
- K66** Approximately 2.4 ha on Woodbourne Creek adjacent to allotment 179B, Parish of Meredith—to be managed by the Department of Crown Lands and Survey.
- K67** Approximately 1.2 ha adjoining Paddock Creek adjacent to allotments 1 and 1A, Section 5, Parish of Moorabool West—to be managed by the Department of Crown Lands and Survey.
- K68** Approximately 0.8 ha adjoining Korkuperrimul Creek, adjacent to allotment 28, Parish of Korkuperrimul—to be managed by the Department of Crown Lands and Survey.
- K69** Approximately 10 ha on Parwan Creek being the temporary water reserve and the adjoining Public Park and Recreation Reserve and Water frontage south and west of allotments 5 and 6 of Section 13, Parish of Corrockburkghap—to be managed by the Department of Crown Lands and Survey.
- K70** Approximately 3 ha on the Little River, being the temporary camping and watering reserve, Parish of Balling, west of the Geelong Bacchus Marsh road, and north of the Township of Ripley—to be managed by the Department of Crown Lands and Survey.

Map 6

- K71** Approximately 8.5 ha on the Werribee River west of allotment B1, Parish of Pywheitjorrk—to be managed by the Department of Crown Lands and Survey.
- K72** Approximately 5 ha on Kororoit Creek adjacent to allotment D of Section 2 and A of Section 3, Parish of Maribyrrong—to be managed by the Department of Crown Lands and Survey.
- K73** Approximately 15 ha on Kororoit Creek east of allotments 10, 10A and 9, Parish of Yangardook—to be managed by the Department of Crown Lands and Survey.
- K74** Approximately 1.5 ha on Riddells Creek south of the Township of Riddell and adjacent to allotments 97A, 97B, 97C, 97C, 97E and 97F, Parish of Kerrie—to be managed by the Department of Crown Lands and Survey.
- K75** Approximately 11 ha on Jackson's Creek, (including the State School Reserve) east of allotment A of Section 5, Parish of Holden—to be managed by the Department of Crown Lands and Survey.

Map 7

- K76** Approximately 1.2 ha north of allotment 18, Township of Toolangi—to be managed by the Department of Crown Lands and Survey.
- K77** Approximately 16 ha being the temporary recreation reserve ; plus approximately 3.2 ha being that part of allotment B2 of Section 4, Parish of Yering, north of and adjacent to the above Recreation Reserve ; plus the water frontage on the Yarra River adjacent to both areas—to be managed by the Department of Crown Lands and Survey.
- K78** Approximately 1.2 ha on the Yarra River and adjacent to allotments 111 and 112, Parish of Gruyere—to be managed by the Department of Crown Lands and Survey.
- K79** Approximately 2 ha on the Yarra River and adjacent to allotment 123, Parish of Gruyere—to be managed by the Department of Crown Lands and Survey.
- K80** Approximately 1 ha on the Yarra River south of allotment 12, Parish of Tarrawarra—to be managed by the Department of Crown Lands and Survey.
- K81** Approximately 0.8 ha on the Yarra River south of allotment 10, Parish of Tarrawarra—to be managed by the Department of Crown Lands and Survey.
- K82** Approximately 1.2 ha on the Woori Yallock Creek and adjacent to allotments 14 and 15, Parish of Gruyere—to be managed by the Department of Crown Lands and Survey.
- K83** Approximately 6.5 ha adjoining Cardinia Creek west of allotment 61, Parish of Cranbourne—to be managed by the Department of Crown Lands and Survey.

Map 8

- K84** Approximately 3.7 ha on Russell Creek adjacent to allotments 9, 9B, 9A and 16B, Parish of Neerim—to be managed by the Department of Crown Lands and Survey.

Map 10

- K85** Approximately 8.5 ha being the Water Reserve adjacent to allotment 30A, Parish of Moorooduc—to be managed by the Department of Crown Lands and Survey. The area should not be licensed for grazing.
- K86** Approximately 1.2 ha being the Public Purposes Reserve on Warrengine Creek, north of allotment 83A, Parish of Bittern—to be managed by the Department of Crown Lands and Survey. The area should not be licensed for grazing.

Map 11

- K87** Approximately 1.6 ha on the Powlett River adjacent to allotment 1, Parish of Wonthaggi, north west of the town—to be managed by the Department of Crown Lands and Survey.

Yarra Valley Multi-Purpose Park Map.

- K88** Approximately 1 ha on Lone Star Creek adjacent to allotment 74, and east of allotment 5B, Parish of Woori Yallock—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Recommendation A26.)
- K89** Approximately 4 ha on Lone Star Creek adjacent to allotment 9, 9C and 5A, Parish of Woori Yallock—to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Recommendation A26.)

L. ROADSIDE CONSERVATION

The primary purpose of road reserves is obviously to provide for communication, transport and access. However, vegetation along the road verges can have particularly high conservation, recreation, and landscape values, especially in agricultural districts where most of the native vegetation has been cleared.

Nature conservation

Vegetation on roads is important for nature conservation because it often contains the only remnants of the region's native plant associations. Such remnants are valuable for preserving species with restricted distributions, and genetically interesting variants of widespread species. They are often useful in land studies, as they may permit the original pattern of the vegetation to be pieced together. They also provide habitat for some native animals, and have special significance as pathways permitting birds to move through the countryside on annual migration, or in search of food or nesting sites.

In the study area a number of regions can be identified where roadside remnants of vegetation are of particular importance for nature conservation. These include, for example river red gum on the basaltic plains around Wollert, grey box and bullock in the Sydenham Exford district, grey box and yellow box in the Glenaroua area, bull mallee west of Melton, manna gum and sheoak on the Bellarine Peninsula, white sallee in the Tylden area, and eurabbie and mountain ash in the Strzeleckis.

Recreation and landscape

In rural districts vegetation along roads is often a major component of the landscape, breaking the monotony of cleared paddocks and accentuating the contours of the land. It provides a pleasant, variable road environment for motorists, and shady areas for rest and relaxation, especially where wayside stops have been established.

Pleasure driving has become a major recreational activity, which is of particular importance in the day-trip zone around Melbourne.

Pleasure drives often have no definite destination—driving and viewing the landscape from the car is the essence of the activity. However, loop roads that have scenic value and those that lead to picnic facilities or to places of historic interest are most popular. Clearly the needs of pleasure drivers are best met by retaining or creating visually diverse environments along roads of varying standard. However, the Council wishes to draw attention to two particular aspects: back roads and main recreation roads.

Back roads

With increasing population and use of cars, a tendency has developed for all through roads in the study area to be continually upgraded. Tree-lined back roads, with gravel surfaces on narrow winding alignments, are becoming increasingly uncommon. Yet these roads best fulfill, for many people, their need for contact with rural environments. The Council believes that a conscious effort must be made to ensure that a number of these roads are retained in an unimproved condition. The Glenburn-Break O'Day road, Acheron Way, Donna Buang-Pantons Gap road, and parts of the Old Sale road are examples of this type.

In some cases attractive back roads can be created when long sections of former main roads are by-passed. A good example is the old Whittlesea-Kinglake road through Humevale.

Main recreation roads

A number of roads in the study area receive particularly heavy recreational use. They include the Maroondah, Warburton, and Nepean Highways, Mount Dandenong tourist road, and the Great Ocean Road. Council believes that it is important that the diversity and attractiveness of the landscape viewed from such roads should be maintained or improved. This would require zoning of adjoining private and public land as well as proper management of the road reserve.

The Whittlesea–Kinglake–Toolangi–Healesville–Yarra Junction–Gembrook–Pakenham road could also fit into this category. This road, ringing the northern and eastern suburbs, provides access between a number of sites at which popular recreational facilities exist, or at which development for recreation has been recommended by the Council.

Management

Responsibility for the management of vegetation on roads is vested in several authorities depending on the status of the road. The most important roads (State highways, tourist and forest roads, and freeways) are declared under the *Country Roads Act 1958*, and are completely under the control of the Country Roads Board (9 000 km). Main roads (14 500 km) are also declared, but are controlled jointly by the Country Roads Board and local municipal councils. Vegetation on unclassified roads (about 98 000 km of mostly minor roads) is under the care and management of municipal councils, although it is owned by the Crown. The Forests Commission has the control of vegetation on unclassified roads that pass through or adjoin State forest. (Note: The figures given above are for all Victoria.)

Unused roads constitute another category. When the State was being settled, surveyors provided access to every block by means of a surveyed Crown road. Many of these have never been used as roads, and they are usually held by the occupiers of the adjoining land under an unused-road licence. The Forests Commission controls the vegetation on unused roads that have been formally declared as such.

Policy Recommendations

- L(i) That trees and shrubs on roads be conserved wherever possible, and used for landscape preservation, recreation, and nature conservation. This can best be done by observing the following guidelines. The Council recognizes that many of these are already being implemented by the Country Roads Board.
- (a) That, when improvements to a road are being carried out, trees and shrubs on the road be disturbed to the minimum extent consistent with the safe and efficient design and use of the road.
 - (b) That major works to re-align minor roads carrying trees and shrubs not be undertaken unless clearly warranted by the nature and volume of the traffic carried.
 - (c) That where a road carrying a healthy stand of trees is to be duplicated, the new carriageways be located, where feasible, on purchased private land, and the trees be retained as a median strip.
 - (d) That where re-alignment of a road results in a section of the old road being cut off from the new alignment, wherever possible the section of the old road not be sold but used as a recreation and rest area.

- (e) That where a pipeline or overhead wires are to follow a road carrying trees and shrubs in a rural district, the easements for these utilities be located on private land alongside the road if this is already cleared.
- (f) That plantings of trees and shrubs native to the area be established along roads from which all trees and shrubs have been cleared.
- (g) That if gravel, sand, and earth for roadworks must be taken from the road verges, then this should be done in such a manner as to ensure a minimum disturbance of the native vegetation, and the disturbed area should be rehabilitated where possible with vegetation native to the area.
- (h) That weeds and vermin on roads be controlled by means that do not conflict with the uses given above.

Unused roads

- L(ii) (a) That the clearing of native trees and shrubs other than noxious weeds continue to be clearly prohibited in the conditions of unused-road licences.
- (b) That, where it appears to be reasonable, a condition permitting public access to licensed unused roads be written into unused-road licences.
- (c) That unused roads or easements should not be alienated unless an investigation shows that they are unlikely to have a high value for future traffic, conservation, or recreation.

Back roads

- L(iii) That where a through road—with high landscape and recreational values because of its narrow winding alignment—must be upgraded, this be done along a new alignment, preferably on cleared land, so that the original road is preserved.

Main recreation routes

- L(iv) That the various road management authorities, when planning to upgrade roads that have heavy recreational use, give adequate consideration to recreational requirements, and give priority to these roads when funds are available for the development of roadside recreation facilities.

Specific Recommendation

- L1 That the unused government road to the north of allotment 56A, Section B, Parish of Gracedale, be exchanged (under the *Local Government Act 1958*) for the road that at present traverses freehold allotment 56A.

M. EDUCATION AREAS

Environmental education is a fundamental step in the conservation of natural resources, and has become an important part of school curricula and tertiary courses.

The study of ecosystems, which mainly concerns natural systems or comparison of these with greatly altered ones, is indispensably linked with field studies. The public land offers many opportunities for such field studies.

The demand for land for education purposes is high in the Melbourne study area as it is close to most of the State's 785,000 students (1971 figure).

Ideally, students should be able to visit a number of education areas in different land types, rather than visiting the one site several times. There is need, therefore, to set aside some small areas, representative of different land types, in which education is the primary use and in which other uses are permitted only when not in conflict with education use.

Activities permitted in education areas, which may not be appropriate elsewhere, would include collection of material for study, excavation of soil profiles, biomass studies, and the establishment of growth plots.

The availability of such areas will also permit long-term studies of the changes occurring within ecosystems to be undertaken by successive groups. Laboratories and accommodation will be required in most education areas.

Adventure and youth camps that provide experience in natural surroundings rather than education in the conventional sense are an acceptable secondary use for education areas. However, care should be taken to ensure that use of an area for adventure activities does not diminish its usefulness for education.

Portions of areas reserved for hardwood production, uncommitted areas, and other small blocks of public land could be used to provide additional areas for education purposes and adventure activities.

In selecting land for education areas, the Council has sought to provide :

- * examples of all major land types in the study area
- * areas of maximum diversity, preferably with natural boundaries
- * areas large enough to be viable and to allow recovery of different sections as use is rotated
- * access to other land types and land uses nearby
- * reasonable vehicular access
- * a wide distribution throughout the study area
- * sites selected in order to minimize fire, erosion, and pollution hazards.

Policy Recommendations

- M(i)** That areas of public land be set aside for educational purposes, and used to :
- (a) illustrate related aspects of natural ecosystems including the geology, soils, hydrology, vegetation, fauna, and ecology of an area—and processes of change in them.
 - (b) provide a comparison with other nearby natural and man-modified systems.
 - (c) demonstrate and practise methods of environmental analysis, and the field techniques of the natural sciences.

- (d) conduct simple long-term experiments aimed at giving an understanding of the changes occurring in an area with time.
- (e) provide facilities for day visits or extended stays at the site.
- (f) provide opportunities for adventure and recreation activities during vacation periods or when there is no requirements to use these areas as indicated above.

M(ii) That the land management be the responsibility of the authority managing the land adjacent to or surrounding education areas.

M(iii) That the Ministry for Conservation, in consultation with the Education Department and the land management authority, be responsible for implementing the educational aspects of these recommendations.

M(iv) (a) That no organization have the exclusive right to use an education area ; rather organizations should be able to use any one of a number of areas.

(b) That existing arrangements permitting the exclusive use of an area by an organization be phased out.

(c) That existing youth and adventure camps be used, when appropriate, for education as well as adventure activities.

(d) That, if the demand for youth camps and adventure activities increases, the allocation of additional areas should be the responsibility of the authorities managing public land. However, no school or organization should have the exclusive use of any area.

Consideration should also be given to locating such camps on alienated land adjoining public land.

Specific Recommendations

M1-M17 That the areas listed below and marked on the maps be used to provide opportunities for field teaching aimed at providing an understanding of natural environments, and that they be reserved under section 14 of the *Land Act 1958*.

M1 Eumeralla (140 ha) ; to be managed by the Forests Commission. It is also recommended that :

(a) teaching as well as scouting activities be permitted.

(b) any additional buildings constructed be confined to the existing central facilities area.

(c) in order to maintain disturbance of the natural environment at an absolute minimum, camping activities should be strictly controlled.

This area is floristically rich and is similar to the proposed fauna and flora reserve that adjoins it ; thus it should serve as an ideal locality for studying the composition and dynamics of natural ecosystems represented in that reserve.

M2 Ocean Grove Nature Reserve (110 ha) ; to be managed by the Department of Crown Lands and Survey.

This is a sensitive remnant of the region's native vegetation, and contains some rare plants, which should be conserved.

M3 Meredith (90 ha) ; to be managed by the National Parks Service.

M4 Korjamunip (240 ha) ; to be managed by the Forests Commission.

M5 Tylden South (115 ha) ; to be managed by the Department of Crown Lands and Survey.

M6 Mount Piper (45 ha) ; to be managed by the Forests Commission.

This area should be used by senior students only.

M7 Kinglake West (280 ha) ; to be managed by the Forests Commission.

M8 Kinglake (110 ha) ; to be managed by the National Parks Service.

M9 Andrews Hill (210 ha) ; to be managed by the National Parks Service.

M10 Castella (50 ha) ; to be managed by the Forests Commission.

M11 Windy Point (185 ha) ; to be managed by the National Parks Service.

M12 Tonimbuk (250 ha) ; to be managed by the National Parks Service.

M13 Bunyip (300 ha) ; to be managed by the National Parks Service.

M14 Springsures Hill (120 ha) ; to be managed by the Forests Commission.

M15 Fumina South (170 ha) ; to be managed by the Forests Commission.

M16 Tanjil (700 ha) ; to be managed by the Forests Commission.

M17 Boggy Creek (160 ha) ; to be managed by the National Parks Service.

In addition to these education areas, three areas lie within the education zone of the Yarra Valley Multi-purpose Park (see page 27) as follows ;

Hoddles Creek (285 ha).

Glenewart (130 ha).

Haining (65 ha).

The latter two areas are at present owned by the Victoria Conservation Trust and managed by the National Parks Service.

N. HISTORIC AREAS

These are areas of land which contain Aboriginal relics or have historical or archaeological significance.

Specific Recommendations

N1 Walhalla

That the area (2 500 ha) indicated on the maps be used to preserve the various sites (and the surrounding environment) that are associated with Victoria's early mining history, and that the public land be reserved under section 50 of the *Forests Act* 1958, and managed by the Forests Commission.

In addition, it is recommended that :

- (a) mineral exploration and mining, in accordance with the policy recommendations set out in Mineral and Stone production, be permitted.
- (b) co-ordinated planning of both public and private land be undertaken to ensure the preservation of this part of Victoria's history, and to create an atmosphere that will allow visitors to appreciate the historical significance of the town.
- (c) timber-harvesting in sympathy with the re-creation of the original atmosphere be permitted.

The main features associated with this area are the townships of Walhalla and Coopers Creek, numerous old mine sites, miners' tracks, and remnants of tramways systems.

N2 Bungal

That the area (20 ha) indicated on the maps be used to preserve the sites (and the surrounding environment) associated with Victoria's early history, and that timber harvesting in sympathy with the re-creation of the original atmosphere be permitted, and that it be reserved under section 50 of the *Forests Act* 1958 and managed by the Forests Commission.

This area is located on the Moorabool River, near the Bungal Reservoir, adjacent to the historic Lal Lal iron ore mine and early blast furnaces and several other features of historic interest.

In making this recommendation, the Council realizes that the study area boundary is arbitrary and thus, in order to obtain a balanced picture of capabilities and resources, has necessarily considered adjoining land in the Ballarat study area.

O. RECREATION AND RECREATION RESERVES

The demand for outdoor recreation in the study area is high and is growing rapidly. The types of activities, the land types used, and the intensity of use were discussed in the descriptive report.

In planning land use, the Council has recognized the importance of recreation. It is a primary or secondary use in most of the land in the study area. For example, it is a primary use in parks, coasts, and streamside reserves and is an important use in timber-production areas, wildlife reserves, and uncommitted land. In addition, recreation reserves have been set aside to cater for certain intensive recreation activities.

Outdoor recreation includes a wide range of activities, which vary in the impact they have on the land itself, and on other uses and users of the land. For example, canoeing has very little impact, whereas use of motorized recreation vehicles creates a noise nuisance and may involve soil disturbance. Different types of land vary in their capacities to support particular uses: for example, sub-alpine and coastal areas often have low physical and biological capacities for withstanding recreational use, whereas wet foothill and mountain forests often have high capacities.

The types of recreation activities permitted in any area must be consistent with the other uses of the area. Some activities are not permitted in areas where nature conservation is a major use, or where the land is unstable and liable to deterioration. However, most activities are permitted in stable areas used for timber production.

Some activities, such as bushwalking and pleasure-driving, are compatible with most other uses of an area. Other activities, which can create serious conflicts and which were often referred to in submissions, are discussed further below.

Motorized recreation vehicles

The *Land Conservation (Vehicle Control) Act 1970*, and regulations made under the Act provide that, unless specifically authorized, no person shall use a motorized vehicle within public land except on a road or a parking area. All roads and 4-wheel-drive tracks are roads within the meaning of the Act and all vehicles using these roads must be registered for road use. Within reserved forest, the Forests Commission can restrict the movements of 4-wheel-drive vehicles by closing roads, as has been done at Lake Mountain and at Lake Tarli Karng. Some controls over the use of vehicles in other public land are provided by various regulations and by laws applicable to parks, special-purpose reserves, and other specific areas.

Motorized recreation vehicles leaving authorized tracks contravene the *Land Conservation (Vehicle Control) Act 1970* and can and do cause extreme damage to vegetation and soils. However, the Act makes provision for the declaration of "free-access areas", where the use of vehicles off roads is not an offence. The need exists for the proclamation of some "free-access areas" in order to accommodate and relocate the activities of motorized recreation vehicles where the damage to soils and vegetation can be minimized. However, the Council is strongly of the opinion that clubs associated with this activity should endeavour to obtain legal access to free-hold land where, similarly to the above, the risk of causing soil erosion and damaging vegetation can be minimized.

Orienteering

This sport has gained popularity in recent years. Its basic requirements are an assembly point for competitors and their families and a tract of forested land in which a course is laid out and mapped. It also requires a number of courses, to provide variation and prevent competitors from getting to know the country.

Horse-riding

This recreational activity is also increasing in popularity, particularly in forested areas close to large population centres (such as Mount Macedon) where native forests as well as firebreaks around pine plantations are used for the purpose. Horse-riding is generally confined to unformed tracks or bridle paths.

Skiing

Although the sub-alpine environment is sensitive to disturbance in spring, summer, and autumn, this is not the case during the winter, when it is covered by snow. However, during the thaw, soil erosion and damage to vegetation can occur.

Policy Recommendations

Motorized recreational vehicles

- O(i) That the Forests Commission endeavour to provide some free-access areas within hardwood and softwood production areas—for example, in the form of trails.
- O(ii) That the authorities managing public land restrict vehicular access, except for management and fire-protection purposes, in areas where the land is highly susceptible to erosion.

In some cases it will be necessary to create quiet zones, from which vehicles will be excluded, in areas set aside primarily for nature conservation and recreation, especially parks and coastal reserves.

Orienteering and horse-riding

- O(iii) That orienteering and horse-riding be permitted in regional and multi-purpose parks as well as timber-production areas.

Skiing

- O(iv) That no new sites be developed for downhill skiing on the Baw Baws, although existing sites may be extended (see Baw Baw State Park recommendation).
- O(v) That no decisions concerning the use of Mt. Torbreck (which has potential as a day skiing area) for skiing be made until the Council considers the development of areas for skiing in the Alpine study area.

RECREATION RESERVES

The specific recommendations below refer to parcels of public land generally surrounded by alienated land. The best use for these parcels of land is intensive recreation.

Specific Recommendations

- O1–O22 That the following areas be used for organized sports (football etc.), horse-racing, golf, picnicking, camping, and informal recreation, as permitted by the managing authority, and that native trees be conserved where possible, and that they be reserved under section 14 of the *Land Act* 1958, and managed by the Department of Crown Lands and Survey.

Map 2

- O1 Approximately 6 ha to the north of allotment 20A of Section C, Parish of Lancefield.
- O2 Approximately 105 ha being the temporary public park and gardens reserve east of Kilmore, Parish of Bylands; the forest plantation is not to be expanded.
- O3 Approximately 1.8 ha being a temporary quarry reserve within allotment 17, Parish of Wallan Wallan.
- O4 Approximately 0.2 ha near the north east corner of allotment 3 of Section B, Parish of Northwood.

Map 5

O5 Approximately 12 ha being 3 areas in the south of the Township of Lara, Parish of Woornyalook on both sides of the Princes Highway and on both sides of Hovell's Creek.

Map 6

O6 Approximately 0.5 ha being a camping and water reserve to the north of Section 26, Township of Gisborne.

O7 Approximately 0.8 ha to the north of allotment 5, Section 3, Township of Sunbury, Parish of Buttletjork ; to be added to the Recreation Reserve to the east.

O8 Approximately 101 ha south of allotments R and Q of Section 10, Parish of Yuroke, and the adjoining 8 ha recreation reserve.

O9 Approximately 1 ha being the Departmental quarry reserve adjoining allotment 1 of Section 15, Parish of Eltham, and the adjoining water frontage reserve on Diamond Creek.

O10 Approximately 1 ha being the temporary water reserve adjoining Diamond Creek, east of Watkins Road, Township of Diamond Creek, Parish of Nillumbik.

O11 Approximately 0.8 ha being allotment 8A of Section 21, Parish of Nillumbik.

Map 7

O12 Approximately 0.3 ha to the west of Section 13, Township of Lilydale, adjoining Olinda Creek.

Map 9

O13 Approximately 130 ha being the Public Recreation Reserve known as Belmont Common, Parish of Corio.

O14 Approximately 41 ha comprising allotments, M, N and O of Section 21, Parish of Duneed, except the cemetery. The quarry licence over part of the area to be revoked.

O15 Approximately 22 ha south of allotment 67, parish of Puebla (Torquay).

Map 10

O16 Approximately 65 ha comprising most of the temporary Recreation and Public Purposes Reserves to the NW of the township of Portarlington.

O17 Approximately 78 ha Public Recreation Reserve north of allotment 23, Parish of Bittern.

O18 Approximately 3 ha bounded on three sides by a Public Park and Recreation Reserve and on the fourth side by allotment 2 of Section B, Parish of Langwarrin

Map 11

O19 Approximately 73 ha being the Racecourse and Recreation Reserves south of the Township of Cranbourne ; the bushland within the Reserve is to be conserved.

O20 Approximately 4 ha south of Bayles Station ground, Parish of Yallock ; to be managed with the Public Recreation Reserve to the north.

O21 Approximately 4 ha being the temporary rubbish depot and supply of sand reserve west of allotment 78A, Parish of Lang Lang.

O22 Approximately 182 ha being the temporary native flora and fauna reserve and the adjoining land south of the South Gippsland Highway and east of allotment 89B, Parish of Lang Lang, to be managed with the following guidelines :

(a) The 57 ha occupied by a golf course is not to be increased.

(b) The 8.5 ha occupied by the Shire rubbish tip is not to be increased and eventually is to be rehabilitated for recreation.

(c) In the remaining 117 ha, removal of sand and gravel is to cease.

Bannockburn

The 470 ha parcel of public land at Bannockburn includes a 57 ha golf course, 38 ha of school plantations, 12 ha used for rubbish disposal and as a sanitary depot, and 150 ha from which gravel has been extracted and which, for the most part, has been replanted with eucalypt species not indigenous to the area. The remaining 220 ha carries natural vegetation.

Remnants of bush on public land in the Geelong region are very scarce and consequently come under considerable pressure for recreation—a pressure that will increase as the city grows. These same remnants have a very high value for nature conservation, being the only examples of once-widespread habitats. The conflict between nature conservation and recreational use of these areas is very real.

In case of the Bannockburn, much of the public land has been considerably altered from its natural condition, and could be developed for a number of types of recreation, including the existing golf course, without decreasing its conservation value. The fact that the land is bisected by the main Teasdale road enhances its value for recreation.

The relatively undisturbed areas have particularly high conservation value, as they support a woodland of yellow gum and manna gum over a grassy understorey that includes several rare orchids (dwarf spider-orchid, crimson sun-orchid, plain sun-orchid, green leek-orchid) and the rare and localized little sword-sedge. It is important that these areas be protected from heavy recreational use.

Council believes the public land should be managed as a single unit by one authority, and therefore makes the following recommendation.

Specific Recommendation

O23 That the area of 470 ha shown on the map be used for recreation and that it be permanently reserved under section 14 of the *Land Act* 1958, and managed by the National Parks Service

and that:

- (a) the area be zoned to protect the native fauna and flora in those parts that still remain relatively undisturbed.
- (b) timber-harvesting continue in existing plantation areas as an aid to creating an attractive environment for picnicking and other recreational activities, and any further planting be of species indigenous to the area.
- (c) rubbish dumping continue to be permitted in the 4 ha currently being used for this purpose, and when full the area be rehabilitated for recreational uses.

Addendum

The following area should be added to the list on page 80
Map 9

- 015 (a)** Approximately 40 ha in the township of Anglesea east of the Great Ocean Road, south of Ellimatta Road and west of the coastal reserve.

P. SCENIC AND OTHER RESERVES

SCENIC RESERVES

These areas are set aside to preserve particular beauty spots or lookouts.

OTHER RESERVES

The study area includes many small areas of public land that are reserved for water, gravel, camping, State schools, and so on. (There are also some small scattered areas of unoccupied Crown Land.) The Council has recommended that some of these small areas, due to their nature or location, become bushland, flora and fauna, or streamside reserves, and so on. However, there is no specific recommendation for many of the small areas, and for these the Council's recommendation is given under **P6** below.

Specific Recommendations

Scenic reserves

P1-5 That the areas shown on the maps and described below be used to preserve beauty spots or lookouts, and that they be reserved under section 14 of the *Land Act 1958*, and managed by the Department of Crown Lands and Survey.

- P1** Approximately 13 ha adjoining the Loddon River adjacent to allotments A40 and 16H, Parish of Holcombe and the adjoining 18.6 ha public park, Parish of Glenlyon.
- P2** Approximately 4.0 ha reserved for the Pulpit Rock adjacent to allotment 40, Parish of Traawod.
- P3** Approximately 208 ha west of allotment 2A and 2C Section A, Parish of Doolam, known as "The Paps". Gravel extraction may continue in the existing gravel reserves and all pits are to be eventually rehabilitated. Infill with rubbish may be a suitable first stage in rehabilitating some of these excavations. Future gravel extraction from this proposed scenic reserve that necessitates opening new pits is to be reviewed by the management authority at the appropriate time.
- P4** Approximately 7.3 ha on the Plenty River adjacent to allotments 8A, and 7A, Parish of Morang.
- P5** Approximately 2.8 ha adjacent to allotment 15, Parish of Yarragon.

Other reserves

P6 That, for small areas of public land not specifically mentioned in this publication, existing legal uses and tenure continue.

Q. AGRICULTURE

The Council recommends that at this stage no additional large areas of public land be developed for agriculture and that only small areas of suitable land on the perimeter of public land be made available to improve the viability of existing and adjoining farms. (Schedule 1).

Alienated land in the study area has been used for agriculture since the days of early settlement. The Council recognizes the trend for commercial agriculture to be replaced by the expansion of metropolitan Melbourne and the development of surrounding population growth centres. If this loss of agricultural land through population pressure should cause the demand for a particular agricultural product to outgrow the ability of the private lands of the State to produce it, further consideration would be given to investigating the suitability of uncommitted land for its production. (For example, berry-growing in the Dandenongs could move to Toolangi/Kinglake areas).

It is emphasized however, that the uncommitted land mainly lies in forested mountainous areas and its preferable uses should be for water supply, timber production, and recreation.

Agricultural research

Public land in several parts of the study area is used for agricultural research purposes. The Council does not propose any change of use for these areas.

Specific Recommendations

Q1 That the land described in the schedule below (88 ha), and shown on the maps, be used for agriculture. It is intended that this land should form additions to present farms rather than be developed as new units.

With reference to section 5 (1) of the *Land Conservation Act* 1970, the Council recommends that land in the schedule be made available for agriculture in accordance with the provisions of the *Land Act* 1958.

SCHEDULE 1 LAND RECOMMENDED FOR AGRICULTURE

Parish	Location	Area (ha)
Bungal	CA 2A, Section 17	0.4
Gobur	CA 4, Section 14, Tp Gobur	2.
Jindivick	Unused road N of CA 59C, Sec. A	2.4
Lauriston	S of CA 21, Sec. 33, Tp Malmesbury	1.6
Moe	Adjoining CA 122B	1.2
Neerim	E of CA 78A	40
Neerim	Adjoining CA 6	1.3
Neerim	Adjoining CA 88, 90, 92 and 93	4
Wombat	Adjoining CA 2, Sec. A	4
Yallock	Adjoining CA 10A, 10B, and 10C	4.8
Yering	Road W of B, Sec. 11	1.6

- Q2-6** That the areas of land listed below, and shown in detail on the maps, be used for agricultural research purposes ; and that the areas remain or become (as the case may be) permanently reserved under section 14 of the *Land Act* 1958 for this purpose, and be managed by the Department of Agriculture.
- Q2** State Research Farm, Werribee (850 ha)
- Q3** Attwood Veterinary Research Station, Westmeadows (60 ha)
- Q4** Potato Research Station, Toolangi (250 ha)
- Q5** Vegetable Research Station, Frankston (part) (30 ha)
- Q6** Dairy Research Station, Ellinbank (210 ha)

R. MINERAL AND STONE PRODUCTION

The Melbourne study area contains known deposits of "gold" and "minerals" as defined in the *Mines Act* 1958 and as subsequently gazetted (metallic minerals, coal, etc.), and further deposits will probably be found. Exploration permits for "petroleum" as defined in the *Petroleum Act* 1958 are held for parts of the area.

The continued existence of our technological society will depend on the availability of minerals. Our present mineral requirements may be well known, but it is impossible to predict future needs arising from further scientific advances. Presently known but uneconomic deposits of currently important minerals may become economically exploitable; other minerals that are not used at present may become important. It is the responsibility of the government to establish the existence and extent of the State's mineral resources. It is therefore important that the reservation of conservation areas should not automatically exclude exploration for mineral or petroleum resources, either by exploration companies under strict supervision or by the Mines Department itself. Attention should be directed towards ensuring that other values and interests are protected rather than attempting to prevent exploration activities.

Materials covered by the definition of "stone" in the *Extractive Industries Act* 1966 are widespread in the area. These materials include rock of any kind, gravel, clay, sand, and soil.

There is a strong community demand for new and better roads and buildings, and so for the materials needed for their construction. Most of these materials are supplied from private land, but in some cases public land is also an important source.

The Council is concerned at the complexity of legislation and procedures governing extraction of "stone", and the lack of control accompanying some of these procedures, whether in theory or in practice (for example, the Country Roads Board and municipal councils are not bound by many of the provisions of the *Extractive Industries Act* 1966). There is a substantial number of unwise excavations upon public land, and in some instances the rehabilitation of excavated land is lagging. Poorly planned and located excavations can affect surrounding lands through noise, dust, unsightliness, and erosion, and diminish or destroy the value of the land for nature conservation; however, with care these effects can be minimized.

The Council is also concerned at the wide privileges conferred on the holder of a miner's right.

Policy Recommendations

R(i) That all exploration for and extraction of "gold", "minerals", and/or "petroleum" on public land be subject to the approval of, and conditions imposed by, the Department of Mines.

In considering an application, the Department of Mines should apply the guidelines listed in Recommendation (Rv), and shall be required to consult the public authority that manages the land and enforce any reasonable conditions imposed by that authority within the field of its expertise; in addition the Department should be required to consult the Soil Conservation Authority and enforce any conditions imposed by that Authority if the area disturbed will exceed 0.2 ha or where the area is an erosion hazard area, a coastal reserve, at an elevation greater than 1,200 m, or within a proclaimed water supply catchment.

- R(ii)** That legislation be altered to ensure a miner's right does not automatically allow access to any public land and that the holder of a miner's right is subject to recommendation **R(i)**.
- R(iii)** That all exploration for and the extraction of "stone" on public land be subject to the approval of, and conditions imposed by, the public authority that manages the land.

In considering an application the managing authority should apply the guidelines listed in recommendation **R(v)**. Where the area disturbed will exceed 0.2 ha or where the area is an erosion hazard area, a coastal reserve, at an elevation greater than 1,200 m or within a proclaimed water supply catchment, the managing authority shall be required to obtain the approval of the Soil Conservation Authority and enforce any conditions imposed by that Authority.

If approval for extraction is granted by the authority that manages the land (and the Soil Conservation Authority when necessary), any project involving extraction of material to a depth of more than 2 metres below the natural surface of the land should then be subject to the approval of, and conditions imposed by, the Department of Mines as is currently required of extractive industries.

This recommendation should apply to municipal councils, the Country Roads Board, and other public authorities, as well as to commercial operators, but to allow this the relevant *Acts* would have to be amended.

- R(iv)** That extraction sites be properly restored and rehabilitated.

A system should be established that would guarantee that funds for rehabilitation would be available for any operation, before the operation commences. This is already the case for operations where the *Extractive Industries Act* applies.

- R(v)** That the following guidelines should apply to all extraction of "gold", "minerals", "petroleum", or "stone" from public land.
- * Royalties on public land, including site rental when appropriate, should be more closely related to the market value of the material; this would eliminate the temptation to use public land purely on the grounds of the nominal royalties often levied in the past.
 - * No sites for the extraction of "gold", "minerals", and "petroleum" should be opened in areas considered by the Department of Mines to be of greater value for their aesthetic or nature conservation values. Similarly, no sites for the extraction of "stone" should be opened in areas considered by the relevant public authority (see recommendation **R(iii)**) to be of greater value for their aesthetic or nature conservation values.
 - * No extraction sites should be opened within the view of a main road unless the site when reclaimed will be of value to the public, or, if no alternative site exists, the impact on the environment should be minimized.
 - * Extraction of "stone" should be concentrated on the fewest possible sites in an area, and any one site should be completely worked out and rehabilitation ensured before a new site is exploited.

- * All extraction sites should be fully rehabilitated. Rehabilitation should follow extraction progressively when possible, but otherwise should begin immediately extraction is completed. The aims for rehabilitation should be defined by the authority that manages the land, and may include, for example, revegetating the site with plantation forest, filling a quarry with water and developing the site as a park, using a gravel pit for off-road vehicles, using a quarry for garbage disposal prior to rehabilitation, or restoring the site as closely as possible to its original topography and revegetating it with species native to the site.

An area of public land near Anglesea is held under lease by Alcoa of Australia Pty. Ltd. The future use of this land is discussed below, after recommendation **R21**.

Specific Recommendations

R1-R21 That the following areas indicated on the maps be used for the extraction of "stone".

Map 1

- R1** An area of 95 ha adjacent to allotments 2 and 3 of section 1c, and 4j and 4d of section 1b, the southern boundary corresponding to the existing irrigation channel, Parish of Yandoit. Reclamation of worked areas should aim at restoring the terrain, as far as possible, to its original form and revegetating it with appropriate species native to the locality. Reclamation should proceed progressively as areas are worked out.
- R2** An area of 1 ha north of allotment 8 of Section 12 and to the west of allotment 9 of Section 11, Parish of Daylesford.
- R3** An area of 2 ha adjacent to allotments 5, 3A and 6 of Section 14, Parish of Wombat.

Map 2

- R4** An area of 1 ha being the Gravel Reserve, allotment 74D, Parish of Broadford.

Map 3

- R5** An area of 10 ha located south of allotment 14 of Section A, in the east of the Parish of Maintongoon.

Map 5

- R6** An area of 2 ha being the 102nd Section Reserve adjacent to allotment 32A, Parish of Bungal.
- R7** An area of 4 ha, the gravel reserve east of allotment 27c, Parish of Durdidwarrah.
- R8** An area of 4 ha, the gravel reserve east of allotment 74, Parish of Durdidwarrah.
- R9** An area of 2 ha north east of allotment 40p, Parish of Durdidwarrah.

Map 6

- R10** An area of 2 ha in the centre of allotment 1c of 18, Parish of Yangardook. Reclamation of worked areas should aim at restoring the terrain, as far as possible, to its original form and at revegetating it with appropriate species native to the locality.

Map 7

- R11** An area of 1 ha to include the existing quarry at the north east corner of allotment 33, Parish of Mooroolbark—the Maroondah Highway and Victoria Road being the boundaries in the north and east.

Yarra Valley Multi-Purpose Park Map.

- R12** An area of 2 ha south west of Warburton adjacent to allotments 207 and 209, Parish of Warburton ; to be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See recommendation A26.)

Map 7

- R13** An area of 0.4 ha being allotment 12b, Parish of Nar Nar Goon.

Map 9

- R14** An area of 10 ha adjacent to the Barwon River at the south west corner of Section 1, Parish of Gheringhap.
- R15** Stingaree Bay : That the area of 300 ha to be made available under lease for the extraction of salt.

Map 11

- R16** An area of 5 ha adjacent to allotments 27H, 27J and 27D, Parish of Woolami.
- R17** An area of 100 ha in allotment 214, Parish of Corinella. Reclamation of worked areas should aim to restore the terrain, as far as possible, to its original form and at revegetating it with appropriate species native to the locality. Reclamation should proceed progressively as areas are worked out. Care should be taken to ensure the worked areas are adequately screened from the Bass Highway, Stanley Road and the subdivision to the east.
- R18** An area of 40 ha north of Grantville in allotments 96b and 96c, Parish of Corinella, 4 ha being the temporary gravel reserve ; also that part of the temporary gravel reserve extension north and east from the gravel reserve to 20 m from the Creek, and the area covered by Extractive Industries Lease No. 16.
- R19** An area of 600 ha being allotments 74c, 75, 77H and 75J in the Parish of Lang Lang, and allotments 121, and 124A in the Parish of Lang Lang East. Reclamation of worked areas should aim at restoring the terrain, as far as possible, to its original form and at revegetating it with appropriate species native to the locality.
- R20** An area of 5 ha (to include the existing quarry) to the north and north west of the Outtrim sanitary depot, in the Parish of Kongwak.

Map 12

- R21** An area of 4 ha adjacent to allotments 35b and 35, Parish of Tanjil.

ANGLESEA LEASE AREA

An area of 7 350 ha of public land in the vicinity of Anglesea is held under mining lease by Alcoa of Australia Pty. Ltd., under the provisions of the *Mines (Aluminium Agreement) Act 1961*, which grants the company a lease for 50 years with the right of renewal. Within the lease area some 1 300 ha marked A on Map D is considered to contain sufficient reserves of brown coal to last for at least 50 years, based on current predictions of the future level of use. The area marked B and the remainder of the lease area shown on Map D is known to contain brown coal, but the extent of these reserves has not yet been fully determined.

In addition, land within the Alcoa lease area has high capabilities for other uses, including conservation of flora and fauna, some forms of recreation, and the production of sand and gravel.

Specific Recommendations

- R22** That the areas marked A and B on Map D continue to be used by Alcoa of Australia Pty. Ltd., for the mining of brown coal, exploration, and associated works as provided for under the *Mines (Aluminium Agreement) Act 1961*.
- R23** That the Government enter into negotiations with Alcoa of Australia Pty. Ltd., with a view to providing for the following uses within the remainder of the lease area:
- (a) In view of the large volume of known reserves of sand and gravel in overburden covering the brown coal deposits, and the favourable location of these reserves in relation to the growth centre of Geelong, it is suggested that the Mines Department and Alcoa investigate a procedure that, while safeguarding the rights of Alcoa under the Agreement, would enable sand and gravel (if required) to be extracted prior to working the area for coal.
If sand and gravel are taken from an area not to be mined for coal in the near future, then the area should be rehabilitated according to the recommendations for Minerals and Stone.
 - (b) The above refers to the extraction of sand and gravel associated with mining an area for brown coal. However, the area marked c on Map D has been investigated by the Mines Department and it is considered that this area should be used for the production of sand and gravel not necessarily as a preliminary to mining the area for brown coal. Portion of the area used for this purpose should be rehabilitated according to the recommendations for Minerals and Stone contained in this publication. It is realised that part of the land referred to lies outside the arbitrarily established boundary of the study area. However, it is necessary to consider this land in order to adopt a balanced view of the capability of land within the study area.
 - (c) The areas adjacent to the Anglesea and Mt. Ingoldsby flora and fauna reserves respectively marked as D and E on Map D contain natural environments not represented in the Angahook State Park and provide corridors for the movement of animals. While the Council recognises that the area adjacent to the Mt. Ingoldsby flora and fauna reserve is probably of particular value for brown coal, this area is also of botanic importance because of the diversity of the flora it contains.

It is suggested that these areas be managed as part of the Anglesea and Mt. Ingoldsby flora and fauna reserves, but the rights of Alcoa to search for brown coal should continue to be recognised. In the event of Alcoa wishing to mine these areas, the relative values of the areas for coal and conservation of flora and fauna should be assessed.

- (d) The area marked F on Map D is currently used for trail-bike riding. The Council suggests that use of the area for this purpose continue to be permitted. It recognises that most of it falls outside the study area boundary and includes the land proposed to be used for the production of sand and gravel. However, inclusion of these areas has allowed the suggested uses to be considered for the whole of the area held under lease by Alcoa.
- (e) It is the intention of Alcoa to progressively rehabilitate areas from which brown coal has been removed. Because of the proximity of the lease area to the township of Anglesea, consideration should be given to using rehabilitated areas within the lease for urban recreation activities.

R24 That, most importantly in view of the high fire hazard that exists in the lease area and its location immediately to the north and west of the Anglesea township, the management authority and the Country Fire Authority continue to implement an adequate fire protection policy for this area.

S. UTILITIES AND SURVEY

Many existing utilities occupy public land ; these include roads, pipelines, power lines, power stations, hospitals, schools and school plantations, churches, public halls, shire offices and depots, garbage depots, sanitary depots, cemeteries, and the Melbourne and Metropolitan Board of Works sewerage farm. Many small areas where no change in use is proposed are not referred to.

In the absence of detailed information, it is not possible at this time to provide for future requirements for land for survey and utilities. Land for these purposes will need to be allocated when particular projects are under consideration.

Policy Recommendations

- S(i) That government agencies concerned with provision and installation of communication equipment, transmission lines, pipelines, roads, etc., be requested to submit to the Council during the early planning stages any major proposals that would involve occupation agreements or the setting aside of sites on public land.

This would assist in achieving co-ordinated planning, and perhaps avoid the necessity for costly resurveys.

Roads, power-lines, pipe-lines

- S(ii) Roads, power-lines, and pipelines should be sited to minimize disturbance to public land, and should not impinge on parks, reference areas, bushland reserves or scenic reserves without the approval of the management authority. New pipelines and power-lines should follow existing easements if possible ; this may require widening of some easements.

Water supply catchments

- S(iii) (a) That roads should be carefully aligned to minimize the short- /or long-term effects on water quality and stream-bed stability. Bare soil areas should in all cases be appropriately stabilised.
(Construction and alteration of new and existing roads, power-lines and pipelines provide sources of sediment and colloidal material that are significant in water supply catchment areas.)
- (b) That the Soil Conservation Authority approve or be consulted where changes in the state of roads or road reserves are proposed in certain water supply catchments for which the Soil Conservation Authority has made land use determinations.
- (c) That roadworks in water supply catchments be referred to the Soil Conservation Authority at the planning stage for comment and recommendations as to stabilisation and the revegetation measures required.

Garbage and sanitary depots

- S(iv) That municipal councils be encouraged to share garbage and sanitary disposal facilities in order to minimize the number of such areas required.
- S(v) That no further public land be made available for the disposal of metropolitan garbage by the land-fill method.

The Council notes the submission from the City of Doncaster and Templestowe concerning a regional garbage depot of approximately 200 ha about 6 km north-nor-west of Narbethong.

The Council considers that the land-fill method must be regarded as an interim means of garbage disposal because eventually, if continued as the main method, it will require too much public land and clearing of native vegetation.

However, there are a number of disused quarry sites in and around Melbourne, some of which can be used in the immediate future. Before these areas are used for garbage disposal, the possibility of polluting the groundwater should be adequately assessed.

The Council considers that the question of metropolitan garbage disposal is one for urgent attention by the Government.

S(vi) That areas used on a temporary basis (such as garbage depots and sanitary depots) be fully rehabilitated. This should apply to sites used illegally as well as to those used legally. Where the user or users are known, rehabilitation should be at their expense.

Railway lines

S(vii) That, where isolated remnants of the original vegetation remain on land associated with railway lines, every effort be made to protect that vegetation consistent with management practices.

S(viii) That disused railway land within the study area be retained as public land. The routes of old railway lines may be valuable for use as cycling or walking tracks, and may eventually be needed again as routes for public transport.

Specific Recommendations

Power

S1 That areas of land as shown on the map, north-east of Tyabb and at Red Bluff, French Island, continue to be held for the time being by the State Electricity Commission.

Note : In recommending that a State park be created on French Island (A12), the Council recommended that 102 ha of land owned by the State Electricity Commission be included in the park.

S2 That existing powerline easements continue to be used for this purpose.

Garbage depots

S3 That an area of approximately 8 ha within allotment 29 of section C, Parish of Flowerdale, be used by the Shire of Yea as a garbage depot. Adequate native vegetation should be retained to screen the garbage depot from the adjacent road and cleared land.

S4 That an area of approximately 2 ha to the north of allotment 8B, Parish of Yuonga, be used as a garbage depot and sanitary depot. Adequate native vegetation should be retained to screen the area from adjacent cleared land. The area should be managed by the Forests Commission as part of the Yarra Valley Multi-Purpose Park. (See Recommendation A26.)

Note : Reference is also made to the disposal of garbage in the sections on scenic reserves, bushland reserves, recreation reserves, flora and fauna reserves, wildlife reserves and minerals and stone.

Railway lines

- S5** That the Victorian Railways continue to maintain native vegetation beside the railway line in the following localities :
- (a) about 5 km north-east of Lara. This area supports a valuable remnant of the original grassland vegetation including the rare brittle greenhood, the uncommon swamp diuris, and several other orchid species, as well as unusual forms of rosemary grevillea and silver banksia.
 - (b) about 2 km west of Riddell. This area supports a valuable remnant of the original grassland vegetation, including the rare purple diuris.
(Similar grassland vegetation occurs beside the railway line between Tottenham and Sydenham, within the metropolitan area. The very rare white diuris occurs here.)
 - (c) between Beaconsfield and Pakenham. This area supports a valuable remnant of the original native vegetation, including the very rare white diuris.
 - (d) about 1.5 km south of Woodend. This is the only known occurrence of black gum (*Eucalyptus aggregata*) in Victoria.

Note : The above list of five areas with great botanical importance on railway land should not be considered exhaustive—many other areas of railway land also support valuable stands of native vegetation.

Sewerage farm

- S6** That the Melbourne and Metropolitan Board of Works sewerage farm at Werribee continue to be used for its present purposes. In view of the value of the farm as a habitat for waterfowl, and the presence of the fat-tailed dunnart in some grassland areas, the Board should continue to consult with the Fisheries and Wildlife Division on matters affecting wildlife. In the event of full treatment the area should remain as public open space.

Hospitals

- S7** That the area of approximately 435 ha south of Sunbury continue to be used for mental hospital purposes. Protection of the valuable remnant of grassy woodland vegetation should continue.
- S8** That the area of approximately 160 ha in the south-west of the Parish of Yuroke being reserved for sanatorium purposes continue to be used for hospital purposes. Protection of the valuable remnant of grassy woodland vegetation should continue.
- S9** That the area of public land west of Watsonia continue to be used for mental hospital purposes.

Trigonometrical stations

- S10** That the minimum area necessary for survey purposes be reserved around trigonometrical stations on public land in the study area where it would otherwise remain as unreserved Crown land and, where other forms of public land tenure apply, the Department of Crown Lands and Survey should have the right to occupy a minimum area around the station and provide lines of sight.

T. TOWNSHIP LAND

Public land in townships is currently used for a wide range of purposes. The Council has not generally proposed any change of use for such public land where the present use is for schools, public halls, sports grounds, and the like. In some cases, however, Council has made a specific recommendation for township land to be used for recreation. These recommendations are included in the section on recreation reserves.

In general, all other public land in townships should remain in the uncommitted state to meet future requirements such as for public open space. The Council, however, recommends that a few small areas of public land be released for urban purposes.

Specific Recommendation

T1 That the land described in the schedule below (approximately 2 ha) and indicated in detail on the maps, be used for urban purposes.

With reference to section 5(i) of the *Land Conservation Act* 1970, the Council recommends that the land in the schedule be made available in accordance with the provisions of the *Land Act* 1958.

SCHEDULE 2

LAND RECOMMENDED FOR URBAN PURPOSES

Parish		Township		Location			Area (ha)
Alexandra	..	Alexandra	..	CA 5B, Section 10	..	..	0.2
Narracan	..	Coalville	..	CA 2, 3, 4, 5, 6, 8, 9, 16, Section 1	..	..	0.5
Wombat	..	Daylesford	..	S of CA 26, Section 10	..	..	1
Total							1.7

U. UNCOMMITTED LAND

In planning land use, known resources are allocated to satisfy known or predicted demands. However, Council is aware that many changes cannot be foreseen and that resources themselves will change as exploration, investigation, and technology progress. For these reasons it is desirable that planning be flexible so that, when land use is reviewed, resources can be re-allocated or adapted to meet changed demands. Changes in demand may affect present uses or may create entirely new ones.

Provision for future demands is made by placing land under flexible forms of use (that is, uses that do not have a major impact on the ecosystem) and by retaining as much land as possible in an uncommitted state.

Such uncommitted land is securely retained as public land, although the form of tenure permits changes in use of status if these are recommended following revision by this Council. All resources on uncommitted land are to be carefully managed, in order to prevent the impairment of the land's capability for any kind of use in the future. In practice this means conserving the capabilities that the land is known to possess, while allowing low levels of some types of use (provided this can be done without reducing options for future uses by causing changes that would be difficult to reverse). Uncommitted land includes areas that, although having a low capability to satisfy any known demand, have an unknown (and perhaps high) capability to satisfy unforeseen future demands.

It also includes areas that, although having a high capability to satisfy one or more known demands, are at present not committed to any one use, as foreseeable requirements can readily be met from other areas.

Yan Yean

The catchments in the Yan Yean system supplying water to Melbourne comprise another category within uncommitted land. These catchments have been closed to public access since last century. The land in them has potential for many uses, but at present our knowledge of the interactions between these uses and water production is incomplete. Results from timber-harvesting experiments in the Yarra Valley, some of which will be available in 1979, will enable some decisions on the future use of the catchment to be made. Until then the land has been placed in the uncommitted category—it will continue to produce water, and its potential for other forms of use will be safe-guarded.

Policy Recommendations

- U(i) That sufficient resources be made available to the authorities responsible for managing uncommitted land to permit careful management of the land. In particular, measures to protect the land and adjacent areas from soil erosion, wildfires, and vermin and noxious weeds are essential.
- U(ii) That new access tracks or roads be constructed in uncommitted land only where absolutely necessary for management, so that the options for uses requiring undisturbed land are maintained.

Several categories within uncommitted land are recognized in the study area. The first contains relatively large areas of land carrying native vegetation. Specific recommendation **U1** refers to these areas.

Specific Recommendations

- U1** That the land (170 800 ha) indicated on the maps be used to :
- (a) achieve or maintain stability of the land and maintain its usefulness for all possible future uses
 - (b) protect water catchments
 - (c) conserve native fauna and flora
 - (d) provide other products (including forest produce) and services (including grazing) where this can be done in a manner compatible with the uses given above—
- and that it be uncommitted land withheld from sale, leasing, or licensing under section 36 of the *Land Act* 1958, and that it be protected forest.
- U2** That the land in the Yan Yean system (10 800 ha) indicated on the maps be used to :
- (a) maintain the stability of the land and its usefulness for all possible future uses
 - (b) protect water catchments
 - (c) conserve native fauna and flora
- and that it be uncommitted land and remain under present tenure and management.

V. MILITARY TRAINING

The Council recommends that military training activities be permitted on hardwood and softwood production areas, and uncommitted land, provided that :

- (a) The types of activities, and their timing and location, are subject to agreement between the Army and the managing authority, and other relevant authorities such as the Soil Conservation Authority.
- (b) The training activities are carried out under conditions specified by the managing and relevant authorities to minimise any detrimental effects.
- (c) The Forests Commission is consulted (for fire protection purposes) with respect to training activities in protected forest.

APPENDIX 1.

MACEDON REGIONAL PARK ZONING GUIDELINES

The recommendations made under Water Production propose that all water supply storages and diversion works, together with surrounding buffer zones as determined by the Soil Conservation Authority, will not form part of the park, but will be water supply reserves permanently reserved under section 14 of the *Land Act* 1958. These reserves will be managed by the water supply authorities.

All activities in park areas that are within proclaimed catchments will be carried out in accordance with land use determinations made by the Soil Conservation Authority.

1. Intensive Recreation

The land within this zone should be used to :

- (a) provide open-space recreation and education for large numbers of people
- (b) protect and conserve the environment to the extent that this is consistent with (a) above
- (c) timber harvesting should be permitted where appropriate to enhance the recreational value of the area.

Walking tracks, picnic facilities, and other amenities would be provided in this zone.

2. Conservation, Recreation and Timber Production

The land within this zone should be used to :

- (a) provide low-intensity open-space recreation with limited facilities
- (b) protect and conserve native flora and fauna
- (c) produce water
- (d) produce timber on a low-intensity basis incorporating where appropriate a gradual conversion of softwoods to hardwoods that are native to the area.

3. Recreation and Softwood Production

The land within this zone should be used to :

- (a) provide low-intensity open-space recreation with limited facilities
- (b) produce water
- (c) produce softwood timber.

4. Nature Conservation

The land within this zone should be used to :

- (a) protect and conserve native flora and fauna
- (b) produce water
- (c) provide limited open-space recreation to the extent that this is consistent with (a) and (b) above.

APPENDIX 2.

SITES OF SPECIAL CONSERVATION SIGNIFICANCE ON THE COAST

The following list contains all known sites of special conservation significance on the coast between Lorne and Wonthaggi. Recommendations made under Coasts, Wildlife Reserves, Parks, and Flora and Fauna Reserves state that particular care should be taken to protect these sites. As well as sites on public land (as defined in the *Land Conservation Act 1970*), the list includes those on private land, Commonwealth land, and land within cities and boroughs. These latter are included for the sake of completeness, and are not referred to in recommendations in the body of the report. (Land in the City of South Barwon is an exception—see Introduction). In the table below, the right-hand column gives the recommended status of sites on public land, and the present status of sites not on public land.

LOCALITY AND SIGNIFICANCE	PRESENT OR RECOMMENDED STATUS
Eastern View The geological contact of the Otways Mesozoic rocks with the Tertiary rocks to the east.	Coastal Reserve (see recommendation J1)
Moggs Creek The coastal heathland habitat of the rufous bristle-bird (near the eastern limit of its restricted range) and the uncommon beautiful firetail (confined to a restricted range of coastal habitats).	Coastal Reserve (see recommendation J1)
Aireys Inlet to Eagles Nest The cliffs exposing a volcanic structure overlain by limestone; the rare ramphobranch polychaete worm on the intertidal rocks; and the distinctive landscape of the rocky promontory, cliffs, and sea stacks.	Coastal Reserve (see recommendation J1)
Urquharts Bluff The moonah trees on the bluff and the rare fungus <i>Underwoodia beatonii</i> , which occurs beneath them.	Coastal Reserve (see recommendation J1)
Hutt Gully The coastal heathland habitat of <i>Antechinus minimus</i> (this locality is one of very few Victorian records for this species.)	Coastal Reserve (see recommendation J1)
Point Roadnight The calcarenite headland, with its well-developed shore platforms and other interesting geomorphic features.	Coastal Reserve (see recommendation J1)
Anglesea River Mouth The grove of moonah trees beside the river and the rare fungus <i>Underwoodia beatonii</i> , which occurs beneath the trees.	Coastal Reserve (see recommendation J1)
Demons Bluff The receding cliffs in carbonaceous clays, and the breeding site of the rather rare peregrine falcon.	Coastal Reserve (see recommendation J1)
Point Addis The cliffs, the fossils they contain (particularly molluscs), and the coastal heathland habitat of the rufous bristle-bird (at the eastern limit of its range), together with the distinctive landscape of the headland and sheltered crescent beaches backed by cliffs.	Coastal Reserve (see recommendation J1)
Half Moon Bay The fossil locality in the cliffs and the rich littoral communities of its waters.	Coastal Reserve (see recommendation J1)
Breamlea Coastal wetland habitat of international migratory waders and waterbirds.	Flora and fauna Reserve (see recommendation H15)

Point Flinders	Coastal Reserve (see recommendation J1)
The basalt and calcarenite bluff, and the uncommon metallic skink that inhabits it.	
Barwon Estuary	Wildlife Reserve (see recommendation C3)
The white mangrove (westernmost occurrence) and saltmarsh vegetation; international migratory waders and waterbirds; and aquatic fauna adapted to extremes of estuarine salinity.	
Ocean Grove to Point Lonsdale	Coastal Reserve (see recommendation J1)
The sand dune vegetation with moonah and tea tree, and the aboriginal middens.	
Salt Lakes	Wildlife Reserve (see recommendation C4)
Habitat of waders, shrimps, and shellfish.	
Point Lonsdale	Borough of Queenscliff (not public land)
Calcarenite cliffs with well-developed stone platform and other coastal land-forms; rich marine algae; rich littoral fauna, particularly opisthobranch molluscs; and a distinctive cliff and headland landscape.	
Mud Island	Wildlife Reserve (recommendation C6)
Coastal saltmarsh and shrub vegetation; one of few breeding areas of the white-faced storm petrel; and feeding grounds of international migratory waders.	
Swan Island	Commonwealth land (not public land)
A highly dynamic sandy shore with excellent examples of sandy coast landforms; saltmarsh, moonah and tea tree.	
Swan Bay	Wildlife Reserve (see recommendation C2) and Borough of Queenscliff (not public land)
The extensive shell beds; saltmarsh, marine angiosperms and algae; fish, shellfish, and other fauna of sheltered marine environments; international migratory waders and waterbirds.	
Edwards Point	Wildlife Reserve (see recommendation C2)
The complex sand spit; saltmarsh, dune and strandline flora; international migratory waders, waterbirds, and the endangered orange-bellied parrot.	
St. Leonards Lagoon	Wildlife Reserve (see recommendation C5)
International migratory waders, and waterbirds.	
Point Richards	Flora and Fauna Reserve (see H18)
Short-nosed bandicoot, in grassland.	
Point Henry	Coastal Reserve (see recommendation J2)
The saltmarsh habitat of international migratory waders and waterbirds.	
Stingaree Bay	Coastal Reserve (see recommendation J2)
The saltmarsh habitat of international migratory waders and waterbirds.	
Limeburner's Bay	Coastal Reserve (see recommendation J2)
The white mangroves (only occurrence in Port Phillip Bay), and saltmarsh habitat of international migratory waders and waterbirds.	
The Spit	Wildlife Reserve (see C8)
Saltmarsh and tidal flats habitat of international migratory waders and waterbirds; the endangered orange-bellied parrot.	
Point Cook	Freehold (not public land)
King quail and aboriginal middens.	
Williamstown	City (not public land)
Lava blister in foreshore basalts	
Red Bluff	City (not public land)
The cliff in sands and sandstone, with rain-washed hills and gulleys; an Aboriginal well at the cliff base.	

Black Rock Point	City (not public land)
Receding cliffs in sands with sandstone shore platforms.	
Ricketts Point	City (not public land)
Extensive sandstone shore platforms with algae and littoral fauna.	
Beaumaris	City (not public land)
Sandstone cliffs with abundant fossils.	
Fossil Beach	Coastal Reserve (see recommendation J2)
The Upper Tertiary formation containing many fossils, and the site of an early cement works.	
Sunnyside	Coastal Reserve (see recommendation J2)
The junction of the Devonian granites with Jurassic and Tertiary rocks, the excellent examples of coastal landforms, and the Aboriginal middens.	
Martha Point	Coastal Reserve (see recommendation J2)
The rocky granite coast with characteristic land forms and cliffs.	
Point Nepean	Commonwealth land (not public land)
Calcarenite cliffs, extensive shore platforms and offshore reefs; marine algae, sand dune flora, and the rare <i>Adriana quadripartita</i> ; rich littoral fauna and Aboriginal middens.	
London Bridge	State Park (see recommendation A13)
The natural arch in dune calcarenite and well-developed coastal landforms.	
Nepean Ocean Coast	State Park (see recommendation A13)
The landscape of cliffs and shore platforms in dune calcarenite and extensive sand dunes, and the Aboriginal middens.	
Rowley Cove and Rowley Rocks	State Park (see recommendation A13)
The exposure of the Selwyn Fault in calcarenite and basalt, and the Aboriginal middens.	
Cape Schanck	State Park (see recommendation A13)
The calcarenite and Tertiary basalts comprising a landscape of a rugged promontory with cliffs, shore platforms, boulder beaches, stacks and caves, with extensive views. The marine algae and dune scrub, including the rare bush pea <i>Pultenaea canaliculata</i> ; the rich littoral fauna; and the pelagic birds.	
Cape Schanck to West Head, Flinders	State Park (see recommendation A13)
The cliffs and shore platforms in basalt and limestone with fossils and zeolites, and the particularly rich littoral fauna.	
Honeysuckle Point, Shoreham	Coastal Reserve (see recommendation J3)
The rock platform with its rich littoral fauna.	
Sandy Point and Hann's Inlet	Commonwealth Land (not public land)
Complex sand-pit formation; coastal banksia and manna gum woodland, sand dune vegetation, saltmarsh, and white mangroves.	
Crib Point and Jacks Beach to Warrengine Creek	Coastal Reserve (see recommendation J3)
The saltmarsh and white mangrove habitat with its associated intertidal fauna, waders and waterbirds, and the manna gum heathy woodland and coastal heathland.	
Tyabb	Freehold (not public land)
New Holland Mouse in coastal vegetation.	
Sandstone Island	Coastal Reserve (see recommendation J3)
The structural exposures in the Silurian rocks and the saltmarsh and white mangroves habitat, with its associated waders and waterbirds.	
Tyabb to Tooradin	Wildlife Reserve (see recommendation C15)
The saltmarsh and white mangrove habitat with its associated intertidal fauna, waders, and waterbirds.	

Quail and Chinaman Islands	Wildlife Reserve (see recommendation C15)
The saltmarsh, white mangrove, and manna gum heathy woodland echidnas and koalas.	
Barrallier Island	Wildlife Reserve (see recommendation C15)
The intertidal fauna and international migratory waders.	
Crawfish Rock	Wildlife Reserve (see recommendation C15)
The intertidal and benthic fauna.	
French Island	State Park (see recommendation A12)
White mangroves and saltmarsh vegetation.	
Tortoise Head	State Park (see recommendation A12)
The basalt promontory; saltmarsh and white mangroves; and breeding colony of short-tailed shearwaters.	
Bass Landing	Coastal Reserve (see recommendation J3)
The saltmarsh and white mangrove habitat, with its associated waders and waterbirds and estuarine fauna.	
Cape Woolamai	Wildlife Reserve (see recommendation C19)
The bold promontory connected to Phillip Island by a sand dune isthmus, the Aboriginal middens, the breeding colonies of short-tailed shearwaters and little penguins, the rare bush <i>Cyathodes juniperinum</i> , and very rare littoral fern <i>Asplenium obtusatum</i> .	
Pyramid Rock	Wildlife Reserve (see recommendation C19)
The prominent shore stack of columnar basalt on a granite base and the breeding colonies of short-tailed shearwaters.	
The Nobbies/Seal Rocks/Cat Bay area	Wildlife Reserve (see recommendation C18)
The basalt headland, cliffs, shore platforms, stacks, and blowholes; the Aboriginal middens; and the breeding colonies of short-tailed shearwaters, little penguin and Australian fur seal.	
Rhyll Swamp	Wildlife Reserve (see recommendation C17)
The international migratory waders; breeding colonies of spoonbills, ibis, and cormorants; and the littoral fauna.	
San Remo to Kilcunda	Coastal Reserve (see recommendation J3)
The numerous bluffs, cliffs and headlands, and small beaches, in Jurassic rocks with thin coal seams.	
Powlett River Mouth	Coastal Reserve (see recommendation J3)
The landscape of long-exposed beach backed by high dunes, and the saltmarsh and sand dune vegetation with <i>Antechinus minimus</i> .	