

ANGAHOOK-OTWAY INVESTIGATION FINAL REPORT

VICTORIAN
ENVIRONMENTAL
ASSESSMENT
COUNCIL



NOVEMBER 2004

WHAT IS VEAC?

The Victorian Environmental Assessment Council (VEAC) was established in 2002 (under the *Victorian Environmental Assessment Council Act 2001*), replacing the Environment Conservation Council (ECC) as the body providing the State Government with independent advice on strategic public land-use planning. Council members are detailed below:

(Inaugural Chairman) Dr Brian Robinson, AM, FTSE, B.Sc., Ph.D. – see obituary below.

(Current Chairman) Mr Duncan Malcolm – currently Chairman of the Gippsland Coastal Board and Watermark Inc. Duncan has also served as Chairman of the Lakes and Wilderness Tourism Association and of the Irrigation Association of Australia. He is a current board member of the Irrigation Association of Australia and member of the Victorian Coastal Council.

Dr Sarah Ewing, B.Sc. (Hons), M.Sc., Ph.D., Grad.Dip.Ed. – currently a member of the Victorian Catchment Management Council and formerly a deputy member of the Australian Landcare Council, Sarah has many years experience in catchment and natural resource management issues.

Dr David Mercer, BA (Hons), Ph.D., Dip.Ed. – fellow of The Environment Institute of Australia and New Zealand, David has broad expertise in natural resource management, recreation and tourism and a highly regarded academic background in geography.

Mrs Eda Ritchie, Grad.Dip.Bus. – former member of the Environment Conservation Council, Trust for Nature Board and the Chair of the Western Region Coastal Board and current member of Melbourne University Council and trustee R.E. Ross Trust, Eda also has a farming background.

OBITUARY – DR BRIAN ROBINSON

Council members and staff were greatly saddened at the passing of VEAC's inaugural Chairman, Dr Brian Robinson, on 30 April 2004. Although his period at VEAC was regrettably brief, Brian quickly established effective working relationships, principles and an identity for the new organisation. His leadership and energy will be sorely missed.

Brian Robinson brought to VEAC a wealth of experience across a broad range of environmental issues. He gained his Ph.D in Melbourne in chemical engineering before being employed in the private sector in Britain and Ireland. However, his name will always be associated with Victoria's Environment Protection Authority (EPA) where he worked for over 25 years – the last 15 as Chairman – until he retired in 2002.

His work at the EPA spanned a very broad range of often controversial environmental issues but he is particularly remembered for his commitment to embedding the principles of ecologically sustainable development in government, private sector and community decision making. He was widely known for his commitment to liaising with the full range of stakeholders relevant to any issue – from local communities to interstate and international governments.

Brian's breadth of experience in sustainable development and natural resource management closely matched VEAC's purpose: to provide advice to the Victorian Government on ecologically sustainable management of the environment and natural resources of public land. Rather than wind-down in retirement, he took to the role with energy and enthusiasm. Soon after VEAC was established in July 2002, Brian set the direction for VEAC's Angahook-Otway Investigation. His experience in dealing with complex environmental issues, and consulting with a range of stakeholders, proved valuable in the Otways. He enjoyed the Otways field trips, consultation with local people, and gaining inspiration from the forests and coast.

Brian was very public-spirited and, in addition to VEAC, took on a variety of extra roles flowing from his expertise. However, when the Angahook-Otway Investigation became more demanding, he reduced some of his other roles to allow him to give more attention to VEAC. Even in hospital Brian was keen to see his Council papers and draft chapters, and maintained his lively interest in current affairs, despite the pain of his illness and treatment.

Brian's last legacy to the Victorian people will be VEAC's recommendations for the Otways. Brian and the other Councillors saw a need to simplify the public land use framework and improve the integration and coordination of public land management. While this report draws on the views of many stakeholders and contributors, it very strongly reflects his vision.



VICTORIAN ENVIRONMENTAL ASSESSMENT COUNCIL



24 November 2004

The Honourable John Thwaites MP
Minister for the Environment
Parliament House
Melbourne VIC 3002

Dear Minister

ANGAHOOK-OTWAY INVESTIGATION

In accordance with the requirements of Section 23 of the *Victorian Environmental Assessment Council Act 2001*, the Victorian Environmental Assessment Council is pleased to submit to you the Final Report for the Angahook-Otway Investigation and copies of each submission received in relation to the Investigation.



Duncan Malcolm
Chairman



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NOVEMBER 2004



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MESSAGE FROM THE COUNCIL

The Otways is one of the most cherished parts of Victoria. It is one of our major tourist regions with attractions ranging from the internationally famous Great Ocean Road, to some of the world's finest beaches. The landscape includes a beautiful hinterland with its waterfalls, magnificent tall forests, ancient rainforest gullies and highly productive agricultural land.

The Victorian Government requested the Victorian Environmental Assessment Council (VEAC) to recommend the boundaries for a single national park in the Otway Ranges and to identify any other public land that should be added to the park and reserve system. VEAC was also required to take into account the environmental, economic and social consequences of recommendations and the effects on any existing or proposed use of the environment and natural resources.

The recommendations in the Draft Proposals Paper published earlier this year were developed after extensive consultation with the community. Since the Draft Paper, there has been further extensive consultation resulting in significant changes to the recommendations in this Final Report. Consultation has revealed many and varied views on how the Otways area should best be managed now and into the future. Reconciling the differing views for the area has been a difficult task and we have sought to cater for these varying demands while protecting the area for current and future generations. The diverse views of the people who live and work in the area are of particular importance and we have endeavoured at every stage to thoroughly consider their views.

We have sought to develop recommendations that reflect the optimum combination of environmental, social and economic objectives for the area now and into the future and to complement other programs, such as the Great Ocean Road Region strategy, that address more general issues.

Our recommendations are intended to balance competing demands and assist in establishing a seamless and integrated management framework over the large areas of public land in the region, which will both protect them and enable further development of benefit to the whole community. We hope that the community will see the recommendations as a key component in planning for a stable and prosperous future in a sustainably managed and well-protected Otways region.

The recommended major new Otway Ranges National Park and the existing marine national parks will form an almost continuously linked stretch of public land and water from the inland plains to the ocean. These highly protected areas will be complemented by a large forest park and smaller areas of public land catering to a range of recreational and other uses, in addition to private land

for residential, farming, and business occupation. The Great Ocean Road and other key roads traversing the region will also be maintained to ensure that the values that have attracted people to the area will be protected into the future.

Council appreciates greatly the assistance the community has given and particularly the hundreds of thoughtful and often detailed written submissions we have received.

Finally we again wish to pay tribute to our inaugural Chairman, Dr Brian Robinson, who sadly passed away early this year. We acknowledge his leadership for much of this Investigation particularly in the crucial early stages when VEAC's vision and draft proposals were developed. The emphasis on integrated management across all public land owes much to the initial vision of Dr Robinson and we would like to think that VEAC's work in the Otways will stand with Brian's long list of other achievements as a cherished legacy for future generations.

Mr Duncan Malcolm
(Chairman)

Dr David Mercer

Dr Sarah Ewing

Mrs Eda Ritchie





THIS FINAL REPORT

This Final Report is the third report published as part of VEAC's Angahook-Otway Investigation, following the Discussion Paper published in September 2003 and the Draft Proposals Paper published in May 2004. This Report contains VEAC's final recommendations for the Angahook-Otway study area, based on information on the values and uses of public land in the Otways (largely as presented in the Discussion Paper) and information and views in nearly 1900 written submissions received. The recommendations for public land are shown in Map A in the back pocket.

This Report is intended to be as self-contained as possible, providing all the key information directly relevant to the recommendations themselves. Some readers, though, may wish to access the more comprehensive and detailed information contained in the previously published Discussion Paper. Copies of the Discussion Paper are available from the same locations as this Final Report, including the free downloads at the VEAC website www.veac.vic.gov.au

Under the *Victorian Environmental Assessment Council Act 2001*, the Minister for the Environment is required to table this Final Report in each House of Parliament within seven sitting days of receiving it. The Government then has up to six months to consider the Report, and table a statement of its response to the Report no later than the next sitting day after that six month period. The response must specify the action (if any) proposed to be taken by the Government with respect to each recommendation, and be made public within seven days.

After the introductory section (chapter 1) there are three major parts to this report:

Part 1 (chapters 2 to 5) provides the recommendations themselves, including general recommendations for the entire study area (chapter 2), and specific recommendations for the establishment of the Otway Ranges National Park (chapter 3), Otway Forest Park (chapter 4) and for other public land (chapter 5).

Part 2 (chapters 6 to 12) discusses the issues raised in the preceding stages of the investigation in the context of their bearing on the recommendations.

Part 3 (chapter 13) analyses the social, economic and environmental implications of the recommendations, including for the key public land uses and values of the Otways.

At the end of the report are a series of appendices containing the following information:

- Appendix 1 presents both a summary of proposals and the VEAC response to main proposals made in submissions to this investigation;
- Appendix 2 lists the scientific names and conservation status of all plant and animal species mentioned in the text;
- Appendix 3 provides a report on the outcome of consultation with Aboriginal communities;
- Appendix 4 is a summary of the environmental, social and economic implications of the recommendations;
- Appendix 5 is a list of submissions received over the entire investigation; and
- Appendix 6 provides a list of members of the Community Reference Group and Government Contact Group for this investigation.

SUMMARY OF FINAL REPORT

The Otways

At the broadest level, the key overall outcome of the recommendations in this Final Report will be a simplified pattern of public land use, managed with a high level of coordination and integration between land-use categories.

This simplification and increased management integration will provide a range of community benefits, including improved understanding of public land and its management; more streamlined access to public land management and planning; more effective conservation of biodiversity, and management of recreation and tourism activity; and more secure water supply protection.

Simplification of public land-use is largely achieved by allocating the majority of public land to two main categories—the Otway Ranges National Park and the Otway Forest Park.

The objective of placing the majority of public land in two units is to provide a framework for improved and cost-effective public land management, with seamless management across the two units ensuring maximum benefits and clarity of responsibilities for all stakeholders.

The **Otway Ranges National Park** covers 102,470 ha, linking the existing Otway National Park, and Angahook-Lorne, Carlisle, and Melba Gully State Parks and many state forest areas and smaller reserves. The recommended national park will provide for biodiversity conservation and a range of exciting opportunities for visitors to the region and encompasses a range of environments, including the majestic mountain forests, spectacular coastal views along the Great Ocean Road and inland waterfalls.

The **Otway Forest Park** encompasses some 39,265 ha and provides for recreation, nature conservation and minor resource utilisation. This new category is similar to the existing state forest and regional park categories, and has been developed in response to the desire for a diverse range of recreation activities in the natural environment of the Otways. Compared to state forest, the forest park category is focussed more strongly on recreational use and protection of natural values, and significantly less strongly on commercial resource utilisation. The forest park category has broad applicability, unlike regional parks which are generally associated with particular towns.

Conservation Reserve System

VEAC's recommendations more than double the total area of permanent conservation reserves from the existing 49,340 ha to 108,542 ha. The total area with the highest level of protection—in national or state parks—will increase from 38,690 ha to 102,470 ha.



The recommended reserve system has been designed to maximise protection of natural values, particularly where protection in reserves is a key conservation requirement. This approach results in much better representation of threatened species sensitive to major habitat disturbance and requiring large contiguous areas of habitat (such as the spot-tailed quoll and masked owl) than is currently the case.

In addition, the new reserve system significantly increases the representation of a number of key vegetation types that are currently poorly protected in permanent reserves: lowland forest, herb-rich foothill forest, and cool temperate rainforest, for example. Old-growth and senescent forests are well represented in the national park.

Outside the permanent conservation reserve system, the Otway Forest Park will also offer protection for natural values. Here, significant values at particular sites—such as waterfalls, historic places, threatened species and poorly represented vegetation types—are to be protected. Furthermore, reduced emphasis on commercial resource utilisation (particularly after the phase-out of logging and woodchipping by 2008) will reduce pressure on natural values.

Finally, the integrated management framework will enhance biodiversity conservation by improving management arrangements which will lead, for instance, to more coordinated control of pest plants and animals on a regional basis.

Recreational Access

The Otways region is an important and popular location for a wide range of recreational pursuits from fishing and four wheel driving, to walking and bird watching. VEAC keenly appreciates the need to ensure that opportunities for such activities are maintained under its recommendations.

A key objective of forest park is the provision of opportunities for recreational pursuits in enjoyable natural settings. Dog walking, dispersed camping and hunting are some of the activities that are specifically catered for within the forest park, along with other active pursuits such as trail and mountain bike riding. Of course, more passive undertakings such as nature study, walking and sightseeing will also be able to take advantage of the considerable natural assets of the forest park.

The recommended national park, while protecting conservation values, also offers facilities and access to key natural assets such as waterfalls and rainforest. Provision of access for many popular recreational pursuits including four wheel driving and bushwalking will continue on the roads and tracks across the Otways. Localised areas within the national park can accommodate activities such as horseriding and dog walking that, more generally, are not compatible with national park values.

Industries and Commercial Uses

In preparing its recommendations, VEAC has endeavoured to minimise the negative effects on industries operating on public land in the Otways. In summary, implications for each industry are as follows:

Tourism: Tourism is the largest industry in the Otways, and VEAC's recommendations will allow this dynamic industry to continue its rapid expansion while ensuring that the natural values on which it depends are protected.

Sawlog and Woodchip Harvesting: Sawlogging and woodchipping will be allowed in the forest park until 2008 when the Government's phase-out of these industries from public land in the Otways will come into effect.

Other Forest Produce: Large areas of forest park are recommended to remain available for sustainable harvesting of firewood and other forest products, such as tea tree stakes, under licence or permit. Harvesting of these products will not be permitted in the recommended national park and nature conservation reserves, requiring some people to travel further to obtain their produce.

Extraction of Sand, Gravel and Stone: The Otways public lands are an important source for many extractive industry products and no current operations will be adversely affected by the recommendations. Current operations will continue either outside the national park or under provisions of the *National Parks Act 1975*. New licences can be issued in all public land categories (generally subject to approval by the Minister for the Environment) except the national park.

Mining and Exploration: There are no operating mines on public land in the study area, although some public land is subject to exploration licences. It is recommended that these licences be allowed to continue under provisions of the *National Parks Act 1975*, where relevant. New licences can be issued in all public land categories (generally subject to approval by the Minister for the Environment) except the national park and reference areas.

Agriculture: There are around 602 current licences, covering about 2138 ha, for grazing domestic stock on public land in the Otways. Only a small percentage of these licences (seven percent by number or eight percent by area) will be affected by the recommendations—all or part of 39 licences, covering about 196 ha will be cancelled.

Commercial Fishery: Lake Elizabeth and reaches of the lower Aire and Gellibrand Rivers and some adjoining public land are recommended for inclusion in the Otway Ranges National Park, and commercial eel harvesting will be phased out of these areas over a ten-year period (immediately at Lake Elizabeth). Other areas outside the recommended national park and nature conservation reserves and currently available for commercial fishing will remain so.

Apiculture: Beekeeping is a relatively minor industry on public land in the Otways, with only three designated sites. While areas near these sites (in the forest park, in the Alcoa lease area and on freehold land) will be available for apiculture, the sites themselves are within an area recommended for inclusion in the Otway Ranges National Park and, consequently, will be closed.

Great Ocean Road

The Great Ocean Road, and the towns, countryside and spectacular natural environment that it traverses, is a tremendous asset to the local and broader community. The very attractiveness of this asset, however, is placing great pressure on the road itself—traffic at times exceeds the road's capacity and poorly planned development along the road is a significant threat to the region's character and natural environment. It is VEAC's strong view that the general character of the road and the region it traverses should be maintained and, in particular, that protection of the adjoining scenic and natural environment is paramount to protecting the touring experience visitors from around the world come to enjoy.

To this end VEAC is recommending that the Great Ocean Road be restricted to a defined road reserve, that roadside vegetation be managed cooperatively between the managers of the road and of adjoining public land, and that any works outside that road reserve require the consent of the adjoining public land manager. To maintain the existing clarity, workability and consistency of management along its length, it is recommended that the Great Ocean Road continue to be managed primarily by VicRoads and not be included in the Otway Ranges National Park.



Table 1. Summary Table of VEAC Angahook-Otway Recommendations for Each Public Land Category

Category	Existing Area (ha)	Recommended Area (ha)
Major Categories		
National Park	11,755	102,470
Forest Park	-	39,265
Other Public Land		
State Park	26,935	0
Regional Park	665	0
Nature Conservation Reserve	6555	5040
Coastal Reserve	925	710
Natural Features Reserve	7170	2970
Water Production	905	1145
Historic and Cultural Features Reserve	1230	0
Community Use Area	1170	815
State Forest	92,030	0
Plantation (not leased or licensed)	100	0
Earth Resources	445	315
Services and Utilities	575	795
Uncategorised Public Land	3885	815
Land Not Required for Public Purposes	2780	2780
Total Extent of Public Land included in the Investigation	157,125	157,125
Public Land Leased or Licensed for Plantations – not included in the Investigation	5850	5850
Freehold	174,505	174,505
Total Extent of Study Area	337,480	337,480
Overlays (areas included in the totals above)		
Reference Area (in various categories above)	2170	3145
Heritage River (in various categories above)	820	1160

Note: The areas in this table are rounded-off to the nearest five hectares. The areas are mostly derived from GIS mapping and, for the existing areas, may differ from (generally less precise) area statements published elsewhere (in association with the listing of areas in various Acts of Parliament, for example). Road reserves have not been comprehensively mapped—accordingly, the areas given in this table for 'Services and Utilities' and 'Total Extent of Public Land' are underestimated and that for 'Freehold' correspondingly overestimated. Some of the existing areas differ from those in the Discussion Paper, reflecting subsequent corrections to the status attributed to many parcels of land. The variation in total areas of public land, freehold land and extent of the study area arise entirely from corrections to the VEAC database. VEAC has not and will not make any changes to the boundaries of freehold land. Land not required for public purposes is not shown on Map A.

LIST OF CHANGES TO RECOMMENDATIONS SINCE THE DRAFT PROPOSALS PAPER

Notes:

1. Where recommendations for the Draft Proposals Paper are referred to, these are in brackets (e.g. formerly OP1).
2. This is a summary only. Numerous minor changes are not listed and the extent and reasons for changes not always fully described. For details of changes, readers should refer to the relevant chapter of the report.
3. The numerous changes to the general text have not been listed. These respond to and address a large range of issues arising from Council's consultation, and in particular as raised in submissions.

Final Report Recommendation	The Change	The Reason
General Recommendations		
R1 Public land-use (formerly OP1)	Deletion of references to Otways Park.	Responds to concerns and uncertainties expressed about the Otways Park concept and reduces the number of categories. Emphasis on coordinated management, including use of only two major land-use categories, has been retained.
R2 Declared water supply catchments (formerly OP3)	No change.	
R3 Reference areas (formerly OP4)	No change.	
R4 Heritage rivers (formerly OP5)	No change.	
R5 Great Ocean Road and other key roads (formerly OP6 & OP7)	Recommendations for Great Ocean Road and other key roads combined.	Reduces duplication.
R6-R9 Implementation recommendations (new recommendations)	New recommendations that the Government allocates additional resources to implement VEAC's recommendations, to manage public land and provide for assistance to those adversely affected. A new recommendation provides for minor boundary amendments to be made during implementation.	Addresses community concerns about the current level of resources and makes explicit Council's intention for resourcing of its recommendations and assisting those adversely affected. Enables limited flexibility when the park and reserve boundaries are being surveyed for implementation.
R10-R11 Coordinated management planning and advisory committees (formerly part of OP1)	Defines mechanisms for coordinated planning and the use of advisory committees.	Defines an explicit process for coordinated planning and responds to community proposals for greater involvement in on-going public land management and planning decision-making processes.
R12 Enhancing Aboriginal involvement (formerly OP2)	Increases emphasis on steps towards joint management and extends opportunities to cover capacity building, a possible cultural/interpretation centre and traditional use.	Adopts some of the suggestions made by Aboriginal groups as part of VEAC's consultation project.

National Parks		
A1 Otway Ranges National Park - text	<p>Addition of an explicit reference to motor bike touring, amended provision for continuation of horseriding, removal of provision for new constructed accommodation, inclusion of process for new utility infrastructure and provision for dogs on a limited number of tracks.</p> <p>Deletion of reference to harvesting of plantations and thinnings, proposed dogwalking area, and special provision for firearms at Barongarook.</p> <p>Phase out commercial eel fishing.</p> <p>Addition of requirement to restore harvested areas and work with neighbours on pest control.</p>	<p>Responds to detailed concerns and suggestions made by recreational groups and others.</p> <p>Where pine removal or tree thinning is required, this is now considered better dealt with as a management issue not as a form of harvesting. Special provision for firearms at Barongarook are no longer required due to changes made to the park boundary.</p> <p>Commercial eel fishing occurs in both the existing Otway National Park and in areas now recommended for inclusion in the Otway Ranges National Park. It is to be phased out as it is incompatible with the management objectives of the park and with the protection of natural values.</p>
A1 Otway Ranges National Park - boundaries (from west to east)	Addition of 9565 ha to the proposed national park. Areas totalling 5300 ha have been excluded and allocated to other land-use categories. A net area increase of 4265 ha.	Details follow.
Extension of Mt Ackland block	Addition of 372 ha to national park (formerly B1 forest park).	Provides protection to a contiguous area of high quality forest identified in submissions and consolidates park boundaries.
Moonlight Head Cemetery	Exclusion of existing cemetery (now H2 service and utility area).	At the time it published its Draft Proposals Paper, VEAC understood that this cemetery was closed for burials. New information clearly indicates that this is not the case and therefore it is retained as a cemetery rather than as an historic feature in the national park.
Kennedys Creek block	Addition of 2354 ha to national park (formerly B1 forest park).	Redresses poor representation of some ecological vegetation classes (EVCs) in the Warrnambool Plain Bioregion in the permanent reserve system.
Tomahawk Creek block	Exclusion of 1612 ha (now C2 Coradjil Nature Conservation Reserve).	Responds to concerns raised about the undesirability of isolated blocks being in the national park, while still providing protection for poorly represented EVCs in this block with little recreation potential.
Gellibrand River escarpment	Exclusion of 1152 ha (now B1 forest park).	Responds to concerns raised about the undesirability of lower value, narrow areas being included in the national park.
Extension to Arkins Creek / Carlisle River block	Addition of 1325 ha to national park (formerly B1 forest park).	Protects undisturbed forest and enhances link between adjoining national park blocks by now including the entire catchment.
Little Aire Falls (VicTree) block	Exclusion of 74 ha (now I2 uncategorised public land).	Facilitates opportunities to develop this well-located but modified block for tourist and educational development.

Northern sector of Barongarook block	Exclusion of 1922 ha (now B1 forest park).	Responds to local requests to allow for multi-use activities currently undertaken in this area and avoids conflict with inlier areas of intensive use and sandmining.
Barwon Downs	Exclusion of 318 ha (now B1 forest park).	Responds to community requests seeking area for horseriding, dogwalking and firewood collection outside the national park.
Callahans Creek weir buffer	Exclusion of 49 ha (now E10 Water Production Area).	Provides for ongoing access to weir infrastructure and adjoining buffer over Barwon Water freehold land.
Middle Spur block	Addition of 905 ha to national park (formerly B1 forest park).	Gives a solid link to an outlier of the park and encompasses additional areas of forest sought for protection.
West Barwon Catchment	Addition of 3906 ha to national park (formerly B1 forest park).	Responds to submissions, protects special values including rainforest, rare and threatened species, and significant historic features, and consolidates quoll habitat and park boundaries.
Storm Point coast	Exclusion of 58 ha of coastal strip west of Marengo (now F1 coastal reserve).	Avoids a long narrow section of national park that abuts farmland.
Skenes Creek block	Addition of 114 ha to national park (formerly B1 forest park).	Encompasses an outlier of remnant forest to provide consistency of management and continuity of habitat.
Part of Kennett and Wye River water frontages	Addition of 18 ha to national park (formerly B1 forest park).	Encompasses adjoining areas of riparian vegetation into the park.
Cumberland River camping ground	Exclusion of 13.6 ha (now part of F2 Lorne–Anglesea coastal reserve).	Responds to request from local foreshore committee to retain area containing caravan park lease.
West Lorne	Addition of 133 ha to national park (formerly B1 forest park).	Protects high quality forests and creates more logical boundaries matching topographic features where possible.
Stony Creek water frontage	Exclusion of 2.5 ha of water frontage east of Lorne (now D19 bushland reserve).	Responds to suggestions that the use and management of this area better fits with bushland reserve status than national park.
Anglesea cliff top heathlands	Addition of 42.3 ha to national park (formerly part F2).	Responds to new information identifying threatened plant species, protects high quality coastal heathland and improves link between park sectors.
Part of Eumeralla Education Area	Addition of 4.9 ha to national park (formerly part G2) and exclusion of 17.5 ha to education area (formerly A1 national park).	Realigns boundaries between the national park and education area to better match geographic features and existing use.
Coastal strip from Wongarra to Carisbrook Falls	Exclusion of 55.4 ha from Wongarra to Carisbrook Falls (now added to F1 coastal reserve).	Avoids a long narrow section of national park that abuts farmland.
Queens Park	Exclusion of 17.6 ha to G4 community use area	Responds to importance of Queens Park and Teddys Lookout to local community, provides for local management and reflects values of the area.
A2 Joint Management Arrangements	Reference to joint management arrangements of water storage buffer areas deleted.	Buffer areas are included within water production areas and not in the national park.

Forest Parks		
B1 Otway Forest Park - text	<p>Addition of specific provision for hunting, more detailed recommendations for minor forest products, and reference to track classification systems.</p> <p>Deletion of reference to recreational fishing on river frontages.</p> <p>Requirement to restore harvested areas.</p>	<p>Responds to detailed concerns and suggestions made by recreational groups and others.</p> <p>Special provision for fishing no longer required as river frontages are no longer in the forest park.</p>
B1 Otway Forest Park - boundaries (from west to east)	Addition of 3425 ha to the forest park. Areas totalling 11,965 ha excluded and allocated to other land-use categories. A net area decrease of 8540 ha.	Details follow.
Kennedys Creek block	Exclusion of 2652 ha (now A1 national park).	As described above (see A1).
Latrobe Bushland Reserve	Exclusion of 298 ha (now D1 bushland reserve).	Responds to requests not to downgrade this block of remnant vegetation from its current bushland reserve status, and reflects its low value for multi-use forest park activities.
Mt Ackland block	Exclusion of 372 ha (now A1 national park).	As described above (see A1).
Gellibrand River escarpment	Addition of 1152 ha (formerly A1 national park).	As described above (see A1).
Arkins Creek / Carlisle River block	Exclusion of 1325 ha (now A1 national park).	As described above (see A1).
Northern sector of Barongarook block	Addition of 1922 ha (formerly A1 national park).	As described above (see A1).
West Barwon Catchment	Exclusion of 3906 ha (now A1 national park).	As described above (see A1).
Barwon Downs	Addition of 318 ha (formerly A1 national park).	As described above (see A1).
Middle Spur block	Exclusion of 905 ha (now A1 national park).	As described above (see A1).
Skenes Creek block	Exclusion of 114 ha (now A1 national park).	As described above (see A1).
Queens Park block	Exclusion of 144 ha (now G4 community use area).	As described above (see A1).
West Lorne	Exclusion of 148 ha (now part A1 national part and part I4 uncommitted public land).	Western part—as described above (see A1). Area closest to Lorne provides an opportunity to rationalise public land boundaries to the west of the township.
North Lorne Parklands	Exclusion of 108 ha (now G4 community use area).	Reflects community concerns and values of the area.
Stream frontages, beds & banks	Exclusion of public land water frontages (now D27 water frontage reserves).	Reflects community concerns and provides for retention of existing licence and management arrangements with the Department of Sustainability and Environment (DSE) and the Catchment Management Authority.

Other Public land		
Nature Conservation Reserves		
C1 Jancourt Nature Conservation Reserve	Firewood collection is to be permitted in western sector (which is currently state forest) during five year phase out period. Specific provision made for continuation of horseriding and other recreation in western sector.	Reflects community concerns and provides for traditional recreational pursuits. Phase out allows time for shifting firewood collection to other sources (such as areas of forest park or private wood lots).
C2 Coradjil Nature Conservation Reserve (new recommendation)	New reserve of 1612 ha (formerly part of A1 Otway Ranges National Park).	As described above (see A1).
C3 Bungador Stony Rises Nature Conservation Reserve (formerly C2)	Addition of 1.2 ha (formerly D2 natural features reserve).	Provides an additional area offering increased protection for the greatly depleted stony rises landform and associated vegetation community.
C4 Marengo Nature Conservation Reserve (formerly C3)	Addition of 2.4 ha (formerly D9 natural features reserve).	Responds to new information on floristic values, provides higher level protection and consolidates remnant vegetation at Marengo into the one reserve.
C5 Edna Bowman Nature Conservation Reserve (formerly C4)	No change.	
Natural Features Reserves		
D1 Latrobe Bushland Reserve (new recommendation)	New reserve of 299 ha (formerly B1 forest park).	As described above (see B1).
D2 Coradjil Bushland Reserve (formerly D1)	No change.	
Former D2 Stony Rises (Bungador) Natural Features Reserve	Deleted (now C3 nature conservation reserve).	As described above (see C3).
D3 - D6	No change.	
D7 Gellibrand Bushland Reserve (new recommendation)	Retain existing reserve, with minor additions (formerly B1 forest park).	Responds to requests not to downgrade existing bushland reserves, and reflects its small size, isolated location and low value for multi-use forest park activities.
Former D7 Gellibrand North Bushland Reserve	Deleted (now G6 rail trail).	Consolidates linear sectors of the Old Beechy railway and adjoining road side area into the rail trail.
D8 Yaughner Bushland Reserve (new recommendation)	Retain existing reserve with minor additions (formerly B1 forest park).	Responds to requests not to downgrade existing bushland reserves, and reflects its small size, isolated location and low value for multi-use forest park activities.
D9 Johanna Falls Scenic Reserve (new recommendation)	Retain existing reserve with minor additions (formerly B1 forest park).	Responds to requests not to downgrade existing reserves, and reflects its small size, isolated location and low value for multi-use forest park activities.
Former D9 Marengo Bushland Reserve	Deleted (now C4 nature conservation reserve).	As described above (see C4).
D10 Aire River Wildlife Reserve (formerly D8)	No change.	

D11 Barham Paradise Scenic Reserve (new recommendation)	Retain half of existing reserve with addition.	Responds to requests not to downgrade existing reserves, while reflecting the values and features of the existing reserve and adjoining areas.
D12 Wild Dog Bushland Reserve (new recommendation)	Upgrade to bushland reserve (formerly B1 forest park).	Reflects values of this small isolated block of remnant vegetation.
D13 Wild Dog Creek Streamside Reserve (new recommendation)	Reverts to streamside reserve (formerly B1 forest park).	Responds to requests not to downgrade existing reserves and reflects values.
D14 - D15 (formerly D10 - D11)	No change.	
D16 Yeo Streamside Reserve (formerly D12)	Note added about commemorating the final journey of Gellibrand.	Responds to information provided in submissions.
D17 (formerly D13)	No change.	
D18 Pennyroyal Creek Bushland Reserve (new recommendation)	Reverts to bushland reserve (formerly B1 forest park).	Responds to requests not to downgrade existing reserves and reflects location and values.
D19 Lily Pond Bushland Reserve (new recommendation)	New reserve of 2.6 ha (formerly part A1 national park and F2 coastal reserve).	Responds to new information on existing management and values.
D20 (formerly D14)	No change.	
D21 Retreat Creek Streamside Reserve (new recommendation)	Upgrade to streamside reserve (formerly B1 forest park).	Responds to new information on existing management and values.
D22-24 (formerly D15-D17)	No change.	
D25 Aireys Inlet Bushland Reserve (formerly D18)	Addition of note about its unsuitability as a recreation ground.	Responds to additional information obtained in response to submissions.
D26 Anglesea Bushland Reserve (new recommendation)	Addition of 8.5 ha (formerly part D19 Elizabeth Street Natural Features Reserve and part F2 coastal reserve).	Consolidates two adjoining blocks of remnant bushland and provides formal protection to these currently unreserved blocks.
D27 Water frontages and stream beds and banks (new recommendation - replacing former D20 recommendation)	New text lists individual reserves, recommends restoration and revegetation programs, and recommends the facilitation of recreational use and access including for fishing. Addition of further existing water frontage reserve (formerly part B1 forest park).	Responds to concerns about the condition of many river frontages and reflects programs now in place. Also as described above (see B1).
Water Production Areas		
E1 - E9	No change.	
E10 Callahan Creek Diversion Weir and Buffer	Addition of 49 ha (formerly B1 forest park).	As described above (see B1).
E11- E15	No change.	
Coastal Reserves		
F1 Apollo Bay Coastal Reserve	Minor boundary changes—including addition of existing coastal reserve west of Marengo and between Wongarra and Carisbrook Falls (formerly A1 national park).	As described above (see A1).
F2 Lorne–Anglesea Coastal Reserve	Minor boundary changes, including addition of the Cumberland River Camping Ground (formerly A1 national park) and deletion of Anglesea cliff top heathlands (now A1 national park).	As described above (see A1).

Community Use Areas		
G1- G2 Education areas	Minor boundary changes.	
G3 Recreation reserves	Minor additions, including area licensed by Aireys Inlet Pony Club (formerly H4 service and utilities). Note regarding potential environmental hazards of former tip sites now used for recreation.	Reflects new information about current use of the site but is subject to environmental testing results.
G4 Parklands and gardens	Additions in Lorne, including Queens Park and the North Lorne Parklands (formerly B1 forest park).	As described above (see B1).
G5 Buildings in public use	Minor additions and deletions.	Responds to new information provided in submissions.
G6 Rail trails	Amendment to note identifying importance of historic features. Deletion of former easement purchased by Barwon Water for a pipeline (now H2 services and utilities).	Reflects historic values as well as recreational values. Responds to new information and reflects primary use of land. However, option to construct a rail trail over the pipeline land retained.
G7	No change.	
Other Land-Use categories		
H1 Gherang Gherang Earth Resources Area (formerly H3)	No change.	
Former H1 Gellibrand Stone Reserve	Deletion (now part of G5 community use area and B1 forest park).	Responds to new information that this is a long disused and worked out quarry, consolidates land with the abutting public land block.
Former H2 Gerangamete Stone Reserve	Deletion (now part of B1 forest park).	Reflects the change in status of the surrounding land (now forest park, formerly proposed national park). Existing use is consistent with forest park without need for a separate reserve.
H2 Service and Utility Areas (formerly H4)	Minor additions, including Moonlight Head cemetery (formerly A1 national park), North Lorne Reservoir (formerly B1 forest park) and Barwon Water future pipeline (formerly G6 rail trail).	Also as described above (see A1, G6).
I1-5 Uncategorised Public Land	Minor additions including land at Little Aire Falls (formerly A1 national park) and at west Lorne (formerly B1 forest park). Individual numbering and wording to identify and explain rationale for each.	Also as described above (see A1, B1).

CHAPTER 1 INTRODUCTION

This Final Report presents the Victorian Environmental Assessment Council's (VEAC's) recommendations for its Angahook-Otway Investigation.

The investigation has involved consideration of the appropriate land-use categories to be applied to the public land of the Otways—the first such investigation in the area since the work of VEAC's predecessor body (the Land Conservation Council) in 1978.

VEAC was asked to undertake the investigation by the Victorian Government in accordance with defined Terms of Reference and under the *VEAC Act 2001*.

Terms of Reference

On 8 September 2002 the then Minister for Environment and Conservation requested VEAC to carry out an investigation relating to Angahook-Lorne State Park to determine the potential for designation as a national park. On 17 February 2003, the Minister for the Environment requested that VEAC expand its investigation in line with amended Terms of Reference (see Figure 1). The Terms of Reference detail the specific matters that VEAC must take into consideration, in addition to general matters described in the *Victorian Environmental Assessment Council Act 2001*.

The study area of the investigation accompanying the terms of reference is shown in Map 1. It encompasses a total area of 337,480 ha, of which some 157,125 ha is public land that is subject to the recommendations of this investigation.

Figure 1 Terms of Reference for Angahook-Otway Investigation

Victorian Environmental Assessment Council Act 2001

Pursuant to section 15 of the *Victorian Environmental Assessment Council Act 2001* (the *VEAC Act*), the Minister for Environment hereby amends the request to the Victorian Environmental Assessment Council made by the former Minister for Environment and Conservation concerning the Angahook-Lorne State Park dated 8 September 2002.

The Victorian Environmental Assessment Council is now requested to carry out an investigation of the public land landward of low watermark within the Otway Ranges area shown on the accompanying plan [see Map 1].

The purpose of the investigation is to determine the boundaries of:

- (a) a single national park in the Otway Ranges including public land extending from Anglesea to Cape Otway, specifying whether or not the Great Ocean Road should be included in the park; and
- (b) any other public land currently managed as State Forest which would be suitable for addition to existing State Parks or nature conservation reserves, or for inclusion in new conservation reserves once native forest logging ceases in the Otways.

The Council is required to prepare a discussion paper and draft proposals paper and to submit a written report on the results of its investigation by 24 November 2004*.

In addition to the considerations specified in section 18 of the *VEAC Act*, the Council must also take into consideration the following matters:

- Victorian Government's policies with regard to logging and woodchipping in the Otways;
- definition of 'national park' used by the former Land Conservation Council and the former Environment Conservation Council;
- objects of the *National Parks Act* with respect to national parks;
- Victorian Coastal Strategy 2002;
- Victorian Government's Great Ocean Road Region Strategy;
- Great Ocean Road Regional Tourism Development Plan;
- Anglesea Heathland Agreement between the Secretary to the Department of Natural Resources and Environment and Alcoa Australia Limited;
- relevant regional catchment strategies.

*Originally 3 September 2004

Map 1. Plan of Angahook-Otway Study Area accompanying the Terms of Reference for the Investigation

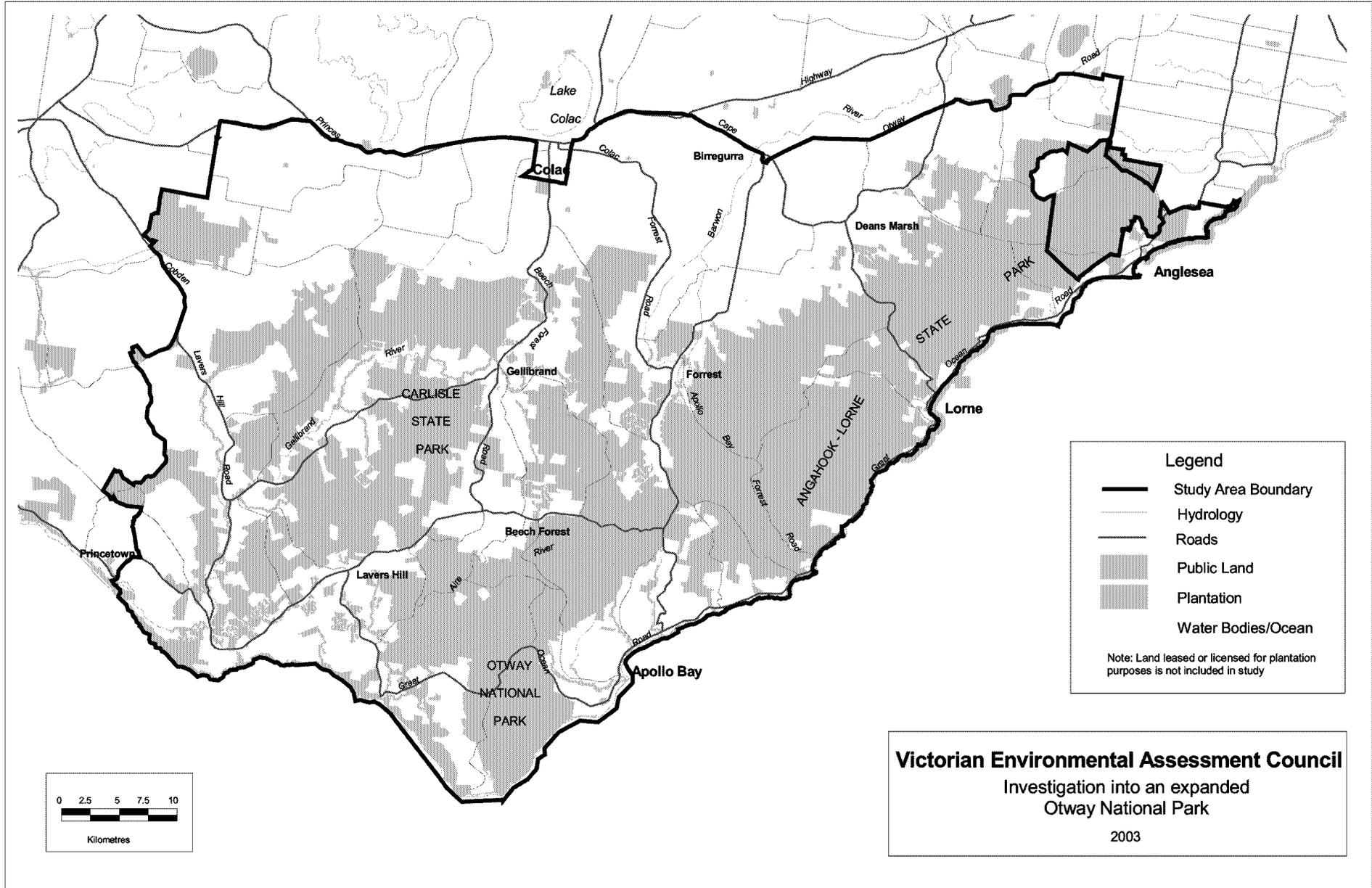
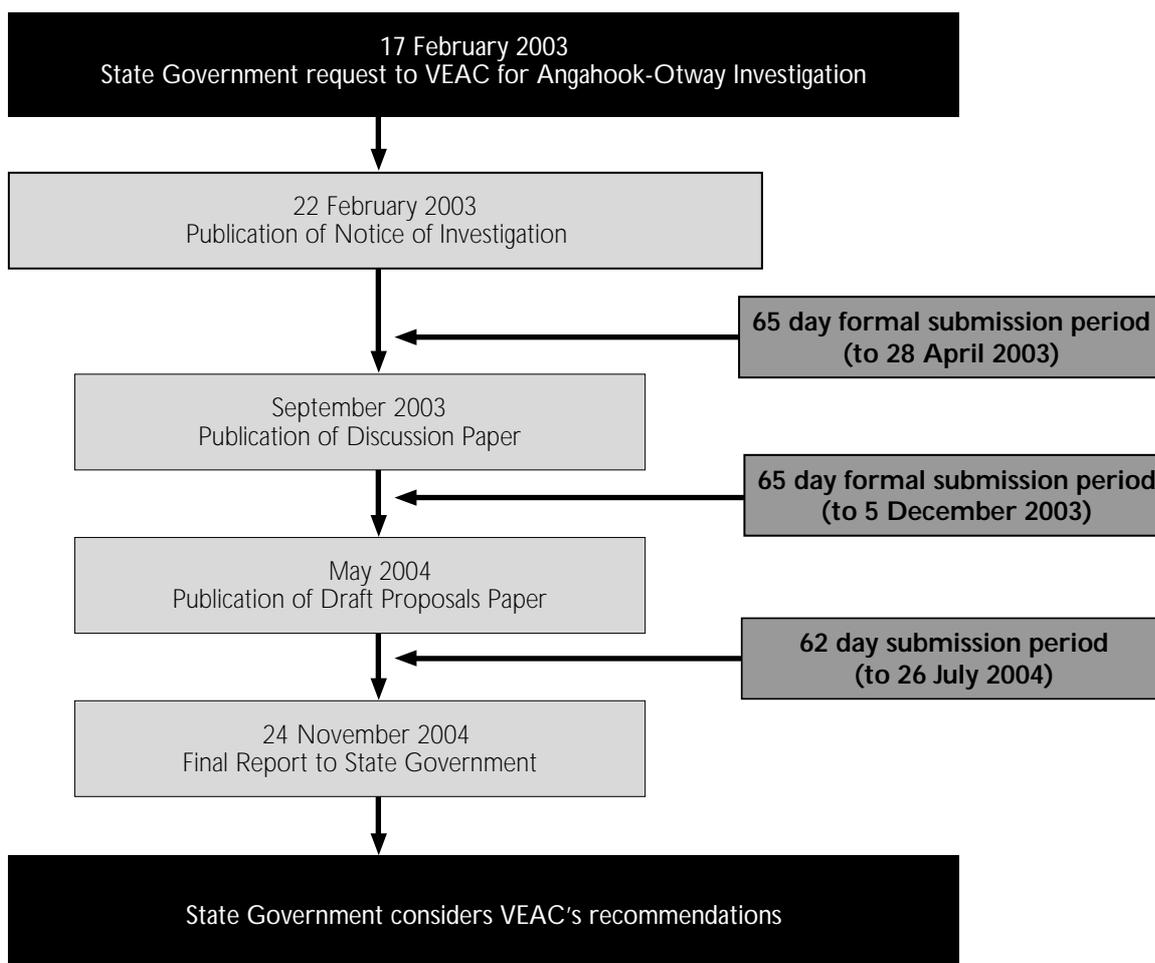


Figure 2 VEAC's Public Consultation Process for the Angahook-Otway Investigation



Investigation Process

The process for the Angahook-Otway Investigation (summarised in Figure 2) is formally specified in the *Victorian Environmental Assessment Council Act 2001* and the Terms of Reference for the investigation. There were four submission periods (each a minimum of 60 days) including an additional period relating to the response to the original terms of reference for the Angahook-Lorne State Park Investigation, which were later amended.

A Notice of Investigation for the Angahook-Otway Investigation was published in statewide daily and weekly newspapers, and local newspapers in or near the investigation area. Some 3000 newsletters were also distributed to publicise the Investigation and encourage submissions.

A Discussion Paper was published in September 2003. At the time of release Council implemented a detailed and thorough communications strategy to foster interest in the investigation and to act as a catalyst for those wishing to make submissions. The strategy involved extensive media advertising, a number of press releases, media interviews and briefings, key stakeholder group and agency briefings, community forums and wide distribution of summary brochures, as well as the Discussion Paper itself.

A Draft Proposals Paper was released in May 2004. The recommendations in this Paper were based on the known values and existing and proposed uses of public land in the Otways as well as information and views received in over 1100 submissions received up to that time. The release of the paper generated a high level of interest in the Investigation as, for the first time, lines on maps were presented for comment. There followed another extensive community consultation program.

The investigation was originally scheduled for completion by 3 September 2004 but with the overwhelming response of 726 submissions following publication of the Draft Proposals Paper, the Minister for the Environment granted VEAC an extension for preparation of the Final Report until 24 November 2004. The extension allowed additional time to thoroughly review the many detailed and wide-ranging issues and different views raised in these submissions.

All those who made submissions at each stage of the investigation were added to a register, which now has approximately 3000 individuals and groups listed. Each of these contacts received mail-outs regarding the progress of the investigation. Copies of this Final Report are available for sale from Information Victoria and at offices of the Department of Sustainability and Environment across the

study area and in Melbourne. A summary brochure is also available from the same locations, and from local Government offices and information centres within and near the investigation area. The Discussion Paper, the Draft Proposals Paper, the Final Report and the related summary brochures can be downloaded from the VEAC website (www.veac.vic.gov.au).

Under the Victorian Environmental Assessment Council Act 2001, the Minister for the Environment is required to table this Final Report in each House of Parliament within seven sitting days of receiving it. The Government then has up to six months to consider the report, and table a statement of its response to the Report no later than the next sitting day after that six month period. The response must specify the action (if any) proposed to be taken by the Government with respect to each recommendation, and be made public within seven days.

Consultation Mechanisms

Public consultation forms an integral part of VEAC's investigations and includes considering written submissions, meeting interested individuals and groups through regional community forums and working with the Community Reference Group established by Council. VEAC has also consulted with other Government agencies and relevant interest groups.



Submissions

Four submission periods have now been completed. Nearly 1900 submissions have been reviewed over the entire investigation and are listed in Appendix 5. These submissions contained an enormous amount of valuable information and contributed substantially to development of the recommendations in the Final Report.

In summary, 471 submissions were received in response to the Notice of Investigation, including 21 submissions responding to what was then the Angahook-Lorne Investigation.

Some 669 submissions were received in response to the Discussion Paper. These submissions and the proposals in them were considered in detail by VEAC in developing the draft recommendations.

The Draft Proposals Paper contained a full set of draft recommendations and generated a great deal of interest with 726 submissions received. Many submissions were very detailed with over 1000 different proposals being raised.

VEAC greatly appreciates the time and effort that the community has put into preparing submissions. The high level of response, increasing as the investigation proceeded, indicates a substantial level of community interest in the investigation especially from within the Otways region and nearby.

Community Forums

A number of widely advertised community forums were arranged across the region following publication of both the Discussion Paper and Draft Proposals Paper. The forums attracted a range of people, representing a broad cross-section of views. The forums provided an opportunity for people to learn about the investigation and raise relevant issues with Councillors and staff. More than 160 people attended the first series of forums which were held in Anglesea, Apollo Bay, Colac, Lavers Hill, Lorne and Geelong in October 2003. Interest was again strong in the eight forums held in June 2004 following publication of the Draft Proposals Paper and over 170 people attended the meetings that included the additional locations of Warrnambool and Melbourne.

Government Contact Group and Community Reference Group

VEAC established a Government Contact Group and a Community Reference Group for the investigation under sections 12 and 13 of the *Victorian Environmental Assessment Council Act 2001*. The Government Contact Group provides technical expertise and liaison assistance between VEAC and Government agencies. The Community Reference Group includes representatives of groups covering a broad range of interests relevant to the investigation and has met regularly to provide advice and input to Council on relevant issues. See Appendix 6 for membership of both groups.

Consultation Outcomes

Submissions Received

All submissions received by Council are available for public inspection at the VEAC office in Melbourne (confidential submissions excepted). The Colac Otway Shire office in Colac and the Surf Coast Shire office in Torquay will hold copies of submissions from the final consultation period following the Draft Proposals Paper until June 2005.

Changes to Recommendations

A detailed analysis of the main proposals in submissions and Council's response to these proposals is provided in Appendix 1. Many proposals present competing or opposing views and values. VEAC cannot satisfy every need or interest but has considered all proposals and made comment in response to the main issues raised in submissions over the entire investigation.

A list of the main changes between the draft and final recommendations is presented above which describes the rationale and decision-making undertaken by VEAC.

Relationship to other Processes

In undertaking the Angahook-Otway Investigation, VEAC has liaised with authorities managing other related government processes including the Great Ocean Road Region Strategy and the Department of Sustainability and Environment's project on public land tourism in the Otways hinterland.

VEAC has taken into account a range of policies and strategies, including the Victorian Government's logging and woodchipping policies in the Otways, the Victorian Coastal Strategy 2002, the Great Ocean Road Regional Tourism Development Plan, the Victorian Biodiversity Strategy and the Anglesea Heathland Agreement between the Secretary to the former Department of Natural Resources and Environment and Alcoa Australia Limited. A number of relevant regional catchment strategies and various local government planning documents have also been taken into consideration.

External Consultancies

VEAC engaged one external consultancy as part of the Draft Proposals Paper stage of the Investigation. The consultant undertook socio-economic background work and a formal assessment of the implications of Council's draft recommendations.

For preparation of the Final Report, one external consultant facilitated and coordinated a response from representatives of the Indigenous community of the Otways to the Draft Proposals Paper (see Appendix 3). Another assessed the socio-economic impacts of the final recommendations and this report is presented in Appendix 4.

Outline of the Final Report

This Final Report is in three parts.

Part 1 – VEAC's Recommendations

Details Council's recommendations for the Angahook-Otway Investigation.

Part 2 – Issues

Discusses the main issues raised during the consultation program and provides a context to the final recommendations.

Part 3 – Implications

Describes the potential socio-economic and environmental effects of the recommendations.

VEAC's General Approach

In the Angahook-Otway Discussion Paper, VEAC offered the following vision as a reference point for its investigation of public land in the Otways.

The public land of the Otways will become an inspiring example of sustainable and integrated land use and deliver enhanced environmental and socio-economic outcomes. Its core will be a new 'single national park' of magnificent forests and beautiful landscapes, which will permanently protect and conserve the full range of ecosystems and biodiversity in the Otway Ranges. Together with the Great Ocean Road, the park will be a focus for tourists and involve the local and wider community. The role and importance of other areas of natural vegetation for biodiversity, soil and water conservation and local landscape amenity will be recognised, and opportunities provided for recreational pursuits reliant upon, or enhanced by, natural environments. Other services and goods that can only be, or are best sourced, from the public lands of the study area will be provided for in a sustainable manner.

In Council's opinion, many of the general views and specific proposals suggested in submissions were by and large consistent with and/or reflected this vision.

Similarly, the general approach taken by VEAC in responding to the Terms of Reference and the submissions also reflects this vision.



PART 1
RECOMMENDATIONS

CHAPTER 2 THE OTWAYS: GENERAL RECOMMENDATIONS

This chapter provides general recommendations to facilitate an integrated management approach to the protection of natural values and features across the public land of the Otway region, including the sustainable development of recreational and tourist potential, provision of adequate resources and enhanced community involvement.

VEAC recommends the creation of an integrated management framework to respond to the distinctive environment of the Otways and ensure a consistent approach to land management and protection of natural values across the region. This will enable the region's tourism potential to be developed and marketed in an integrated and sustainable manner; as well as providing certainty and consistency in approach for adjoining land owners and other stakeholders. Such a management regime provides an overall context for the two main land-use categories that have been recommended by VEAC—the national park and forest park as outlined in Chapters 3 and 4.

A Distinctive Environment

The lands in and around the Otway Ranges form a distinctive and significant environment. The Otways are an island range—isolated for over a million years from similar mountain ranges in Victoria and Tasmania. The ranges rise above the surrounding inland plains and the ocean and provide habitat for endemic plants and animals found nowhere else. The rich soils and high rainfall of the Otways have produced some of the most dense forests in southern Australia including extensive rainforests and towering eucalypt forests, comprising the world's tallest flowering plant, mountain ash.

Three major rivers rise in the Otways—the Aire, the Gellibrand and the Barwon—each sustained by regular and substantial rainfall. A major proportion of Victoria's waterfalls are found here, most on short, fast-flowing streams that, as a result of uplifting and faulting over millennia, plunge through steep narrow valleys to Bass Strait. The highest rainfalls in the State are recorded in the Otways, as are some of the highest average wind speeds.

For thousands of years Aboriginal people have lived with and used the land of the Otways, with a particular presence near the rich resources of the lakes, rivers, estuaries, coastal environment and inland plains.

Prehistoric fire regimes within the Otways forests were mostly intense late summer fires following lightning storms. Current fire management regimes attempt to moderate these wildfires, with controlled burns for the protection of towns and assets, and ecological burns to mimic natural events, combined with a policy of rapidly suppressing all wildfires.

Roads have been put through the forests, with barely an unroaded ridge remaining in the Otways. The Great Ocean Road was pushed through previously undisturbed mountain slopes and settlements are spread throughout the forests, behind sandy embayments, and on estuaries.

Over half the Otways are in private ownership, much of which is cleared farmland. The majority of public land has been extensively used for timber harvesting. Sand, gravel and rock have been quarried, and riparian environments have been cleared and grazed. While forests are still widespread, the landscape is also defined by areas devoted to grazing, dairying, fishing, small business, coal mining, urban settlements and tourism.

While the Otways do not meet nationally accepted definitions of wilderness, as characterised by large remote essentially unmodified areas, they remain a fascinating mosaic of natural and cultural environments. Small remote valleys, pockets of little-disturbed tall trees and rare and threatened species remain, with the scenic grandeur of the Otways coastline, the more accessible waterfalls, and the Great Ocean Road now attracting visitors from all over the world.

A New Approach to Public Land Use

By the 1880s and 1890s most of the Otways had been sold or made available for sale for farming. Early in the 20th century the forests were reserved for water supply and timber. After World War Two, the forests again came under



pressure with increased demand for timber and new timber cutting technology. Many species have had their distribution significantly reduced and some have become locally extinct. Timber plantations have been developed on previously cleared lands and, most recently, the Government has decided to phase out logging and woodchipping. The boundaries of the existing land-use categories have not changed significantly since the Land Conservation Council assessed the area over 25 years ago.

Community needs and expectations of public land vary over time and between different sectors of the community. Some needs and expectations are fully or partly compatible with each other while others are incompatible. The inherent values of the natural environment also vary. Some parts of the Otways are especially significant, while other areas have lower natural values. Some parts are quite robust, while others are sensitive to even minor changes in the intensity or type of use. In addition to its significance for particular uses, public land also plays a vital role in meeting broader objectives that operate across entire landscapes and are important to the whole community.

VEAC does not consider that the status quo is adequate to address the expectations and issues facing the Otways today, let alone the future. Many of these expectations and issues can be of great importance but are often large, complex, and inherently difficult to manage or resolve.

VEAC's view is that the allocation of public land into a great variety of land-use categories with different managers and distinctive management regimes is not the best way forward—rather, that public land should, as far as possible, be managed in an inclusive manner that is clear to all stakeholders. It has recommended that the greater majority of public lands in the Otways be allocated to two land-use categories both of which have the protection of biodiversity, natural landscapes and water supply as key management objectives, but each providing for a distinct suite of uses reflecting potentially conflicting community demands. It is recommended that both categories be managed in an integrated manner.

While VEAC cannot make recommendations for private land, it is important that programs on public land are coordinated with related programs on adjoining private land to maximise their effectiveness.

VEAC considers that such an integrated management approach will provide consistent and sustainable natural resource management and protection of the very special natural and tourist features on public land across the region.

The Management Rationale

A number of the management issues affecting the Otways demand a regional approach, including:

- maintenance of natural landscapes, soil stability, water quality and yield;
- conservation of biodiversity, especially threatened flora and fauna;

- control of pest plants and animals and disease pathogens;
- fire management, including ecological burning and protection of settlements;
- development, maintenance and servicing of recreational and other infrastructure on public land, including fencing, signage and vehicular tracks;
- enhancement of the region's tourism potential;
- maintenance and enhancement of the scenic amenity of the Great Ocean Road and other main roads that traverse the Otway Ranges; and
- acknowledgment of the role of private land.

Natural Landscapes

Natural landscapes function on a regional as well as local scale. The creation of roads, development of facilities, installation of services and utilities can, and do, visually and physically affect distant areas. The maintenance of regional landscapes thus requires that local management decisions be undertaken in a regional context. Similarly the management of river systems demands a broad-scale response, with maintenance of their cultural, biological, recreational and landscape values being reliant on appropriate use and management of adjoining lands. Less-disturbed landscapes on public land also provide a reference point for the management and restoration of similar land types modified elsewhere.

Soil and Land Stability

While much of the Otways is naturally stable, there are extensive areas susceptible to sheet and gully erosion. There are also significant areas subject to mass movement such as rock-slides, landslips, slumps and earth flows. Mass movement is aggravated where the Great Ocean Road cuts across steep geological bedding planes or the toe of existing landslips.

Along the coast there is major undercutting and collapse of cliffs rising in some places 100 metres above the sea. Coastal dunes are naturally dynamic and sea cliffs are subject to active erosion, which may conflict with the maintenance of permanent structures such as coastal roads.

While the soils in the Otway Ranges are generally deep and fertile, there are some areas of acid soils with nutrient and structure decline. Such forms of deterioration are aggravated by the modification of vegetation and soil and affect the natural hydrological balance, especially where such disturbance occurs on steep slopes.

Such common features underscore the logic of gathering and disseminating knowledge about land systems, land capability and soil erosion hazards on a regional basis to all land managers.

Water Quality and Yield

The surface waters of the Otways, and the groundwater aquifers fed by the Otways, have a key role in the maintenance of in-stream and riparian ecosystems both within and beyond the region. They also provide water vital for the residential and industrial development of Victoria's second largest city, Geelong, and the largest coastal city in western Victoria, Warrnambool. Notwithstanding the vital role that public land has for water supply, the catchments above many water offtakes include freehold lands subject to an array of land uses. Defining environmental flows, allocating bulk entitlements to water authorities and managing in-stream biodiversity occurs on a catchment basis irrespective of land-use category. Whole of catchment planning is thus important.

Biodiversity Conservation

While national parks and nature conservation reserves provide the core of biodiversity protection, remnant native vegetation across all land types has an important contribution to make. The survival of many species of threatened fauna depends on landscape-scale programs. For example, spot-tailed quoll and powerful owl (see Appendix 2 for scientific names of all species in this Report) distribution is more directly related to the extent of suitable habitat and predation or competition (particularly from foxes) than land-use categories as such. Consequently, regional programs of protection and monitoring are required if meaningful contributions are to be made to biodiversity conservation.

Control of Pest Species

Pest plants and animals do not recognise land-use category boundaries. Blackberries and foxes occur on both public and private land in the Otways. Cooperative arrangements between public land managers and adjacent landholders are critical for successful control programs.

Local programs are currently undertaken within the context of statewide and regional strategies. However, the setting of priorities and targeting of funding programs would be facilitated further by regional approaches where land managers act in concert. The ability to seek and attract research funding may also be improved. A regional approach to the control of pest species on public land will also facilitate the fostering of partnerships between the Department of Sustainability and Environment (DSE) and Landcare groups, the Corangamite Catchment Management Authority and other community groups.

The containment of pathogens such as cinnamon fungus requires both a localised and regional approach.

Fire Management

Wildfire is a serious potential hazard in the Otway forests. Although many of the forests are located in a damp environment with a relatively low risk for most of the year, they also have the capacity to burn with the utmost ferocity under certain conditions. Many townships lie within or close to forest and are therefore vulnerable to uncontrolled fires.

Adverse effects of fire on biodiversity can include the local extinction of particular species and reduced abundance of habitat features such as fallen timber, dead standing trees and hollow-bearing trees. In the long term however, as with almost all eucalypt forests, fire is an important element in forest ecology.

Fragmentation of the public land estate, together with the extensive existing road network means that the forests are relatively accessible for fire-fighting compared to similar forest types in eastern Victoria. While major fires are infrequent in the wetter forests, they are relatively frequent in the drier forest. In particular, the 1983 Ash Wednesday fires in the Otways, in which three lives were lost and 800 homes were destroyed, highlight the necessity for adequate fire prevention and suppression measures on all public land.

Fire prevention and suppression on public land of all categories is the responsibility of DSE. Fire management planning, works and operations are currently undertaken on both a statewide and regional basis. Parks Victoria, committees of management, the Country Fire Authority, private plantation owners and other relevant agencies or groups have a vital role to play in fire management planning.

Recreational Infrastructure

Many recreational activities rely on the development, maintenance and servicing of infrastructure. Such infrastructure may be fundamental to activity, such as constructed roads providing vehicular access through the forests and to features of interest. Other infrastructure is less critical but may nonetheless facilitate or enhance recreational activity. Such infrastructure would include hang gliding launching sites, signage and picnic facilities. A regional approach enables linking routes to be developed, providing a diversity of experience without compromising the special values of particular localities by spreading visitor pressure and directing people to suitable areas where resources can be most effectively applied.

Capitalising on the Region's Tourism Potential

The Otways lie in the Geelong Otway and Shipwreck Coast tourist regions, with the Great Ocean Road being an internationally-recognised tourist feature. The region is already one of the key tourist destinations in Victoria and much work is being undertaken to provide directions for further growth—including the Great Ocean Road Region Strategy, the draft Great Ocean Road Regional Tourism Development Plan and various regional and municipal tourism plans and strategies.

The natural landscapes and features of the Otways are key factors in the appeal of the region for tourists. Tourism experiences—such as scenic drives and short walks—are highly dependent on appropriate public land management. Recent studies indicate that the management and promotion of natural features of the hinterland areas will be important in meeting desired tourism outcomes, such as an expanded range of tourism products, increased length of stay and increased quality of experience.

DSE is currently preparing a tourism plan for public land in the Otway Hinterland area and the recommended Otway Ranges National Park and Otway Forest Park will provide a greater focus for such consolidated planning.

Scenic Amenity of the Great Ocean Road and other Main Roads

The Great Ocean Road offers an internationally acclaimed scenic journey. Its particular attraction lies in those sections of road providing views of a spectacular coastline on the edge of steep forested slopes, interspersed with pockets of open farmland and small settlements.

Hinterland roads such as the Winchelsea–Deans Marsh–Lorne Road, the Birregurra–Forrest–Apollo Bay Road and the Colac–Lavers Hill Road serve as important through roads but also offer highly scenic routes through the forests of the Otway Ranges. Other routes, such as the Grey River Road, Turtons Track and Mt Sabine Road linking to Erskine Falls Road are being promoted as touring routes to support dispersal of visitors to the Otways hinterland.

Such road networks necessarily operate on a regional scale and require a consistency of approach, whilst reflecting and responding to the sensitivities of the lands through which they pass.

Private Land in the Otways

Because just over half (52 percent) of the Otways study area is private land, many objectives which contribute to achieving balanced public land use, such as reversing biodiversity loss or increasing the value of timber production, are more likely to be achieved if supported by sympathetic management of private land. Many private landholders are already implementing management practices that make a significant contribution to achieving these objectives.

While VEAC cannot make recommendations applying directly to private land, it would be remiss not to acknowledge and support initiatives that foster sympathetic management of private land. Government can and does play a pivotal role in nurturing cooperative programs across a variety of land tenures and involving a diverse range of landholders and other stakeholders, in particular improving

communication and coordination between the stakeholders. In recent years, cooperative approaches such as management agreements and Good Neighbour programs have demonstrated the valuable role to be played by Government and landholders.

Approximately 12 percent (around 20,000 ha) of native vegetation in the Otways is found on private land. Often this freehold bush has characteristics that are rare on public land, making it particularly important for biodiversity conservation. For example, all but 20 ha of the 2106 ha of the stony rises woodland Ecological Vegetation Class (EVC) remaining in the study area is on private land (that is, over 99 percent).

Accordingly, the protection and restoration of native vegetation on private land across the region and programs such as Bushcare and Land for Wildlife are important components of biodiversity conservation. Effective programs to facilitate cooperation of landholders in retaining, protecting and restoring remnant native vegetation should continue to be funded.

Private land in the Otways can support existing native vegetation, indigenous revegetation, plantations and farm forestry woodlots (indigenous species or otherwise). These activities can provide alternative sources for wood products, habitat, and/or land care benefits. In recent years, commercial plantations have been established over large areas of Victoria, including many parts of the study area. Planting for indigenous revegetation, plantations, and farm forestry enterprises should be encouraged through new and existing programs and VEAC strongly supports the continuation of Government programs that encourage such activities.

Recommended Land Use

VEAC is recommending that all public lands of the Otways be managed in a coordinated manner to provide a range of community benefits, including conservation of biodiversity, recreation and tourism activity, and water supply while providing for limited resource utilisation, and to complement the opportunities available on freehold lands. To this end it has recommended that the majority of public land be allocated to two main units, to be known as Otway Ranges National Park and Otway Forest Park.



GENERAL LAND-USE RECOMMENDATIONS

RI: PUBLIC LAND-USE

That:

- (a) the public lands of the Otways be generally allocated to two main land-use categories, to be known as:
 - (i) the Otway Ranges National Park (see Chapter 3, Recommendation A1); and
 - (ii) the Otway Forest Park (see Chapter 4, Recommendation B1);
- (b) the Great Ocean Road not be included within the Otway Ranges National Park; and
- (c) existing management coordination mechanisms be retained and where necessary improved or supplemented, and opportunities for community involvement enhanced (see also Recommendations R10-11 below and Recommendation A2).

- Notes:
1. Smaller more isolated areas with particular values or functions have been recommended to be retained or created as separate reserves - see Chapter 5.
 2. Existing management coordination mechanisms include the Great Ocean Road Region Strategy, regional catchment management strategies, regional fire plans, regional tourism plans, and the Great Ocean Road Roadside Management Plan.

Statutory Land-use Overlays

A number of statutory land-use overlays are available and have been applied in the past across the public land of the Otways. It is envisaged that these mechanisms would continue to apply to relevant areas. They apply in addition to the main underlying land-use category.

Declared Water Supply Catchments

Public land within the declared water supply catchments of the Otways, has been mostly included within either the Otway Ranges National Park or Otway Forest Park. This designation alerts planners, landowners, managers and the wider community to the importance of the area for water supply. Special area plans provide detailed prescriptions for appropriate use to ensure that harvested water meets accepted community standards. Three declared water supply catchments are no longer harvested, and the catchment of one area proposed for water harvesting is not declared.

Reference Areas

Reference areas are relatively small sections of public land, containing viable samples of one or more relatively undisturbed land types, reserved in perpetuity. Such areas are set aside to maintain natural systems as a scientific reference to enable comparative study of modified and unmodified environments. Reference areas may be applied over any land-use category, including, but not restricted to national parks and nature conservation reserves.

Seven existing reference areas within the study area provide samples of most, but not all, land types within the Otways region. Three additional reference areas are recommended.

Heritage Rivers

Victoria's heritage river system was established to identify and protect those rivers with outstanding values for current and future generations. Part of the corridor of the Aire Heritage River, the only designated heritage river within the Otways, was previously reduced to accommodate timber harvesting. Council recommends that the width of the scheduled corridor be extended to form a consistent width.



LAND-USE OVERLAY RECOMMENDATIONS

R2: DECLARED WATER SUPPLY CATCHMENTS

That:

- (a) if the proposed relocation of the Apollo Bay water supply off-take to downstream of the confluence of the west and east branches of the Barham River proceeds, the whole catchment of the Barham River be considered for listing on Schedule 5 of the *Catchment and Land Protection Act 1994* as a declared water supply catchment;
- (b) declarations of the following water supply catchments which are no longer used for water production be revoked and removed from Schedule 5 of the *Catchment and Land Protection Act 1994*:
 - (i) Erskine River (a sub-catchment of the Lorne declared water supply catchment);
 - (ii) Gosling Creek (a sub-catchment of the Pennyroyal, Matthews and Gosling Creeks declared water supply catchment); and
 - (iii) Skenes Creek;
- (c) special area plans be prepared under the *Catchment and Land Protection Act 1994* for all declared water supply catchments in the Otways used for water production and, once approved, incorporated into management plans and planning schemes.

Note: Special area plans have not been prepared for the following declared water supply catchments: Barwon Downs Wellfield Intake Area, Lorne (St Georges River) and Pennyroyal and Matthews Creeks.

R3: REFERENCE AREAS

That:

- (a) existing proclaimed reference areas be retained and continue to be managed under the auspices of the *Reference Areas Act 1978*;
- (b) the following area totalling 977.6 ha, indicated on Map A, be used as reference areas and proclaimed under the *Reference Areas Act 1978* and managed by the Department of Sustainability and Environment:
 - (i) Porcupine Creek (particularly representing wet heath and sedgy riparian woodland ecological vegetation classes);
 - (ii) Aquila Creek (particularly representing herb-rich foothill forest/shrubby foothill forest and shrubby wet forest ecological vegetation classes); and
 - (iii) Painkalac Creek (particularly representing shrubby foothill forest, and shrubby dry forest ecological vegetation classes).

R4: HERITAGE RIVERS

That:

- (a) the Aire River Heritage River be retained and, together with a 100 metre wide addition on either side of the existing heritage river between the Aire River Gorge and public land plantations vested in the Victorian Plantation Corporation as indicated on Map A, continue to be managed under the *Heritage Rivers Act 1992*.

Notes:

1. VEAC notes that a management plan has not been approved for this river, nor indeed for any Victorian heritage river, despite this being a statutory requirement.
2. The aim of the 100 metre wide addition is to create a consistent 200 metre width through the recommended Otway Ranges National Park.

Roads

The Great Ocean Road

The Great Ocean Road extends from Torquay to Warrnambool and, where it traverses public land, is mostly within a road reserve of varying width. While key sections of the Great Ocean Road traverse public lands of high nature conservation and scenic value, extensive sections are within townships and pass through farmland.

Parts of the road reserve carry remnant native vegetation and road works can have a significant effect on landscape values on both a local and regional scale. Because the road passes through areas of great structural instability, road maintenance costs are high and, in the past, sections of the road have been closed to enable major repair works to be undertaken. VicRoads is responsible for the road and maintains it in accordance with a regional roadside code of practice and the Great Ocean Road Roadside Management Plan.

As well as being an internationally recognised tourist road, the Great Ocean Road serves as an essential transport route for local businesses, residents and holiday makers. Although sections of the road are already over-capacity at times, there is an on-going steady increase in use. The Great Ocean Road Region Integrated Access Study noted, for instance, that the acceptable level of service of the Great Ocean Road between Torquay and Anglesea was an average 10,000 vehicles per day—the present average is 12,000 vehicles per day, with 13,000 at Easter and 26,000 during Christmas peaks.

Further discussion of the issues informing VEAC's recommendation for the Great Ocean Road is included in Chapter 11 Roads.

Hinterland Roads

Recent planning studies, such as the Great Ocean Road Region Strategy, have looked at options to encourage as much traffic as possible to utilise hinterland routes rather than the Great Ocean Road itself. The strategy proposes that the Winchelsea–Deans Marsh–Lorne Road, the Birregurra–Forrest–Apollo Bay Road and the Colac–Lavers Hill Road be further developed and promoted as alternative routes. All of these roads pass (to a significant degree) through the Otway Ranges National Park or Otway Forest Park. While road development is outside VEAC's charter, the Council supports the general thrust of the strategy. Council notes that these alternative roads traverse steep mountain forests in areas susceptible to erosion and that they are scenic roads in their own right in areas of high landscape quality.

VEAC acknowledges that upgrading of these inland routes to redirect traffic from the Great Ocean Road may in some cases require compromise with the values of the land through which these roads pass (including the Otway Ranges National Park in some areas).

Management Approach and Principles

VEAC considers that the primary management objective of the Great Ocean Road and alternative routes is their maintenance as both key tourist roads and also as through roads catering for local business and residents. Accordingly the roads should be contained within defined road reserves and be managed by an agency whose primary function and expertise is to manage roads. While these roads are key access routes into the park, they are not envisaged to ever be primarily park access roads. VEAC does not believe that incorporating sections of the Great Ocean Road, nor other main roads, within the national park would result in significant benefits and is likely to result in disadvantages due to confusion as to who is responsible for aspects of the road management.



Nonetheless Council believes that where these roads traverse the natural environments of the Otways, such road reserves should be of the minimal width for operational and safety needs and managed in a manner that reflects the natural landscapes of the road. Council has developed a series of principles for the complementary management of the Great Ocean Road—and other relevant declared arterial roads and municipal roads—with the Otway Ranges National Park and Otway Forest Park:

- the scenic character and natural values of the road and surrounds require the highest possible level of protection;
- the tourism value of the road is internationally significant and must be protected;
- the road is currently, and will continue to be, important for local residents, holiday-makers and businesses and the ability of the road to continue to cater for these users must be protected;
- a high standard of safety and amenity is required and should continue—encompassing road maintenance, appropriate speed limits, provision of turning lanes to main roads and park access roads, and improvement of turn out points to lookouts or other attractions;

- consistent signage is important to indicate primary tourist routes and features, alternative inland routes and warn of hazardous areas;
- the natural values of adjoining park areas must be respected—road impacts should, where possible, be contained within the road reserve;
- where an existing road formation does not correspond to a road reservation, the road reservation should be amended or created;
- road reserves should be of a width—generally not exceeding 20 metres—necessary to encompass the roadway, including any turning lanes, the road shoulder (whether or not constructed or sealed), and any associated pathway or ancillary area (such as a rest stop or scenic lookout).

While formerly a declared tourist road, the Great Ocean Road is now declared as an arterial road under the recently proclaimed *Road Management Act 2004*. VEAC considers it important that its tourist function be specifically recognised.

ROAD RECOMMENDATIONS

R5: GREAT OCEAN ROAD AND OTHER KEY ROADS

That:

- (a) the Great Ocean Road be managed principally as a tourist road, whilst also servicing an arterial road function;
- (b) where the Great Ocean Road or other declared arterial road, or a declared municipal road, passes through or adjoins the recommended Otway Ranges National Park or other public lands, it remain or be included within a defined road reserve (thereby excluding the road from the adjoining park or reserve);
- (c) where a road reserve is created in accordance with (b) above that, other than where the road is within a township, the road reserve be generally no greater than 20 metres in width;
- (d) where works are necessary on adjoining public land outside the road reserve to maintain the stability of the road pavement, such works be permitted subject to the consent of the land manager and in accordance with any conditions that the land manager may determine; and
- (e) roadside management plans be prepared by the responsible road authority in consultation with the adjoining land manager, to define roadside management goals, outline management prescriptions and apply relevant codes of practice.

- Notes:
1. Arterial roads include roads formerly known as declared tourist roads and declared main roads. They are managed by the State level road authority, VicRoads. The Great Ocean Road is a declared arterial road.
 2. If it is not possible to precisely define these road reserves prior to the scheduling of the national park, VEAC suggests that a process be established that will enable the formal delineation of the road reserve to be subsequently defined.
 3. Where a realignment of a road is required outside a road reserve, this would entail revision of the road reserve boundary and consequential adjustment to the adjoining park boundary. Such realignments may require formal environmental assessment.
 4. Section 27 of the *National Parks Act 1975* provides for a public authority to exercise its functions and powers within a park subject to consent and any conditions that may be determined.
 5. Recommendation A2 also covers various matters associated with the Great Ocean Road and the management of other roads that traverse the Otway Ranges National Park.

Implementation

Enhancing Public Land Management

Throughout the consultation process of the Angahook-Otway Investigation, submissions, briefings and meetings frequently raised the perceived need for more expenditure on public land management. Management issues included pest animal and weed control, fire protection, presence of rangers, the provision and servicing of recreation facilities and track maintenance.

In VEAC's view, these concerns arise from genuine public observations about what is required and that there is a real need for additional resources. The application of additional resources needs to be targeted to priority areas identified on a regional basis across all land-use categories.

Resources for Implementation

VEAC stresses the importance of appropriate resources being allocated for the implementation of these recommendations. Additional resources will be required to identify boundaries precisely, for signage, for education programs and for the establishment or upgrading of basic facilities to reflect the new management objectives.

Resources will also be required to ensure that management planning for the Otway Ranges National Park and the Otways Forest Park is undertaken in a timely and inclusive manner.

Adjustment Issues

VEAC's recommendations have been designed to provide for a net benefit for all Victorians. Where individuals, businesses or particular communities are disproportionately affected, it is appropriate for the wider community, through the Government, to assist in overcoming adverse impacts.

Environmental Management Systems

Council believes that managers should develop and pursue processes that will further improve Ecologically Sustainable Development (ESD) outcomes—that is, processes to facilitate decision-making which increases equity, improves welfare and well-being, and protects and maintains biodiversity and ecological processes.

At an operational level, ESD decision-making frameworks are typically in the form of an environmental management system. Such systems provide for continuous review and feedback. Monitoring current activities may identify new management needs. New information and discoveries will feed into the appropriate management of the forests. VEAC encourages land managers to continue such adaptive management programs and develop and apply targeted new research and monitoring programs where appropriate.

IMPLEMENTATION RECOMMENDATIONS

R6: IMPLEMENTATION RESOURCES

That the Government allocate adequate resources for implementation of the recommendations of the Final Report to ensure that the objectives of the report and recommendations are achieved.

R7: LAND MANAGEMENT RESOURCES

That the Government allocates additional resources to address the current and future public land management needs across the region, with priority given to fire protection, pest plant and animal control, track maintenance, on-ground presence, and provision and servicing of recreation and tourist facilities.

R8: ASSISTANCE

That where individuals or local communities are directly or adversely affected as a result of the implementation of approved final recommendations in this report, Government establishes a process to evaluate mechanisms and levels of assistance that may be required.

R9: INTERIM MANAGEMENT AND MINOR BOUNDARY ADJUSTMENTS

That, upon Government approval of VEAC recommendations:

- (a) relevant land be managed in accordance with those recommendations; and
- (b) subsequent implementation of recommendations and land management allow flexibility for minor boundary adjustments.

Enhanced and Coordinated Management Planning

VEAC recommends that the principles and integrated management approach across land-use categories be put into place through formal coordination arrangements being established between land managers, water authorities, road authorities and local government.

Building on existing mechanisms will be emphasised, although new mechanisms will need to be established for setting region-wide priorities and to implement continuous review and improvement processes for coordinated programs. Most obviously, the preparation of management plans for Otway Ranges National Park and Otway Forest Park should be undertaken in a coordinated manner. The establishment of advisory committees will also assist.

Ongoing Community Involvement

Education and Awareness

Awareness raising, promotion, interpretation and education are important for maximising ESD outcomes. Such activities could include materials or services provided at feature sites, posters, books, displays, field days and talks. The creation of networks between managers and local communities, and provision of opportunities for involvement in park planning and management are also important for improving ESD outcomes within the Otways. VEAC encourages the Government to support measures to increase awareness, appreciation, education, interpretation and promotion of all aspects of the Otways region.

Community Consultation

Public consultation undertaken by VEAC clearly identified the importance and value that communities place on providing input into public land management, particularly in relation to involvement of Indigenous communities, and in the provision of access for recreation. It is desirable that formal opportunities be created for community input into public land management in the Otways.

Community needs and expectations are diverse and tend to change over time. As such public land management needs to be informed and to respond appropriately. Accordingly, VEAC recommends the establishment of advisory committees to help guide management decision-making throughout the Otways. Advisory committees could assist in the implementation, detailed management planning (when management plans are developed), and ongoing management following Government acceptance of VEAC's recommendations. As a result, the form of the committees may change over time and it may be appropriate for there to be more than one committee at various times—there could be several regional or issue-based committees, for instance. It is beyond VEAC's brief to specify such details, however, the establishment of formal committees should not exclude existing or new ad hoc committees or other consultation mechanisms as appropriate.

Issues that may be dealt with by advisory committees include track access, pest plant and animal control and strategic recreational management. Committees would not review land-use category boundaries, previous land manager decisions based on legislative responsibilities, or management objectives of land-use categories. Instead, they would provide the opportunity for communities, interest and user groups to contribute to the management of public land.

Membership of the advisory committees would include—but not be limited to—representatives of the Indigenous community, environment and recreational user groups, relevant industry representatives, and local communities. Committee members would act as lines of communication both to and from their respective constituencies, thereby ensuring that communities, interest and user groups are represented and that there is increased awareness of actions taken by the land manager to address land management issues.

In addition to the recommended advisory committee, opportunities for the involvement of Indigenous communities in public land management are discussed in Chapter 10 and Appendix 3, and are the subject of Recommendation R12.

Involvement of Aboriginal Communities

The special relationship Aboriginal people have with their land transcends an interest in a particular area or site. The relationship intertwines spiritual, ecological and economic connections with land and water and is reflected in the desire by Aboriginal communities for greater involvement in land and water management. The integrated management framework across the major public land categories aids in the development of effective relationships and consultation protocols with traditional owners, as well as providing a consistent approach to the involvement of Aboriginal communities in land and water management in the Otways.

Key issues for the Aboriginal community in land and water management include: recognition and respect for the indigenous connection to country; involvement in resource management; effective consultation; protection of cultural sites and places; addressing of cultural requirements; and economic opportunities.

VEAC notes that native title may exist in regard to the study area and that Aboriginal people are concerned to ensure that these rights are not inadvertently extinguished or impaired as a result of their own actions or actions by Government agencies. In view of these concerns, VEAC stresses that nothing in these recommendations should be taken to prejudice or diminish any native title rights to land, water and resources.

RECOMMENDATIONS

RI 0: COORDINATED MANAGEMENT PLANNING

That:

- (a) management plans be prepared for the Otway Ranges National Park and Otway Forest Park within three years of the acceptance of these recommendations; and
- (b) management plans for the Otway Ranges National Park and the Otways Forest Park be prepared as part of a single coordinated process.

Note: Other VEAC recommendations promoting coordinated management planning include Recommendations R2 and RI 1 (this chapter) and Recommendation A2 (Chapter 3).

RI 1: ADVISORY COMMITTEES

That an advisory committee or committees, representing community needs and expectations, be established to provide input into decision-making within the Otways public land management framework.

RI 2: ENHANCING ABORIGINAL INVOLVEMENT

That:

- (a) planning and management relating to traditional interests and uses acknowledge the unique relationship of Aboriginal people with country and be based on recognition and respect for the traditional and contemporary relationship of Aboriginal peoples with the land.
- (b) prior to implementation of VEAC recommendations for the parks and reserves, and changes in public land management, Government consult with traditional owners and Aboriginal groups regarding their native title rights and interests.
- (c) Government, in consultation with traditional owners and Aboriginal groups, investigate and report on a preferred model for joint management structures and arrangements between Government, and traditional owners and Aboriginal groups with regard to public land, water and resources in the Angahook-Otway study area, within 12 months of responding to these recommendations.
- (d) Government, in consultation with traditional owners and Aboriginal groups, establish mechanisms to improve indigenous participation in land and water management including:
 - (i) development of principles and protocols to improve the policy and planning processes of public land and water management agencies and the representation and participation of Aboriginal peoples in these processes;
 - (ii) preparation of a strategy to improve the participation of Aboriginal peoples in land, water and resource use decision-making and day-to-day management;
 - (iii) provision of information to assist the facilitation of land and water use agreements between agencies and local Aboriginal communities;
 - (iv) facilitation of surveys and site visits necessary for planning and development purposes;
 - (v) development of cross-cultural awareness programs for land, water and natural resources agency staff to improve knowledge and understanding of, and communication with, Aboriginal communities; and
 - (vi) assistance to provide Aboriginal communities with the capacity (including resources and skills) to fully participate in future consultation and management planning arrangements.
- (e) Government, in consultation with traditional owners and Aboriginal groups, assist in the establishment of one or more Indigenous cultural and interpretation centres in the Otways.
- (f) Government, in consultation with traditional owners and Aboriginal groups, develop and implement principles to provide appropriate access for Aboriginal cultural customs, and traditional practices.
- (g) Government more actively publicise existing notification and consultation processes, required under the *Native Title Act 1993* and other relevant legislation such as the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*, the *Archaeological and Aboriginal Relics Preservation Act 1972*.
- (h) Government stringently enforce and take action against breaches of legislation that protect Aboriginal cultural sites, places and objects.
- (i) Opportunities for increased employment and training for local Aboriginal people be encouraged in the implementation of Otway Forest Park and Otway Ranges National Park.

CHAPTER 3 NATIONAL PARKS

National parks are generally extensive areas of public land of national significance because of their outstanding natural features and diverse ecosystems. They are securely set aside primarily to conserve these values and to provide public enjoyment, education and inspiration.

Victoria's national park system aims to protect viable representative samples of the State's natural ecosystems occurring on public land. National parks provide high-level, long-term protection of relatively undisturbed natural environments and their indigenous flora and fauna. They also protect features of ecological, geological, scenic, archaeological, historic and cultural interest. National parks are particularly important for the conservation of features or species that are rare, threatened and/or susceptible to disturbance.

As a result of their outstanding features, national parks are also important and popular visitor destinations, providing significant opportunities for enjoyment, education, recreation and inspiration in natural environments. However, protection of cultural and natural values, particularly biodiversity, remains the primary role of national parks. Consequently, activities that involve the removal or damage of natural resources, such as timber harvesting, mining, prospecting, stock grazing, hunting (and carrying of firearms), are normally not permitted. Activities that involve the introduction of non-indigenous plants or animals into national parks, such as beekeeping, horseriding and dog walking are permitted only in defined areas, if at all.

Many activities are, however, compatible with national parks, including bushwalking, car touring, picnicking, nature observation, camping, canoeing, bird watching and visiting scenic and historic sites. Many other outdoor activities, such as mountain and trail bike riding, four wheel driving, motorcycling, fishing, hang gliding, rock climbing, caving, orienteering and roganing are undertaken in suitable areas. Visitor numbers can be very high.

Interpretative services and other facilities are required to direct and enhance visitor experiences. At the same time, facilities and activities may need to be confined to sites of appropriate size and location to minimise their effect on sensitive values and other uses.

Another important element of national park status is the imperative for active conservation management. Management of fire, overuse, soil erosion, water quality, track networks, illegal activities, commercial concessions, visitor facilities and pest plants and animals are all integral aspects of the management of national parks.

Astute planning is required to minimise potential conflicts between different uses and particularly the conflict between access to, and protection of, special features. The precursor

for such management is the preparation of management plans. Community involvement in the planning and management of these areas of public land is essential. The protection and recovery of natural ecosystems, protection and respect for cultural sites and places, and involvement in the management of national parks are also aspects of special interest to local Aboriginal communities.

The management and use of national parks is primarily directed by the *National Parks Act 1975*, although other legislation may apply, for example where a national park encompasses reference areas, heritage rivers and declared water supply catchments.

VEAC is recommending the creation of a single large national park within the study area—the Otway Ranges National Park—to form a highly protected core within the wider sustainable land-use framework envisaged for the Otways.



AI OTWAY RANGES NATIONAL PARK

The Otway Ranges National Park encompasses an area well known for its spectacular waterfalls, impressive forests and scenic landscapes. It supports a remarkable number of threatened species, extraordinarily diverse heathlands, significant areas of old-growth forest, majestic tall trees and extensive areas of rainforest. The recommended national park offers a wide variety of recreational opportunities and its outstanding biodiversity, landscape and cultural heritage values attract an increasing number of visitors, enhanced by its proximity to the world-renowned Great Ocean Road.

The recommended park covers an area of 102,470 ha. It straddles the main range of the Otway Ranges, extending along the coast and inland to encompass the forests of the foothills and inland plains. The park is readily accessible from a number of main roads, including the Great Ocean Road, but also includes deep remote valleys, windswept heathlands and impenetrable mountain forests. While parts have been disturbed by past land uses, the park encompasses the largest relatively undisturbed areas remaining in the Otways. The protection of nature conservation values is an overriding objective of the recommended park.

The park comprises twelve main sectors across three bioregions:

Warrnambool Plain Bioregion

- Kennedy Creek forest

Otway Plain Bioregion

- Gellibrand heathlands (Devondale, Mt McKenzie/Crinoline Creek and Carlisle)
- Sheeppark Creek forest
- Wonga forest
- Barongarook forest
- Anglesea heathlands

Otway Ranges Bioregion

- Carlisle River catchment
- Melba Gully
- Aire River catchment
- Northern catchments: West Gellibrand, Olangolah, West Barwon, Lake Elizabeth/East Barwon, and Pennyroyal
- Southern fall

with a western coast sector straddling all three bioregions.

Natural Features

The national park will provide excellent representation of the landforms and vegetation of this unique part of Australia. It ranges from spectacular coastlines, with their salt-hardened cliff-top heaths, extending inland to the cloud-shrouded ranges of towering mountain ash. Together with the nationally significant rainforests and their cascading waterfalls, the landscape diversity of the Otways provides habitat for a large suite of fauna, some of which are found nowhere else in the world.

Physiography

The park encompasses all of the geomorphic units that occur in the Otways. In particular, the park is dominated by the Southern Victorian Uplands. These uplands have an average elevation of 500 metres, but extend from sea level to 675 metres at Mt Cowley. They are composed mostly of Lower Cretaceous non-marine sedimentary rock (geologically the oldest strata in the study area) which has been uplifted and eroded to produce steep, rugged terrain. The south-eastern slopes of the park descend rapidly to the sea, producing short, fast-flowing streams and an abundance of waterfalls.

Parts of the park, at Barongarook, Carlisle and Chapplevale, consist of undulating country on Tertiary marine sediments. Elevation of these areas is between 100-300 metres above sea level. The park also includes outcrops along the coast as high vertical cliffs, in areas such as west of Moonlight Head. Elevated plains of windblown coast dunes also lie within the study area, with most included within the park. These plains are only found within five kilometres of the coast and rise up to 150 metres in elevation.

Average annual rainfall varies from 600 mm to 2000 mm and the park encompasses some of the wettest forests in Victoria.

Geology and Geomorphology

The landscapes of the Otways are not only diverse and spectacular, but also of great geological and geomorphological importance. Two sites of international significance and six sites of national significance are within the national park.

Geologists from around the world use the stretch of coastline between Torquay and Aireys Inlet (now within the park) to undertake sequence stratigraphic analyses of the exposed sedimentary rocks. The site enables viewing of sedimentary depositional cycles from approximately 10 million to 40 million years ago.

Dinosaur Cove is the other internationally significant site in the park. Scientific study—requiring specialised excavation of fossils—has made a major contribution to our knowledge of dinosaurs in the Australian part of Gondwana. The nationally significant dinosaur bone site at Point Lewis is also in the park.

Nationally significant sites in the park include the impressive features along the eastern Port Campbell coastline—including large landslip amphitheatres, caves and one of only two dinosaur footprints known in Victoria. Lake Elizabeth and its catchment is a nationally significant example of a recent (1952) major landslip and its consequences.

The park also contains many and diverse geological features, such as waterfalls ranging from small cascades, fast-flowing rapids, tall single-drop falls, and large multiple-drop waterfalls. The national park includes the entire length of the Aire River Gorge, which is the most rugged river gorge and the least modified large river in south-western Victoria.

Vegetation Types

The Otway Ranges National Park contains several unbroken corridors spanning the range of vegetation types from dark, damp cool temperate rainforest, through wet and dry eucalypt forests to the botanically diverse coastal and inland heaths. In high rainfall areas, the eucalypt forests may be pure stands of tall mountain ash, whereas drier foothill sites may consist of a range of eucalypts such as messmate and narrow-leaf peppermint. The understoreys of these forests vary greatly, from open, grassy and herb-rich, to dense low heaths and shrubs. The park's heathlands and heathy woodlands are of particular significance. The Anglesea heath alone contains seventy-nine orchid species, presenting a dazzling wildflower display in spring.

Protection of ecosystems (or Ecological Vegetation Classes—EVCs) in a comprehensive, adequate and representative system of dedicated reserves is the backbone of biodiversity conservation. The recommended park comprises nearly all of the dedicated reserve system within the Otways. In particular, the park includes significant areas of several widespread EVCs that are currently poorly represented in the dedicated reserve system—lowland forest, herb-rich foothill forest/shrubby foothill forest complex, shrubby wet forest, and herb-rich foothill forest.

The addition of the majority of the Kennedys Creek Forest to the national park has substantially increased the representation of the lowland forest and shrubby foothill forest in the Warmambool Bioregion.



As well as being poorly represented in existing dedicated reserves, cool temperate rainforest is highly valued for its rarity and beauty, as testimony to the evolutionary history of flora in Australia. This fragile vegetation community is particularly in need of protection from fire, weeds and disease. The park contains over two-thirds of cool temperate rainforest and all rainforest sites of national and state significance in the Otways—delivering secure long-term protection for this ancient vegetation type and its unique biodiversity.

Old-Growth and Senescent Forest

As with rainforest, the importance of secure long-term protection for old-growth and senescent forest was a recurring theme in submissions to VEAC—particularly given its antiquity, scarcity and susceptibility to several common threats. To this end, most major areas of old-growth and senescent forest (identified using a combination of techniques) in the Otways are contained in the park, focussing especially on the largest patches and a broad range of vegetation types.

The inclusion of these areas will ensure that irreplaceable source of inspiration and information on the function of undisturbed and ancient natural systems is not compromised. Their value to future generations—and specifically in management decision-making and research—is invaluable.

Threatened Flora

The park encompasses all of the wetter vegetation communities for which the Otways are recognised. These are home to a host of different species of ground and shrub layer plants as well as a variety of tree species. Many of the threatened flora species found in the study area occur in these wetter environs. In particular, the Otway Ranges are a stronghold for the threatened tall astelia and slender tree fern (see Appendix 2 for scientific names of all species in this report). The cool, damp environment of the rainforest also favours many of the other threatened flora species like the small ferns and fern allies including beech finger-fern and slender fork-fern.

In contrast, wrinkled buttons, found primarily in the vegetation communities between Lorne and Aireys Inlet, depend upon periodic fire to maintain significant populations. The park includes the vast majority of locations where wrinkled buttons have been recorded. This species was not detected in the study area for many years until after the 1983 Ash Wednesday fires. More recently, a decline in numbers has been noted. The future conservation focus of management in these areas will contribute to ensuring the long-term survival of this species.

The well-known coastal heathlands near Anglesea are especially diverse and exhibit a number of botanical differences from those of Carlisle River and Devondale. The heathlands within the park are a stronghold for many orchids, with a number listed as rare or threatened, including the Anglesea sun-orchid. The Otways also contain key

populations in the coastal and western Victorian distribution of the wine-lipped spider-orchid and heart-lip spider-orchid.

The Otways' population of the rare Otway bush-pea is a Victorian stronghold. The inclusion of the Devondale heaths in the park encompasses the vast majority of known records for this species in the study area. This population forms an important link to the other populations in Western Victoria, found mainly around Portland.

The Otways are also a key location for the rare dwarf silver wattle. The park will include a significant proportion of the known records of this species, as well as its only coastal representations in the state.

Anglesea grevillea is one of the flowering plants found only in the heathy woodlands to the north and north-west of Anglesea. Many of the known sites for this species will be protected within the park. In contrast, white daddy long legs orchid, also found near Anglesea, is not rare or threatened, however the Otways represent the southern-most limit of its distribution. These important records are also within the park.

The Otway Ranges provide the ideal conditions for the rare Brooker's gum to flourish, resulting in a reasonably wide distribution across the main Otway Range. It is found from approximately 160 metres elevation near Chapplevale, in the west, up to 500 metres elevation near Mt Cowley on the Benwerrin–Mt Sabine Ridge. The populations of Brooker's gum in the Otway Ranges are at the edge of a more extensive distribution in Tasmania. The park includes representation of Brooker's gum, whether occurring as a pure stand, or mixed with other eucalypts.

In addition to Brooker's gum, a number of other species demonstrate close evolutionary links between the Otways and Tasmania, including the starry daisy-bush, beech finger-fern and slender tree-fern. The majority of the known sites of these species are within the park.



Tall Trees

Tall trees are one of the defining features of the Otway Ranges. The wet, relatively fertile conditions ensure that maximum growth is achieved by many of the tall forest eucalypts. They display high aesthetic values and are greatly valued by the many visitors attracted to the region, some specifically to view these giants.

The relatively undisturbed Olangolah and West Gellibrand catchments, and the forests of the southern fall of the Otway Range, contain the majority of known examples of exceptionally tall mountain ash and Otway messmate. Of particular note, the Olangolah catchment has had no significant disturbance, even from wildfire, since the 1850s. All these areas are contained within the park.

Fauna

The national park will provide permanent, high-level protection over extensive contiguous areas for the fauna of the Otway ranges and foothills. Substantial areas of contiguous habitat are essential for species such as the powerful owl and spot-tailed quoll. Individuals of these species range over large areas (up to 4500 ha in the case of the quoll) with viable populations of many individuals needing much larger areas. The Otways is a key area for the quoll, being by far the larger of the two areas in western Victoria where it survives. The recorded distribution across the Otways is contracting, with clearfelling and 1080 poisoning being documented as the main threats to survival.

At the other extreme, the park also protects some animals that do not range far at all. For example, there are four species of land snails that are thought to be endemic to the study area—although much remains to be learnt about their distributions and ecological requirements. Three of these snails are currently known from only one or two localities, while the Otway black snail is widespread in the damp environs of the cool temperate rainforests and wet forests of the park. Other endemic or threatened invertebrates known from the park include the Otway burrowing cray, Otway stonefly, Glenelg freshwater mussel, and three caddisfly species. There are likely to be many other invertebrates—including many threatened or undiscovered species—inhabiting the broad range of ecosystems protected in the park.

Two vertebrates are endemic to the study area and will be protected in the park. The Anglesea form of the mountain dragon has been found at a small number of sites in the Anglesea heath. All sites within the study area reported as containing this small lizard are included in park. The Otways subspecies of the rufous bristlebird is almost entirely confined to the study area, and is classified as vulnerable, with an estimated population of around 4000 birds. They rarely leave their preferred habitat of dense understorey vegetation (in coastal scrub, heathland, rainforest, and wet forest) and, accordingly, the population is susceptible to habitat fragmentation—further emphasising the importance of a large contiguous park.

The birdlife of the park is as diverse as the habitats represented. Australian king-parrots, powerful and masked owls, gang gang and yellow-tailed black-cockatoos breed in large tree hollows that take many decades to develop, and the high representation of old-growth forest and tall trees in the park will ensure long-term protection for these birds. On the other hand, the park's heathlands provide essential habitat for species such as the endangered ground parrot and smoky mouse. The park will substantially increase the area of ground parrot habitat within the reserve system by the inclusion of the Devondale heathlands, west of Lavers Hill.

The fauna of the Otways and of the national park in particular is also of great zoological interest due to its affinity to faunal assemblages elsewhere. For example, two of the park's carnivores, the swamp antechinus and the grey goshawk, have strong affinities to Tasmania, where they are more common. The populations of swamp antechinus may also form an important link between coastal populations to the east and west of the study area. The Otways population of broad-toothed rat represents the southwest limit of this species' east coast distribution.

Although difficult to see, the platypus is a relatively common inhabitant of waterways of the Otways. Lake Elizabeth, in the park, is a well-known and popular location to view these egg-laying mammals. Waterways of the park are also home to 14 native freshwater fish, notably the vulnerable Australian grayling and critically endangered Australian mudfish.

Cultural and Historic Features

Indigenous Heritage

Interpretation of the density of the known archaeological sites in the study area indicates a mostly mobile society seasonally using the coastal, estuarine and riverine resources of the region. The coastal strip may have been occupied year-round, with residential movements along the coast, with or without seasonal movements into the ranges. Regular movement of groups between the coast and the more densely populated, productive basalt plains in the hinterland may have also occurred. It is understood that the majority of activity occurred along the coastal strip and also along the northern-western periphery of the main Otway range, areas well represented in the park.

Currently Aboriginal communities are formally involved in identification, protection and management of cultural heritage sites and places via the cultural heritage program of Aboriginal Affairs Victoria (AAV) and through consultation and negotiation obligations required under the Commonwealth *Native Title Act 1993*.

In addition to the specific management of cultural heritage sites and places, Aboriginal communities have much to contribute to overall management of the park. This can be achieved via the establishment of, and adherence to, consultation protocols, the provision of cross-cultural training for park managers, users and tourism operators, as well as the use of appropriate naming and interpretive

information that recognises and respects the traditional owners' connection to country.

European Heritage

The national park includes many historic features that recognise the 150-year presence of Europeans in the region. Many of the historic features are relics of the region's previously prominent timber and shipping industries.

The Cape Otway Light station is the second lighthouse constructed on mainland Australia—thus providing one of the earliest examples of European settlement in the region. The lighthouse was built in 1848 as a warning beacon for ships entering Bass Strait. In 1859 one of the earliest telegraph stations in Australia was added to the site.

Evidence of more than 200 sawmills and tramways are distributed throughout the Otway forests. The park encompasses a number of historic sites that were identified as highly significant and placed in historic and cultural features reserves by the LCC Historic Places Special Investigation in 1997.

One of the most significant sites is that of the Henry and Sanderson sawmill complex that was established in the early 1900s. It is one of the largest in the Otways and represents the application of innovative engineering and technological solutions to the challenging terrain and conditions. For example, the sawmill site was serviced by two tunnels which are still intact. Only three such tunnels are known in Victoria. The settlement associated with the sawmill was one of the most isolated and self-contained in the Otways.

Other significant sites identified within the park include Knott's No.3 Sawmill (also known as the "Wait-a-While" mill), the Marchbank Sawmill and Tramway Historic Area (located north-west of Ferguson) and the sites of Henry's Nettle and Carisbrook sawmills (in the forest behind Kennett River). The sawmill sites often include relics representing all of the stages of sawmilling operations, from logging and tramway transportation, through to milling. The Marchbank site includes particularly significant examples of zigzag and switchback tramlines—once common tramway systems needed across the hilly Otways to create a workable gradient for timber haulage. Some, such as the Henry's Nettle and Carisbrook sawmill site, contain evidence of substantial associated sawmill settlement.

The inclusion of 'The Redwoods'—a towering and impressive stand of Californian redwoods—in the park represents the period of planting of exotic conifers on reclaimed farmland in the Otways. Of special interest are some of the early plantings where different species were trialed. Some such pilot plantings were unsuccessful, others flourished and most have now been cleared or are being harvested. 'The Redwoods' also exemplifies early government policy of plantation development using sustenance labour and is both historically and botanically significant.

The Otway Ranges have been a source of gravity-fed water for Colac since the Olangolah Weir and Pipeline were built between 1909 and 1911. The rugged conditions and the



basic construction method make this pipeline quite an engineering feat and historic feature. Arkins Creek weirs and pipeline, also within the park, were built in the 1930s to supply Warrnambool, Cobden, Camperdown and Terang with a reliable water supply. The workers, mainly sustenance labour, endured wet and difficult conditions to construct the first long welded steel pipeline in Victoria, and possibly Australia.

All these sites are important features for historical reference and education and provide us with an essential link to days, not so long ago, when life in the Otway Ranges was very different.

Activities and Uses

Recreational Opportunities

Without doubt the diversity of landscapes and vegetation encompassed by the Otway Ranges National Park provide a multitude of activities that visitors can enjoy. Opportunities for short walks and, to a lesser extent, multi-day walks are features of the park. The Great Ocean Walk, passing around Cape Otway, is currently under construction and will provide an exhilarating experience for the independent walker. Sheer cliff tops, sandy open beaches, wild winds and pounding oceans all contribute to this multi-day trek. The western section of the Surf Coast Walk also extends into the park linking Jan Juc with Aireys Inlet.

The large size of the park, combined with the diversity of attractions across the landscape, contributes to further opportunities for multi-day walks. A proposed Trans-Otway Walk linking Lorne and Apollo Bay is of great interest to walkers and would expand the range of experiences available. The need to minimise development in remote areas, as well as the need to protect fragile environments is vital when considering routes for such multi-day walks.

Short rainforest and waterfall walks such as Melba Gully and Erskine Falls give visitors the chance to immerse themselves in the magnificent Otways experience, without the need for navigation skills and extended exertion. Visitor interpretation signage and facilities help walkers to learn about and appreciate this unique environment.

Many of the walks also feature information on the cultural and historic values of the area. Sabine Falls walking track is an example of one of several walking tracks located on old timber tramway routes. The opportunity to see historical relics in-situ, as at Kalimna Falls walking track, is another feature of the park.

Opportunities for nature study are plentiful. The heathlands of Anglesea and Carlisle have exceptional wildflower displays, as well as being very popular for bird watching. Bird hides, such as at Distillery Creek, and nature trails assist interested people to interpret their natural environment.

Existing nature trails in the park are mostly associated with the picnic facilities. Such sites include Melba Gully, Lake Elizabeth, the Sheoak Picnic area and Blanket Bay. Of course, the more sheltered beaches are always popular as

informal picnic sites. Many other formal and informal picnic areas occur throughout the national park, including at the Redwoods on a picturesque section of the Aire River upstream of Hopetoun Falls.

Scenic drives include excursions to popular waterfalls like Triplet and Erskine Falls, as well as forest touring routes such as the winding Turtons Track. The world-renowned coastal scenery along with scenic routes through the park to hinterland towns are essential elements of any scenic drive in the Otways.

For those wanting a different view, the park is well traversed by four wheel drive roads. Generally only tackled in the drier months, these roads provide opportunities for alternative access to the top of the range from the coastal and inland towns. Four wheel drive and trail bike visitors to the park can use formed vehicular tracks and roads to explore the natural features of less visited forest areas and to discover relics of past sawmilling.

From the dark, shady forest, to the stunted heaths and woodlands, the park visitor can quickly achieve a sense of isolation in the park. Aire Crossing, located south west of Lavers Hill, is a popular destination on its own and an entry point for the more isolated southern forests. Nestled amongst the cool temperate rainforest of the Aire River, the crossing is an excellent location to experience the rushing river, its cascades and potholes.

For many, camping in national parks completes the nature appreciation experience. The park includes the coastal campsites of Blanket Bay and Parker Hill, as well as the popular riverside camps of the lower Aire River. The sheltered Lake Elizabeth and Big Hill camping areas are surrounded by the tall trees of the Otways, where observant campers might spot a koala or hear the call of the Australian king-parrot.

Licensed marine, estuary and freshwater recreational fishing, in accordance with fishing regulations, is permitted in national parks for both native and introduced fish. There are a number of areas suitable for fishing included within the park. The winding Gellibrand River is popular with anglers seeking river blackfish and brown trout in the freshwater upper reaches, as well as black bream near the river mouth at Princetown. The coastline around Cape Otway offers opportunities for the keen fisher to take a variety of species including snapper or King George whiting when the conditions are favourable.

Experiencing the forest on horseback is a popular pursuit for some locals and visitors. Meandering vehicular tracks and roads of the park are used by horse and rider for exercise as well as to access and appreciate their natural surroundings. Guided horseriding tours provide visitors with an alternative way to experience the forests. Popular areas currently used for horseriding and horse trail rides, such as at Cape Otway, Barwon Downs, Wensleydale and Aireys Inlet, would continue. However horse-based camping would not be appropriate in the national park. The use of a free permit system for horse riders in the existing Otway



National Park sector of the park enables park managers to record usage and disseminate information on best practice and park management.

In recent years, mountain bike riding has established itself as an alternative nature-based pursuit in forested areas. The steep, winding vehicular tracks on the coastal fall of the Otways provide an opportunity to ride from the top of the range to the coast. A purpose-built riding and walking track extending from the township of Forrest to the camping ground at Lake Elizabeth is also popular with bike riders, with more remote bike riding opportunities available in the west of the park. For others, the roads that traverse the park are regarded highly for cycle touring.

Other activities involve fewer participants, but are nonetheless eagerly sought by those involved. A number of designated hang glider launching sites occur and offer an exhilarating view of the park to suitably qualified enthusiasts. Gemstone seeking using non-mechanical hand tools is permitted at designated beaches within the park at Moonlight Head.

Dog walking will not be provided for, other than on a limited number of tracks or beaches in close proximity to urban areas as defined through management planning processes. Such possible exceptions where dog walking could be permitted include Johanna Beach, Urquharts Bluff Beach, Sunnymeade Beach at Aireys Inlet and tracks in the vicinity of Moggs Creek and Fairhaven. Community expectations call for dog walkers in all such areas to clean up their dogs' excrement.

Intrinsic Values

The Otways are not only appreciated for their important scientific or activity-based attributes; their natural features are of high intrinsic value. The ancient rainforests are often special places of reverence and spiritual revitalisation. The cathedral-like myrtle beech or blackwood canopy over the damp, mossy and quiet interior creates the ideal surrounds for personal reflection and appreciation of the wonder of nature.

The Otway Ranges are synonymous with picturesque waterfalls cascading amidst lush vegetation. The many waterfalls of the park are a key feature, attracting tens of thousands of visitors every year. Triplet Falls are popular due to their great beauty, easy access, heritage interest and the surrounding cool temperate rainforest.

Without doubt, scenic beauty is a key feature of the Otway Ranges. Along with the Great Ocean Road, there are grand vistas available within the park from the top of the Otway range and along some of the strongly defined ridges. The beauty of forested landscapes can be seen from roads such as Turttons Track, as well as those through the Cumberland Catchment and Wild Dog Ridge.

Tourism

The proximity of the park to the large population centres of Melbourne, Geelong and Warrnambool, as well as its location adjacent to the Great Ocean Road, are major factors when considering the contribution the park will make to tourism in the immediate region. The park complements the existing tourist attractions while also offering seasonal and recreational alternatives to the main coastal activities currently undertaken. The rainforests, waterfalls and scenic coastline are attractions in their own right. The independent tourist can discover them or visitors may be assisted by tourist operators to access the area.

Commercial tour operators offer the opportunity for alternative and adventurous methods of enjoying the magnificent natural surrounds of the park. These include mountain biking from the top of the range into Apollo Bay, or discovering platypuses by canoe at Lake Elizabeth. Commercial operators also undertake horse trail rides through some areas of the park.

Research

Research is an essential part of ensuring good management practices in any park. It provides useful feedback on management techniques and monitoring can alert the manager to potential problems. National parks offer a vital source of information on relatively undisturbed natural environments for research institutions. The ability of these groups to conduct research in the park contributes to a greater knowledge of the natural values of the park, and the environment as a whole. It is important to ensure that any research undertaken does not compromise the protection of natural values.

Water Resource Use

A number of key water storages lie on the edges of the national park. The West Barwon Reservoir supplies a large proportion of Geelong's water supply. The West Gellibrand Reservoir (with a capacity of 2000 megalitres) is the principal storage for the Colac region. The Olangolah Reservoir also supplies the Colac region, however it has a significantly smaller capacity. Three small weirs on the Arkins Creek catchment supply approximately one third of the Warrnambool region's water requirements, with the Allen Reservoir, a 220 megalitre storage on St Georges River

providing the entire water supply for Lorne, and the 514 megalitre Painkalac Reservoir; supplying the entire water supply for Aireys Inlet and Fairhaven.

The catchments of all of these reservoirs are entirely, or mostly, within the park. Given the importance of these water supplies to the region, it is vital that their catchments are managed in a manner that ensures high quality reliable water supplies. Three of the catchments have 'closed catchment' status that effectively precludes timber-harvesting and public access. Warrnambool relies on the Arkins Creek catchments, which has no significant water storage capacity, for a substantial part of its water supply. The closed catchment policy reduces the level of risk of fire and contamination and the need for, and level of, water treatment.

Council recommends that the catchments of the Allen and Painkalac reservoirs, respectively 2700 ha and 3400 ha, be managed in a similar manner. Both the catchments are little disturbed and have minimal existing public access. The communities supplied by these two reservoirs are entirely reliant on these catchments for continuing good quality water and have a steadily increasing permanent population.

The domestic water supply catchment of the West Barham River that supplies the townships of Apollo Bay and Skenes Creek is also contained in the park. However, augmentation proposals of the water authority involve relocating the offtake to access waters from the East Barham River, which draws water from a largely cleared catchment. Consequently, a higher level of water treatment will be required.

Approximately half of the catchment supplying the Pennyroyal Creek diversion, which contributes to the water supply for Geelong, Bellarine Peninsula, Torquay and Anglesea, is within the park. The remaining area is largely freehold land. The capacity of the diversion is around 100 megalitres per day.



Management Issues

Active Management for Conservation

For many natural features the protection from large-scale disturbance provided by national park status will be adequate, while other values will require active management. For example, populations of spot-tailed quoll within the park are vulnerable to predation and competition from foxes. However, traditional methods of fox control, such as the use of 1080 poison in baits, have been implicated in quoll mortality. The distribution of ground parrots and the smoky mouse are highly correlated to certain age-classes of heathland, thus requiring ecological fire regimes to ensure that adequate areas of suitable aged heath are provided. Some of the rare and threatened plant species are susceptible to minor levels of modification such as trampling. Similarly, the nests of hooded plovers are vulnerable to disturbance by domestic dogs, walkers and horse riders while bats hibernating and breeding in caves are also vulnerable to disturbance.

Monitoring of biodiversity values is required, particularly of threatened flora and fauna and of species such as koalas that have limited optimal habitat within the park.

Pest Plants and Animals and Diseases

In recent years, considerable works have been undertaken in the control of a number of weeds, most notably ragwort and blackberry. Foxes and rabbits are known to occur in areas of the park and feral cats are also a concern. The presence of such species poses a direct hazard to some threatened fauna species and significantly reduces the quality of the park's vegetation communities and habitat. Weed plants are mostly associated with disturbed areas such as roadsides, former logging coupes and gravel pits and, on the park boundary, with farmland. Ongoing weed control programs should continue to be a major management priority to protect park values and promote good neighbour practices.

While the spread of the pathogen *Phytophthora cinnamomi* is currently localised, extensive areas of the park are particularly vulnerable to invasion by this destructive fungus. Active management programs such as the restriction of vehicular and pedestrian access and/or the introduction of disinfectant procedures will be required, especially in heathland areas.

A small number of plantations of exotic tree species occur. Other than where retained for their historic interest, such as the plantation of redwoods on the Aire River, such non-indigenous trees should be removed, especially where they are likely to be a source of weed invasion, and revegetated with local provenance plants.

Fire Management

The Otway Ranges and, in particular, the surrounding foothill forests and heathlands, have always been subject to bushfires and will continue to be susceptible. However, the option of letting nature take its course is not open to park

management as the vegetation and fire regimes have been modified since European settlement and, more particularly as there is now more assets at risk. Deliberately lit fires are more prevalent and now all fires are suppressed as a matter of policy. Prescriptive burning has focussed on protecting assets such as the merchantable mountain ash forests, pine plantations and townships. In recent years, ecological burning has also been undertaken. All such fire management is complicated by dense settlement in and around the park.

Revegetation and Soil Conservation

The national park includes relatively undisturbed areas, but also includes many areas that have been disturbed in the past by a range of uses that directly modified the natural features of the land. Past uses include agriculture, timber harvesting, and quarrying. While such activities have been well regulated in recent times, rehabilitation and restoration have not always been attempted or been successful in the past. Park managers will have to respond actively to the impact of such past land use. Soil erosion programs, revegetation and removal of inappropriate species may all be required.

Visitor Use and Tourism

Strategically located, well-designed and soundly constructed visitor facilities are required not only to enhance the visitor experience, but also to ensure protection of natural values. Basic interpretation and visitor facilities will be required to meet current as well as likely future visitor levels. The provision of support facilities and interpretation programs by others, including commercial operators, may be appropriate although arrangements for public access and maintenance of park values must remain paramount. Tourism opportunities in the park need to complement, rather than compete with, tourism development on freehold lands.

Resource allocation will also need to respond to illegal activities such as off-road vehicle use, firewood collection and encroachment by abutting landowners.

Community Involvement

Park managers need to work with local communities and provide opportunities for community involvement in park planning and management. Aboriginal groups in the area have expressed a desire to be more involved in park management and the identification and protection of Aboriginal cultural sites and places. Such consultation with traditional owners and participation in public land and water management is to be encouraged.

Community groups such as the Friends of Angahook-Lorne State Park have greatly assisted management of the existing State Park. Recreational groups have also assisted in activities such as the development and maintenance of tracks. Such groups should be encouraged and supported to continue their conservation activities in the park. In addition, opportunities for involvement should be provided

for any interested individual. All such involvement should complement, not replace, professional management by parks staff.

VEAC has also recommended the establishment of advisory committees to further enhance opportunities for community involvement in public land planning and management across the study area. Such involvement should occur as part of the implementation of the national park, during the development of its management plan and as part of the ongoing operation of the park.



Water Catchments

The park encompasses extensive areas of water supply catchment, with the water supply catchments serving Colac, Apollo Bay, Lorne, Fairhaven and Aireys Inlet, entirely dependent on water harvested from the park. As detailed earlier, water harvested from the park is also critical to the supply requirements of Warrnambool and Geelong.

Council has recommended that the water supply catchments above the Arkins Creek weirs, and the West Gellibrand, Olangolah, West Barwon, Allen and Painkalac Reservoirs be included in the park and managed cooperatively by the park manager and the relevant water authority.

VEAC considers that the management of such lands is best placed under the jurisdiction of a land manager, not the water authority, but nonetheless firmly believes that an overriding function of these sectors of the park is to ensure reliable, high quality water.

Council has recommended that the actual water storages, associated reservoir infrastructure and surrounding buffer areas be excluded from the park and be managed by the respective water authority.

The short, steep water supply catchments serving the coastal towns, and the small high yielding water supply catchments serving Warrnambool and Colac are vulnerable to disturbance. It is important that the park management plan ensure the protection of the catchments of these reservoirs and indeed all water supply catchments within the park. Sound hydrological research and ongoing monitoring is required to ensure that land management practices indeed meet water supply objectives.

VEAC has recommended that a cooperative agreement for the management of those water supply catchments entirely within the park be drawn up between the respective water authorities and the park manager to recognise on-ground operational requirements and define the working relationship between the bodies.

Council has developed a series of principles to guide the cooperative management of these water supply catchments that are entirely within the national park:

- Management priorities include the protection of water quality and yield, together with continued protection of the very high conservation values of the park.
- Continued high priority be given to fire prevention and control to protect water quality and yield.
- Field staff of the water authorities and the park manager should have reciprocal enforcement powers.
- Priority be given to developing a comprehensive program to control exotic flora and fauna.
- Other than for the West Barwon water supply catchment, restriction of public entry to the water supply catchments should continue to apply to reduce the risks of contamination of water supplies and fire. Provision of a limited number of strategically located walking tracks within the St Georges River and Painkalac Creek water supply catchments of the park may be consistent with these requirements. Public vehicular access and camping would not be provided.
- Catchment hydrology research should continue, with other bona fide research permitted where the activities do not conflict with the protection of water quality or yield or the protection of conservation values.
- Should minor upgrading or additional facilities be required, this may be permitted subject to environmental assessment and adequate safeguards to protect conservation values.
- Should any dispute arise in relation to the management of the park, a final determination should be made jointly by the Minister for the Environment and the Minister for Water.

Boundaries

The park incorporates the existing Otway National Park, Angahook-Lorne State Park (other than the Aireys Inlet reservoir), Carlisle State Park (other than the Gellibrand transfer station site), Melba Gully State Park and the following reserves and state forests:

- Eumeralla Flora Reserve
- Forest Road Flora Reserve
- Mount Ingoldsby Flora Reserve
- Mt McKenzie/Crinoline Creek Flora and Fauna Reserve
- Olangolah Flora and Fauna Reserve
- Princetown Nature Conservation Reserve
- Redwater Creek Flora and Fauna Reserve
- Smythes Creek Flora Reserve
- West Barham Big Trees Flora Reserve
- Yaugher Flora and Fauna Reserve
- Hayden's Sawmills Historic Features Reserve (part)
- Henry's Nettle and Carisbrook Sawmills Historic Features Reserve
- Henry and Sanderson Sawmill Complex Historic Features Reserve
- Knott's No.3 Sawmill Historic Features Reserve
- Marchbank Sawmill and Tramway Historic Features Reserve
- St George Sawmills Historic Features Reserve
- Aire Bushland Reserve
- Johanna Bushland Reserve
- Wiridjil Bushland Reserve (part)
- Beauty Spot Scenic Reserve
- Carisbrook Creek Scenic Reserve
- Glasgow Falls Scenic Reserve
- Hopetoun Falls Scenic Reserve
- Sabine Falls Scenic Reserve
- Wyelangta Scenic Reserve
- Wangerrip Streamside Reserve
- Apollo Bay Coastal Reserve (part)
- Lorne Coastal Reserve (parts)
- Big Hill Coastal Reserve
- Fairhaven/Aireys Inlet/Anglesea-Point Addis Coastal Reserve (parts)
- Various abutting water frontage reserves (small sectors)
- Aire State Forest (part)
- Arkins Creek Catchment

- Barongarook State Forest (part)
- Kennedys Creek State Forest (part)
- Otway Forest—Barham sector
- Otway Forest—Barwon sector (part)
- Otway Forest—Boonah sector (part)
- Otway Forest—South-eastern sector
- Sheeppark Creek State Forest
- West Gellibrand Catchment
- Western Otways State Forest (part)
- Wonga State Forest (part)
- Cape Horn Stone Reserve
- Chapplevale Gravel Reserve
- Cape Otway Cemetery Reserve
- Cape Otway Lightstation Reserve
- Various unreserved Crown lands and public authority freehold land

Statutory Land-use Overlays

Existing statutory instruments or provisions for reference areas, heritage rivers and water supply catchments continue to apply over parts of the park. The park also encompasses a proclaimed optional dress (nudist) area.



RECOMMENDATIONS

A1: OTWAY RANGES NATIONAL PARK

That the area of 102,470 ha indicated on Map A as the Otway Ranges National Park

- (a) be used to:
 - (i) conserve and protect biodiversity, natural landscapes and natural processes;
 - (ii) protect significant cultural and historic sites and places, including Aboriginal cultural sites and places;
 - (iii) provide opportunities for recreation and education associated with the enjoyment and understanding of natural environments and cultural heritage; and
 - (iv) supply water and protect domestic water supply catchments;
- (b) be managed to provide for, in particular, the following activities:
 - (i) bushwalking, including the development and maintenance of walker-only tracks suitable for short and longer walks and walk-in campsites;
 - (ii) car and motor bike touring, including the maintenance of formed vehicular tracks, roads and travel routes at four wheel drive standard as well as all-weather access for all vehicles;
 - (iii) picnicking and camping, including designated areas with facilities and, at the manager's discretion, dispersed camping in appropriate locations where this will not adversely affect biodiversity values or water quality;
 - (iv) the continuation of horseriding on formed vehicular tracks and roads and associated firebreaks, and designated beaches, subject to any necessary restrictions to avoid damage to tracks (including seasonal closures), the introduction of weeds and conflict with other users and natural values;
 - (v) existing accommodation and associated facilities at the Cape Otway lighthouse precinct, with specific provision being made for their ongoing operation by way of long-term commercial leases under the provisions of the *National Parks Act 1975*;
 - (vi) existing pipelines, aqueducts, cables, communication towers, navigation aids, weirs, dams and other minor service and utility infrastructure that are necessarily within the park, subject to the creation of formal agreements with the land manager, as well as additional service and utility infrastructure if alternative sites are unavailable and subject to environmental assessment and minimal impact; and

- (vii) the artificial opening of the mouths of the Aire and Gellibrand Rivers in consultation with Indigenous traditional owners and other relevant groups to take into account primarily the needs of wildlife, as well as fisheries and landowners affected by inundation;
- (c) be regulated to **exclude** the following activities:
 - (i) exploration and extraction of earth resources and minerals, other than the continuation of entitlements under existing licences or authorities, as approved;
 - (ii) grazing by domestic stock, with existing grazing licences terminated as soon as possible, but no later than 2008;
 - (iii) walking dogs, other than the walking of dogs on leads along a limited number of designated tracks and beaches, to be designated in management plans;
 - (iv) apiculture;
 - (v) hunting and the use or carrying of firearms;
 - (vi) prospecting under miners right, other than for gemstone seeking along designated beaches at Moonlight Head using non-mechanical hand tools only; and
 - (vii) commercial fishing, other than commercial eel fishing under existing entitlements which shall be subject to phase out within ten years and subject to continuing reductions in bycatch in accordance with the findings of current research;
- (d) be managed in a manner that, amongst other things, gives particular emphasis to:
 - (i) programs to conserve and enhance populations of spot-tailed quoll, ground parrot and other threatened species requiring active management;
 - (ii) revegetation of previously harvested areas where the restoration of a natural mix of overstorey and understorey species has been unsuccessful;
 - (iii) ensuring the quality and yield of the domestic water supply catchments especially in the Arkins Creek, West Gellibrand, Olangolah, St Georges River, and Painkalac Creek and water supply catchments where 'closed catchment' policies should continue or be applied other than for pedestrian access on designated tracks in the latter two catchments;
 - (iv) fire protection especially for nearby towns and settlements;
 - (v) joint programs with adjoining landowners for the control of declared pest species along the park boundary interface; and
 - (vi) strategies to reduce the risk of introduction and spread of the dieback fungus *Phytophthora cinnamomi*, including the restriction of vehicular or pedestrian access and/or the introduction of disinfectant procedures, especially in heathland areas;
- (e) be created by inclusion on a schedule to the *National Parks Act 1975*; with
 - (i) unused road reserves within or adjoining the park that are not required for legal or practical access to existing freehold allotments added to the park;
 - (ii) licensed or leased Crown land abutting or surrounded by the park be rehabilitated and added to the park when no longer required for their existing purposes; and
 - (iii) the seaward boundary of the park being low-water mark, other than to the extent that there is overlap with a proclaimed marine national park; and
- (f) be managed in consultation with the relevant water authorities within declared water supply catchments with respect to ensuring quality and yield of water supply.

A2: JOINT MANAGEMENT AGREEMENTS

That within two years of the acceptance of this recommendation, agreements be entered into by the park manager and the relevant water authority or road authority:

- (a) to ensure coordinated management in line with the principles outlined in the accompanying text above (for the water supply catchments listed above within the park);
- (b) the buffer areas of the Arkins Creek weirs, West Gellibrand Reservoir, Olangolah Reservoir, West Barwon Reservoir, Painkalac Reservoir and, when defined, of the Allen Reservoir, adjoining the park, together with the land exposed at any time below full supply level, to ensure coordinated consistent management that provides for both the protection of water quality and appropriate use of the adjoining areas of national park; and
- (c) for the management of the road reserves of declared arterial roads (formerly known as main roads), including the Great Ocean Road and Turtons Track, and municipal roads where they pass through the park, to ensure that they are managed in a coordinated manner that provides for the safety, trafficability and scenic amenity of the road and roadside and the appropriate use and protection of the adjoining areas of national park.

- Notes:
1. The park encompasses nine existing and proposed reference areas. Reference areas must be managed in accordance with the *Reference Areas Act 1978*.
 2. The Bambra Road quarry has pre-existing rights of operation that precede the creation of the Angahook-Lorne State Park. Its occupation has not, to date, been formalised under the *National Parks Act 1975*. It is subject to a current work authority application under the *Extractive Industries Development Act 1995*.
 3. Practical access should continue to be provided to existing private land holdings surrounded by the park.
 4. Inclusion of the Arkins Creek, West Gellibrand, Olangolah and West Barwon water supply catchments in the park will involve transfer of land from South West Water and Barwon Water to the Crown.
 5. The buffer areas of the Arkins Creek weirs, West Gellibrand Reservoir, Olangolah Reservoir, West Barwon Reservoir and Painkalac Reservoir are defined and subject to special area plans (previously known as land use determinations or LUDs) made under the *Catchment and Land Protection Act 1994*. Where the boundaries of a buffer area are amended arising from the gazettal of a revised or new plan, the boundaries of the national park, and abutting water production area, should be amended accordingly.
 6. The Council supports the continuance of land-acquisition programs by opportunistic purchase to consolidate park boundaries. Boundary rationalisation, perhaps by way of land exchange, could also be explored. Implementation of the park is intended to allow flexibility for minor boundary adjustments.
 7. Where appropriate, the land manager may enter into formal agreements with private operators to build and/or operate facilities in accordance with approved management plans. Similar arrangements may apply for relevant park activity programs.
 8. Council supports negotiations between DSE and the Surf Coast Shire Council with a view to ensuring the complementary management of the municipal land known as the Ironbark Basin and possible transfer of the land for inclusion into the park.
 9. Council has included areas to the east of the Alcoa leasehold within the park on the presumption that the significant vegetation of the Anglesea heath lying within the Alcoa leasehold continues to be subject to a cooperative management agreement between the State government and Alcoa of Australia Limited. When the current lease comes up for renewal in 2011, consideration should be given to amending the boundaries of the lease to enable areas of high conservation value to be added to the park.
 10. Licensed or leased Crown land suitable for inclusion in the park when no longer required for the existing purposes, include the Tallawalla Guide Camp at Moggs Creek and the Belmont High School camp at Tanybryn (an unused part of the current licensed area is included in the park).
 11. The Cape Otway cemetery is closed for further burials.
 12. A number of small parcels of cleared Crown land adjacent to the park between Castle Cove and Aire River have not been included in the park, but allocated to uncategorised public land. It is intended that they be available for exchange with neighbouring freehold land with higher conservation values, at which time the latter areas should be added to the park.
 13. Restrictions on the carrying in of pets or firearms in the national park do not apply to those passing through the park on declared arterial, municipal or other roads excluded from the park.
 14. Council is aware that the cessation of commercial fishing in the national park may require amendment to the *Fisheries Act 1995* and/or *Fisheries Regulations 1998* and/or relevant fishery plan.
 15. The artificial opening of river mount entrances is to be also consistent with estuary management guidelines defined in relevant coastal action plans as adopted under the *Coastal Management Act 1995*.
 16. The 102,470 ha recommended national park does not include two immediately adjacent areas (37 ha south of Aireys Inlet Sewage Treatment Plant and 15 ha of the existing Forest Road Flora Reserve near Anglesea) that are outside the study area and are suggested as logical Government additions to the national park.

CHAPTER 4 FOREST PARKS

Forest parks—a new land-use category for extensive areas of land supporting native forests and bushland, with a range of recreation, nature conservation and resource utilisation values.

One of the primary attributes of much of Victoria's state forest is the provision for timber harvesting. In the Otway forests, the native forest-based timber industry is to be phased out by 2008, providing an opportunity for former state forest land, and other forested areas, to be reassigned to a new land-use category that better reflects community expectations and needs for forest conservation and recreation.

VEAC proposes that a new land-use category be created to provide for the protection of extensive areas of forest for recreation, conservation and minor resource utilisation where timber harvesting is to be prohibited. Council envisages that the new land-use category could also be applied outside the Angahook-Otway study area.

The three management objectives of the new land-use category are:

- (a) recreation;
- (b) nature conservation; and
- (c) compatible minor resource utilisation.

Flowing from these management objectives, appropriate uses would include a wide range of recreational activities reliant on extensive areas of land, a limited range of utilisation (in a manner consistent with recreation and conservation), with timber production (specifically, sawlogs and pulpwood) not being permitted once phased out in the Otways by 2008.

While national parks provide the core area of nature conservation protection across the State, forest park in the Otways will provide complementary protection for plants, animals and natural landscapes, as well as for those rare and threatened species outside national park boundaries.

Access for a broad range of recreational activities, particularly those already established in the former state forests, is an important part of the forest park concept. Such activities will require on-ground management supervision and the maintenance of infrastructure, including roads. Development nodes to facilitate recreational use may be desirable within areas of forest park.

Appropriate resource utilisation could include apiculture and low-intensity harvesting of timber and other vegetative material (such as seeds and foliage)—for firewood, posts and poles, woodchop blocks, stakes, revegetation and decorative products. Any such use should be demonstrably sustainable.

Unlike state forest, forest parks are recommended to be 'restricted Crown land', where the consent of the Minister for the Environment is required for the exploration and extraction of minerals. Such uses would only be permitted where consistent with the maintenance of overall recreation and conservation values.

As the forest park category has three very different management objectives, it will be necessary for the land manager to identify and apply management zones to reduce conflict between uses. For example, management may need to identify firewood collection zones, areas unsuited for utilisation, special feature zones and so forth.

Council has recommended that forest parks be created under the existing *Forests Act 1958*; and that the three management objectives for forest parks be explicitly included in this Act. Council is recommending the creation of one forest park within the study area—the Otway Forest Park—to unify the areas across the Otways which provide opportunities for a wide range of activities and also to complement the values and uses of the Otway Ranges National Park.



BI OTWAY FOREST PARK

The recommended Otway Forest Park encompasses extensive areas of mountain and foothill forests extending from the main ridge of the Otway Ranges to the undulating plains and plateaus further inland. The park can be explored from a network of vehicular tracks and roads and offers a wide variety of recreational opportunities that complement those available in the adjoining recommended Otway Ranges National Park.

The recommended park extends over 39,265 ha across public lands both in and around the Otway Ranges, and across the dissected inland plains to the north and west of the Otways. The park brings together nine main blocks of public land:

- Ferguson Hill
- Western Otways
- Ford River
- Head of Aire
- Tomahawk Creek–Wonga Forest
- Kawarren–Barongarook Block
- Upper Gellibrand Forests, including Charlies Creek and Lardners Creek Forests
- Yaughar Forest
- Barwon Downs
- Boonah–Wormbete Forest

Recreational Opportunities

The recommended forest park provides opportunities, facilities and enjoyable natural settings for active recreation pursuits that may not always be well suited to the protection of national park values. Prudent management and responsible use will ensure that sustainable recreation experiences are achieved and that conservation values are not compromised.

The range of landscapes and vegetation in the forest park ensures forest recreation experiences that are diverse and stimulating. From walking to the cascading Aire River at Beauchamp Falls to trail biking on the roads in the heathy woodlands of the Wormbete Forest, many visitor expectations can be realised.

The breadth of the recommended forest park will also ensure that many communities have good access for forest recreation activities. The Barongarook block is an example of forest park that is close to the major town of Colac. The recreation opportunities available in this area include horseriding, cycling, walking, picnicking and nature drives.

Camping

The forest park provides excellent camping opportunities. All groups are provided for, from families and retirees with caravans, to those who just want some peace and quiet under the stars.

Dandos campground on the Gellibrand River is an ideal base for those wanting a formal campsite amongst the tall Otway forests. The open space at this campsite also appeals to groups and families needing some room to move. Stevensons Falls provides another formal campsite, amongst exotic conifers just downstream from a picturesque waterfall.

A number of submissions stressed the importance of having the opportunity to undertake dispersed camping in natural settings. Opportunities for dispersed camping are an important element of multi-day walking, horseriding, driving and trail biking treks. The forest park will provide for dispersed camping across extensive areas of forest.

Car Touring

The well-formed roads of the forest park provide for car touring. While some of the roads in the forest park are unsuitable for all-weather two wheel drive access, there are still many opportunities to access the forest.

Delaneys Road, near Barwon Downs provides access to the top of the main range of the Otways. It passes through a range of vegetation types and allows the visitor to experience some of the wet Otway forests. Some of the roads through the Wonga block, while unsealed, also allow two wheel drive vehicles good access.

Picnicking

The forest park has a number of formal picnicking locations, including those at Birnum Station, near Kawarren, Loves Creek, Dandos and Stevensons Falls. These sites provide good access, parking, and tables in natural settings. Usually basic toilet facilities are also provided. Shelters are important to protect picnickers from the characteristically inclement Otways weather.

Informal picnicking is also encouraged in the forest park. Extensive options for impromptu picnicking occur throughout the forest and especially beside waterways.

Four Wheel Driving

Four wheel driving is a recreational pursuit in its own right, but may also provide essential transport to undertake other activities such as camping, hunting and fishing. Formed vehicular tracks and roads provide access across a range of environments and offer alternative routes through the Otways.

In the drier months the forest park roads offer the opportunity to venture into the wet forests. Many historic sites and relics of past timber harvesting found in the forest park are of interest to the keen explorer and accessible only to four wheel drive vehicles.

Ready access into the forested environments helps people to appreciate and learn about natural values, potential impacts on fragile systems and the need for their careful management.

Local four wheel drive groups of the Otways actively contribute to public land management by assisting with development of road maintenance priorities, track clearing, reporting of track hazards, removal of dumped vehicles and more recently through the development of a track classification and rating system. Such cooperative relationships should continue.



Trail biking

The formed vehicular tracks and roads of the forest park also provide extensive opportunities for trail biking. The roads of the Wormbete forest are popular for trail biking due to proximity to population centres situated along the coast, including Geelong. The diversity of vegetation and the undulating nature of the country in this part of the forest park contributes to the experience.

Careful monitoring and enforcement will be required to prevent damage to fragile natural systems. Local trail bike groups are currently involved on committees and programs that will assist in ensuring that this popular recreational pursuit is conducted in a sustainable manner.

Hunting and Fishing

Provision is made for hunting in areas of the forest park. Four wheel drive access, combined with a range of camping options, further enhances this experience. In the past there have been unauthorised introductions of deer (red, fallow and sambar) which are now increasing in range and number, especially in the western Otways. Declared pest animals, especially on the margins of farmlands, are also targeted by hunters.

A number of the watercourses which flow through the forest park provide opportunities for fishing.

Walking

Walking is a popular activity in the forest park. Many people limit themselves to short walks around picnic grounds and camping areas or to specific attractions such as Beauchamp and Stevensons Falls.

Others however appreciate the extensive landscapes found in the forest park to extend and test their abilities. Fire trails and seldom-used vehicle tracks assist walkers gain access; others seek off-track routes. Dispersed camping opportunities cater to these multi-day bushwalk endeavours.

Part of the Old Beechy Line rail trail passes through the park and will provide an excellent walking experience from Colac, through hinterland towns and communities, to the top of the Beech Forest ridge, whilst also informing visitors about the history of the Otways. Walking groups assist in the establishment, promotion, and maintenance of walking trails and the reporting of hazards and inappropriate activities.

Horseriding

The proximity of the forest park to many Otway communities ensures opportunities for local horseriding individuals and groups. The ability to exercise in and experience the natural environment on horseback is highly valued. The Wonga and Barongarook blocks, in particular, provide a safe environment to ride due to a number of wide, slashed roadsides that easily accommodate horse and rider and their network of forest roads on gentle slopes also are well suited to carriage-driving.

Opportunities for more remote and challenging treks are provided on the formed roads of the western Otways and inland fall sections of the forest park.

The forest park at Ferguson Hill includes a designated short, cross-country course that is well utilised and maintained by the local pony club.

Bicycle Riding

In recent years mountain bike riding in particular has become a popular pursuit in natural environments. The formed roads and tracks of the forest park provide ideal trails for this active endeavour.

The development of the Old Beechy line rail trail that passes through the forest park at Kawarren, and also runs adjacent to the park north of Beech Forest, will greatly enhance cycling opportunities in the Otways. This rail trail is envisaged to provide a riding route from Colac to the top of the ridge at Beech Forest.

Dog walking

People are able to walk dogs through the forest park. The proximity of the forest park to many Otway towns and localities ensures that community members can exercise their dogs (and themselves) in a natural setting. In keeping with the conservation objectives of the forest park, it is expected that dogs will be kept under the control of their owner at all times.

Nature Study

The forest park makes provision for independent nature study where visitors are encouraged to seek natural experiences largely without the assistance of formed nature trails and interpretation facilities. Good access and a range of camping options assist in undertaking both informal and formal nature study. Observing natural features in their settings is an essential feature of environmental education and future conservation of natural resources. Schools and organisations can utilise the forest park to stimulate and extend participants' interest and knowledge of natural systems.

Gold Prospecting and Gem Fossicking

The forest park is not particularly prospective for precious metals and gemstones, however provision is made for recreational fossickers and prospectors to pursue their interest.

Tourism

There is increasing demand for high quality nature-based tourism opportunities in the study area. The proximity of the Otways to large population centres and the excellent conservation values and recreation opportunities available greatly contribute to this demand.

The forest park enhances tourism opportunities in the study area due to the large range of recreational activities that can be undertaken, both by the independent visitor and those who prefer commercial tours. Some natural features of the forest park, such as Beauchamp Falls, are also easily accessible attractions in their own right. Opportunities for assisted tours include those involving commercial mountain biking, horseriding and gypsy wagons. These services provide visitors with an alternative way of experiencing the Otways.

Constructed support facilities for bush-based recreational and tourist activities occur in a number of areas, and can assist to make the bush accessible. Such facilities may include shelters, field ranges, staging posts, toilets and water supply. It is important that such facilities are located and maintained in a manner that is safe, environmentally sound, accessible to all and, where no longer required, removable. The primary conservation objectives of national parks, the other major public land category in the study area, do not provide the flexibility for such developments to be undertaken.

Natural Features

Conservation of natural values is one of the objectives of the forest park. There is a wide range of landscape and vegetation types represented. It therefore contains a wide range of natural values that are a key attraction for many visitors. In some localities, the forested blocks of forest park supports remnant vegetation and natural landscape where cleared farmland is the dominant land use. Management of the forest park must ensure that these important values are not compromised.

Physiography, Geology and Geomorphology

The forest park extends across the undulating country of the South Victorian Coastal Plains (Dissected Plains) from the coast near Princetown and around to the north of the main Otway Range. Most of the park is, however, within the South Victorian Uplands dominated by high ranges and dissected valleys.

A number of geological and geomorphological sites of scientific interest are found in the forest park. All are of local significance. They include gravel pits and road cuttings, such as the Jacobsons Road gravel pit, which provide good access to rock exposures. These exposures may be typical of a particular formation or exhibit notable features not generally seen in the formation.

Waterfalls that have been listed as local significance, such as the Beauchamp and Stevensons Falls, demonstrate the relationship between the underlying geology and stream development.

Vegetation

The plant communities found in the park encompass the botanical diversity of the Otways. There are examples of cool temperate rainforest, tall mountain forests, drier foothill forests and woodlands, as well as the heathlands and riparian zones.

Two of the main ecological vegetation classes in the forest park are lowland forest and shrubby foothill forest. These two vegetation types often occur close to each other, with elevation and soil type being contributing factors in determining their respective distributions. Both vegetation types are characterised by the diversity of their understorey layers. Another well-represented vegetation type is the shrubby wet forest—a major component of the tall, wet eucalypt forests for which the Otways are well known. It occurs generally on northern and westerly aspects with rainfall greater than 1200 mm.

There are a number of localities, such as Beauchamp Falls, where examples of cool temperate rainforest are easily accessible. Other rainforest examples are found deeper in the forest park such as in Ford River valley, east of Lavers Hill. Pockets of old-growth forest are distributed across a variety of vegetation types. Not only do the large, hollow trees provide habitat in these areas, but the forest floor debris including hollow logs provides nest and den sites for some less conspicuous species such as bandicoots and potoroos.

Threatened Flora

While most records of threatened species have been included in the recommended national park, a number of threatened and near threatened species occur in the forest park. The heathy and wetter forest vegetation types within the forest park often contain threatened flora. For example, skirted and slender tree ferns, along with the smaller beech finger-fern and long club-moss are generally found in cool temperate rainforest or wet forest. Anglesea grevillea and wrinkled buttons are found further east.



Near-threatened species occur throughout the forest park. They range from the tall Brooker's gum to the small ground spleenwort. Showy lobelia and currant wood are two near-threatened species that only exist in one area other than the Otways. Currant wood and Brooker's gum are species that exemplify strong Tasmanian links. Brooker's gum flourishes in the Otways, with a wide distribution across the main range. It particularly favours high-rainfall, northerly aspects. Otway bush-pea, ground spleenwort, satinwood, dwarf silver wattle and netted daisy-bush are all found in the forest park. The Otway populations for all of these species provide a stronghold in Victoria.

Fauna

The diversity of landscapes and vegetation communities in the forest park provides habitat for a wide range of animal species. The Otways provides habitat for species that are found nowhere else, such as the Otway black snail. The eastern subspecies of the rufous bristlebird is confined almost entirely to the study area. This species is primarily found in the dense coastal heaths and wet forests of the recommended Otway Ranges National Park, although forest gullies and heaths of the forest park also make an important contribution to its survival.

While the main strongholds of most threatened fauna are in the national park, these species also occur in the forest park. Of special interest is the grey goshawk, which has strong affinities to Tasmania where it is more common. Populations of a number of other species in the forest park are also potentially important links, including the long-nosed potoroo, southern brown bandicoot, swamp skink, yellow-bellied glider and eastern false pipistrelle (a small forest bat). The broad-toothed rat is primarily found in the high rainfall forests, heathlands and grasslands of eastern Victoria, however the Otways population represents the southwest limit of this species' east coast distribution.

Cultural and Historic Features

Indigenous Heritage

The forest park includes a large area on the north-western periphery of the main Otway range. Interpretation of the known archaeological sites in the study area has identified a high level of past Aboriginal activity. This reflects a mostly mobile society that seasonally utilised the natural resources of the rivers, wetlands and oceans of the region. Elements of such activity survived the post-contact period and the forest park continues to be of cultural significance to local Aboriginal communities.

Archaeological survey of the forest park has been reasonably limited and a more thorough survey is required. Land managers and tourism operators need to be aware of the importance of such sites and monitoring should be undertaken of known sites to ensure that any indigenous heritage values are not compromised. The local Aboriginal communities need to be involved in such education and monitoring programs.

European Heritage

The timber and transport industries provide the majority of historic features in the forest park. The park allows visitors to explore the forest and discover some of the heritage of the Otways. Numerous sawmills and their associated features are also found in the forest park. They are valuable historic assets and contribute greatly to our knowledge of the Otways.

Notable features in the Lardners Creek forest include the McDonald tramway and associated water race, the well-preserved tramway of the Hitt No.4 mill and the incline and winch site of the Devitt sawmill. Other northern fall historic features are the comparatively intact tramway and relics of the Royle sawmill, south of Pennyroyal. Nearby are the turn-of-the-century Hayden's sawmills with their noteworthy log lines and snig tracks.

The western Otways portion of the forest park also has sawmill and tramway remains, as well as the associated access, winch and log lines for a number of mills including Kincaid and Northern Timber Co.

The Kawarren block is the site of Birnum station, one of the numerous railway stations and sidings that once existed on the Colac–Beech Forest–Crowes railway line, also known as the Old Beechy. This narrow gauge railway, curving in and out of the forest park, has captivated rail enthusiasts since its inception in 1901. It played a key role in opening up the Otways to settlement and timber. At various times it operated as a mixed train carrying passengers, however its primary function was carrying timber and general supplies for communities.

Resource and Other Uses

Timber Extraction

The forest park excludes timber harvesting for the production of sawlogs and pulpwood, other than for harvesting in accordance with approved Wood Utilisation Plans to meet existing timber licence obligations to 2008. That is, logging will occur within the recommended forest park only until 2008.

Non-licensed Plantations

Pine plantations that are subject to commercial licences were specifically excluded from the investigation study area. There are, however, areas of non-licensed plantations in the forest park. These are generally low-yielding softwood plantations that are of low economic value. The removal of trees and revegetation of these areas would be an appropriate part of management.

Firewood

The foothill forests of the Otways are the main source of firewood for commercial and domestic firewood collectors. Most such firewood is consumed locally.

The forest park includes large sections of suitable foothill forest to cater for this use and its proximity to many Otway communities facilitates collection of firewood by local residents—at Barwon Downs, for instance. Firewood collection from public land provides both an economic and

cultural need in rural areas. Firewood is a relatively inexpensive heating and cooking resource, particularly in areas that are not connected to the main gas network. The collection of firewood is also often one of the regular traditional activities conducted in rural communities by many families.

It is anticipated that as hardwood logging is phased out and the value of senescing forest for ground dwelling fauna is recognised, that the level of available resources on public land resources will reduce. However, all of the major inland townships in and around the study area now have piped natural gas available and firewood is increasingly accessible from woodlots. Currently the extent of firewood harvesting in the forest park appears to be sustainable and would provide for existing and foreseeable future local requirements.

Other Harvesting

The harvesting of minor forest produce, other than firewood, in the study area is not a major forest use. The main products currently sourced from the Otway forests are grass-tree fronds, tea tree stakes and woodchop logs. Other products include craftwood, posts and poles, and the selective harvesting of trees to supply specialist timber markets. Currently these activities are undertaken by a few small operations.

Tea tree stakes, for example, are selectively harvested by a small local family business, from mostly lowland forests. A machete is used to cut individual tea tree stems that are greater than 2.5 cm diameter. Sites are revisited as the tea tree grows to meet specification. The stakes are then sold



to markets including Geelong, Melbourne, Adelaide and Sydney. Another operator spot-fells trees and carries sawn timber out of the forest to supply musical instrument makers with high grade tone wood and figured timber.

Prudent management of these resources at low intensity levels should ensure that harvesting of such produce does not impact negatively on recreation and conservation values, while providing local employment and supplying market needs.

Grazing

The environments of the forest park mostly have low capability for grazing. Some existing grazing licences are held over land in the forest park and used for grazing and VEAC has recommended that such use may continue.

Water Production

The majority of the forest park is within declared water catchments supplying the Geelong or Warrnambool schemes. Some of the water supply catchments occur predominantly in the forest park.

Extensive parts of Matthews, Dewings and Callahans Creek catchments are within the forest park and supplement the flows for Geelong via concrete-lined diversions. Recently, commitments have been made to improve natural conditions for aquatic life in the Barwon River. This has been partly achieved by Barwon Water forgoing its right to harvest water from Gosling Creek. As Geelong's water supply is sourced from a variety of catchments, there is reasonable security for the water resource as any impact on a single catchment need not excessively affect the overall quality or quantity of water supplied.

Water for Gellibrand is pumped from Lardner Creek, which flows for most of its length through the proposed forest park. The Gellibrand and Carlisle Rivers contribute a significant portion of Warrnambool's domestic water supplies. These domestic supplies also provide for some agricultural uses, such as dairy farming. An extensive area of forest park covering the Western Otways, Tomahawk Creek–Wonga Forest, part of the Kawarren–Barongarook Block and Upper Gellibrand Forests falls within these water supply catchments.

Mining and Extractives

There are no existing mining licences or leases in the forest park, however a petroleum exploration permit covers the majority of the forest park area, with extensive areas also subject to current mineral exploration licences for coal bed methane. There are also a number of gravel pits. None of these pits are currently operating, however some are considered to have a useful gravel resource.

Mining and exploration may be allowed subject to the approval of the Minister for the Environment and where consistent with recreation and conservation management objectives.

Apiculture

The recommendations provide for apiculture where consistent with recreation and conservation management objectives. Currently, there are no licensed apiculture sites in the forest park.

Defence Force Exercises

Defence force exercises are regularly carried out on public land in the study area. The most common exercises are navigation and camping skills training for local cadet groups. The forest park provides for defence force exercises to continue, subject to the land manager's discretion and conditions.

Research

Research and monitoring is an essential tool of all land managers as it assists in the development of effective management practices. The forest park will be an ideal location for research on recreation management techniques and road drainage, as well as for research on specific natural values. This research may be undertaken by the land manager or other approved researchers or research institutions. Research activities must ensure that recreation and conservation values of the forest park are not diminished.

Environmental Education

The forest park includes two former education areas located at Barongarook and Bamba. These areas will continue to offer schools, tertiary institutes and other educational bodies the opportunity to undertake active hands-on field studies, including physical trials and long term plots, that would not normally be permitted in parks. These two areas, in mountain ash forest and foothill forest respectively, complement the resource offered by the Eumeralla Education Area in the coastal scrub east of Anglesea and an additional area at Bamba.

Management Issues

Visitor Use and Tourism

For both locals and visitors from further afield, the forest park is likely to be a focus for vehicle-based recreation and horseriding, which are less well-suited to many national park areas. Increased levels of four wheel driving, trail bike riding and horseriding will place greater pressure on track surfaces, especially at creek crossings and on steep slopes. Active management will be required to ensure that such pressures do not adversely affect the natural environment. Monitoring of road conditions in the forest park, such as the current Stream Crossing Project, should continue. Such monitoring of the stream/road interfaces assists in identifying required improvements.

The narrowness and undulating nature of many forest tracks means that safety of park users will be an important issue to address. Provision for dispersed camping will require a strong management presence to ensure that regulations dealing with fires, latrines, set backs from water courses and rubbish disposal are all met. Designated campsites and popular visitor localities, such as at

Stevensons Falls, will require a high level of management and well-designed, soundly constructed, regularly maintained visitor facilities. Guided tours and professionally supported recreation, such as mountain bike and four wheel driving trips, should be encouraged to assist visitors to experience the Otway forests in a safe manner.

The land manager must also apply resources to respond to illegal activities such as unlicensed, unregistered and off-road trail bike riding, off-road driving, and unauthorised firewood collection.

Community Involvement

It will be important for the land managers to work with local communities and recreation groups and provide opportunities for involvement in the preparation of park management plans and in management activities. Such involvement could be through advisory committees or through informal working relationships and specific programs. Detailed track maps are required and the full range of recreational groups closely involved in any changes to the track network, including the classification of tracks.

Conservation and Protection

Many of the environmental and cultural features of significance found in the forest park, particularly the habitat of threatened species, will require active management. Pest plant and animal control must be continued, with ragwort, blackberries, foxes and cats of particular concern. Control programs in disturbed areas, such as roadsides, former logging coupes, gravel pits and park/farmland boundaries should continue to be a major management priority. Rehabilitation of areas disturbed by past uses such as agriculture, timber harvesting, and quarrying, will require active responses, including soil erosion control and revegetation.

The forests of the Otway Ranges have always been and will continue to be subject to wild fires. Prescriptive burning programs and fire suppression will remain an overriding task of the land manager, in consultation with other fire management bodies.

Water Catchments

As previously noted, much of the forest park is within declared water supply catchments that supply water to the Geelong and Warrnambool systems. Management must ensure the protection of all such water supply catchments within the forest park. In particular, high level fire protection and track maintenance will be required. Should future augmentation of domestic water supplies require the upgrading or construction of facilities within the forest park, this should be permitted provided adequate safeguards are implemented to protect significant conservation values and water quality.

Timber Production

Government policy dictates the phase-out of timber production by 2008. Consequently the forest park manager will need to oversee timber harvesting during the next four years. It is important that wood utilisation plans be prepared in accordance with the code of forest practices and management prescriptions—and that harvesting be distributed across the forest park, including the northern fall catchments. Special protection zones (for rare and threatened species) and special management zones (to protect quoll habitat), designated under the Regional Forest Management Agreement, should continue to be applied until new zones are identified in the management planning phase of the implementation of these recommendations. All harvested areas and associated operational areas require active revegetation to ensure the restoration of the forest.

The land manager will also need to work closely with licensed operators to identify appropriate areas for minor forest production such as firewood, posts and poles, woodchop blocks and other plant products and ensure that harvesting is sustainable and conducted with minimal impact on other users and values. Management zones will need to be assigned to ensure that firewood collection does not compromise conservation values or impair recreational experiences in the forest. Demonstrating sustainability will also require mechanisms to be put in place to ensure that the level and location of harvest is accurately recorded, that the price of public land sourced firewood reflects competition policy requirements and its extraction meets occupational health and safety requirements. A continuous review process, involving monitoring and auditing, is also required to ensure that sustainable outcomes are met.

Services and Utilities

A number of transmission lines, communication towers, water supply tanks, pumps and pipelines occur in the forest park. Where such facilities are required for ongoing use, they should be permitted under licence. Environmental assessment is required for proposed additional facilities, including consideration of alternatives outside the forest park, to avoid or mitigate possible adverse impacts.

Boundaries

The recommended forest park area incorporates areas of unclassified public land and the following existing parks, reserves and state forests:

- Kawarren Regional Park
- Haydens Sawmills Historic and Cultural Features Reserve (part)
- Tomahawk Creek Bushland Reserve (part)
- Beauchamp Falls Scenic Reserve
- Stevensons Falls Scenic Reserve
- Aire State Forest (part)
- Anglesea River headwaters
- Barongarook State Forest (part)
- Kennedys Creek State Forest (part)
- Lardner Creek State Forest
- Otway Forest—Boonah sector (part)
- Otway Forest—Barwon sector (part)
- Pennyroyal forest
- Tomahawk Creek State Forest
- Western Otways State Forest (part)
- Wonga State Forest (part)
- Wormbete State Forest
- Yaugher Forest
- Bamba Education Area
- Barramunga Education Area
- Forrest Recreation Reserve (part)
- Kawarren Recreation Reserve (part)
- Kawarren Camping and Water Reserve (Loves Creek Picnic Area)
- Yan Yan Gurt Sanitary Depot Reserve

Statutory Land-use Overlays

Existing statutory controls for water supply catchments apply over parts of the forest park. These should remain in place.



RECOMMENDATIONS

BI: OTWAY FOREST PARK

That the area of 39,265 ha indicated on Map A as the Otway Forest Park

- (a) be used to:
 - (i) provide opportunities for informal recreation associated with the enjoyment of natural surroundings;
 - (ii) protect and conserve biodiversity, natural and cultural features and water supply catchments; and
 - (iii) supply a limited range of natural resource products;
- (b) be managed sustainably to provide for, in particular, the following activities:
 - (i) horseriding, trail bike riding and four wheel driving on formed vehicular tracks and roads;
 - (ii) camping at designated sites and dispersed camping, including overnight camps for horse riders;
 - (iii) hunting of deer, with an emphasis on controlling animal numbers;
 - (iv) low-intensity grazing of domestic stock where pre-existing and consistent with recreation and conservation management objectives;
 - (v) apiculture;
 - (vi) low-intensity harvesting of selected trees for firewood up to current levels, posts and poles, woodchop blocks, stakes, hobby wood or specialty applications and the low intensity harvesting of other vegetative material (such as seeds for revegetation and foliage for decorative products), where such harvesting is demonstrably sustainable; and
 - (vii) exploration and extraction of earth resources and minerals where consistent with recreation and conservation management objectives, and subject to the approval of the Minister for the Environment;
- (c) be regulated to exclude the following activities:
 - (i) timber harvesting for sawlog and pulpwood production, other than for harvesting in accordance with approved Wood Utilisation Plans to meet existing timber licence obligations up to 2008;
- (d) be managed in a manner that gives particular emphasis to:
 - (i) strategies to reduce the risk of soil erosion from vehicular use, especially on steep forest vehicular tracks;
 - (ii) providing for the safety of riders and drivers, especially on narrow, undulating vehicular tracks—including the development of a track classification system;
 - (iii) providing for the quality and yield of the domestic water supply catchments;
 - (iv) fire protection in water supply catchments and in the vicinity of rural settlements;
 - (v) pest plant and animal control, especially on public land margins ;
 - (vi) revegetation of previously harvested areas where the restoration of a natural mix of overstorey and understorey species has been unsuccessful;
 - (vii) maintaining opportunities for environmental education and research in mountain ash forest and foothill forest at, respectively, Barramunga and Bamba; and
 - (viii) protecting the special features listed in the schedule below;
- (e) be permanently protected as a forest park under the *Forests Act 1958* with explicit legislative recognition given to the three management objectives for forest parks listed in Recommendation BI (a) above.

- Notes:
1. VEAC is aware that there is an existing provision for forest parks under the *Forests Act 1958*. VEAC understands that all areas so designated are subject to a Government approved Land Conservation Council recommendation for allocation to another land use category. VEAC is recommending that the Act be amended to create a new category of forest park. The new forest park should be subject to specific regulations made under the *Forests Act* that will reflect the uses and activities outlined in above chapter.
 2. Council is aware that the requirement for the consent of the Minister for the Environment for the exploration and extraction of minerals may require amendment to the *Mineral Resources Development Act 1990*.
 3. The buffer areas to the northern catchment weirs are defined and subject to special area plans (previously known as land use determinations or LUDs) made under the *Catchment and Land Protection Act 1994*. These arrangements should continue.

4. The above recommendations do not list all permitted uses—they only highlight activities requiring particular management attention. A much wider range of activities from nature study and bushwalking to dog exercising and fishing are considered appropriate in the forest park. Areas licensed or leased to facilitate the provision of recreational facilities, including the Colac Field and Game Association's shooting ground, the Colac-Otway Archers' Field Range, the Patonga Scout Camp and the Colac Moto-Cross Track at Barongarook and the Geelong Archers' field range at Wensleydale, may continue.
5. Where appropriate, the land manager may enter into formal agreements with private operators to build and/or operate facilities in accordance with approved management plans. Similar arrangements may apply for relevant activity programs.
6. Existing practical access should continue to be provided to existing private land holdings surrounded by the forest park.
7. Council supports the continuation of land-acquisition programs by opportunistic purchase to consolidate public land boundaries. Boundary rationalisation, perhaps by way of land exchange, could also be explored. Implementation of the forest park is intended to allow flexibility for minor boundary adjustments.

Schedule Of Special Features To Be Protected

These have been grouped by geographic regions to assist managers and others to locate the sites.

Ferguson Hill

Recreation Sites and Landscape

- horseriding trails.

Nature Conservation

- Stands of senescent forest.

Western Otways

Nature Conservation

- Stands of old growth and senescent forest.
- Threatened fauna including the spot-tailed quoll and the Otway black snail.

Historical Sites

- Features and relics of two early 20th century sawmills: Northern Timber Co sawmill (and associated snig tracks, winch sites and tramline) and the Robins and Kincaid sawmills and tramways.

Ford River

Recreation Sites and Landscape

- Network of four wheel drive tracks.

Nature Conservation

- Threatened fauna, including the powerful owl, masked owl, grey goshawk, and Otway black snail.
- Threatened plants, including slender tree fern, skirted tree fern, and slender fork-fern.

Head of Aire

Recreation Sites and Landscape

- Beauchamp Falls and associated picnic area, camping ground, walking tracks and forest environs.
- Natural values of Eberwaldt Falls

Tomahawk Creek–Wonga Forest

Nature Conservation

- Stands of old growth and senescent forest.
- Threatened fauna including the swamp skink.
- Habitat of ground-dwelling mammals such as the long-nosed bandicoot.

Kawarren–Barongarook Block

Recreation Sites and Landscape

- Birnum Station Ground picnic area and associated rail trail walking and cycling path.
- Loves Creek picnic ground and associated forest environs.

Nature Conservation

- Stands of old growth and senescent forest.
- Threatened fauna including the long-nosed potoroo and southern toadlet.
- Habitat for ground-dwelling mammals such as the swamp antechinus.

Historical Sites

- Site of the Birnum Station and associated track formation of the former narrow gauge Colac to Beach Forest railway line.

Upper Gellibrand Forests

Recreation Sites and Landscape

- Stevensons Falls picnic area, camping ground and walking tracks, together with associated historic tree plantings and waterfall.
- Dandos picnic and camping ground and associated forest environs.
- Network of four wheel drive tracks.

Nature Conservation

- Stands of old growth and senescent forest.
- Threatened fauna including the white-footed dunnart, long-nosed potoroo, grey goshawk, powerful owl, Otway black snail.
- The habitat of the spot-tailed quoll, especially in the vicinity of recent records near the Charlies Creek forest.
- Geomorphological features of Stevensons falls.

Historical Sites

- Historic sawmill sites and associated log lines, tramways and water races including Hitt No 4, Seebeck/Henry, Henry, Kincaid and Devitt sawmills and the historic (1920s) tramway known as McDonald's tramway.

Yaugher Forest

Nature Conservation

- Stands of old growth and senescent forest.
- Habitat for ground dwelling mammals such as the long-nosed potoroo and southern brown bandicoot.

Barwon Downs

Recreation Sites and Landscape

- Network of four wheel drive tracks.

Nature Conservation

- Stands of old growth and senescent forest, especially in Dewings Creek catchment.
- Threatened fauna including the grey goshawk.
- Habitat for ground dwelling mammals such as the long-nosed potoroo, broad-toothed rat and southern brown bandicoot as well as the yellow-bellied glider.

Historical Sites

- Historic sawmill sites and associated landings, log lines, snig tracks, cuttings, dams and tramways including Haydens No 2 and No 3, Mackie No 4, No 5 and No 6, Hayden No 4 and No 5 and Royle sawmills.

Boonah–Wormbete Forest

Nature Conservation

- Stands of old growth and senescent forest.
- Threatened fauna including the grey goshawk.
- Threatened flora including the Anglesea grevillea.
- Habitat for ground-dwelling mammals such as the swamp antechinus and southern brown bandicoot.
- The large untracked area of the Anglesea River headwaters block.

Forest Park-wide Features

- Archaeological sites and other sites and places of Aboriginal cultural significance.

CHAPTER 5 OTHER PUBLIC LAND

Other public land in the Otways includes small reserves protecting natural features and areas providing for community uses or services and utilities.

In addition to the main large blocks of public land in the Otways, there are many smaller, more isolated, blocks that contribute to the protection of natural landscapes and biodiversity and provide a base for services and utilities required by the community. VEAC's investigation has focused on larger blocks of public land and it has made a deliberate effort to reduce the number of land-use categories. In responding to the Terms of Reference, however, VEAC has taken a comprehensive approach and assessed the values of all areas—both large and small—prior to the consideration of new parks and reserves. Council has recommended that a number of the smaller existing parks and reserves be included within the larger national park or forest park. Other small, more isolated reserves have been allocated to distinct land-use categories in order to clearly identify their roles and uses.

VEAC's recommendations for such areas of public land are based on the broad land-use categories which form the basis of existing legislation and management arrangements. Most of the land-use categories have been used in the past for public land in the Otways. Most recently, marine national parks have been proclaimed at the western and eastern extremities of the Otways respectively, at Princetown (the Twelve Apostles Marine National Park) and at Anglesea (Point Addis Marine National Park). Such marine parks complement the protection of the Otways terrestrial environment now being recommended by Council in the Otway Ranges National Park. No changes to these marine national parks are proposed.

The national and forest parks have been discussed in the preceding chapters 3 and 4, under recommendations A and B respectively. All existing reserves lying outside the recommended national park and forest park are listed below, together with Council's recommendations for a number of new or amended nature conservation and other reserves.

These land-use categories appear as follows:

C: Nature conservation reserves

D: Natural feature reserves, including water frontage, streamside, scenic, wildlife and bushland reserves

E: Water production areas

F: Coastal reserves

G: Community use areas, including education areas, parklands and gardens, recreation reserves and buildings in public use

H: Other land-use categories

- Historic and cultural features reserves
- State forest
- Plantations
- Earth resources, including stone areas
- Services and utilities

A small portion of public land in the study area is listed as uncategorised public land (section I).

C NATURE CONSERVATION RESERVES

Nature conservation reserves are set aside to conserve rare or threatened species and significant plant associations or communities. The primary land-use objective is nature conservation, although education, scientific study and passive recreation are permitted subject to the maintenance of the conservation values of the particular reserve.

The majority of existing nature conservation reserves - previously designated flora reserves or flora & fauna reserves - are recommended for inclusion in the Otway Ranges National Park. Other existing nature conservation reserves lie within township areas or occur as distinct public land blocks remote from the Otway Ranges. The land-use classifications of these blocks have been reviewed on the basis of their values and proximity to other existing reserves. VEAC recommends creating two new nature conservation reserves, adding to two existing reserves and retaining one existing reserve.



CI JANCOURT NATURE CONSERVATION RESERVE

The Jancourt Nature Conservation Reserve encompasses the largest remnant of the once extensive Heytesbury Forest. This land lies on the western edge of the study area surrounded by open pastures, much of which was cleared in the 1950s and 60s. The reserve significantly improves the protection of a number of vegetation types that are currently poorly represented within the permanent reserve system.

Nature Conservation Features

The recommended reserve is high in species richness and a number of threatened flora and fauna have been recorded within its boundaries, including the powerful owl and the forest bitter-cress, both of which are vulnerable in Victoria. The reserve has the only record of forest bitter-cress within the study area and is one of only four sites in Victoria where the plant has been recorded. Near-threatened species recorded include the tufted club-sedge and the parsley xanthosia, both of which are rare in Victoria.

The recommended reserve makes a significant contribution to the representation of a number of ecological vegetation classes (EVCs) classed as vulnerable within the Warrnambool Plain bioregion: herb-rich foothill forest (1476 ha), lowland forest (455 ha), and damp heath scrub (39 ha). The reserve encompasses the largest consolidated block of herb-rich foothill forest remaining in the Warrnambool Plain Bioregion as well as in the study area.

Sedgy riparian woodland is considered endangered within the bioregion and is well represented in the reserve. This EVC extends across 157 ha of which two blocks, with a combined area of about 50 ha, are mapped as old-growth forest.



Recreation

The well-maintained network of vehicular tracks in the western portion of this reserve, allied to the open forests, undulating terrain and bisecting watercourses, all contribute to the appeal of this area for a variety of recreational activities. Horsingriding, carriage driving, picnicking, and vehicle-based sightseeing are all undertaken. While such active recreation is not ordinarily compatible with the objectives of a nature conservation reserve, given the size of this particular reserve and the established nature of its track network, an exception is appropriate in this instance. VEAC has recommended that provision be made for such uses to continue in the western portion of the reserve.

Management Issues

Parts of the reserve (mostly along the network of vehicular tracks) were logged in the 1990s and 2000s for firewood and have been subject to an active program of silvicultural improvement. Weed control within the understorey will continue to be required. While the existing track network provides good access for visitors, there is scope to rationalise the number of tracks and, where possible, divert through traffic to other routes.

The western portion of the recommended reserve is used as a source of firewood for residents of nearby towns. This use is not compatible with the on-going protection of the area's nature conservation values, and alternative energy and firewood sources exist. VEAC is recommending that the collection of firewood be phased out over 5 years.

Boundaries

The recommended new reserve includes the existing Carpendeit Flora and Fauna Reserve and the Jancourt State Forest. The existing Carpendeit Reference Area remains as an overlay to the reserve.

C2 CORADJIL NATURE CONSERVATION RESERVE

The Coradjil Nature Conservation Reserve lies beyond the Otway Ranges on the western edge of the study area and is surrounded by farmland. It complements the protection offered by the Jancourt Nature Conservation Reserve for the remnant vegetation of the Warrnambool Plain Bioregion. In particular, the reserve improves the protection of a number of vegetation types that are currently poorly represented within the permanent reserve system.

Nature Conservation Features

The recommended reserve contributes to the representation of a number of ecological vegetation classes (EVCs) that are vulnerable within the Warrnambool Plain bioregion: herb-rich foothill forest, lowland forest and, notably, riparian forest. Much of the vegetation is little-disturbed and areas of old-growth and senescent forest have been identified.

The reserve provides habitat for the threatened white-footed dunnart and the rare tufted club-sedge has been recorded on the edge of the reserve along Kennedys Creek.

Management Issues

The reserve is little disturbed other than for two long-disused gravel pits and associated access tracks, which will require rehabilitation.

Boundaries

The recommended reserve is largely coincident with the existing Tomahawk Creek Bushland Reserve. The existing Tomahawk Creek Reference Area remains as an overlay to the reserve.



C3 BUNGADOR STONY RISES NATURE CONSERVATION RESERVE

There is virtually no public land remaining within the stony rises region of the western district. It is recommended that two small blocks of this land type containing remnant vegetation be added to the existing Stony Rises Flora and Fauna Reserve.

Nature Conservation Features

The enlarged reserve consists of three separate blocks representative of the distinctive stony rises landform and associated vegetation community. The vegetation of the reserve consists of stony rises woodland—an open grassy woodland with an overstorey dominated by manna gum and swamp gum. This ecological vegetation class is considered vulnerable in Victoria. The recommended reserve is one of only two public land reserves where the EVC is found in the study area.

The fauna of the stony rises has been greatly depleted and once common species such as the eastern quoll and common wombat no longer occur there. The open woodlands are, however, important for bird species otherwise only found in northern Victoria and the rocky terrain provides habitat for ground dwelling fauna, especially reptiles.

Management Issues

A number of pest plant species have been recorded in the understorey of these blocks, with the understorey vegetation of the smallest block severely modified. Such pest species require control and the native ground cover restored. Fencing and signage will assist in raising awareness of the status of the land and reduce pressure from wandering stock.

Boundaries

The recommended reserve includes the existing Stony Rises (Bungador) Flora and Fauna Reserve (also known as the Stony Rises Wildlife Reserve), and two small unreserved blocks of Crown land.

C4 MARENGO NATURE CONSERVATION RESERVE

The recommended Marengo Nature Conservation Reserve will extend and consolidate protection of the remnant coastal heathlands at Marengo.

Nature Conservation Features

Three EVCs are found in this small reserve: wet sands thicket, damp heath scrub and swamp scrub. These vegetation types have limited distribution within the study area and have been greatly modified elsewhere in Victoria. At Marengo, the three vegetation types merge into each other and form an impenetrable block of highly diverse flora.

Management Issues

Parts of the reserve have been disturbed in the past by drainage works and a mini bike track, and may require rehabilitation, with pest plants on the reserve margins needing control. Monitoring will be required to determine whether there is any leaching of contaminants from the adjoining former Marengo rubbish tip.

Boundaries

The recommended reserve includes the existing Marengo Flora Reserve, together with adjoining blocks of currently unreserved Crown land, the three intersecting unused road reserves, and the nearby Marengo Bushland Reserve.

C5 EDNA BOWMAN NATURE CONSERVATION RESERVE

This small existing reserve protects a high value block of remnant vegetation at Anglesea.

Nature Conservation Features

The remnant vegetation understorey of this small block is significant with at least one threatened species recorded.

Management Issues

As the reserve is on the edge of the Anglesea township, the reserve and its biota are subject to a variety of pressures including weed invasion, roaming pets and litter. The maintenance of its values will rely on continued active management, and strategies such as fencing may assist.

Boundaries

The existing boundaries of the reserve are recommended to remain without change.

NATURE CONSERVATION RESERVE MANAGEMENT OBJECTIVES

These areas are used to:

- (a) conserve and protect species, communities or habitats of indigenous animals and plants;
- (b) provide for educational and scientific study if consistent with (a) above, and in ways that minimally affect the area; and
- (c) provide for passive recreation such as nature study and picnicking by small numbers of people, where consistent with (a) above or as otherwise provided;

and:

- (d) grazing, harvesting of forest products, hunting and the use of firearms is not permitted;
- (e) apiculture is not be permitted except on traditionally licensed sites subject to conditions; and
- (f) low impact exploration and mining for minerals may be permitted subject to consent of the Minister for the Environment.

Note: The above management objectives and summary land-use recommendations are those that generally apply for the land-use category. Exceptions to these may apply to specific reserves in special circumstances..

RECOMMENDATIONS

CI-C5 NATURE CONSERVATION RESERVES

That the following existing, enlarged or new nature conservation reserves as indicated on Map A and described above and listed below be used as nature conservation reserves:

- C1 Jancourt Nature Conservation Reserve (3385 ha)—new reserve
- C2 Coradjil Nature Conservation Reserve (1612 ha)—new reserve
- C3 Bungador Stony Rises Nature Conservation Reserve (16.2 ha)—existing reserve with additions
- C4 Marengo Nature Conservation Reserve (26.7 ha)—existing reserve with additions
- C5 Edna Bowman Nature Conservation Reserve (0.8 ha)—existing reserve

- Notes:
1. The Jancourt Nature Conservation Reserve includes the existing Carpendeit Flora and Fauna Reserve.
 2. The following existing reserves have been included in the new Otway Ranges National Park:
 - Eumeralla Flora Reserve (286 ha)
 - Anglesea (Forest Road) Flora Reserve (569 ha)
 - Mount Ingoldsby Flora Reserve (48 ha)
 - Mt McKenzie/ Crinoline Creek Flora & Fauna Reserve (2159 ha)
 - Olangolah Flora & Fauna Reserve (1694 ha)
 - Prinetown Nature Conservation Reserve (68.5 ha)
 - Redwater Creek Flora & Fauna Reserve (370 ha)
 - Smythes Creek Flora Reserve (78 ha)
 - West Barham Big Trees Flora Reserve (220 ha)
 - Yaugher Flora & Fauna Reserve (121.5 ha)
 3. The Barongarook West Flora and Fauna Reserve (0.7 ha) is recommended to be a natural features reserve, as this category better reflects the values of the land—see Recommendation D5.
 4. The Yan Yan Gurt Flora & Fauna Reserve (16 ha), which for many years has been managed as part of the adjoining school camp, is recommended for addition to the adjoining Bambra Education Area—see Recommendation G1.

C6 SPECIAL ARRANGEMENTS FOR JANCOURT NATURE CONSERVATION RESERVE

That, in the western portion of the recommended Jancourt Nature Conservation Reserve, a range of recreational use, including horseriding, be provided for, and firewood collection be permitted subject to phase out of collection within 5 years of the acceptance of this recommendation.

D NATURAL FEATURES RESERVES

Natural features reserve is a general public land-use grouping that includes land with natural features (such as a river, stream, lake, scenic area, bushland, geological or geomorphological feature) worthy of protection. These reserves are protected (especially in land types that have been largely cleared) for conservation of habitat, maintenance of landscapes and prevention of land degradation, while providing opportunities for passive recreation and, in designated reserves, recreational duck-hunting.

VEAC has reviewed all existing natural feature reserves and other small blocks of public land with a view to assessing the appropriateness of including such land in the recommended Otway Ranges National Park, upgrading them to nature conservation reserve, or recommending another category.

Most natural features reserves previously set aside to protect waterfall areas have been included in the Otway Ranges National Park, with the Tomahawk Creek and Wiridjil Bushland Reserves (by far the largest bushland reserves in the study area) included, respectively in a nature conservation reserve and partly within national park and forest park.

Most existing reserves on water frontages have been retained as separate reserves. The remaining existing natural features reserves are mainly small relatively isolated blocks. VEAC is recommending that these remain as natural features reserves. A number of other smaller blocks of public land assessed as not appropriate for addition to national park or as stand-alone nature conservation reserves, were nonetheless considered to contain features that should be recognised and they have been proposed for inclusion in new natural features reserves.

The Aire River Wildlife Reserve is the only natural features reserve in the study area where recreational duck-hunting is currently permitted.

Water Frontage Reserves

In 1881, Crown land consisting of the bed and banks of a defined list of watercourses, together with adjoining lands (generally of a width of 20 metres on both sides of the watercourse) that had not previously been alienated, were permanently reserved for public purposes. They were established for the benefit of the public and to prevent exclusive occupation. For many years water frontage licences have been issued to adjoining land-owners over parts of these reserves—mostly to enable the watering of stock and to enable the landholder to avoid the costs of fencing. Such licences provide for the protection of timber, ensure access for recreation and require licensees to control pest plants and animals.

In those parts of the study area alienated prior to 1881 there are few water frontage reserves. However, under provisions of the *Water Act 1905*, the beds and banks of all

watercourses (that formed the boundaries of freehold allotments) were deemed to be Crown land.

The natural features of the water frontage reserves are of special value, although their condition varies widely. They may be the only area of public land in agricultural regions, with remnant vegetation of landscape, habitat, and erosion-prevention value. Those in at least reasonable condition contribute to the maintenance of water quality and in-stream habitat. Water frontage reserves offer opportunities for recreational activities, such as angling, picnicking, swimming, walking, canoeing and (in unlicensed areas) camping. Many water frontage reserves in the study area have, however, been severely degraded—with greatly modified understoreys, poorly controlled weeds, reduced tree cover, and extensive soil pugging and erosion evident. Substantial parts of the public water frontage reserves have been (illegally) cleared—some of which have been sown to improved pasture and even cropped. They have, in effect, been incorporated into the adjoining landholding. Indeed a number of these public reserves are signed as 'private property'. Public access to such water frontages should be restored, although vehicular recreational use and utilisation of forest products are not appropriate in these narrow reserves.

Such management issues are not restricted to the Otways. Catchment Management Authorities across the State are being given increased responsibility for the management of water frontages. Their water frontage management programs are undertaken with local Landcare groups and DSE and aim to enhance biodiversity and control erosion. One of the principal causes of river degradation is uncontrolled stock access to rivers. Consequently the restriction of stock access and the restoration of indigenous riparian vegetation (as opposed to pest species such as willows) are key management strategies. In recent years, the Corangamite Catchment Management Authority has led major programs to implement such strategies, notably along the Gellibrand River near Gellibrand.

Council believes that many water frontage reserves will be best managed as distinct reserves in accordance with catchment-wide policies and priorities, rather than as part of the recommended forest park. It also believes that the water frontage reserves should be clearly defined, with a substantially higher level of resources applied to their management—by both licensees and the responsible agencies. Where licensed, licence conditions must be enforced.



NATURAL FEATURES RESERVE MANAGEMENT OBJECTIVES

These areas, according to the specific characteristics of the individual reserve, are used to:

- (a) protect natural features and values;
- (b) provide opportunities for:
 - (i) education and passive recreation such as picnicking, walking and, where relevant, fishing;
 - (ii) hunting on wetlands, where specified and subject to other relevant limitations; and
 - (iii) more intensive recreation such as camping where specified;
- (c) protect areas with remnant vegetation or habitat value and conserve indigenous flora and fauna;
- (d) maintain scenic features and the character and quality of the local landscapes; and
- (e) preserve features of geological or geomorphological interest;

and:

- (f) commercial timber harvesting is not permitted;
- (g) exploration of minerals and mining may be permitted, subject to consent of the Minister of Environment;
- (h) prospecting and apiculture generally is permitted; and
- (i) grazing generally is not permitted (unless required for management purposes) other than on water frontage reserves where currently licensed.

Note: The above management objectives and summary land-use recommendations are those that generally apply for the land-use category. Exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

DI-D26 NATURAL FEATURES RESERVES

That the following existing, enlarged or new natural features reserves as indicated on Map A and listed below be used as natural features reserves:

- D1 Latrobe Bushland Reserve (299 ha)—existing reserve
- D2 Coradjil Bushland Reserve (166.2 ha)—existing reserve with addition
- D3 Carpendeit Bushland Reserve (11.2 ha)—new reserve
- D4 Irrewillipe Bushland Reserve (26.1 ha)—new reserve
Note: Part of this reserve has been cleared and requires revegetation.
- D5 Barongarook West Bushland Reserve (0.7 ha)—new reserve
Note: This reserve was previously classified as a flora and fauna reserve.
- D6 Six Mile Dam Lake Reserve (5.4 ha)—existing reserve
- D7 Gellibrand Bushland Reserve (114.9 ha) - existing reserve with addition
- D8 Yaugher Bushland Reserve (5.6 ha) - existing reserve with additions
- D9 Johanna Falls Scenic Reserve (14.6 ha) - existing reserve
- D10 Aire River Wildlife Reserve (279.2 ha)—existing reserve with additions
Note: Fencing will be required to exclude grazing from the wetland areas and connecting watercourses.
- D11 Barham Paradise Scenic Reserve (118 ha)—part existing reserve and addition
- D12 Wild Dog Bushland Reserve (26 ha)—new reserve
- D13 Wild Dog Creek Streamside Reserve (22.5 ha)—existing reserve
Note: There has been encroachment over this reserve; its boundaries need defining and restoration works undertaken.
- D14 Wongarra Bushland Reserve (1.3 ha)—existing reserve
- D15 Barwon Downs Bushland Reserve (23.8 ha)—existing reserve with additions
Note: Part of the addition includes the site of the former Barwon Downs tip; this requires revegetation.

D16 Yeo Streamside Reserve (5.8 ha)—existing reserve

Note: As a readily accessible and only block of public land on the Barwon River between Birregurra and the Otway Ranges, this reserve may be a suitable site to commemorate the final ill-fated journey of the explorer Gellibrand.

D17 Murroon Bushland Reserve (2.1 ha)—existing reserve

D18 Pennyroyal Creek Bushland Reserve (11.1 ha)—existing reserve

D19 Lily Pond Bushland Reserve (2.6 ha)—new reserve

D20 Parkers Road (Bambra) Bushland Reserve (2 ha)—existing reserve

D21 Retreat Creek Streamside Reserve (8 ha)—new reserve

D22 Bambra Bushland Reserve (37.1 ha)—existing reserve with additions

D23 Wensleydale Bushland Reserve (11.2 ha)—existing reserve

D24 Gherang Gherang Bushland Reserve (108.7 ha)—existing reserve

D25 Aireys Inlet Bushland Reserve (2.4 ha)—existing reserve

Note: As this is an existing reserve with high quality remnant vegetation on a hillside, and of small size, VEAC does not believe that this is an appropriate location for a sports ground.

D26 Anglesea Bushland Reserve (10.5 ha)—new reserve

Note: This reserve consists of two currently unreserved blocks of land; the western block is known locally as the Elizabeth Street Flora Reserve, the eastern block has no current name.

D27 NATURAL FEATURES RESERVES - WATER FRONTAGES AND STREAM BEDS AND BANKS

That:

- (a) The following water frontages as indicated on Map A and listed below, and stream beds and banks other than where included in another reserve or park, be used as natural features reserves:

Lake Corangamite Catchment

- Pirron Yallock Creek Water Frontage Reserve

Gellibrand River Catchment

- Gellibrand River Water Frontage Reserve
- Kennedy Creek Water Frontage Reserve
- Chapple Creek Water Frontage Reserve
- Carlisle River Water Frontage Reserve
- Love Creek Water Frontage Reserve
- Lardner Creek Water Frontage Reserve

Johanna Catchment

- Johanna River Water Frontage Reserve

Aire River Catchment

- Ford River Water Frontage Reserve

Apollo Bay Catchments

- Barham River Water Frontage Reserve
- Milford Creek Water Frontage Reserve
- Wild Dog Creek Water Frontage Reserve
- Skenes Creek Water Frontage Reserve
- Sugarloaf Creek Water Frontage Reserve

Barwon River Catchment

- Barwon River (West Branch) Water Frontage Reserve
Note: Includes lower reaches of Roadknight Creek
- Barwon River (East Branch) Water Frontage Reserve
- Matthews Creek Water Frontage Reserve

- Pennyroyal Creek Water Frontage Reserve
- Wormbete Creek (West Branch) Water Frontage Reserve

Lorne to Anglesea Catchments

- Painkalac Creek Water Frontage Reserve

Note: Includes a tributary. Complementary management with the adjoining municipal council freehold land is desirable.

- (b) the Corangamite Catchment Management Authority, in cooperation with adjoining landowners, implement programs, including fencing, in accordance with priorities set down in the regional catchment strategy to restore frontages, protect remnant vegetation and encourage regeneration—in particular where there is uncontrolled stock access to streams and where stream-bank or frontage vegetation is degraded, frontage vegetation not regenerating, stream banks eroding or salt-affected, or to protect natural, cultural, recreational and scenic values or water quality; and
- (c) where a water frontage or grazing licence has been issued, recreation use and access by the public for activities such as walking, nature observation or fishing be facilitated.

Notes:

1. VEAC notes that a water frontage licence is not necessary to gain access to water (as a licence under the *Water Act 1989* allows the taking of water for domestic and stock use) and that where a frontage is not licensed fencing is not necessarily required unless the adjoining land is grazed by stock.
2. Most of these water frontage reserves require revegetation works and a number require extensive restoration and revegetation works.
3. Stream beds and banks are as defined in section 385 of the *Land Act 1958*.



E WATER PRODUCTION AREAS

Water production areas encompass water storage areas, diversion weirs, pump intakes and associated buffer areas used primarily for the collection of water for water supply purposes.

The Otways are a vital source of water for Warrnambool, Colac, Geelong and a number of other towns and settlements in south-western Victoria. Consequentially it is important that the reservoirs, weirs and offtakes located on

Otway watercourses be clearly designated and managed primarily for water production. An operational area around each facility has been included within the designated water production areas.

Much of the catchment from which the water is harvested has been included within national or forest parks, with special provision made to ensure the continued supply of high quality water. Public lands used for the distribution of water, including off-stream reservoirs, storage tanks and pipelines have been classified as service and utility areas.

WATER PRODUCTION AREA MANAGEMENT OBJECTIVES

Water storage areas, diversion works and associated facilities and protective buffer zones around diversion works and storages where defined in a special area plan or land-use determination; and any other public land considered necessary for water production are used for:

- (a) water supply purposes;

and:

- (b) other activities may be permitted by the water supply authority after consultation with the Department of Sustainability and Environment and the Environment Protection Authority, as appropriate; and
- (c) biodiversity and historic values as specified are protected.

Note: The above management objectives and summary land-use recommendations are those that generally apply for the land-use category. Exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

E1-E15 WATER PRODUCTION AREAS

That the following water production areas as indicated on Map A and listed below be, or continue to be, used for water supply purposes:

- E1 South Otway Offtake (and pumping stations)
- E2 Gellibrand River Offtake (and pumping stations)
- E3 Arkins Creek diversion weirs and buffer
- E4 Lardner Creek Offtake (and pumping station)
- E5 West Barham Weir
Note: VEAC is aware that Barwon Water proposes to relocate this weir to a downstream offtake, at which time the existing weir should be removed and a new water production area defined.
- E6 West Gellibrand Reservoir and buffer
- E7 Olangolah Reservoir and buffer
- E8 West Barwon Reservoir and buffer
- E9 East Barwon River Diversion Weir
- E10 Callahan Creek Diversion Weir and buffer
- E11 Barwon Downs Groundwater Bore
- E12 Matthews Creek Diversion Weir
- E13 Pennyroyal Creek Diversion Weir
- E14 Allen Reservoir and buffer
- E15 Painkalac Reservoir and buffer

F COASTAL RESERVES

Coastal reserve is a multi-use land-use category set aside primarily to provide informal recreation for large numbers of people, including fishing and boating, in a natural coastal environment, as well as protection of natural coastal landscapes, ecosystems and flora and fauna.



Coastal reserves are a focal point of recreational activity in the Otways, with ocean beaches and sheltered sandy bays of the foreshores at Apollo Bay, Kennett River, Loutit Bay (Lorne), Fairhaven and Anglesea especially popular. The waters beyond high water mark are best considered a transition zone between terrestrial and marine processes and are used for swimming, sailing and fishing. Jetties and harbours also extend beyond the low water mark. The Apollo Bay harbour and Lorne Jetty are managed as local ports, which are important for the local fishing industry as well as for visitors. The Apollo Bay harbour is especially important as a safe haven for recreational boats and inshore and offshore fishing fleets.

Coastal reserves are currently managed by various committees of management. In recent times the committees have been consolidated, with two main committees formed—one encompassing most of the coastal reserves in Colac Otway Shire and the other covering most coastal reserves in Surf Coast Shire. VEAC has recommended that some sections of the existing coastal reserve outside townships be included in the Otway Ranges National Park—to consolidate boundaries and encompass high value areas, with the remainder retained as coastal reserve.

COASTAL RESERVE MANAGEMENT OBJECTIVES

These areas are used to:

- (a) provide opportunities for informal recreation for large numbers of people, and also for recreation related to enjoying and understanding nature;
- (b) protect and conserve natural coastal landscapes, ecosystems and significant geomorphological, archaeological and historical features for public enjoyment and inspiration and for education and scientific study;
- (c) ensure the protection and conservation of important aquatic and terrestrial fauna and flora; and
- (d) provide opportunities for fishing and facilities for boating, together with the necessary navigation aids;

Note: The above management objectives and summary land-use recommendations are those that generally apply for the land-use category. Exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

F1-F2 COASTAL RESERVES

That the following coastal reserves as indicated on Map A and listed below be, or continue to be, used as coastal reserves.

F1 Apollo Bay Coastal Reserve

Note: This reserve includes existing coastal reserves, foreshore reserves and unreserved lands between Marengo and Carisbrook Creek and at Kennett River and Wye River.

F2 Lorne-Anglesea Coastal Reserve

Note: This reserve includes the existing coastal reserves, foreshore reserves and unreserved land at Cumberland River, Lorne, between Eastern View and Aireys Inlet and at Anglesea.

G COMMUNITY USE AREAS

Community use areas are primarily used for education, recreation or other specific community purposes.

All public land is utilised either directly or indirectly for the benefit of the community. Designated community use areas are those where education, recreation or other specified community use is the primary land-use goal. They include land used for environmental education, recreation reserves such as sports grounds, local parks and formal gardens, and buildings such as schools, public halls, kindergartens, or libraries. Most of these reserves are currently managed by committees of management.

VEAC is aware of proposals to develop the former Beech Forest narrow gauge railway line and the former Birregurra-Forrest railway as rail trails for informal recreation, such as walking, cycling and horseriding, and to protect remnant features of the former railway, such as the track formation and embankments. Council supports such proposals and notes that rail trails may form desirable links between the larger blocks of public land. Sectors of these former railways still in public ownership have been designated as community use areas. Other sectors are included within larger blocks of Otway Forest Park, with a section purchased by Barwon Water for a future water pipeline now recommended as a service and utilities reserve but with specific reference made to retaining the opportunity for a rail trail—see Recommendation H2. Other sectors of these former railways have been sold.

Other community use areas that offer additional recreational opportunities include shooting ranges, speedways, moto-cross complexes and youth camps.

Should a building or site no longer be required for its primary designated use, it should be assessed for its cultural and natural heritage values and capability for other public uses before, in consultation with the community, being either added to an adjoining public land-use category, re-categorised, exchanged or disposed of.



COMMUNITY USE AREA MANAGEMENT OBJECTIVES

These areas are used for:

- (a) education, recreation or other community purposes;

and:

- (b) appropriate facilities are provided;
- (c) where relevant, and where compatible with (a) above, features of cultural significance, natural surroundings, and the local character and quality of the landscape are maintained or restored; and
- (d) harvesting of forest products, hunting, and extraction of 'stone' is not permitted.

Note: The above management objectives and summary land-use recommendations are those that generally apply for the land-use category. Exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

GI-G7 COMMUNITY USE AREAS

That the following community use areas as listed below, and mostly indicated on Map A, be used as community use areas:

- G1 Bambra Education Area (22 ha)— additional area
- G2 Eumeralla Education Area (139.3 ha)—part of existing area
- G3 Recreation reserves—existing areas in use
- G4 Parklands and gardens—existing areas and additions

Note: Two new reserves have been recommended at Lorne. In the south lies Queens Park which is recommended for enlargement, and a separate North Lorne parkland. The following special features are to be protected in these reserves: the natural environs of Teddys Lookout and its 1920s picnic shelter/pavilion, the 'sanctuary' amphitheatre used as a church and later a scenic picnic spot from the 1850s to the 1900s, the network of walking tracks, habitat of the threatened Australian grayling, chestnut-rumped heathwren and long-nosed potoroo, and populations of the threatened wrinkled buttons and the near threatened netted daisy-bush, dwarf silver wattle, Madeira moss and wiry bossiaea. Management of these two reserves will also require careful attention to their important fire protection role.

- G5 Buildings in public use—existing areas in use
- G6 Rail trails—existing areas and additions

Note: Where remnant native vegetation occurs, this should be protected, as should remnant structures of the railway line operation.

- G7 Shooting ranges, golf courses, speedways, moto-cross complexes, and youth camps—existing areas

Notes:

1. Council has proposed that the existing Barramunga Creek Education Area and the pre-existing Bambra Education Area be part of the Otway Forest Park and that part of the existing Eumeralla Education Area be included in the Otway Ranges National Park. The recategorised areas are currently not in active use and retain little-disturbed vegetation.
2. Council considers that the values of the existing Marengo Tramway Historic Area are more commensurate with designation as a parkland and garden. Remnants of the former tramway embankment should be maintained.
3. Some of these areas were formerly used for refuse disposal. Potential environmental hazards need to be assessed and, where necessary, mitigated.



H OTHER LAND-USE CATEGORIES

Historic and Cultural Feature Reserves

Most of the existing historic and cultural features reserves have been included in the Otway Ranges National Park, which will provide a similar to current level of protection for their historical values. Part of one existing reserve has been included in the Otway Forest Park and another, the Marengo Tramway Reserve, reclassified as a community use reserve (parklands and garden). In each case their historical values have been listed as a value to be protected. VEAC is not recommending any stand-alone historic and cultural features reserves.

State Forest

All existing state forest areas are included in the Otway Ranges National Park, Otway Forest Park or other land-use categories.

Plantations

There are a number of public land plantations throughout the Otways. The majority of these areas have been vested in the Victorian Plantations Corporation which in turn has leased the plantations. These leased plantations, together with other public land plantations held under various licences, were excluded, under the terms of reference, from the investigation study area.

Earth Resources and Stone Areas

Provision has been made for the continued extraction of earth resources within the forest park (see Recommendation B1), pre-existing operations within the Otway Ranges National Park (see Recommendation A1) and within a stand-alone existing stone reserve (see below).

Services and Utilities

VEAC recommendations provide for the continued use of existing service and utility facilities within the Otway Forest Park, the Otway Ranges National Park, existing stand-alone sites in township areas and on isolated blocks. Examples of service and utility areas include water and sewerage services, waste disposal facilities, train lines, cemeteries and government offices.

VEAC's consideration of the Great Ocean Road and other arterial and municipal roads is described in Chapter 2, which also includes a number of recommendations about these particular roads.

Should a facility no longer be required for its primary designated use, the land and facility should be assessed for its cultural and natural heritage values and capability for other public uses before, in consultation with the community, being either added to an adjoining public land-use category, re-categorised, exchanged or disposed of.

STONE AREA MANAGEMENT OBJECTIVES

These areas are used for:

- (a) the extraction of stone resources;

and:

- (b) extraction sites are preferably located on already cleared land; and
- (c) where no longer required for extraction, each site is considered uncategorised land and assessed for public land values and uses, and where appropriate assigned to another public land use category or made surplus.

SERVICES AND UTILITIES AREA MANAGEMENT OBJECTIVES

These reserves and easements are used for:

- (a) public services and utilities such as transport, electricity and gas, communications, cemeteries, water and sewerage;

and:

- (b) new services or utility sites and easements or lines not be sited in or across reference or wilderness areas, and wherever possible not be sited in or across national, state, regional or marine parks, marine reserves or nature conservation reserves;
- (c) railway lines and other service and utility sites be managed to protect remnant vegetation and habitat, as far as practicable; and
- (d) should a public land area or building and site used for service or utility purposes no longer be required for its primary designated use, it be assessed for its natural, recreational and cultural heritage values, and capability for other public uses, and where appropriate assigned to another public land use category or made surplus.

Note: The above management objectives and summary land-use recommendations are those that generally apply for these land-use categories. Exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

H1 STONE AREAS

That the following area as indicated on Map A and listed below be used as a stone reserve:

H1 Gherang Gherang Stone Area (110.2 ha)—existing reserve

- Notes:
1. The existing Rochford Road Stone Reserve (3.4 ha) in the Parish of Gherang Gherang has not been developed and is currently subject to a grazing licence. VEAC has assigned it as uncategorised public land. The existing Gellibrand Stone Reserve (2.1 ha) has been worked out and has been included with the adjoining community use area.
 2. Gherang Gherang is used for the extraction of sand and gravel.

H2 SERVICE AND UTILITY AREAS

H2 That existing service and utility sites as indicated on Map A be used as service and utility areas.

- Note:
- The service and utility area extending between Forrest and Deans Marsh was acquired by Barwon Water to facilitate the construction of a water main. The land was formerly part of the Birregurra-Forrest railway line and is a vital section of a proposed rail trail. The plans for the water main should provide for the operation of this rail trail. See also Recommendation G6.

I UNCATEGORISED PUBLIC LAND

Uncategorised public land, includes public land, often in small rural parcels or in townships, for which no other land-use category is recommended.

Where no specific recommendation for a public land block has been made, existing legal use and tenure should continue, and those areas not currently used for any particular purpose should be used in a way that will not reduce future options.

Some such areas have not been assigned to a long-term land-use category as they may have potential for a number

of alternative land uses or may be suitable for land exchange. A substantial area of public land on Dewings Creek owned by Barwon Water may be required in the long term for water storage. Accordingly, this area is recommended as uncategorised public land until such time as a decision is made regarding the use of this land for water production.

Should any such land no longer be required for its existing use or the designated possible use, it should be assessed for its cultural and natural heritage values and capability for other public uses before, in consultation with the community, being added to an adjoining public land-use category, re-categorised, exchanged or disposed of.

RECOMMENDATIONS

II-5 UNCATEGORISED PUBLIC LAND

That public land as generally indicated on Map A and listed below:

- (a) be uncategorised public land and continue to be used in accordance with existing legal use and tenure; or
 - (b) subject to assessment and consultation:
 - (i) be assigned to a specific public land-use category; or
 - (ii) subject to the protection of any identified cultural or natural heritage values, be exchanged or disposed of.
- 11 Aire River Valley lands—designated for possible land exchange to consolidate the boundaries of the adjoining national park and nearby natural feature reserve.
 - 12 Little Aire block—designated for possible development to facilitate the tourist and/or educational use of the adjoining national park.
 - 13 Dewings Creek—Barwon Water land designated as a possible water production area.
 - 14 West Lorne—designated to allow for a detailed planning process to consider possible land exchange to consolidate the boundaries of the national park and/or creation of bushland areas and/or for township development.
 - 15 Various other minor reserves, unreserved public lands or township land not otherwise recommended for specific uses elsewhere in this report.

PART 2
ISSUES

CHAPTER 6 NATURAL AND CULTURAL HERITAGE

The Angahook-Otway study area has a wide range of natural and cultural heritage values, from fragile ecosystems that support rare and threatened species, to internationally significant geological and geomorphological features. It is rich in the history of the Indigenous people whose shell middens, quarries, axe grinding grooves and artefacts are evidence of a long and profound association with the land. The history of European occupation is also apparent, with many relics of the timber, shipping and transport and other industries across a complex cultural landscape.

Natural Heritage

Central to VEAC's vision for the Otways is an enhanced environmental outcome, at the core of which is biodiversity conservation, provided by the Otway Ranges National Park and other parks and reserves. The recommended reserve system has been designed to maximise protection of natural values, especially those for which adequate reserve protection is a key conservation requirement. The objective of biodiversity conservation is to protect natural ecosystems and thereby maximise the survival potential of the 1230 recorded plant species, 341 recorded vertebrates, indigenous invertebrates and other unrecorded species found in the Otways.

Community Views on Biodiversity

Biodiversity protection in the Otways has substantial community support, with many submissions recognising the area's outstanding natural values, including old-growth forest, cool temperate rainforest, diverse heathlands and coastal habitats. Many submissions to VEAC's Discussion Paper and Draft Proposals Paper specifically refer to the importance of nature conservation, through protection of either wildlife habitat or threatened species. Many submissions proposed that specific places or extensive areas be included in the national park.

Biodiversity Protection

VEAC is recommending a substantial increase in the area of permanent parks and conservation reserves established primarily for biodiversity conservation in the Otways. These parks and reserves implement the principles of a comprehensive, adequate and representative reserve system. VEAC's recommendations aim to include areas of all ecosystem types in permanent parks and reserves, ensuring these areas are of suitable size and represent an appropriate extent of each ecosystem. This approach seeks to protect all plant and animal species that occur within their boundaries. To ensure the protection of rare and threatened species, information from the Department of Sustainability and Environment's Atlas of Victorian Wildlife and Flora Information System databases was used in the design of the recommended reserve system. Considerations included habitat requirements, species ranges and habitat links.

A key issue for the establishment of a comprehensive, adequate and representative reserve system is that few examples remain of some ecosystems. Some ecological vegetation classes (EVCs) of the Warrnambool Plain and Otway Plain Bioregions have been extensively cleared and those remnants remaining are of particular importance. The vegetation of the Heytesbury forests is one such area. It has been almost entirely cleared, with the remnant vegetation on public land thus vital to ensuring adequate representation in the reserve system.

Species with the highest conservation status—those at most risk—may require recovery programs. However, such programs are expensive and can only be applied to a small number of species, and only those whose decline, scarcity or existence has been documented. The only practical way to protect all species (known and unknown, scarce and abundant) is to conserve sufficiently large areas representing the range of habitat types.

Old-growth and senescent forests contain key habitat resources for many species such as tree hollows and fallen logs and are an important repository of both flora and fauna. Long-term protection in permanent reserves protects current old-growth and, over time, allows more ecologically mature forests to replace old-growth forests lost to wildfire.

While assisting visitors to use and enjoy the natural values of national parks it is important that such values be protected from over-use or inappropriate use by visitors. Visitor management techniques may be required to protect natural heritage and to rehabilitate damaged areas.

As well as conserving natural heritage, national parks and other permanent reserves such as nature conservation reserves provide long-term protection for other landscape values such as scenic amenity, and ensure priority for the protection for those species and features most under threat.

Climate Change

Climate change is expected to lead to a more erratic climate pattern in the study area. There are likely to be more extreme events such as storms and droughts against a background of higher average temperatures and reduced annual rainfall.



VEAC has applied design principles for its recommended conservation reserves in the study area that aim at minimising the impact of climate change on threatened species and ecological communities. These principles include:

- the permanent protection of important habitat areas;
- ecological connectivity to facilitate migration and dispersal of species through the provision of habitat links; and
- the protection of drought refuges for wildlife, including wetter habitats and gully vegetation.

Actions to reduce greenhouse gas emissions are being taken under the Victorian Government's Greenhouse Strategy.

Representation of Vegetation Types

Vegetation types are commonly grouped into ecological vegetation classes (EVCs), which consist of one or more vegetation communities occurring under similar environmental conditions. Bioregions are larger areas that have been classified according to a number of environmental variables including landform, rainfall and soil fertility. The representation of specific EVCs within bioregions is often used as a measure of ecosystem representation. VEAC's recommendations significantly increase the representation of EVCs in permanent reserves (see Chapter 13), across the study area as a whole and within each of its component bioregions.

Special Features Protection

While the national park encompasses a whole array of special features, the forest park areas also contribute to biodiversity protection and include areas of special nature conservation value and interest. VEAC's recommendations include a schedule of special features to be protected within the forest park. This emphasis on the protection of particular values and locations highlights their importance to land managers and the community, and will contribute to ensuring their conservation.

Small Parcels of Public Land

Smaller vegetated blocks of public land in the study area are important for protecting remnant vegetation and landscape amenity in areas where cleared farmland is the dominant land use. These small, but significant areas are particularly susceptible to threats such as weed invasion because of their large exposed boundary. In addition, these blocks have a limited capacity to cope with impact from recreational pursuits and minor forest produce utilisation. Most such areas have been designated as natural features reserves. Astute planning and management of these reserves is required to ensure that their important role is maintained.

Protecting Natural Values

EVC representation in dedicated parks and reserves offers long-term conservation of natural values in the permanent reserve system. VEAC's recommendations increase the protected area of many EVCs that were previously under-represented in permanent reserves, including:

- lowland forest, dominated by brown stringybark, or occasionally co-dominated by messmate, narrow-leaved peppermint and the rare bog gum;
- herb-rich foothill forest, with messmate dominant or co-dominant with mountain grey gum; and
- shrubby wet forest, dominated by messmate, mountain grey gum and manna gum.

Permanent representation of several other habitats will also be substantially increased by VEAC's recommendations. Cool temperate rainforest, for example, is home to a large number of threatened species, including feather-fan germanderwort (otherwise found only in Tasmania), tall astelia, slender tree-fern, beech finger-fern and slender fork-fern. These cool, damp environs are also habitat for endemic species (that is, species found nowhere else), such as the Otway black snail and Otway stonefly. The national park delivers secure, long-term protection for all rainforest sites of national and state significance in the Otways, and over two-thirds of extant cool temperate rainforest.

Another vegetation type with a high proportion of rare and threatened species is heathy woodland. Substantial areas of this EVC near Anglesea, Carlisle River and Devondale are included in the national park. These heathlands are strongholds for many orchids, some listed as rare or threatened including the endemic Angahook pink-fingers.

Several rare or threatened species in the study area require large, contiguous areas of suitable habitat, notably the powerful owl and the spot-tailed quoll. Habitat links are also important for many other species in the study area, providing increased security against habitat fragmentation, which often leads to local extinction. The extended national park contributes to meeting these requirements.

The national park and forest park play a significant role in protecting populations that may be key links in their species' western Victorian or coastal distributions, such as the long-nosed potoroo, swamp skink, wine-lipped spider-orchid and heart-lip spider-orchid. The Otways are the south-west limit of the distribution of many Australian east coast species such as the broad-toothed rat and satin bowerbird. On the other hand, currant wood and Brooker's gum are species that indicate the Otways' links with Tasmania.

For other fauna, geographic isolation has resulted in a relatively large number of endemic species. For example, the endemic Otway population of the rufous bristlebird is a subspecies distinct from other populations in far western Victoria. Protection of such rare and threatened species will be a high management priority for the national park and forest park. The poorly known status of a number of other apparently endemic species highlights the importance of careful management and long-term protection for the



Otway forests—while some knowledge exists for the rare carnivorous Otway black snail, there is limited information regarding the distribution and ecological requirements of several other land snail species thought to be endemic to the area.

Old-growth and Senescent Forest

Old-growth forest—that is, ecologically mature forest where the effects of disturbances are now negligible—is a natural value of particular importance for its scarcity, habitat value, biological diversity, and spiritual and aesthetic qualities.

The status of some areas of mapped old-growth (generated principally for the West Victoria Regional Forest Agreement in 2000) was questioned in submissions to the Draft Proposals Paper. Some of these submissions also mentioned other areas not mapped as old-growth but containing a high density of veteran trees and mapped as senescent or late-mature forest in the Department of Sustainability and Environment's forest growth stage mapping. Among the specific areas mentioned were Barongarook forest, the Lower Arkins Creek catchment, and various parts of the Barwon catchment.

The relationship between forest growth stage mapping and old-growth mapping is somewhat complex, but essentially the growth stage mapping is one of many initial inputs used in the identification and mapping of old-growth. Other key factors include those related to disturbance history, although not all types of disturbances are well-documented. Indeed, VEAC inspections of several areas mentioned in submissions found mapped old-growth areas showing signs of disturbance that had not been well-documented (e.g. cutting for firewood). On the other hand, these inspections also revealed that several areas mapped as senescent or late-mature forest—but not old-growth—had very little disturbance and, more particularly, abundant old forest elements such as large trees, tree hollows, fallen timber and structural complexity.

In summary, while areas mapped as old-growth, senescent or late-mature forest may in fact show signs of disturbance, they are nonetheless likely to contain abundant old forest elements—and, therefore, abundant biodiversity—and are generally indicative of older forests than places that have no such areas mapped. Other things being equal, they may be high priority areas for protection, even if they have some disturbance.

In preparing its final recommendations, VEAC largely used DSE's mapping of old-growth as indicative of important forest areas with the forest age mapping used as an additional tool. However, this value was only one component of those used to refine park boundaries—there are areas of mapped old-growth outside the national park, and no large areas are included in the national park solely on the basis of mapped old-growth.

The end result is that old-growth forest remains well-represented in the recommended national park, with inclusion of some of the largest patches across the full range of vegetation types.

Rivers and Streams

The waterways of the Otways are home to at least 14 native freshwater fish species including the critically endangered Australian mudfish and the vulnerable Australian grayling.

The outstanding values of the Aire River were recognised with its designation as a heritage river under the *Heritage Rivers Act 1992*. The majority of the river's length, and the entire Aire River gorge, are encompassed by the national park. The gorge is one of the most rugged river gorges in south-west Victoria.

Riparian zones are particularly sensitive environments—important for biodiversity in themselves—and with potentially significant effects on in-stream characteristics such as nutrient levels and turbidity. Protection and enhancement of natural values along water frontages will contribute to overall conservation management objectives.

Public land water frontages are managed in partnership with the regional Catchment Management Authority, licensees, local land care groups and DSE. Their value for habitat and recreation is increasingly recognised with management now giving particular emphasis to fencing and revegetation. Many water frontages in the study area are in poor condition, and land managers and licensees need to improve native vegetation cover and reduce streambank disturbance and weed infestation to restore natural and recreational values.

Geological and Geomorphological Sites

As described in Chapter 3, the national park includes two sites of international geological and geomorphological significance (Dinosaur Cove and the coastline between Torquay and Aireys inlet). The national park also encompasses six sites of national significance. While many of these sites are reasonably robust, care must be taken to ensure appropriate management particularly regarding access and sensitive rehabilitation works. These sites are vital for education about landscape formation.

Waterfalls, a prominent feature of the Otways landscape, demonstrate the relationship between lithology and stream development and offer easily accessible views of the underlying rock. The steep southern slopes of the national park have an abundance of waterfalls, cascades and fast-flowing rapids.

Reference Areas

The national park encompasses five existing reference areas, managed in accordance with the *Reference Areas Act 1978*. Council has recommended an additional three reference areas in the eastern part of the study area. These areas offer the highest level of protection for little-disturbed representative land-units not found elsewhere in the Otways.

Cultural Heritage

Historic places and objects are a tangible link to our past. They give meaning and enlightenment to the stories, both written and verbal, that describe how life once was.

Cultural Heritage Protection

The Land Conservation Council's 1997 special investigation into historic places across south-western Victoria identified eleven historic sites of state significance, as well as a range of other significant and notable historic places in Otways public lands. As a consequence, reserves were established to protect places with highly significant historical values that were not within other permanent reserves or parks. These sites were then listed on the Heritage Inventory or Victorian Heritage Register.

Under VEAC's recommendations, cultural heritage protection and management generally will continue to be undertaken in a manner consistent with in the Victorian Heritage Strategy 2000-2005 and, specifically, the recommended national and forest parks will protect these sites and their values. The recommendation for the Otway Ranges National Park specifies that the park be used to (among other things):

protect significant cultural and historic sites and places, including Aboriginal cultural sites and places

The Otway Forest Park is to be used to:

protect and conserve...natural and cultural features, and water supply catchments

A schedule of special features which includes historic sites and features is listed in the forest park recommendations, highlighting the need for management to help protect cultural heritage. The *Victorian Heritage Act 1995* controls the protection of cultural heritage places, relics and objects.

Indigenous Heritage

Chapter 10 provides an overview of Aboriginal cultural heritage and measures for the protection of archaeological sites. VEAC's national park and forest park recommendations supplement such protection and identify the need for Indigenous people to be more closely involved in public land management.

Specific recommendations developed by VEAC, in consultation with the Indigenous communities of the Otways, aim to improve mechanisms for the participation of Indigenous people in public land management, during planning and policy development, resource use decision-making, and day-to-day management through employment and training opportunities.

European Heritage

The numerous sites of European historic significance located within the national and forest parks relate largely to timber-getting, transport, water supply infrastructure and shipping. Features are often notable for their intactness, scarcity or their setting in rugged terrain.

As described in Chapter 3, three sites of state significance are listed on the Victorian Heritage Register and are included within the national park: Cape Otway Lighthouse; Knotts No.3 sawmill; and Henry's No.1 sawmill and tramways. The Lorne Pier has also been nominated for the Register recently. The implications of VEAC's

recommendations for significant sites on public land in the study area are listed in Chapter 13.

Many historic sites, such as Knotts No.1 sawmill at Triplet Falls and Cape Otway Lightstation are highly accessible and well documented. Others demand some research and exploration before yielding their stories.

While there are few remaining sawmill buildings, many features associated with the sawmills remain intact, such as the well preserved tramways of the Hitt No.1 mill in the Lardner forest, and hand dug sawpits and sizeable sawdust mounds at numerous sites. Some features are rarely found outside the Otways, with tunnels found at the Henry and Sanderson sawmill complex, in the West Barwon catchment, two of only three tunnels known to have serviced sawmills in Victoria.

Maritime history is important to the region which has a long association with shipping, as evidenced by the 150 year old Cape Otway Lighthouse which is one of the earliest examples of European settlement in the region. The shores between Point Lonsdale and Cape Otway are known to contain 52 shipwrecks. The whaling station at Point Bunbury, Apollo Bay is the area's first recorded extractive industry.

Both road and rail transport history is well-represented throughout the area. The Cape Otway Lightstation is the second lighthouse constructed on mainland Australia and one of the earliest examples of European settlement in the region. It is protected by inclusion in the national park.

The narrow gauge Colac-Beech Forest-Crowes railway line operated on and off from 1902 until 1962, providing all-weather access through the steep terrain. It is of both social and technical interest. It carried general supplies to remote communities and timber and agricultural produce to markets and had more than 150 curves on the 19 kilometres between Gellibrand and Beech Forest. Most of the infrastructure has been long dismantled and much of the line sold. However, the track embankments remain and are being developed for recreational use. The Great Ocean Road, constructed between 1918 and 1932 is another historic transport feature. The road was principally designed as a memorial and tourist route but also opened up access to the bays and townships along the relatively isolated coast. It remains and has become the major transport and tourist route that we know today.

The region's water supply infrastructure also has important heritage values as well as being a vital piece of community infrastructure. The wet and difficult conditions of the Otways posed challenges in construction of Colac's water supply. From 1909 to 1911, mainly sustenance labour was used to construct the Olangolah Weir and gravity-fed pipeline, the first long, welded steel pipeline in Victoria, and possibly Australia.

All such historic features are offered protection through VEAC's recommendations and where appropriate under the *Heritage Act 1995*.

CHAPTER 7 WATER PRODUCTION

The Otways supply high quality water to a large part of south-west Victoria, including the major centres of Warrnambool, Colac and Geelong. The management arrangements of the different water supply catchments vary across the region as well as within individual catchments. There are advantages in a consistent approach.

The South West Water Supply System

Regional water authority South West Water provides domestic supply to Warrnambool, Camperdown, Terang, Cobden, Koroit, Mortlake, Timboon, Lismore, Derrinallum, Allansford, Peterborough, Port Campbell, Carlisle River, Simpson, other small towns and around 1000 rural stock and domestic users. Water is drawn from a complex "run-of-the-river" system, with little bulk water storage, and town service basins which only store 8-10 weeks supply.

A crucial component of this system is Arkins Creek catchment, which produces high-quality, gravity-fed water contributing about one third of the total volume being used. Arkins Creek weirs feed the Otway Main Pipeline which extends to Warrnambool via Cobden and during high demand is supplemented at Carlisle River by pumping from the Gellibrand River. The Gellibrand River downstream is also the raw water source for the separate South Otway Pipeline (Warrnambool via Port Campbell). Otway Main Pipeline water is treated at major towns for bacteriological quality. South Otway Pipeline water from the Gellibrand River has full bacteriological, physical and chemical treatment.

The Barwon Water Supply Systems

Water supplies for the Geelong region and coastal towns from Anglesea eastwards are drawn from the Barwon Water systems. West Barwon Reservoir of 21,000 megalitres has a large catchment—all of which is Crown land except for 670 ha of public land owned by the water authority. Water released from the storage enters the 55 km Wurdee Boluc Inlet Channel, augmented by flows from the East Barwon River, Callahans Creek, Pennyroyal and Matthews Creeks catchments. Wurdee Boluc Reservoir (just outside the study area) stores some 38,000 megalitres.

The 2000 megalitre West Gellibrand Reservoir and 136 megalitre Olangolah Reservoir form the principal water storage for the Colac region. Gellibrand township takes water from Lardners Creek. The West Barham catchment, supplying Apollo Bay and Skenes Creek, has a small off-take weir that diverts water to the 125 megalitre Marengo Service Basin. Lorne's 220 megalitre Allen Reservoir is in the St Georges River catchment. Painkalac Reservoir holds 514 megalitres for Aireys Inlet and Fairhaven supply.

Barwon Water's supply is augmented by groundwater pumping at Barwon Downs, and Geelong also takes substantial volumes from the Moorabool River catchment (to the north outside the study area). To ensure reliable water quality, Barwon Water has constructed water treatment plants in the following places: Wurdee Boluc (main Geelong plant); Lorne; Aireys Inlet; Apollo Bay; Colac; Birregurra; Forrest; and Gellibrand. The water quality of the West Barwon Reservoir catchment and tributaries supplying Geelong is also improved by aeration from a long run of channel flow and retention time in the Wurdee Boluc Reservoir. The West Barwon catchment is very important for the Geelong region's water supply, especially with lower than expected flows from the Moorabool River system over recent years.



Trends in Water Demand

Apollo Bay's water demand now exceeds the system yield, necessitating water restrictions. Demand is expected to increase 2.1 percent per year. There are current plans to enlarge the Marengo basin to 325 megalitres and substantially increase potential yield by establishing a new Barham River off-take downstream of the confluence of the East and West branches. This catchment would include substantial private land areas.

Barwon Water's Geelong system is also approaching the limit of its current supplies, and the following measures are being investigated:

- water conservation;
- alternative resources such as recycled water, greywater, stormwater and household tanks;
- improving system efficiency; and
- new supply sources.

In 2001 Barwon Water investigated 15 future surface water supply options, including possible dams on the Dewings and Callahan Creeks, where some farmland has been purchased. These are now not preferred options. Barwon Water's preferred new source options, in order of increasing cost per megalitre, are:

- further groundwater development at Barwon Downs or Bamba;
- interconnection with the West Gellibrand Reservoir or Melbourne system; and
- potable recycled water or desalination of seawater.

Demand in the South West Water supply area is within the system capacity.

Catchment Land-uses and Effects

The water catchments for reservoirs and offtakes currently include a number of land tenures which are subject to different management arrangements. Permitted land-uses vary from catchment to catchment and even within individual catchments.

The small Arkins Creek, Olangolah Reservoir and West Gellibrand Reservoir catchments are effectively closed to uses other than water production and biodiversity conservation. Elsewhere in the Otways, water supply catchments currently encompass state park, state forest, or water supply reserves, with a wide range of recreational and/or commercial utilisation activities, including timber harvesting. The range of permitted uses varies even more widely in water catchments which include freehold land.

The Gellibrand River water supply catchment to the South Otway pump at Chapple Vale has several land-uses which may cause earth disturbance or increase the risk of pollution by pathogenic organisms. These include extensive areas of freehold land with farming activities, road construction, softwood and hardwood harvesting

operations and extractive industries. The townships of Gellibrand and Carlisle River adjoining the river, and Lavers Hill, Beech Forest and Kawarren in the catchment, are unsewered. South West Water's two offtakes have freehold farmland close by. The water authority fully treats supply taken from this river. Treatment costs are higher with poor raw water quality.

Recreational activities vary in their effects on water quality. Direct human contact with water used for domestic supply can increase the risks of water borne diseases, most commonly gastro-intestinal illnesses. Some recreation activities can contribute to degradation of tracks, encouraging erosion and reducing water quality in nearby streams or rivers. "Run-of-the-river" water supply off-takes and small water storages are particularly susceptible to water quality problems arising from their catchments. Retention time in large water storages generally improves water quality. Aeration of flowing water in stream or channel flows contributes to improvement in microbiological quality by oxidation of organic substrates for pathogens.

Water yield is a significant issue with supply systems at the limit of their capacity, especially with "run-of-the-river" systems dependent on reliable stream flow.

The hydrological response to timber harvesting is highly dependent on the composition of the forest, age class distribution, average rainfall of the site, and proportion of the catchment logged. In the Otways, the response of streamflow to logging of foothill mixed species forest is likely to be substantially different to that of mountain ash forests. Logging a small part of a catchment (before 2008) is likely to have a negligible effect on streamflow levels across the catchment as a whole. Research in the Otways forest has demonstrated a significant but small increase in turbidity due to logging, but no other significant water quality effects. Roding and crossings are more significant contributors to soil erosion, turbidity and localised sediment.

Wildfire can potentially have a major impact on water catchment yield and water quality. For example, modelling predicts that if 50 percent of the West Barwon catchment were affected by wildfire, streamflow would be reduced for more than 30 years, in addition to increased erosion, turbidity and nutrient levels in run-off. Human access markedly increases the risk of wildfire, although controlled day-time access by walkers along designated routes away from watercourses and water storages may present an acceptable risk.

Views on Water Catchment Protection

VEAC's Discussion Paper outlined several issues associated with water supplies, in particular the effects of catchment land-uses on water quality and yield, and appropriate levels of protection.

There has been much debate over the potential effects of forestry operations on water supply. Supporters of expanded parks and reserves often mentioned water

(supply) catchments in their submissions for inclusion in expanded parks. Their rationale for park expansion was usually the protection of these areas, typically from logging or other uses perceived as adversely affecting water supply. Among the catchment areas most commonly mentioned in this context were the West Barham River, lower Arkins Creek and Barwon catchments, and more generally the Geelong and Warrnambool water supply catchments. Some submissions sought the further extension of 'closed catchment' policies to all water supply catchments, especially for the West Barwon catchment upon which Geelong's water supply is highly dependent.

As noted above the effects of timber harvesting a small part of a catchment on water quality and yield is not significant and, in any case, timber harvesting is to be phased out across the Otways, irrespective of VEAC's recommendations for a national park.

Catchment Protection

In considering public land-uses in water supply catchments, VEAC considered land tenure, current catchment uses, the water supply systems and water treatment methods.

VEAC recommends that the majority of the water supply catchments above the Arkins Creek weirs, the West Gellibrand, Olangolah and West Barwon Reservoirs, Allen Reservoir, Painkalac Reservoir and West Barham off-take be included in the Otway Ranges National Park and be managed cooperatively between the Department of Sustainability and Environment (DSE) and the relevant water authority. Council considers that the management of such lands is best placed under the jurisdiction of a land manager, not the water authority, but nonetheless firmly believes that an overriding function of these sectors of the national park is to ensure reliable, high quality water.

The West Gellibrand and Olangolah catchments cover just 2900 ha but these high rainfall catchments are the sole source of water supply for Colac. The small Arkins Creek catchment plays a very important role in the Warrnambool region's water supply. Its reliable, high yield is generated from a high rainfall catchment of 1200 ha, in a system with no significant water storage capacity. The current closed catchment policies of the West Gellibrand, Olangolah and



Arkins Creek catchments will be maintained under these recommendations. These catchments have been managed as closed catchments by the relevant water authorities for many years and have not been available for timber harvesting and, being fenced and untracked, are not accessible for recreation.

The 2700 ha St Georges River catchment and 3400 ha Painkalac Creek catchment are largely forested and undisturbed with minimal existing access. Vehicular tracks in these catchments are "management vehicle only" and there are no recreational facilities. Communities supplied by these two reservoirs are entirely reliant on these catchments for continuing good quality water. Application of closed catchment policies will formalise a de facto arrangement.

Limiting access to the above catchments in park management will provide a consistent management strategy for small catchments with limited bulk water storage. It is expected that the limited access policy would have little to no adverse impact on the current uses of these areas. In contrast, there are significant benefits from the supply of consistent, high quality water (with low requirements for treatment) to communities with a steadily increasing permanent population.

The 1050 ha West Barham River catchment is also contained entirely in the national park. However, the planned new off-take below the junction with the East Barham substantially alters the situation in relation to catchment area, tenure and land-uses — as the catchment above the offtake includes extensive areas of freehold land subject to a variety of land-uses.

Under VEAC's recommendations, public land in the East and West Barwon and Pennyroyal Creek catchments is largely in the national park because of their nature conservation values. They are not, however, pristine. The West Barwon River catchment in particular has suffered some localised disturbance, mostly from timber harvesting. The track networks that arose from harvesting activity are now used by vehicle-based visitors to access a number of increasingly popular recreation areas. Protecting this vital water supply area and its natural and cultural features, while providing for recreational use, will require careful management.

Most other public land in water supply catchments lying outside the national park has been included in forest park, where the protection of water supply catchments is also a key management objective (see Chapter 4).

VEAC also envisages that under its recommended cooperative management arrangements, the water authorities will take on a greater responsibility for fire management.



Water Production Land

VEAC recommends that water storages, off-takes, associated infrastructure and the water production buffer identified in special area plans under the *Catchment and Land Protection Act 1994* not be included in the national park or forest park. These areas should have water supply as their primary management objective and be managed by the respective water authority with sole responsibility for the infrastructure and associated operational area. Close liaison between the land and water authority is required for the catchments to these water bodies and facilities, as identified in special area plans.

At present the Painkalac Reservoir is partly in the Angahook-Lorne State Park. It is recommended that this small area be removed to become water production land, for consistency of management. Likewise, Allen Reservoir is to be excluded from the national park and managed by the water authority. The two Gellibrand River off-takes, Lardner Creek off-take, and East Barwon River weir have little public land at the off-take points. Small water production areas are recommended for these sites. The Pennyroyal and Matthews Creeks off-takes in the Barwon River catchment have been treated similarly.

Barwon Water-owned farmland on Dewings Creek may be required in the long term for a new water storage. While there are no active plans for such development, VEAC considers that this option be at least kept open for the longer term. Accordingly, this area remains as uncategorised public land where present uses may continue.

Catchment Management

In 1995 Melbourne Water's "closed catchments" were included in the Yarra Ranges and Kinglake National Parks, with land-use subject to management agreements between Melbourne Water and DSE. These areas provide for biodiversity conservation, and very limited recreation, with public access only to areas away from watercourses and the water storages.

VEAC recommends similar arrangements for the catchments of the Arkins Creek weirs, the West Gellibrand and Olangolah Reservoirs, Allen Reservoir and Painkalac Reservoir, located within the national park. The management objectives of the Otway Ranges National Park include protecting water supply catchments. Cooperative management arrangements between the water authority and park manager will ensure domestic water quality and yield, as well as addressing:

- the timing, location, nature and intensity of scientific, educational and recreational use;
- restrictions on the development of facilities for public access and recreation; and
- retention and/or application of "closed catchment" land-use policies.

It is important that the national park management plan protects water supply catchments within the park. By far the greatest threat to water supply quality in the Otways is from fire. Risk management planning and practices must ensure appropriate measures are implemented within the park. To this end, VEAC has developed a series of principles for the cooperative management of the Painkalac Creek, St Georges River, Olangolah, West Gellibrand and Arkins Creek water supply catchments (as described in Chapter 2).

The State Government is developing a risk management approach to the delivery of safe drinking water. Protection of drinking water catchments is an important part of this program. Sound hydrological research and ongoing monitoring is required to ensure that land management practices meet water supply objectives.

Elements of the Government's approach are:

- to evaluate land-use proposals against river water quality and quantity requirements;
- to develop and implement catchment management strategies that minimise the impact of identified risks; and
- review and continually improve catchment management strategies.

CHAPTER 8 RECREATION AND TOURISM

The Otway Region offers diverse, accessible natural environments that provide a variety of recreational opportunities for residents and visitors alike. Its natural features attract tourists from around the world, with the tourism industry playing an expanding role in the economy of the region.

Recreational activities and tourism are enjoyed throughout the Otway Ranges region and encompass a diverse range of experiences. Many forms of recreation and tourism activities and experiences depend on the natural landscape. Additionally, different visitors to the area may bring very different expectations. For example, sightseers may focus on scenic beauty and special interest attractions, while those undertaking active recreation may demand infrastructure, access and facilities as well as specific landscape characteristics.

Ecologically sustainable development of public land requires the conservation of natural and cultural values of public land, while also providing for long-term individual and community well-being. Personal and community well-being relies upon adequate opportunities and facilities for desirable recreation and tourism activities. Sound planning and procedures are required to ensure that biological diversity and ecological processes are protected now and into the future in a climate of increasing visitor demands and expectations. The current distribution of visitors to the region is heavily skewed towards the coast and warmer seasons. The development of targeted recreation and tourism opportunities in the Otways hinterland is intended to disperse visitors across the area and seasons and extend the time they stay.

Recreation

Recreational opportunities are a major attraction for visitors to the area and also contribute to the health and quality of life of residents. A wide diversity of recreational pursuits is undertaken on public land in the study area,

including bushwalking, fishing, four wheel driving, nature study, horse and trail bike riding, gem fossicking, fishing and hunting. Many people living in the area seek a lifestyle with close links to the natural environment. Access to this environment, and protection of its natural assets, are high priorities for the local community.

Recreational activities are generally managed through regulation and management plans rather than legislation. Different restrictions and exceptions may apply in different parks or between different public land categories but, overall, very few recreational activities are totally prohibited in any public land category—including national parks.

A fundamental difference between national park and forest park is the approach taken to recreation. In national parks the objective is to provide for recreation 'associated with the enjoyment and understanding of the natural environment'. The promotion and encouragement of such use is a specific legislative objective of national parks. The new category of the forest park has three equal management objectives of recreation, nature conservation and minor resource utilisation. National parks and forest parks are expected to have substantially different usage patterns with high impact or widely dispersed activities occurring in the forest park, and highly localised impacts around the facilities and services offered in the national park. The forest park land-use category allows flexibility to cater for new recreational uses and activities that grow in popularity.

In submissions to VEAC, many people proposed that access be maintained for recreational users in general in the study area. Arguments both for expansion of national park area and for either the status quo or a reduction in the recommended national park areas, were based on assumptions about continuing recreational access. There was some concern voiced about the potential threats posed by some recreational pursuits to natural values.



Council believes that concerns regarding the limitation of certain recreation activities in the Otway region are addressed by the creation of the Otway Forest Park where a diverse range of recreational activities will be encouraged, while also providing for a wide range of recreational activity, including horseriding, in the Otway Ranges National Park. The flexibility to achieve sustainable recreation and tourism, while maintaining the natural and cultural features that make the area attractive, is an important objective of this approach. It is important to acknowledge the natural values that encourage such a diverse range of uses, and to manage the area so as to preserve these values.

Some key points regarding recreational use in the study area are that:

- walkers, horseriders, cyclists and trailbike riders often prefer designated tracks for their own use;
- active recreation activities are often combined, for example four wheel driving, camping and hunting may be undertaken together;
- recreational activities vary greatly—some areas are intensively used, while other areas are valued for their remoteness and low intensity use;
- flexibility is needed to cater for a wide range of recreation needs which may change over time; and
- as many uses are competing, it is not possible to provide for all uses at all locations.

Bushwalking

Bushwalking is a popular recreational use of public land in the study area, undertaken by individual residents and visitors, as well as walking clubs, school groups and commercial operators. Bushwalking on well-maintained tracks is generally compatible with the conservation objectives of both the national park and the forest park.

Many opportunities exist for walks of varying length and difficulty in the study area. A large number of short walks to special features, like waterfalls and lookouts, are present and visitor interpretation facilities at some of these sites add to the experience and improve understanding and appreciation of natural and cultural values.

Provision is also made for those seeking more remote and challenging experiences on longer day and multi-day walks. The two-day Great Ocean Walk currently links Apollo Bay and Cape Otway, and work is under way to provide an eight-day walk that continues across the coastal cliffs and beaches to Glenample Homestead (just outside the study area, west of Princetown). More recently, an 18 km return walk linking Forrest to Lake Elizabeth has been established to encourage visitors to stay longer in the hinterland towns of the Otways. The Surf Coast Walk at the eastern end of the study area provides a different experience with spectacular coastal scenery and diverse vegetation stretching over 30 km between Jan Juc and Moggs Creek.

Bushwalking clubs proposed the development of new walking tracks, most notably the Trans-Otway walking track

connecting Lorne and Apollo Bay, as well as other walks in the Apollo Bay and Gellibrand areas. Such long distance walking tracks will require improved facilities including designated campsites and signage, as well as careful planning and maintenance to minimise environmental impacts. More educational resources and information boards would also enhance the walking experience while promoting an understanding of natural and cultural values of the area.

Some recreational users of public land claimed that national parks are for bushwalkers only with others excluded. Visitor numbers show that this is clearly not the case, although some remoter areas may only be accessible by walking.

The growing popularity of bushwalking and the recommendations for the Otway Ranges National Park encourage the development and maintenance of walker-only tracks suitable for short and longer walks, as well as the provision of walk-in campsites. Other public land categories will also continue to provide bushwalking opportunities with a range of experience, catering to different levels fitness and physical abilities.

Four Wheel Driving and Trail Bike Riding

The large number of tracks and the varied terrain of the Otways have particular appeal for four wheel driving and trail bike riding. Drivers and riders seek challenging conditions, as well as access to places of interest (such as forests, waterfalls and scenic views). There is also a preference for roads that provide through access across the Otways, rather than dead-ends. Trail bike riding is particularly popular in the forests and heaths around Anglesea where riders have a reasonably short travel distance from large population centres such as Geelong, Torquay and the western suburbs of Melbourne.

Under existing legislation, four wheel driving and trail bike riding on public land are restricted to formed roads. Some trail bike riders would like to see areas designated for off-road riding. In the past, pine plantations on public land provided extensive opportunities for four wheel driving and trail bike riding but the licensee of these plantations has told VEAC that it discourages such use due to safety concerns. This is also the case for the Alcoa lease area near Anglesea.

Seasonal closures are applied to many tracks between May and November to limit impact on water quality and the road surface, as well as for driver safety. Local four wheel drive clubs recognise the value of seasonal closures in the Otways for safety, to reduce track damage and for the protection of natural values. Some local four wheel drive clubs have offered to classify tracks to provide users with guidance to make informed decisions about vehicle capabilities, equipment requirements, and driver training or experience.

Four wheel drive clubs have established collaborative relationships with Parks Victoria and the Department of Sustainability and Environment to discuss track closures and budget allocations as well as assisting with maintenance such as track clearing, reporting, camp site maintenance and rubbish removal. Despite this acknowledgment, there are



four wheel drivers who argue that they are excluded from national parks by arbitrary or unjustified track closures. VEAC recognises the importance of the existing relationships in ensuring good management outcomes. The establishment of advisory committees is recommended by VEAC as the most appropriate mechanism for recreational users to have input into public land management practices and decision-making processes.

Both trail bike riding and four wheel driving can potentially damage natural values when undertaken off formed roads, or in heavily used areas. Some submissions noted such damage from off-road activities in many areas. Legislation preventing off-road damage needs to be enforced while erosion and track widening must be managed to protect environmental values. Monitoring and research, such as the Stream Crossing project and Sayers Track road drainage trials currently under way, are essential for the effective management of recreation on roads and tracks.

Four wheel driving and trail biking are popular recreational activities for both local residents and visitors to the region. In response, VEAC has ensured that the recommendations for both the national and forest park provide for four wheel driving and trail bike riding on formed roads. Restrictions may be necessary on the timing, location, nature and intensity of recreational use to ensure the protection of nature conservation values and the quality and yield of water for domestic supply.

The forest park recommendations recognise the potential for conflict between vehicular and other recreational users and highlight the importance of safety for all users of narrow, undulating vehicular tracks. The schedule of features to be protected in the forest park also identifies important recreational sites (See Chapter 4).

Camping

Camping options provided on public land across the study area range from the foreshore reserves in coastal townships such as Skenes Creek and Anglesea, to quieter, more nature-based experiences in the forested hinterland. These inland campsites are often used as a base for other recreation activities in the forest, for example four wheel driving or trail bike riding.

Dispersed camping in the bush with no facilities (rather than at formalised camping areas) appeals to visitors who prefer a more isolated and natural camping experience. It also tends to have greater potential impact on natural and water values due to vegetation damage, soil disturbance and disposal of excrement and rubbish.

Concern was expressed, particularly from four wheel drivers, that the expansion of a national park in the Otways will restrict access to vehicle-based dispersed camping. Other submissions called for more camping facilities (especially for longer walking tracks) while also supporting an expansion of national parks. Some user groups emphasised the need for routine maintenance of existing facilities to ensure that sites are not closed due to safety concerns or lack of resources.

Demand for camping in the study area is likely to increase and campsite management will become an important issue with a strong bearing on the visitor experience. Allocation of resources to maintain and improve facilities will be necessary to meet the increasing demand.

VEAC's recommendations for the Otway Ranges National Park provide for walk-in campsites as part of the development and maintenance of walker only tracks. In addition, camping will be provided in designated areas of the national park, as well as opportunities for dispersed camping at the land manager's discretion, in appropriate locations where biodiversity values and water quality will not be adversely affected.

The new forest park land-use category also provides for camping at designated sites, as well as opportunities for dispersed camping, including overnight camps for horseriders.

Hunting

Parts of the study area are used by recreational hunters who target both pest animals and game species. Commonly hunted pest species include rabbits and foxes. Game species include red, fallow, and sambar deer. During the duck season hunters also shoot ducks on some of the water bodies of the study area, such as the lower Aire River.

Recreational hunters and hunting groups are interested in maintaining current access to public lands in the study area for the purposes of hunting. Submissions on this issue ranged from total opposition to any hunting on public land to access to all or most public land for hunting. Recreational hunting was frequently described as beneficial in reducing pest animals, particularly given that management authorities may be unable to undertake this role effectively by other methods. However, other submissions stated that hunters had introduced exotic species in some areas.

Three freshwater lakes on the Aire River floodplain comprise a designated state game reserve (the Aire River Wildlife Reserve) and are used by duck hunters during duck season. VEAC recommends that this wildlife reserve be retained and expanded to include nearby public land along water frontages.

Fishing

A number of waterways in the study area are popular with recreational fishers. Ongoing access for fishing was an issue for some, leading to a call for the status quo or exclusion of some areas from any new national park. Riparian land and intertidal zones as well as coastal or foreshore reserves were often proposed for exclusion from national parks, in order to maintain access for fishing.

In fact, licensed marine, estuarine and freshwater fishing in accordance with fishing regulations is permitted for native and introduced fish in terrestrial national parks in Victoria, and will be generally permitted in both the recommended national park and forest park—subject to any statewide provisions that apply. In short, VEAC's recommendations do not entail any change for recreational fishing.

Horseriding

Horseriding and carriage driving are popular activities undertaken by individuals or as part of club activities or commercial tour operations in the Otways. Horseriding occurs on tracks throughout the Otways, but is particularly focused on locations with good access and proximity for local residents, for example near Anglesea, Aireys Inlet, Barwon Downs, Princetown, Wensleydale, Cape Otway and Barongarook.

Some local clubs have their facilities located on public land. These clubs include the Loch Ard Pony Club, operating from the Wiridjil Recreation Reserve, Aireys Inlet Pony Club at Aireys Inlet and the Anglesea District Riding Club that operates adjacent to the Anglesea River. The social benefit of horseriding is highly valued and provides a sense of ownership and recreational activity for youth in small communities, particularly through pony clubs. VEAC has recommended that the status of the public land where these three clubs operate remain unchanged.

Opportunities for longer distance trail rides are generally found on public rather than freehold lands and some riders particularly seek the experience of riding through forested areas or on beaches. Generally, riders are keen to continue access along formed roads and vehicle tracks in all public land-use categories. Some horse riders, particularly those around Aireys Inlet, felt that recommendations to change the existing Angahook-Lorne State Park to Otway Ranges National Park would specifically exclude horses.



Horseriding has the potential to conflict with the conservation objectives of public land, particularly national parks, and also to conflict with other recreational users—especially where horseriding is undertaken in large groups. Introduction of a horseriders' code of practice is designed to minimise impact on environmental, historical and cultural features, and ensure rider safety for the study area. This may be undertaken through public land managers and horseriding groups, including commercial operators, working together as part of an advisory committee(s).

Council supports horseriding on public land while acknowledging prudent management is required. The Otway Ranges National Park provides for the continuation of horseriding on designated beaches and formed roads and firebreaks, subject to restrictions including seasonal closures to avoid damage to tracks, introduction of weeds and conflict with other users and natural values. The new forest park category provides access for horseriding on formed vehicular tracks and roads, subject to the same restrictions.

Access for Walking Domestic Dogs

Dog walking is a popular activity undertaken in many areas, including accessible areas of public land near towns, picnic grounds and beaches. VEAC has retained coastal reserves and community use areas to provide for such use. Away from the townships, forest park areas provide opportunities for dog walking and for dog owners to camp or ride with their animals.

Dogs are generally not permitted in national parks and nature conservation reserves. In recognition that some parts of the recommended Otway Ranges National Park adjoin township areas currently used for dog walking, VEAC has provided for the walking of dogs on leads along with a limited number of designated tracks and beaches. These exceptions are to be designated through management plan processes.

Coastal Recreation

The coastline of the study area has long attracted large numbers of people seeking beach-based recreation such as surfing, swimming, beachcombing, diving, kayaking and boating. Such use is highly seasonal, with a major influx of visitors over summer. The great majority of these people are from outside the study area, predominantly from Melbourne.

Popular coastal reserves especially in the immediate environs of townships have been greatly modified to cope with the high numbers of people seeking to enjoy this coastal environment. These locations often provide public facilities, planned beach and water access points and car parking. VEAC recognises the importance of these coastal reserves (and their recently restructured committees of management) in providing facilities and desirable settings for large numbers of people. VEAC recommends that coastal reserves in the townships be retained and a wide variety of recreation provided for:

Away from townships, the coastal experience is less structured and natural values often high. Where existing coastal reserves are adjacent or linked to areas recommended as national park, the coastal land has generally been recommended for inclusion in the adjoining national park.

Nature Study

The heathlands, woodlands, forests and wetlands of the Otways offer many opportunities for nature study. The study of natural features in their settings is essential to understand and appreciate the environment and promote the conservation of natural resources for the future.

People undertaking nature study seek experiences largely without the assistance of formal nature trails with interpretative facilities. However, others who may be less experienced greatly appreciate the provision of interpretive nature trails that extend participants' interest and knowledge of natural systems. Nature trails are located at such areas as Maits Rest, Triplet Falls, Sheoak Creek near Lorne, Melba Gully and Lake Elizabeth.

Overall, nature study on its own has relatively little impact on natural values, other than occasional trampling of vegetation. The bird hide at Distillery Creek, near Aireys Inlet, is an example of a facility that provides for nature study with minimal impact on the environment. Factors contributing to satisfying nature study include good access, a range of camping options, diversity of landscapes and vegetation, as well as presence of key species, for example rare or charismatic animals.

VEAC recommends that one of the three key objectives of the national park be to:

provide opportunities for recreation and education associated with the enjoyment and understanding of natural environments and cultural heritage.

This objective provides for nature study within the national park. The recommendations for the forest park complement the nature study opportunities and values of the national park.

Car Touring

The two wheel drive roads of the study area provide a wide range of touring alternatives and also provide good access through the tall forests to popular sites such as waterfalls, rainforest and scenic lookouts. The Great Ocean Road remains the focus for most car-touring visitors to the region.

VEAC recognises that the management and enhancement of the Great Ocean Road and other main roads that traverse the Otway Ranges is largely a regional issue rather than specifically related to a particular land-use category.

The Great Ocean Road Region Strategy addresses the need for improved management of access and transport. Key touring routes identified in that Strategy include the Winchelsea–Deans Marsh–Lorne Road, the Birregurra–Forrest–Apollo Bay Road and the Colac–Lavers Hill Road as alternative touring routes. Road management

programs will promote the dispersal of visitors to the Otways hinterlands along the Grey River Road, Forrest–Apollo Bay Road and Mt Sabine Road linking to Erskine Falls Road, providing a range of experiences and alleviating some of the congestion on the Great Ocean Road.

Council recommends joint management agreements be established between the road manager and the park manager, where these roads pass through parks. These agreements are directed towards retaining the scenic and natural values along these routes, particularly the Great Ocean Road, as part of the key visitor experience of the region.

Picnicking

The majority of formal picnic areas across the study area are either linked to specific attractions (for example, the rainforest nature trail at Melba Gully), located with existing camp sites, or on the coastal foreshore. Picnicking is usually associated with a broad range of recreational activities, from car touring to horseriding. Formal picnic areas cater for both the local community and visitors, and generally have associated toilet facilities.

The Otway Ranges National Park recommendations specifically provide for picnicking at designated areas with facilities. Informal picnicking is encouraged throughout the forest park with established formal picnic areas at Dandos and Stevenson Falls, popular existing destinations.



Cycling and Mountain Biking

Long distance cycling and mountain biking have greatly increased in popularity in recent years. Cycle touring to townships and attractions is mainly limited to bitumen roads. Mountain biking, on the other hand, is focused on dirt roads and tracks in natural settings, and tends to be limited to single day routes.

Mountain bikers generally seek challenging and diverse terrain. The numerous roads and tracks on public land in the Otways provide a range of opportunities for mountain biking. A new designated walking and cycling trail has also been created from Forrest to the Lake Elizabeth camping ground, and the Old Beechy rail trail will provide other cycling opportunities in the Otways hinterland.

The impact of mountain biking can be significant if it is not confined to defined roads or designated tracks. Impacts include damage to vegetation, soil disturbance and conflict with other users. Track maintenance is essential to limit soil movement and reduce impact on water quality, particularly when close to, or crossing, waterways. Management plans for public land should accommodate and manage this increasingly popular activity.

There are no specific recommendations regarding cycling and mountain bike riding in the national or forest park, however it is envisaged that this activity will be continue to be confined to formed vehicular tracks and roads.

Gold Prospecting and Gem Fossicking

Agates and other semi-precious stones can be found along the beaches and bays near Moonlight Head, and a designated fossicking area at Wreck Beach (within the existing Otway National Park) is of ongoing interest to gem collectors. While prospecting is generally excluded from national parks, continued access to existing designated areas has been specifically permitted. VEAC recognises that careful management of the existing resource is required to ensure this activity is able to continue at these sites.

While other areas of public land are not considered to be prospective for precious metals or gemstones, provision is made for recreational prospectors and fossickers to pursue their interest in the forest park under authorisation of a miner's right or tourist fossicking authority.

Sporting Facilities

Sports requiring specific facilities are provided for in a number of coastal and inland towns and are mostly located on recreation reserves. They provide for activities such as golf, tennis, football, cricket and basketball. Many of these facilities are managed by committees of management and clubs and are used predominantly by local residents.

VEAC recognises the important role these reserves and their committees of management contribute to both the physical and social health of the communities that they serve. All recreation reserves that are currently actively used and those that are situated within the townships are recommended to remain.

Tourism

The Otway region, and particularly the Great Ocean Road, is one of Victoria's major tourist destinations, with some of the highest visitation rates outside Melbourne. The tourism industry supports a significant part of the region's economy. Tourism Victoria estimated that annual visitation is growing at around one percent for domestic and six percent for international visitor nights. Currently tourism is largely focussed on the Great Ocean Road which is recognised as one of the world's great touring routes. Visitors come to the region to experience diverse, accessible natural environments with a growing demand for nature-based or ecotourism activities.

The tourism industry is increasingly focused on enhancing the value of tourism by spreading seasonal visitation patterns, increasing the length of stay, improving visitor dispersal, and avoiding duplication of experience and overcrowding. The economic result of this is described as visitor yield. From a tourism perspective, increasing visitor yield is preferable to building capacity for more short stay visits or day-trips that often provide little economic return for input, and increase demand on already limited resources and infrastructure. For example, some sections of the Great Ocean Road are currently over carrying capacity at peak times. The widening of roads or provision of alternative routes may increase capacity, but not increase the length of stay in the region and, by diminishing the environmental values adjoining the road, may diminish the driving experience itself.

The proximity of the study area to major population centres aids its popularity but it also provides challenges to increasing yield, as visitors often limit their visit to a day or short weekend. Another challenge to visitor yield is that many visitors to the study area are provided with accommodation by friends or relatives. These visitors do not tend to explore the surrounding natural assets of the region, but prefer to limit their activities to the coastal fringe.

However, recent information indicates that the number of day-trips to the region is decreasing, the number of overnight stays is increasing, and the colder months are also becoming more popular with domestic visitors. It seems that the efforts of many in the industry, and especially regional bodies such as Geelong Otway Tourism, to reshape tourism in the Otways are already proving successful.

Furthermore, the recent success of the Otway Fly tree top walk and visitor centre private development near Beech Forest has demonstrated that there is high demand for nature-based experiences away from the coastal area. In submissions and elsewhere, several people involved in tourism proposed that in order to maximise opportunities, developments should be concentrated in zones or nodes with visitor infrastructure, improved access and focussed marketing. Potential sites for nodes include the Triplet Falls–Otway Fly area (including the Little Aire falls area), Mount Sabine and Forrest in the hinterland and, along the coast, Apollo Bay, Glenaire, and Cape Otway. Some



proposed that VEAC should identify specific nodes, or recommend a study to do so. Proximity to the recommended national park was seen as important to the success of developments, with some proposing that the nodes be in the national park itself, or that appropriate locations be identified and excluded from the park expressly for development. The use of public land in this context was seen as beneficial in that it would encourage private investment and provide funding for park management through lease payments.

In contrast, several submissions opposed the use of public land for commercial development, and especially in national parks. Such people were concerned that development in parks in the Otways may set a precedent for environmentally damaging developments in national parks elsewhere in Victoria, as well as adverse impacts on specific sites in the Otways.

The effects of tourism on the natural environment were explored in many submissions, including those that, in general, supported tourism development for its economic benefits. There was an overriding concern that unsustainable levels of visitation may adversely affect the natural assets of national parks. This concern was also reflected in calls for improved park management (including more flexibility), improved tracks, roads, signage, planning and resources, as well as promotion of inland areas to relieve some of the pressure on the coastal zone, and to allow tourism development to proceed without significant environmental impacts.

Recent studies of national parks throughout Australia support the commonly held view that parks need adequate funding to sustain their natural, cultural and heritage assets and, thereby maintain quality visitor experience and associated regional tourism industries. The studies identified

natural features and unspoiled nature as the most important factors, although the provision of suitable signage, maps and clean toilets were also important.

VEAC is strongly of the view that land managers need to provide facilities to encourage a spread of visitors to hinterland attractions. VEAC's recommended national park will protect the natural values that appeal to many nature-based tourists and, by linking coastal and hinterland attractions, will assist planners to attract visitors to the hinterland. The park manager in consultation with tourism planning bodies will be able to provide facilities and services to match the capability of the region.

In relation to tourism developments within the national park, VEAC has refined its position. Its recommendations provide for commercial development and operation of only the existing accommodation and associated facilities at the Cape Otway lighthouse precinct in the national park. The Cumberland River camping ground (existing facilities) and recently acquired land to the north of Little Aire waterfalls (proposed facilities) are no longer included in the recommended park. There are numerous other potential sites for tourism development nodes in the Otways—often abutting the recommended national park, and including those listed above—most of which have suitable areas of freehold land where tourism development could occur with greatly reduced threat to park values.

CHAPTER 9 RESOURCE INDUSTRIES

Resource industries use public land for mining, quarrying, sawlog and pulpwood production, harvesting of other forest produce, commercial fisheries, apiculture, and grazing. These industries make a valuable contribution to the livelihood of local communities. Continued use of resources from public land depends on both sustainability and compatibility with conservation and recreation objectives.

The recommendations in this report offer simplified public land management, planning and administration for the resource industry in the Otway region. However, resource utilisation will not generally be appropriate in the national park and may be restricted in parts of the forest park where it conflicts with other values.

Extractive Industry

The extractive industry produces crushed rock, sand, gravel and blocks for building and paving from public land in the Otways region. Work authorities, administered under the *Extractive Industry Development Act 1995*, allow operators to extract stone resources from specific sites. While most commercial stone is extracted from private land, there are ten current work authorities on public land in the study area, and four applications or proposals for additional work authorities.

Under the *Extractive Industry Development Act*, work authorities are not generally granted in national parks. However, stone production may continue if a pre-existing tenement or application exists at the time of park establishment. This occurred at the Bambra Road sandstone quarry which continued operation when the Angahook-Lorne State Park was created. This quarry, which now falls within the recommended national park, does not have a current work authority, but an application has been submitted. While recognising the pre-existing rights to pursue the application, conditions relating to approval for the work authority may be more onerous following inclusion of the area in the Otway Ranges National Park.

Similarly the Kaanglang quarry, located within the national park, is subject to an application for a work authority. This quarry is also a geological site of state significance. Previous works have exposed interbedded sandstones and shales of the Otway Group containing plant remains, and it is one of the most accessible sites in the Otways for study of Cretaceous flora. The application can be pursued as it pre-dates park implementation, but the geological values of the site need to be considered in relation to any works conducted (including rehabilitation).

VEAC recommends that exploration for, and extraction of, earth resources and minerals within the forest park be subject to approval from the Minister for the Environment. This may require amendment to the *Mineral Resources*

Development Act 1990. Extractive operations may be permitted where consistent with the recreation and conservation values of forest park. A current work authority at the Lardner pit, and an application for a work authority located south of Carlisle River, are within the Otway Forest Park.

Stone Reserves

VEAC considers that extraction of stone should generally be concentrated in the fewest possible sites, while still allowing competition between suppliers.

The study area contains extensive sand, gravel and hard rock resources. As with other extractive industries, a current work authority (within an existing stone reserve or not) remains current once land is recommended as forest park or national park. New work authorities can be applied for in forest park areas but not national park areas.

A number of existing stone reserves are no longer in use, generally because they have been worked out. These have been included with the adjoining land-use category as follows:

- Chapple Vale Stone Reserve; to be included in the national park and rehabilitation works completed;
- Gellibrand Stone Reserve; to be added to the adjoining community use reserve; and
- Cape Horn Stone Reserve; to be added to the national park.

Two small stone reserves on Rochfords Road, south of Modewarre, are recommended as uncategorised public land.

The Yaughner Stone Reserve and the Gerangamete Stone Reserve have been incorporated in the forest park, with the latter an active sand pit operated under a current work authority. All remaining work authorities or applications for work authorities on public land in the study area are found within the Gherang Gherang Stone Reserve. VEAC is recommending that this stone reserve be retained as a stand-alone reserve.



Mining and Fossil Fuel Production

There are no petroleum or mining licences or leases on public land in the Angahook-Otway study area, however the majority of the area is covered by current exploration licences or licence applications, for minerals (coal bed methane), and petroleum and other fossil fuel products. These are administered under the *Mineral Resources Development Act 1990*, which does not permit exploration and extraction in "exempt" areas such as national parks, except where approved tenements or applications existed prior to park establishment or are made under the *Petroleum Act 1998*. Any such prior tenements or applications are allowed to take their course meaning that some mining activity may be permitted in the park.

Timber Production

State Government has declared that sawlog and pulpwood production will cease in the Otways by 2008. In the intervening years, approximately 20,000 cubic metres of sawlog and approximately 60,000 cubic metres of pulpwood is intended for harvest under existing commitments to the sawlog and pulpwood licensees annually.

The forest park, including declared water supply catchments, will be available for timber harvesting until the end of the 2007-2008 harvesting season. All such logging coupes will be listed on the Wood Utilisation Plans prepared each year for the Otway Forest Management Area (FMA), and will be prepared with public consultation.

Those Special Protection Zones which exclude timber harvesting under the Regional Forest Agreement (to ensure adequate representation of EVCs or ecological vegetation classes) may no longer be necessary with the expanded representation of many EVCs in the new national park. However Special Protection Zones and Special Management Zones to protect rare and threatened species, including quoll habitat protection, will still be required. All such zones will continue to apply until management planning is completed.

No native forest timber harvesting will be permitted within the boundaries of the Otway Ranges National Park either during or following the phase out of sawlog and pulpwood production. However, the removal of pines from small isolated plantations lying within the boundaries of the national park or forest park is permitted at the land manager's discretion as part of native revegetation or rehabilitation plans.

Other Forest Harvesting

The harvesting of other forest products is not compatible with the primary conservation objective of national parks, and as such will not be catered for in the Otway Ranges National Park. Harvesting forest produce is, however, consistent with the management objectives of the forest park which include minor resource utilisation compatible with recreation and conservation. Many submissions requested continued access to firewood and forest

produce, including blackwood sawlogs for manufacture of furniture or musical instruments.

Firewood

Firewood is the main form of other forest produce harvested. All commercial and domestic firewood from public land in the study area is sourced from the northern fall foothill forests and from the Jancourt, Irrewillipe, Wonga and Barongarook forest blocks. The majority of firewood produced is consumed locally.

The forest park includes large sections of suitable foothill forest and its proximity to many Otway communities facilitates collection of firewood by local residents. Currently firewood harvesting is of low intensity, with the amount of suitable firewood resource in the forest park adequate to provide for existing requirements.

Some areas of the forest park may be unavailable for firewood harvesting in order to maintain conservation and recreation values. Management planning will need to ensure that firewood collection occurs in a way that does not compromise conservation values or impair recreational experiences in the forest park, and is demonstrably sustainable. In addition, the land manager will need to work closely with licensed operators to identify resource needs and locations, and ensure that where permitted, harvesting is sustainable, low intensity, selective and conducted with minimal impact on other forest park users and values. Mechanisms will be needed to ensure that the level and location of firewood harvesting is accurately recorded and that sustainability can be demonstrated through a continuous review process involving monitoring and audit.

Firewood collection will be permitted in the western portion of Jancourt Nature Conservation Reserve only during a phase-out period of five years after which this activity will need to be relocated. Council envisages that sufficient resources will be available from other forest park blocks and increasingly from private plantations and woodlots.

Other Harvesting

Numerous commercial operators and local landowners currently use the Otway forests as a source of material ranging from posts and poles used on farms to seed sources for revegetation and nursery use.

The recommendations for the forest park allow for the licensed low-intensity harvesting of selected trees and other vegetative material for posts and poles, tea-tree stakes, craftwood, wood chop logs, and decorative foliage. VEAC's recommendations also provide for the harvesting of selected trees for specialist applications such as providing ornamental timbers for musical instruments.

The range of vegetation types in the forest park enables the collection of a wide range of other forest produce. Prudent management and consultation with licensed operators, will ensure that the sustainable harvesting of these products will not impact negatively on recreation and conservation values and be maintained at low-intensity levels.

Commercial Fisheries

The only commercial fishery within the study area is an eel fishery that mainly operates on the lower reaches and estuaries of the Gellibrand and Aire Rivers, south of the Great Ocean Road. This relatively small industry is undertaken by two operators (one on each river). The fishery relies on the harvesting of wild populations of shortfin eels as glass elvers (about 1cm in length) and immature eels (about 30-50 cm length) that are on-sold to other licensees who supplement stocks in lakes north of the study area and harvest adults for sale. The fishery is governed by the *Fisheries Act 1995* and operates under the Eel Fishery Management Plan 2002. Fisheries Victoria, Department of Primary Industries administers commercial eel fishing licences.

Commercial eel fishing under these two licences is currently conducted across a range of Crown land categories, including the existing national park, a wildlife reserve and public land water frontage reserves. While eel fishing may be appropriate for some of these categories, it conflicts with the conservation objectives and values of the national park, not only in relation to the harvesting of a native species, but also in relation to potential incidental catches of threatened species (such as the Australian grayling and Tasmanian mudfish).

Recommended additions to the national park boundaries include parts of the licensed areas in both the Gellibrand and Aire River fisheries. VEAC recommends that commercial eel harvesting not be permitted in these sections of national park after a phase-out period of ten years. VEAC has also recommended that commercial harvesting during the phase-out period be assessed and modified to reduce by-catches, particularly of protected fish. Eel fishing in Lake Elizabeth is recommended to cease immediately.

Commercial eel fishing in the Aire River Wildlife Reserve is currently subject to consultation with the land manager (Parks Victoria) and is also permitted on water frontage reserves, both of which are unaffected by VEAC's recommendations.



Apiculture

Apiculture is not a major resource industry in the Otways. Currently there are three designated apiculture sites on public land in the study area, all of which occur on Crown land near Anglesea. The national park will include all three sites.

Apiculture conflicts with national park conservation objectives due to competition from European honeybees with native species for nectar, pollen and nesting hollows. Apiculture may effect plants that require specific native pollinators to ensure successful fertilisation. Accordingly, the recommendations for the Otway Ranges National Park specifically exclude apiculture.

Potential alternative sites have been identified on other public land and the recommendations for forest park permit apiculture. There are no existing sites in the forest park.

Agriculture

While most agriculture within the study area occurs on private land, some public land is subject to grazing licences. Typically these areas are water frontages and unused Government roads. Grazing licences are usually held by the adjacent land owner. There are currently 602 grazing licences issued for public land in the study area comprising some 2138 ha.

In its Draft Proposals Paper VEAC proposed that public land water frontages be included in the proposed forest park to simplify management by reducing the number of public land-use categories. Many submissions were received from people proposing that these water frontages be retained as they are rather than added to forest park. The reasons given were largely to do with administrative responsibilities and perceived differences in management by the existing responsible authorities (Corangamite CMA and DSE) and the forest park manager. In response VEAC has recommended that most public water frontages be retained as natural features reserves and that Corangamite CMA and DSE work with adjoining landholders to implement restoration projects and control stream-bank erosion or protect natural values.

Grazing may be incompatible with the natural values of public land as it can cause loss of native vegetation, trampling, streambank disturbance, soil compaction, erosion and reduced water quality. In light of this, the recommendations for the Otway Ranges National Park and the expanded Aire River Wildlife Reserve exclude grazing by domestic stock, with existing licences to be terminated as soon as possible, but no later than 2008. In all, implementation of VEAC's recommendations will require the cancellation of all or part of 39 grazing licences. The area of cancellation covered by these licences is about 196 ha, although in many cases the entire area is not currently grazed.

Most grazing licences remain within public land water frontage reserves where VEAC's recommendations permit grazing to continue where it currently exists, provided it is compatible with recreation and conservation objectives, or undertaken on unused roads which are also unaffected.

CHAPTER 10 ABORIGINAL INTERESTS

The landscape is a central element of Aboriginal culture, arising from thousands of years of living with the land and skillfully using and managing its resources.

People of the Wada Wurrung, Gulidjan, Katabanud and Kirrae Wurrung Aboriginal communities have strong traditional and contemporary connections to the Otways, with the Wathaurong Aboriginal Co-operative and Framlingham Aboriginal Trust having formal responsibility for cultural heritage protection.

As well as its intrinsic importance, Aboriginal people's continuing sense of belonging to, and responsibility for, country can bring valuable insight and custodianship principles to contemporary land management. Adequate consultation with, and involvement of, the Aboriginal community, particularly traditional owners, is a prerequisite for sustainable development in the Otways.

Consultation with Aboriginal People and Groups

To facilitate Aboriginal participation in the public consultation process following the release of the Draft Proposals Paper, VEAC engaged independent consultants Atkinson Kerr and Associates to seek the views of Aboriginal groups and individuals with a potential interest in the investigation. The consultants' report on the outcomes of their consultation is provided in full in Appendix 3.

Major issues for Aboriginal people in the VEAC study area are:

- protection of cultural sites and places;
- greater involvement in land and water management, including employment of Indigenous people and moves towards more formal arrangements such as joint management of public lands;
- addressing cultural requirements, including access to and protection of key sites on public land for traditional practices;
- more frequent and timely consultation on issues of importance to Aboriginal people,
- more visible identification and better interpretation of the traditional and on-going relationships between Indigenous people and their country, potentially including visitor and cultural centres; and
- measures to increase the capacity of Aboriginal people to be fully involved in land and water management and consultation on issues of importance to them and the broader community.

Protection of Cultural Sites and Places

Pre-European Contact

Aboriginal people occupied the Otways for many thousands of years, however little is contained in the written record of their culture, economy and movements. Some conclusions can be drawn from the 250 or so known archaeological sites along the main range and adjoining areas. The density of these variable sites—mostly middens and artefact scatters—is lowest along the main range itself, and greatest along the coast and hinterland, and along the north-western periphery of the range.

The coastal strip may have been occupied by the Gadabanud language group moving up and down the coast year-round. The ranges and northern periphery are more likely to have been occupied seasonally, leading to contact with people of the adjoining Girai Wurrung, Djargurd Wurrung, Gulidjan, and Watha Wurrung language groups, who occupied the inland plain and lakes country.

European Impact on Communities

The lives of Aboriginal people in the study area were significantly disrupted by European settlement. European settlers introduced diseases, instigated massacres and dispossessed and forcibly removed Aboriginal people from their land to missions and reserves.

Places of Aboriginal interactions with explorers and settlers, including massacre sites, mission stations and reserves are especially significant. These sites are important for recognising the interactions that occurred there, and because many people lost their families and ancestors there. Protection of these places is vitally important to Aboriginal communities.

Recognition of the history of cultural contact, resistance and adjustment, and an awareness of places reflecting that history, are important for understanding our shared, and at times, poorly documented past.

Management and Protection of Cultural Sites and Places

The identification, protection and management of Aboriginal cultural heritage places in Victoria are primarily the responsibility of Aboriginal Affairs Victoria (AAV), who administer the Victorian and Commonwealth-delegated Aboriginal cultural heritage legislation, discussed later in the Legislative Obligations section. This responsibility is shared with the relevant Aboriginal groups and communities.

Once cultural sites are located, their spiritual and cultural sensitivity for Aboriginal communities needs to be recognised. Groups associated with these want to be, and indeed must be, consulted about any development or interpretation, and be involved in authorising any public access to such sites.

The protection of both pre- and post-contact Aboriginal sites and places is vital and VEAC recognises that stringent enforcement, as well as application of mechanisms to enhance public awareness (such as community education programs, and cross-cultural training for land and water managers) is essential to ensure cultural sites and places are not damaged or violated.

Adequate protection of cultural heritage—and adequate consultation with Aboriginal people in relation to this protection—was a major and consistent theme to emerge from the work of VEAC's independent consultants with Indigenous communities in the Otways (see Appendix 3). Other public submissions also expressed considerable support for the recognition, protection and cooperative management of sites and artefacts representing Aboriginal cultural heritage with a number of submissions calling for the general protection of Aboriginal cultural sites and artefacts in national parks or other special protection reserves.

Many Aboriginal sites and places are located in the recommended Otway Ranges National Park which complements the existing protection provided under the current State and Commonwealth legislation. The recommendations for the Otway Forest Park also require the protection of sites and places of Aboriginal cultural significance.

Survey Coverage

Surveys for Aboriginal sites have been limited on Angahook-Otway public land, partly because of heavy vegetation. Most surveys have been associated with the planning and development of specific works, such as the construction of walking tracks, and laying of communication cables. Adequate surveys, involving traditional owners and relevant cultural heritage officers, must be done prior to any planning and development. Opportunities for further surveys should be sought to improve the existing level of information and recognition of cultural sites and places in the study area. Aboriginal people report that new sites are found regularly in the study area.

Cultural Requirements

Aboriginal people in the Otways have specific cultural requirements that need to be recognised by land managers. This awareness can be achieved by consulting with local Indigenous groups, developing protocols and processes to facilitate productive, open communication and implementing cross-cultural training.

Consideration and awareness of these cultural requirements enables land and water management regulations and practices to reflect the needs of traditional landowners and



provide opportunities where appropriate to continue cultural and spiritual practices such as hunting, fishing, food gathering, education, and ceremonial activities, which may well lead to more sustainable land management.

Legislative Obligations

Cultural Heritage Protection

Aboriginal archaeological sites are protected under the *Archaeological and Aboriginal Relics Preservation Act 1972*, and the *Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984* with substantial penalties for unauthorised disturbance of Aboriginal sites. The regulations under the Commonwealth Acts define the boundaries of the 'local Aboriginal communities' that have standing under the legislation. Within the study area, these are Framlingham Aboriginal Trust and Wathaurong Aboriginal Co-operative Ltd.

Aboriginal communities often assert that the requirements of these Acts and the spirit of the legislation are ignored by public and private land and water management agencies. Aboriginal people want to be consulted and involved in planning, decision-making and implementation processes, rather than invoking the provisions in the legislation when a problem arises.

Native Title and Indigenous Land Use Agreements

Native title is based on the laws and customs of Indigenous people that is recognised by the common law of Australia. Aboriginal people have significant associations with the Otways and continue to assert their association with all of their ancestral areas. The exercise or enjoyment of native title rights and interests may include hunting, fishing, gathering, and cultural or spiritual activities.

Under the Commonwealth *Native Title Act 1993* Aboriginal people can claim native title on Crown lands and waters in their traditional lands. In Victoria, Native Title Services Victoria coordinates the majority of native title claims, facilitates the identification of an authorised Indigenous negotiation group for a particular area, and acts for native title holders and claimants in relation to matters that may affect their rights and interests in land. The existence of native title is not dependent on a claim being lodged.

Under the 'future acts' provisions of the *Native Title Act 1993* there are obligations to notify, receive and consider comments and in some cases negotiate with groups in relation to activities which may affect native title. In the event that obligations are not observed, activities are invalid to the extent that they affect native title. In summary, Aboriginal groups must be consulted about activities proposed on their traditional lands, with negotiation undertaken as to whether or not the activity may proceed, and if so, how—to the satisfaction of all parties.

Negotiation rather than litigation has become the preferred approach to native title applications, as well as for broader Indigenous involvement in land and water management. The identification of an authorised negotiation group greatly assists in undertaking these negotiations.

In 2000, the *Protocol for the Negotiation of a Native Title Framework Agreement for Victoria* was developed by the Victorian Government, the former Aboriginal and Torres Strait Islander Commission (ATSIC) and the Mirimbiak Nations Aboriginal Corporation (predecessor of Native Title Services Victoria). In this protocol, the Victorian Government acknowledges that traditional Aboriginal owners of land and waters in Victoria may hold native title to their traditional lands.

The protocol offers a framework for resolving native title claims in Victoria. The framework provides for Indigenous Land Use Agreements (ILUAs) which may address a range of issues including:

- recognition, protection, and exercise of native title rights and interests;
- the relationship between native title rights and other rights, and the manner in which native title rights are exercised, including co-management of, and access to, national parks, state forests, etc., and any flora and fauna therein; and
- the identification, protection and management of Aboriginal cultural property.

An ILUA is a voluntary agreement made between native title groups (who hold or claim to hold native title) and other people or organisations, such as governments, mining companies and other commercial industries, regarding the use of land and resources of a particular area. Although ILUAs can be complex and time-consuming to negotiate, they allow people to make agreements about how land is used without necessarily entering into the usual native title process—although an ILUA may also be a stepping stone to a native title determination.



ILUAs allow parties to negotiate flexible and pragmatic agreements. They are intended to be living documents that set relevant, formal specifications about how the land will be used. Once registered, ILUAs bind all the parties and all persons claiming to hold native title to the terms of the agreement. ILUAs offer Indigenous people potential benefits such as employment, compensation and recognition of native title rights.

To date, 138 ILUAs have been registered (with the National Native Title Tribunal) in Australia, including 11 in Victoria. Like most ILUAs, those in Victoria are associated with particular infrastructure or mining developments, such as the Lara to Paaratte gas pipeline which passes through the Angahook-Otway study area. The Arakwal ILUA, one outcome of which is the creation of, and funding for Arakwal National Park, which is jointly managed by the Byron Bay Arakwal People and the New South Wales National Parks and Wildlife Service is of particular relevance to the study area.

Most of VEAC's recommendations in this report, if adopted by Government, would modify permitted uses on Crown land, or change the emphasis of public land management. However, this should not occur prior to further Government consultation with relevant Aboriginal groups on native title rights and interests. VEAC stresses that nothing in these recommendations should be taken to prejudice or diminish any native title rights to land, water and resources.

Involvement in Land and Water Management

Indigenous stakeholders in the Angahook-Otway Investigation were generally broadly supportive of VEAC's draft proposals for public land. Rather than the specific areas proposed for particular public land categories, they were more concerned about environmental degradation, dispossession from traditional land and water estates, loss of traditional access, fishing and hunting rights, and lack of opportunities for genuine participation in decision-making about land and resource planning and management.

Consultation and Negotiation

Consultation is the first step to involvement in land and water management. Traditional owners and local Aboriginal communities need to be consulted early in land use planning and decision-making processes. This provides the opportunity to:

- assess the landscape for potential sites of significance;
- identify and locate sites that may be affected; and
- ensure that appropriate protocols for dealing with Aboriginal sites are followed.

During the consultation process opportunities to increase public awareness of Aboriginal connections with the area were identified, for example, by naming particular locations or providing interpretative material along walking tracks and visitor attractions.

VEAC's recommendations refer specifically to the need for consultation with traditional owners. The need for consultation is not limited to special events such as the artificial opening of the mouths of the Aire and Gellibrand Rivers and those specified by legislation, but to overall management of the public land in the study area.

Representation and Economic Opportunities

Involvement in natural resource management may increase opportunities for representation on land and water management bodies and improve economic opportunities for the Aboriginal community. This could be achieved in a number of ways including:

- employment in natural resource management and liaison positions;
- representation on land and water planning bodies, or policy-making committees with capacity-building to facilitate Indigenous input;
- interpretation, community education, and tourism opportunities provided through dedicated programs or interpretive centres; and
- cultural heritage protection program positions.

The involvement of the Aboriginal community in the management of public land in the study area will also lead to improved cultural and environmental outcomes.

A specific, tangible example of these aspirations was a proposal received in submissions for the establishment of an Aboriginal Cultural Centre at Point Bunbury (Apollo Bay) if and when the golf course relocates. This accessible, high profile site has strong associations with past Aboriginal occupation as evidenced by a number of archaeological and environmental features. It was envisaged that this area could provide a focus for visitors entering the recommended Otway Ranges National Park whilst demonstrating an appreciation of the cultural significance of the park for Aboriginal communities.

Another suggestion made in submissions was for an area, not specifically defined at this stage, within the park or other public land, that could be used for ceremonial and specific cultural activities.

CHAPTER 11 ROADS

The primary purpose of road reserves is to provide for communication, transport and access. Within the study area the Great Ocean Road is both a main access road and an internationally recognised touring route attracting numerous visitors to the region. Roads through the Otway Ranges provide links to the hinterland and access to the forests.

The Great Ocean Road

The Great Ocean Road extends some 242 km from Torquay to Allansford (east of Warrnambool), providing access to major tourist destinations both within and beyond the study area — such as the Twelve Apostles, Apollo Bay, Lorne and Torquay. Approximately 60 percent of the entire length of the road is included in the study area and of that, approximately 40 percent has public land on both sides.

Although the Great Ocean Road is used by local residents and provides access for commercial traffic, the road's role as a major tourist route and world-class driving and touring experience is by far its greatest value. The essential character of the road and its ability to deliver on its reputation is under increasing pressure, leading many groups to call for the road to be reserved within a national park.

VicRoads has responsibility for works and maintenance and manages the road in accordance with the detailed Great Ocean Road Roadside Management Plan. Much of the road is within a permanent gazetted road reserve. There are, however, sections of the road that are on other forms of Crown land such as coastal reserve or park without a defined road reserve, particularly between Apollo Bay and Lorne. In such areas VicRoads usually has agreements in place with land managers, such as Parks Victoria and foreshore committees of management, which cover the management of both the formed road surface and the road environs. Irrespective of the tenure of the road, the maintenance of the scenic and tourism attraction of major sectors of the road continue to be important aspects of its management.

The vehicle capacity of the Great Ocean Road is finite with significant delays being experienced during peak summer and Easter periods. Because of the increasing popularity of the area as a tourist attraction, these peak periods are extending. There are also sections of road with substantially higher accident rates than the State average, motorcycle crashes being a particular concern. The standard response to such factors on other roads might include major construction work to increase carrying capacity. In the case of the Great Ocean Road, increasing capacity would compromise both scenic and environmental values along the road and, given the physical constraints of the Otway Ranges, would likely be cost-prohibitive. Given that demands on the road are unlikely to decrease, alternative measures such as traffic calming, redirection of traffic and upgrading of alternative routes need to be considered.

A major strategic review entitled "Great Ocean Road Region - A Land-Use and Transport Strategy" has been recently adopted by the Government. The Strategy has identified key initiatives such as enhancing the Great Ocean Road as a world-class travelling experience by preserving key vistas and improving travel information and improving safety, sealing road shoulders, guard fencing, signage and undertaking a speed limit review. Additionally, investigation of alternative routes for through-traffic around townships and improved safety for north-south routes accessing the hinterland areas are suggested.

While the Great Ocean Road Region Strategy deals with issues related to the road in detail, part of VEAC's specific charter was to recommend whether the Great Ocean Road should be in the national park or not. VEAC's terms of reference require that Council consider whether or not the Great Ocean Road should be included within an expanded Otway Ranges National Park and a number of submissions received specifically addressed this. Those that proposed excluding the Great Ocean Road from the national park generally indicated that VicRoads was the most appropriate manager; although few gave detailed rationales. Those who proposed the inclusion of the Great Ocean Road in an expanded national park based their views largely on conservation grounds or the enhancement of tourism values through sensitive future development. Some suggested including parts of the road only where it abutted national park. Specific concerns were related to managing roadsides for conservation values, enhancing tourism potential, continuing access, establishing a road reserve along the entire length and controlling pest plants and animals.

Some submissions commented on the potential for a road toll to be introduced and, whilst most preferred no tolls, a small number proposed tolls with exemptions for local residents.

According to some submissions, inclusion of the Great Ocean Road in the national park would not have to change existing funding and on-ground management arrangements.



Some saw it as desirable for park regulations to apply to those travelling on the Great Ocean Road. Others thought this inappropriate given the extent of through traffic and the fact that exemptions would be required for the passage of vehicles with firearms, stock, and dogs through the national park. There was a view expressed that such roads should only be included in national parks if they serve as an access road terminating in the park.

VEAC has recommended that the Great Ocean Road not be included in the national park but be restricted to a defined road reserve. This road reserve is to be managed by VicRoads, with the roadside vegetation managed cooperatively through a management agreement established between the park manager and the road authority.

Council has assumed that strategic planning and upgrading of hinterland routes as described in the Great Ocean Road Regional Strategy will alleviate some of the existing capacity and safety concerns related to the road, while maintaining its existing character and function as a tourist route. Nonetheless, Council envisages that in places, road widening or engineering works may be required outside the defined road reserve. Any road re-alignment outside the defined road reserve would entail a revision of the park boundaries and should be subject to environmental assessment to ensure that the essential scenic character of the road is maintained.

Hinterland Roads

The Great Ocean Road Region Strategy identifies the development and promotion of inland routes from Apollo Bay and Lorne (and, outside the study area, from Port Campbell) as a strategy to reduce traffic congestion on the primary tourist route, the Great Ocean Road.

The Strategy also identifies a 'main touring route' connecting a number of arterial roads (formerly declared main or tourist roads) in order to promote touring through the Otways. A number of sections of the nominated route, including Turtons Track, traverse the Otway Ranges National Park. The designation of 'supporting routes', for two wheel drives and four wheel driving, is also proposed in the Strategy.

VEAC acknowledges that redirecting traffic from the Great Ocean Road to such hinterland routes may require upgrading of these roads and that this may compromise the values of the land (including parts of the Otway Ranges National Park) through which these roads pass. In some places within the study area the road formation does not actually lie within the designated road reserve. VEAC has delineated the boundaries of recommended national and forest parks to reflect the actual alignment of the main through roads. The same approach recommended by VEAC for the Great Ocean Road also applies to these hinterland roads in relation to management of roadside reserves and use of abutting public land. VEAC has also recommended that roadside management plans be prepared by the responsible road authority in consultation with the adjoining land manager.

Some submissions have suggested that an additional inland route be designated to link Aireys Inlet with the hinterland. VEAC considers that this proposal is worthy of further investigation by VicRoads and the relevant municipal Council.

Tourist Roads

The Great Ocean Road, Otway Lighthouse Road and Beech Forest Road (Turtons Track) have for many years been designated declared tourist roads. Such designation clearly defined their function as well as the State as the responsible authority for their management. Under the recently proclaimed *Road Management Act 2004* these three roads are now designated as arterial roads. VEAC recommends that the tourist function and related values of these roads be specifically recognised in addition to their role as arterial roads.

Vehicle Tracks and Road Management



The Otway region has inherited an extensive vehicle track network created to establish fire access and facilitate timber harvesting. Some tracks were created as part of Government relief schemes. The vehicle track network is a valuable resource for managers and users alike. However, current use of such vehicular tracks may not reflect the original rationale for their creation and their design and construction may no longer be adequate, leading to high maintenance costs and/or damage especially given the wet climate of the Otways. Consequently tracks on public lands may be subject to seasonal closures, restrictions or permanent closure and rehabilitation.

Changes to the status of vehicular tracks usually occur through management plan processes and consultation with key user groups. Some groups also assist park managers with the monitoring and aspects of track maintenance, and contribute to collaborative projects such as track rating systems to improve the safety of recreational users.

Many submissions from recreational users of the Otway forests were concerned that park creation may lead to all, or almost all, tracks being closed. Other submissions offered a contrary view, suggesting that park creation led to tracks being made or upgraded to cater for increased visitor use. Concern was raised that closure of tracks would hinder fire

fighting and other emergency operations. Some felt that while organised groups had the opportunity to be involved in decisions about tracks the opportunity for individuals to be involved was limited.

VEAC was advised that track closures followed the establishment of the Otway National Park. There was, however, no evidence that all tracks in national parks are or would be closed. Council also noted that a network of fire access tracks is still maintained, and that tracks have been closed in state forest areas as well as in parks.

While tracks are closed by park managers for legitimate reasons, VEAC acknowledges that there is a demand for continued recreational access and has placed a high emphasis on providing for this use in most land-use categories including the Otway Ranges National Park. In particular, Council's recommended Otway Forest Park has the capacity to provide for a range of four wheel drive and trail bike recreational requirements. VEAC has also recommended that car touring, including routes for four wheel drives as well as all-weather access for two wheel drives standard, be provided in the national park. It is anticipated that the expanded national park can meet conservation objectives while maintaining a viable road network and most vehicular roads and tracks through the park are expected to remain open. Nonetheless, threatened species protection, safety risk management, and other potential reasons for track closures occur within parks and are ultimately the responsibility of the land manager.

VEAC recognises the importance of the wider community being involved in such decisions and has recommended the establishment of advisory committee(s) to help guide decision-making throughout the implementation, planning and on-going operational phases of the management of the public lands of the Otways. It is envisaged that an advisory committee would deal with track access and develop criteria for the development, closure and standard of vehicular tracks.

Some have advocated the classification of tracks according to their standard, allied with identifying signage, to provide guidance to users of four wheel drive tracks across the Otways. VEAC supports this approach. Council has also reviewed the use of a system to regulate access, as

developed in Tasmania, to designated trailbike routes, but considered it unsuitable in the Victorian context as Tasmania has a different licensing system.

Concern was expressed about funding for track maintenance to replace current timber industry contributions to road management. Some suggested that tourist operators pay road levies. VEAC considers that such funding issues need to be taken into account by the Government when considering the recommendations in this report. It also notes that levies obtained from the timber industry for roads, are intended to upgrade and maintain roads for use by log trucks — a standard not necessary for general recreational traffic and not always on routes that coincide with the interests of recreational users.

Roads across public land may be important for through traffic as well as park traffic. In some instances they may provide legal and/or practical access to freehold lands surrounded by or adjoining the main blocks of public land. Such roads will generally remain within road reserves, rather than be included in a park or reserve.

Road access is also required for log haulage of hardwood timber sourced from public land (until 2008) and for softwood logs sourced from both public land and freehold. Mostly such haulage routes are on roads through the forest park or on roads within road reserves managed by municipal Councils. VEAC is not recommending any changes to such arrangements.

Unused road reserves that are surrounded by public land and are not used for access have been recommended for addition to adjoining parks or reserves.

The recently proclaimed *Road Management Act 2004* will also influence the future management of vehicular roads in the study area. For example, each road authority must keep a register of public roads for which it is responsible, in which it lists the classification of public roads, any public roads that have been closed and the construction standard for each public road. The Act also provides for the development of codes of practice which, amongst other things, will guide the allocation of resources, engineering standards, risk identification, maintenance programs and the making of road management plans.



CHAPTER 12 IMPLEMENTATION AND MANAGEMENT

The full value of VEAC's recommendations is dependent upon the extent to which they are successfully implemented and managed into the future by the respective land managers. Both adequate resourcing and community involvement are required.

Many of the submissions received following both the Discussion Paper and Draft Proposals Paper, referred to the need to improve management of public land and, in particular, adequately fund parks resulting from VEAC's recommendations. Comment was also made about difficulties identifying the responsible land manager and differences between land managers in dealing with issues such as pest species control. Some expressed the view that local knowledge and experience was undervalued and that opportunities for influencing management practices were limited. Many recreational users felt that their activity was either being excluded by VEAC recommendations or, in areas where VEAC recommend it be permitted, would be subsequently excluded by land managers. In particular, recreational users were concerned that such exclusion might occur without the opportunity to comment, contribute to decision-making or formally object to management decisions.

In summary, the most common issues raised relating to implementation and management were:

- adequate resources for implementation of VEAC recommendations including provision of assistance to those adversely affected;
- enhancing management of all public land;
- desirability of integrated management;
- support for ecological sustainability; and
- the need for community participation in public land management decision-making processes.

Resources for Implementation

Most public land in Victoria is managed, directly or indirectly (through delegation), by DSE regardless of the current or recommended land-use category. While land status changes do not necessarily imply a greater level of management, community expectations may differ between land-use categories. For example, the public may expect higher quality picnic areas in a national park compared with state forest. Additional resources are required to respond

to these expectations and, in particular, will be required where the intensity of management needed increases as a result of the acceptance of VEAC's recommendations. Accordingly, VEAC has made a specific recommendation that the Government allocate adequate resources for the implementation of its approved final recommendations.

Implementation also involves establishment costs, such as fencing, signs and management planning, as well as an ongoing commitment to ensure that the management objectives of each particular land category are met. During the implementation of Council's recommendations it will be necessary to widely distribute information on boundaries and permitted activities in the different land-use categories, particularly those of the national and forest parks. This information should be supported by the presence of rangers or other staff at community events and institutions. While education should be emphasised during the implementation phase, compliance programs will also be necessary to address potential threats to the park and its biodiversity. A suite of education and enforcement approaches developed specifically to achieve compliance within the Otways will require specific allocations of resources.

Assistance to Affected Parties

VEAC's recommendations have been designed to provide a net benefit to all Victorians, and to minimise the impacts on current users of resources of the Otways.

On the basis of its own work and that of independent social and economic consultants engaged by VEAC, Council anticipates that any negative effects of the recommendations on resource users are likely to be relatively minor (see Appendix 4 for details). However, where an individual, business or local community is disproportionately affected, VEAC considers it appropriate for the community, through Government, to assist in overcoming those effects, and has made a specific recommendation to that effect.

It should be noted that the Government has a separate process for dealing with the impacts of its decision to phase out logging and woodchipping from public land in the Otways. This decision by Government is likely to have much greater adverse socio-economic implications for the Otways than any changes resulting from VEAC's recommendations.

Enhancing Public Land Management

Throughout the consultation process, a frequent issue raised in submissions, briefings and meetings was the perceived need for more expenditure on public land management. Some of the issues raised as needing more resources include:

- pest plant and animal control, particularly foxes and feral cats;
- fire protection;
- presence of Parks Victoria rangers and DSE staff;
- provision and servicing of recreation facilities; and
- track maintenance.

These comments applied both to parks and reserves and state forests. Concerns arose from effects on biodiversity conservation in these areas as well as their impact on adjoining landowners and water catchments.

VEAC's view is that these concerns result from genuine public observation about what public lands require. The Otways forests are in real need of additional resources for on-ground management and for the scientific research upon which on-ground management is based. These concerns stand irrespective of any VEAC recommendations to change existing land-use categories.



Integrated Management

Management issues such as fire and pest species are currently the responsibility of a number of agencies such as DSE and Catchment Management Authorities, who operate across land-use categories. Regional coordination of other management issues across public land categories, such as recreation and tourism, would also be advantageous and avoid unnecessary duplication of visitor experiences across the Otways. Emphasis on integration and coordination should lead to improved and more cost-effective land management.

The need for integrated management was the primary reason for VEAC's original over-arching Otways Park proposal and, although that proposal has not endured, VEAC remains committed to addressing this issue. The recommendations in this Final Report simplify and consolidate the vast majority of public land into two main land-use categories, whilst also emphasising coordination, across category boundaries, of implementation, planning and management. DSE's current program to consolidate coastal reserve committees of management is a good example of the type of initiative that VEAC envisages bringing further clarity and simplicity to public land management.

The following examples demonstrate some of the key issues that would benefit from an integrated management approach.

Fire

As is the case throughout Victoria, fire protection in the Otways is the responsibility of the Department of Sustainability and Environment's Fire Management Branch (FMB). The Department develops fire management plans and coordinates fire-fighting efforts between government and other agencies. The fire management plans take into account special natural values as well as ensuring the protection of assets. All public land managers including Parks Victoria, water boards, VicRoads and plantation managers have a role to play in fire control, together with the CFA, and need to maintain at least first attack capability.

Pest Plants and Animals

Many pest species favour disturbed environments (such as forest tracks) or forested-open country interfaces which often coincide with land-use boundaries, and so coordinated management is particularly important in the control of these species. Particular pest species, such as foxes and feral cats, are currently targeted in the Otways according to regional and statewide priorities and program directions developed in conjunction with other land managers including private land managers.

Similarly, cinnamon fungus is a well-known soil borne pathogen that has a dramatic impact particularly upon heathland and other vegetation communities regardless of public land-use category.



Foxes, feral cats and rabbits are of particular concern in the Otways because of their impact on wildlife either as predators or competitors. Research has shown that effective control of these pests can only be achieved with sustained action (particularly baiting) across a broad area. Poor coordination between land managers could lead to apparently minor geographic or temporal gaps in control programs that may have major impacts on the success of the programs.

Track Networks

The extensive track network throughout the Otways is under increasing demand for recreational use. Many tracks have been established for fire access or timber harvesting and safety of users is now a paramount concern for land managers, especially as many tracks are steep and narrow. Such tracks can be expensive to maintain.

While it is desirable to maintain track networks to provide a range of experiences across the Otways, coordination across land-use categories is required to maximise the cost-effectiveness of track maintenance. For instance, a uniform classification system could be established with user groups to inform track users of vehicle requirements or the level of experience needed—clearly differentiating through routes from meandering four wheel drive routes, for example. The level of maintenance funding would reflect the track classification. This approach is consistent with the new requirements under the *Road Management Act 2004* (see Chapter 11).

Joint Management Agreements

Land managers on both sides of boundaries are likely to have a significant interest in land management practices at the interface, especially where these impinge upon core objectives. This is particularly the case for water supply managers and the tourism industry primarily focussed on the Great Ocean Road, both of which could be affected by poor management of adjoining land or buffers, and vice versa.

Water supply catchments were an important issue raised in submissions and other public consultation, particularly in response to the Draft Proposals Paper. Many people proposed the inclusion of all water supply catchments or those of Geelong or Warrnambool in the national park. VEAC has recommended that key areas of water supply catchment above major reservoirs and weirs be included in the Otway Ranges National Park. A series of cooperative management principles have been developed to ensure the protection of both water supply and quality as well as national park values in these areas.

A similar approach is recommended for road managers where main routes pass through the national park. In such cases the roadside management goals or outline of management objectives will be defined in a management plan prepared in collaboration with the park manager. This is particularly important for the Great Ocean Road where scenic values are a very important part of the visitor experience.

Ecologically Sustainable Development

VEAC strongly believes that the Otway Ranges National Park will form the core of a sustainable future for the Otways. The complementary Otway Forest Park will not only provide protection for other areas of forest but VEAC's recommendations seek the active management and support of recreational activities so that they are carried out in a manner which is safe and within the capability of the environment.

Informed decision-making for ongoing sustainability requires reliable and relevant data—the collection of environmental and biological data on species and ecological communities and, especially information on specific threatened species and indicator species for environmental health, such as the spot-tailed quoll. Monitoring of higher order predators or species that are highly vulnerable to changes in the ecosystem that supports them, not only improves management strategies for that species, but also provides a cost-effective measure of the health of the entire ecosystem.

VEAC also advocates that land managers make greater use of processes of continuous review and improvement in the form of environmental management systems—for planning, implementation and review of their efforts to manage the environment.

Community Participation

Community understanding and involvement are essential to the achievement of VEAC's vision for the sustainable management of the Otways. An informed community that values the many natural attributes and habitats of the Otways and understands the impacts of different uses upon them is more likely to act in ways that protect and enhance the environment. By participating with public land managers in the planning and implementation of decisions made together, the local and wider community will develop an increased sense of ownership and responsibility for their

public land. The already enthusiastic and diverse interest in the Otways indicates a strong desire from the community to be involved in public land decision-making and management. While normal processes of preparing management plans and various single-issue ad hoc processes provide for some participation, there is no existing mechanism that specifically deals with community participation or enables community issues to be addressed pro-actively from a regional perspective.

Accordingly, VEAC is now recommending the use of advisory committees to provide a voice for the community in decision-making at not only the implementation stage but also during preparation of management plans, and in an on-going capacity. In summary, VEAC is proposing a comprehensive approach, with community involvement covering three stages:

- (1) in the implementation stage after the Government's response to VEAC recommendations;
- (2) in the detailed planning phase, when management plans are developed; and
- (3) in on-going management decisions.

The establishment of such advisory committees should not mean that there is no role for existing or new ad hoc groups or other consultation mechanisms as appropriate to respond to particular issues as they arise, especially for local or special interest issues.

Membership of the advisory committee(s) would include, but not be limited to, representatives of the Indigenous community, environment and recreational user groups, relevant industry representatives, and local communities.



PART 3
IMPLICATIONS

CHAPTER 13 SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPLICATIONS OF THE FINAL RECOMMENDATIONS

Optimising net social, economic and environmental benefits for the whole community has been VEAC's major objective and guiding principle during the Angahook-Otway Investigation. Throughout the lengthy and detailed process of developing its recommendations, VEAC has been continually assessing the outcomes and refining them against this objective accordingly. This chapter summarises VEAC's assessment of the social, economic and environmental implications of the final recommendations.

There are very many parameters and measures of social, economic and environmental implications, and this chapter focuses on those that have been foremost in VEAC's deliberations.

Consultants' Overall Assessment

VEAC commissioned URS consultants to provide detailed, comprehensive and independent advice on, and assessment of, the social and economic implications of the final recommendations. This work builds on the earlier report undertaken for the Draft Proposals Paper by URS. Appendix 4 is a summary of the lengthy assessment—the full report is available at VEAC's website (www.veac.vic.gov.au) or by request from the VEAC office (see opposite title page).

As part of this work, URS estimated the dollar value of the social, economic and environmental costs and benefits of the recommendations. These estimates allow a quantification of the net benefit/cost of the recommendations overall. Such analyses, and the data on which they are based, involve many assumptions and caveats (which are documented in URS' full report), and they should be used cautiously. That said, the consultants' analysis indicates that implementation of the recommendations should lead to a net increase in economic value to Victoria of between \$5.4 million (pessimistic case) and \$30.2 million (optimistic) a year, with a 'conservative case' net benefit of about \$18 million per year. The bulk of the net benefit comes from increased tourism and the non-use values for biodiversity protection (\$4.8 and \$15 million per year respectively in the 'conservative case'). Costs are predicted to be comparatively low, with impacts on industries in the tens of thousands and increased expenditure on public land management of two million dollars.

It should be noted—and this is apparent in the following sections of this chapter—that the quantification and net economic benefit calculations have informed VEAC's decision-making, but did not drive the process. **That is, to reiterate, VEAC's emphasis has been on seeking recommendations that optimise the social, economic and environmental benefits themselves, rather than their dollar value as such.**

Social and Economic Implications

With over 1800 submissions received throughout the investigation, VEAC certainly recognises the wide range of views in the community on both the appropriate social and economic future for the Otways, and the public land settings that may contribute to realising these different futures. To take a simple example, there are obvious difficulties in satisfying both the many people who see no change to public land use as the most socially desirable outcome and those who prefer a very large national park.

Ultimately, though, two things are clear—firstly, it is the character of the region that makes it so popular for people and secondly, that popularity (and its associated pressures) will continue to increase. The challenge is to maintain the region's character so as to continue reaping the benefits of its popularity.

Among the special characteristics that are most under threat are the region's natural and cultural heritage, the rural or seaside village feel of many towns and districts, and the associated relatively low-key, affordable summer holiday venues. VEAC's recommendations contribute in particular to the protection of heritage values and characteristics, as well as the region's status as rural Victoria's premier destination for tourists.

Recreation

Maintaining and, where possible enhancing, the existing recreational opportunities in the Otways is one of the keys to retaining the area's popularity and values. Most of the current popular recreational activities are generally not intrinsically damaging to the environment, and usually only cause damage when excessively focussed on particular sites or when illegal—when trail bike riders leave formed tracks, for example. Generally, these problems, and conflicts with other users, can be reduced or at least minimised with good management planning and education.

VEAC's recommendations provide a framework to assist such management. The national park provides for most existing recreational uses in the context of strong and secure protection for the high natural and cultural values in that park; the forest park is generally located in areas of interest for those activities that are least compatible with national park status. The forest park also provides for protection of natural and cultural values as well as these activities.

Examples of areas of most interest for particular activities in the forest park include areas near towns (e.g. Barwon Downs, Forrest and Lavers Hill) for horseriding or dog walking, and four wheel driving in forest areas near the Head of Aire River and Upper Ford River. That is not to say that four wheel driving—and, for that matter trail bike and horseriding—are

not permitted in the national park; only that it would be generally more appropriate, for example, to locate focal points (such as trail bike unloading areas, or bridle paths) for these activities in the forest park areas. Similarly, key areas for hunting remain available—duck hunting in the existing Aire River Wildlife Reserve, for which a minor extension is recommended, and deer hunting in parts of the western Otways forest recommended as forest park.

There are existing opportunities for dog walking throughout the Otways, especially in forest park, coast reserves and along water frontages. Dog walking is provided for on designated tracks in the Otway Ranges National Park mostly near urban areas. The existing zone for gem fossicking at Wreck Beach near Moonlight Head is retained.

A key issue for many recreational activities—particularly four wheel driving, and trail bike riding—is continued access to roads and tracks through the forest, especially in national parks. VEAC does not envisage the high proportion of track closures that may be appropriate in a relatively small national park such as the existing Otway National Park, being applied across the much larger national park, and has specifically recommended that a network of tracks be retained. With the phase-out of sawlog harvesting and woodchipping by 2008, the requirement for new roads to service the timber industry will be greatly reduced, and other things being equal, minor dead-end logging tracks closed and the need for haulage standard roads reduced.

The new *Road Management Act 2004* may also lead to changes in road and track access independent of VEAC's recommendations. At the same time, fire protection will always be an extremely important issue in the Otways and will ensure that a network of well-maintained roads and tracks is retained.

Land managers also need flexibility to manage the track network in response to particular circumstances as they arise. Detailed proposals on particular tracks are generally beyond VEAC's broad, strategic and long-term scope and would generally be an undesirable restriction on the land managers' flexibility.



In summary, the implications of VEAC's recommendations for recreational opportunities are expected to be:

- enhanced protection of the key natural and cultural heritage values that underpin most recreation—such as native flora and fauna, waterfalls, historic sites and unspoilt landscapes and scenery;
- increased accessibility for a number of activities and sites as facilities are developed in the new parks;
- better integration of public land management, and simpler administrative and planning arrangements across the region;
- improved community participation in public land management decision-making processes through advisory committee participation in implementation of VEAC's recommendations, management planning and in on-going management;
- continuation of existing access for virtually all current recreational activities, including possible relocations as a result of management planning; and
- continuing access to key areas for hunting (particularly the lower Aire wetlands) and dog walking (particularly around towns), but exclusion of these activities from relatively large areas of the national park.

On this basis, URS concluded that VEAC's recommendations would attract more visitors to the study area, leading to economic benefits for the tourism industry (see below)—the increased accessibility of activities and sites being a key factor for tourists relative to the other implications listed above. Any negative effects of the recommendations on recreational activities are likely to be small and heavily outweighed by the benefits.

Industries and Commercial Uses

The industries and commercial activities currently operating on public land make an important contribution to the social and economic character of the region and, apart from sawlog and woodchip harvesting—which is to be phased out by 2008—will continue to do so with relatively little impact on other values.

Specific implications for each industry are as follows.

Tourism

Tourism is the largest industry in the Otways. As indicated above in the consultants' analysis, VEAC's recommendations are likely to attract more visitors to the region—that is in addition to likely increase without VEAC's recommendations—allowing this industry to continue its expansion while ensuring that the natural values on which it depends are protected. The national park expansion is likely to raise the profile as well as standard of funding for infrastructure and resources, thus improving the visitor experience. A significant factor in URS' predictions is the spread of the recommended national park. By linking the coastal and hinterland environments, the park will greatly assist in attracting visitors from the crowded coastal

attractions to the under-utilised hinterland. This, according to URS, is a key to increasing visitor numbers beyond the 'background' level of increase.

With a marked expansion from an already large base, URS has quantified significant social and economic benefits for the region from an increased proportion of interstate and international visitors attracted to the extent and scale of the new national park. The report forecasts an increase in overnight stays and visitor expenditure in the region supported by the range of attractions or experiences within the national park. This analysis is supported by recent trends established by Geelong Otway Tourism pointing towards a decrease in the number of day trips but an increase in the number of domestic overnight stays in the region over the period 1998 to 2002.

Sawlog and Woodchip Harvesting

Sawlogging and woodchipping will be allowed in the forest park under existing entitlements until 2008 when the Government's phase-out of these industries from public land in the Otways will come into effect.

The sawlog potential of parts of the forest park is poorly known, in part because some areas have not been available for harvesting for several years (for example special protection zones that represent vegetation types now well represented in VEAC's recommended permanent reserves—see below). Consequently, it is difficult to be confident at this point that existing commitments can be met, particularly for mountain ash timber. The large area of mixed species forest in the forest park would suggest that sufficient product would be available from this source at least.

Other Forest Harvesting

Large areas of forest park are to remain available for firewood and harvesting of other forest products such as tea-tree stakes. This change may displace some firewood production to more distant areas, resulting in a limited impact on commercial or domestic harvesters.

Extraction of Sand, Gravel and Stone

Table 2 summarises the implications of the final recommendations for extractive industries. The key outcome is that none of the current operations on public land will be adversely affected. Current operations will continue either outside the national park or under provisions of the *National Parks Act 1975*. New licences can be issued in all public land categories (subject to approval by the Minister for the Environment) except the national park and reference areas (where existing tenements are required).

As with mining and exploration (see below), adverse effects are restricted to potential future developments and therefore cannot be quantified, but are likely to be small.

Mining and Exploration

There are no operating mines on public land in the study area, although some public land is subject to exploration licences for coal bed methane and petroleum (see Table 2). It is recommended that these tenements continue in accordance with existing practice. New mining tenements can be issued in all public land categories except reference areas and the national park. By far the majority of other public land is forest park, recommended as restricted Crown land that is available for mining, subject to approval by the Minister for the Environment.

Accordingly, the implications of the recommendations are the effective loss of potential for future resource developments in those areas that are not currently covered by tenements and are to be added to the national park, and higher approval standards in the forest park. Both of these implications are impossible to quantify without knowledge of what future developments may eventuate but, given the relatively low level of exploration and prospectivity of the Otways, impacts are likely to be small.



Agriculture

Table 3 summarises the implications of the recommendations for agriculture. It shows that public land grazing by domestic stock in the Otways occurs under licence over about 2138 ha under some 602 licences, generally held by adjoining private landholders.

Grazing by domestic stock can adversely affect natural values, particularly along water frontages where both the riparian and aquatic environments can be affected by soil disturbance, fouling, trampling and removal of native vegetation, and introduction of invasive plants.

VEAC's recommendations will result in cancellation of all or part of 39 licences—with a total licence area of 196 ha to be cancelled—mostly in areas to be added to the Otway Ranges National Park, but also in some areas to be added to the existing Aire River Wildlife Reserve. Implementation of the recommendations may also require fencing of some of the currently licensed areas.

Although some licence areas can play an important role in overall farm management, URS' analysis concluded the direct economic effect of the recommendations was likely to be small.

Commercial Fisheries

Sections of the Aire and Gellibrand Rivers, currently used for commercial eel fishing, are recommended for inclusion in the Otway Ranges National Park. VEAC is aware that commercial eel harvesting is undertaken in the existing national park and nature conservation reserve on these rivers, as well as other Crown land and freehold land. A phase-out of commercial harvesting in the recommended national park is recommended over a ten year period. The commercial implication of the recommendation to exclude commercial eel fishing in the national park may have a significant impact (albeit in ten years' time) on the affected licensees, but relatively little impact on the fishery as a whole.

Other waters, particularly artificial reservoirs, are also fished commercially for eels on a more sporadic basis. With the exception of the natural Lake Elizabeth—which is recommended for inclusion in the national park, and where commercial eel fishing is recommended to cease immediately—no change is recommended for eel fishing in any of these other areas.

Apiculture

Beekeeping is a relatively minor industry on public land in the Otways, with only three designated sites, all in the eastern part of the study area. Only one of these sites is held under a current licence, although it has not been actively used within recent years. All of these sites are located in areas recommended for inclusion in the Otway Ranges National Park.

While national parks in other parts of Victoria contain bee sites, honey bees are an exotic species with potential adverse impact on natural values—through competition with native wildlife for tree hollows (in the case of feral bees) and nectar. Their presence conflicts with the purposes and objectives of national parks. There are several possible options for relocation of the affected bee sites in nearby areas (such as in the forest park). VEAC recommends that in order to maintain the integrity of the national park, the apiary sites be closed when the park is established. If alternatives can be found nearby, the closure of the sites will have no significant impact, otherwise there may be a relatively small impact on one licensee.

Net Outcome

The net outcome for industry overall according to URS is favourable resulting primarily from tourism benefits, with most other industries able to continue with little or no effect. Where effects on a particular industry are greater, the industries themselves are relatively small-scale and these effects do not change the overall economic outcome.

Tourism is expected to grow at an annual rate of at least two percent, to 2012; the Great Ocean Road Region, including the recommended national park, will feature strongly in this growth. Enhanced visitor facilities in the Otways hinterland will improve tourist capacity within the region.

Extractive industries and current petroleum and gas exploration can continue. Regarding sawlog harvesting before 2008, it is expected that planned coupes within areas recommended for inclusion in the national park can either be relocated or otherwise resolved.

Individual commercial eel harvesters may be adversely impacted by VEAC's recommendations. Relocation of the two exiting licensed operations may be possible and should be explored during the recommended phase-out within the national park over the next 10 years.

Other industries—harvesting of firewood and other minor forest products, apiculture, public land grazing—are only marginally affected or readily relocated, so that economic effects are generally minor. Nonetheless, VEAC is recommending that Government establishes a process to evaluate mechanisms and levels of assistance that may be required for any individuals or communities adversely affected as a direct result of these recommendations.

URS has not assessed the implications of the phase-out of the native forest sawlog and pulpwood timber industry—because this does not arise from recommendations by VEAC.

Table 2. Implications of the Final Recommendations for Mining, Extractive and Petroleum Tenements

	Existing Area (ha)	Area under VEAC Recommendations (ha)	Change (ha)
Mining (categories as defined in the Mineral Resources Development Act 1990)			
Area of Exempt Land (not available for mining)	40,128	103,482	+63,355
Area of Restricted Land (available subject to Ministerial consent)	13,278	47,028	+33,750
Area of Unrestricted Land	103,719	6,615	-97,105
Extractive Industry			
Area not available for extractive industry	40,128	103,482	+63,354
Area available subject to Ministerial consent	116,997	53,643	-63,354
Petroleum and Fossil Fuels (categories as defined in the Petroleum Act 1998)			
Wilderness Crown Land (not available; includes reference areas)	2170	3145	+957
Parks Crown Land and Restricted Crown Land	51,968	149,498	+97,530

Note: Rights under existing tenements, including applications are unaffected by VEAC's recommendations.

Table 3. Implications of the Final Recommendations for Grazing Licences

Location	Number of Licences	Total Area of Licences Affected (ha)
Licences affected by expanded national park	33	137
Licences affected by expanded Aire River Wildlife Reserve	8	59
Total Affected by Recommendations	39	196
Total of All Licences	602	2138

Note: The total numbers and areas of licences affected are less than the sums of the numbers and areas affected in the national park and wildlife reserve because parts of two licences are in both categories. Changes to this table since the Draft Proposals Paper reflect improved source data, as well as changes to VEAC's proposals.

Environmental Implications

Ecosystem Protection

Biodiversity is the variety of all life forms: genetic diversity, species diversity and ecosystem diversity, and their interactions with each other and the physical environment. There is a great deal that is not known about biodiversity (and is likely to remain so for the foreseeable future)—many lower plants and animals have not been discovered, let alone been studied, and ecological relationships and genetic diversity are generally even more poorly known. The challenge for the community is to protect biodiversity for future generations with limited knowledge about much of it.

Confronting this challenge is the basis of the comprehensive, adequate and representative (CAR) reserve system approach—the reasoning is that if *adequate*

areas of a *comprehensive* range of ecosystems are included in a *representative* system of conservation reserves (where biodiversity protection is paramount), then a large proportion of biodiversity—known and unknown—will be conserved. Consequently, establishment of a CAR reserve system is a fundamental prerequisite in the conservation of biodiversity, which is itself a core element of ecologically sustainable development. Accordingly, the establishment of such a reserve system in the Otways has been a key driver in the formulation of VEAC's recommendations.

In developing its recommendations, VEAC has used Ecological Vegetation Classes (EVCs) as surrogates for ecosystems, and the nationally-agreed JANIS criteria for a CAR reserve system. EVCs and the JANIS criteria are described in more detail in the Angahook-Otway Investigation Discussion Paper. The key elements of the

JANIS criteria are reserve system representation targets of 100 percent of the current extent of rare or endangered EVCs, 60 percent of the remaining extent of vulnerable EVCs and at least 15 percent of the pre-1750 (that is, pre-European) extent of all other EVCs.

Table 4 shows the representation of the 38 Angahook-Otway EVCs in existing and recommended permanent reserves in the study area. VEAC has also analysed the EVC representation in each of the four main bioregions in the study area—the results of these analyses are available on VEAC's website (www.veac.vic.gov.au) or by request from the VEAC office (see opposite title page).

Table 4 shows that VEAC's recommendations more than double the total area of permanent reserves from 49,340 ha to 108,542 ha. It also shows that several EVCs are poorly represented in existing permanent reserves (not meeting or barely achieving the JANIS targets summarised above). For several of these EVCs, existing informal reserves (special protection zones in state forest) complement existing permanent reserves and thereby achieve the JANIS targets. However, VEAC has been keen to see the much more secure protection afforded by permanent reserves extended to as many EVCs as practicable, especially with the phasing-out of sawlog harvesting from state forest in the Otways.

Table 4 shows that VEAC's new dedicated reserves satisfy the JANIS targets for most EVCs. Key EVCs for which permanent reserve representation is recommended to increase significantly include cool temperate rainforest, herb-rich foothill forest, herb-rich foothill forest/shrubby foothill forest complex, lowland forest, and riparian scrub/swampy riparian woodland complex. Additionally, the percent change to permanent reserve representation increases for each of these EVCs across the four bioregions within the study area. This is especially so for the Warrnambool Plain Bioregion for most EVCs, however it should be noted that only part of this bioregion is within the study area, and consequently VEAC is limited in achieving JANIS targets for all EVCs. That is, VEAC cannot recommend reserve system additions (or any other changes) outside the study area.

Those EVCs for which the recommended permanent reserves do not satisfy the JANIS targets, either have a small absolute extent on public land or occur in small or narrow patches in the forest park. In the latter instance, large additions to the national park would have been required to incorporate these small patches in the permanent reserve system, generally in places with few other documented national park values and of importance for other public land uses. These areas can be satisfactorily protected by subsequent management planning in the forest park.

The economic value of biodiversity protection is measured in terms of the dollar values that well-informed respondents to surveys would be willing to pay to gain additional biodiversity protection (see Appendix 4 for a discussion of

the assumptions involved in these estimates). Using such techniques URS has estimated that the non-use value that can be attributed to the expanded national park is approximately \$5 million per annum for the pessimistic case, \$15 million dollars for the conservative case and \$25 million for the optimistic case. Additionally, there is a perceived willingness for people to pay more for protection of mountain ash forests, rainforest and old-growth forests in preference to ecosystems in low rainfall areas. The willingness to pay was also supported by the following values contained within the recommended national park:

- a large contiguous protected area;
- CAR reserve system conservation of biodiversity across a range of habitat types and landscapes; and
- scenic landscapes and natural values that are attractive to visitors such as waterfalls, Aboriginal and historic places, rainforest and coastal areas.

In addition, willingness-to-pay respondents are likely to assume the area will be well managed and the integrity of the park values maintained. Finally, the scale of the national park was also important in this assessment of non-use dollar value with the 8-fold increase in national park area and the doubling of the area of ecosystems protected in permanent reserves likely to contribute significantly to the willingness of people to pay for this particular outcome.



Table 4. Reservation Status of Ecological Vegetation Classes (EVCs) in the Angahook-Otway Study Area (see following page for a key to the table)

Column 1

Ecological Vegetation Classes (EVCs)	2		3		4		5		6			7		8		9		10	
	Area in ha		Area in ha		Percent Remaining		Conservation Status		Existing Permanent Reserves		Area in ha		Other Public Land		VEAC Percent Change to Permanent Reserves		Recommended Permanent Reserves as Percent of Pre-1750 Extent		
	Pre-1750 Extent	Current Extent	Pre-1750 Extent	Current Extent	Percent Remaining	Conservation Status	Existing Permanent Reserves	Conservation Status	Existing Permanent Reserves	Recommended Permanent Reserves	Other Public Land	VEAC Percent Change to Permanent Reserves	Recommended Permanent Reserves as Percent of Pre-1750 Extent						
Aquatic Hermland/Plains Sedgy Wetland Mosaic	690	10	1.4	E,R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay Heathland	2	2	100.0	R	2	2	0	0	0	0	0	0	0	0	0	0	0	0	100.0
Coastal Alkaline Scrub	25	5	20.0	V,R	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4.0
Coastal Dune Scrub/Coastal Dune Grassland Mosaic	1,631	1,144	70.1		783	819	155	50.2	783	819	155	4.6	50.2	783	819	155	4.6	50.2	50.2
Coastal Headland Scrub	2,674	2,134	79.8		805	1,161	174	43.4	805	1,161	174	44.2	43.4	805	1,161	174	44.2	43.4	43.4
Coastal Headland Scrub/Coastal Tussock Grassland Mosaic	254	194	76.4	R	102	102	0	0	102	102	0	0	40.2	102	102	0	0	0	40.2
Coastal Saltmarsh/Mangrove Shrubland Mosaic	5	5	100.0	R	0	0	4	0	0	0	4	-	0.0	0	0	0	-	0.0	0.0
Coastal Tussock Grassland	305	223	73.1	R	140	150	13	49.2	140	150	13	7.1	49.2	140	150	13	7.1	49.2	49.2
Cool Temperate Rainforest	9,663	8,567	88.7		1,459	6,426	706	66.5	1,459	6,426	706	340.4	66.5	1,459	6,426	706	340.4	66.5	66.5
Damp Heath Scrub	1,541	571	37.1	R	425	462	5	30.0	425	462	5	8.7	30.0	425	462	5	8.7	30.0	30.0
Damp Sands Herb-rich Woodland	3,337	1,593	47.7		612	703	36	21.1	612	703	36	14.9	21.1	612	703	36	14.9	21.1	21.1
Estuarine Wetland	208	114	54.8	R	26	30	41	14.4	26	30	41	15.4	14.4	26	30	41	15.4	14.4	14.4
Floodplain Reedbed	112	0	0.0	E,R	0	0	0	0	0	0	0	-	0.0	0	0	0	-	0.0	0.0
Floodplain Riparian Woodland	1,853	42	2.3	E,R	0	0	1	0.0	0	0	1	-	0.0	0	0	1	-	0.0	0.0
Grassy Dry Forest	291	275	94.5	R	158	179	36	61.5	158	179	36	13.3	61.5	158	179	36	13.3	61.5	61.5
Grassy Forest	1,595	138	8.7	E,R	0	0	0	0	0	0	0	-	0.0	0	0	0	-	0.0	0.0
Grassy Woodland	35,787	623	1.7	E,R	1	15	8	0.0	1	15	8	1,400.0	0.0	1	15	8	1,400.0	0.0	0.0
Heathy Woodland	20,358	17,713	87.0		7,586	10,844	3,401	53.3	7,586	10,844	3,401	42.9	53.3	7,586	10,844	3,401	42.9	53.3	53.3
Herb-rich Foothill Forest	10,113	5,495	54.3		1,044	3,190	1,221	31.5	1,044	3,190	1,221	205.6	31.5	1,044	3,190	1,221	205.6	31.5	31.5
Herb-rich Foothill Forest/Shrubby Foothill Forest Complex	6,107	4,165	68.2		17	1,452	1,976	23.8	17	1,452	1,976	8,441.2	23.8	17	1,452	1,976	8,441.2	23.8	23.8
Lowland Forest	74,561	32,562	43.7		6,902	11,924	10,384	16.0	6,902	11,924	10,384	7.8	16.0	6,902	11,924	10,384	7.8	16.0	16.0
Plains Grassy Wetland	11	2	18.2	V,R	0	0	0	0.0	0	0	0	-	0.0	0	0	0	-	0.0	0.0
Plains Grassy Woodland	4,725	47	1.0	E,R	0	0	1	0.0	0	0	1	-	0.0	0	0	1	-	0.0	0.0
Plains Sedgy Wetland	262	27	10.3	V,R	0	0	0	0.0	0	0	0	-	0.0	0	0	0	-	0.0	0.0
Riparian Forest	5,849	3,347	57.2		798	1,392	1,179	23.8	798	1,392	1,179	74.4	23.8	798	1,392	1,179	74.4	23.8	23.8
Riparian Scrub/Swampy Riparian Woodland Complex	5,928	3,965	66.9		1,311	1,907	999	32.2	1,311	1,907	999	45.5	32.2	1,311	1,907	999	45.5	32.2	32.2
Sand Heathland	176	167	94.9	R	78	139	9	79.0	78	139	9	78.2	79.0	78	139	9	78.2	79.0	79.0
Scoria Cone Woodland	1	1	100.0	R	1	1	0	100.0	1	1	0	0	100.0	1	1	0	0	100.0	100.0
Sedgy Riparian Woodland	2,872	1,458	50.8		223	590	434	20.5	223	590	434	164.6	20.5	223	590	434	164.6	20.5	20.5
Shrubby Dry Forest	1,687	1,589	94.2		1,074	1,249	15	74.0	1,074	1,249	15	16.3	74.0	1,074	1,249	15	16.3	74.0	74.0
Shrubby Foothill Forest	36,857	29,589	80.3		10,404	16,902	5,741	45.9	10,404	16,902	5,741	62.5	45.9	10,404	16,902	5,741	62.5	45.9	45.9
Shrubby Wet Forest	37,579	32,448	86.3		5,446	16,607	9,425	44.2	5,446	16,607	9,425	204.9	44.2	5,446	16,607	9,425	204.9	44.2	44.2
Stony Rises Woodland	4,471	2,106	47.1		13	15	5	0.3	13	15	5	15.4	0.3	13	15	5	15.4	0.3	0.3
Swamp Scrub	9,367	497	5.3	E,R	5	11	105	0.1	5	11	105	120.0	0.1	5	11	105	120.0	0.1	0.1
Swampy Riparian Woodland	1,926	239	12.4	V,R	0	0	43	0.0	0	0	43	-	0.0	0	0	43	-	0.0	0.0
Wet Forest	48,911	40,944	83.7		8,571	27,991	5,093	57.2	8,571	27,991	5,093	226.6	57.2	8,571	27,991	5,093	226.6	57.2	57.2
Wet Heathland	4,074	2,016	49.5		803	1,260	404	30.9	803	1,260	404	56.9	30.9	803	1,260	404	56.9	30.9	30.9
Wet Sands Thicket	1,299	1,270	97.8		451	912	267	70.2	451	912	267	102.2	70.2	451	912	267	102.2	70.2	70.2
Total:	337,107	195,287	57.9		49,241	106,436	41,882	31.6	49,241	106,436	41,882	116.2	31.6	49,241	106,436	41,882	116.2	31.6	31.6

Key to Table 4

Data in Table 4 were derived by GIS computer analysis, comparing:

- the pre-1750 extent of EVCs—that is, the distribution of EVCs as it is thought to have been immediately prior to European settlement;
- the current extent of tree cover—that is, areas where indigenous tree cover is present, based on satellite imagery; and
- the current and recommended public land use categories.

Many small public land units are not picked up in the public land GIS layer. For example, none of these figures include roads and roadsides, for which no estimate of extent exists. In addition to Table 4 for the study area as a whole, presented here, VEAC has prepared tables for each of the main bioregions in the study area. These tables are available by request from VEAC.

Several figures in Table 4—including totals—differ slightly from the corresponding figures presented in the corresponding table in the Angahook-Otway Discussion Paper. These differences reflect GIS variations and subsequent corrections to the status of many parcels of land and other data. Also, many of the column totals are greater than the sum of the areas in their column—the differences are accounted for by relatively small areas for which no EVC is mapped, such as cleared areas and water bodies.

Column 1: Ecological Vegetation Classes

The names of the 38 Angahook-Otway EVCs mapped within the study area.

Column 2: Pre-1750 Extent

The total area in hectares thought to have been occupied by each EVC prior to European settlement.

Column 3: Current Extent (public and private land)

The total area in hectares currently occupied by each EVC—that is, that part of the pre-1750 distribution where indigenous vegetation cover is currently present.

Column 4: Percent Remaining

The current extent (column 3) as a percentage of the pre-1750 extent (column 2), for each EVC.

Column 5: Conservation Status (JANIS)

The status of each EVC in terms of the categories developed by JANIS. The assessments refer to the study area as a whole and take no account of EVC distributions outside the study area or in bioregions within the study area (the latter are presented in the bioregional tables available on the VEAC website). The percent remaining (column 4) is a key factor in assigning EVCs to JANIS categories: E = endangered, V = vulnerable, R = rare.

Column 6: Existing Permanent Reserves

The total area in hectares of each EVC in existing public land categories which comprise the existing permanent conservation reserve system. The existing conservation reserve system also includes informal reserves not included in these data.

Column 7: Recommended Permanent Reserves

The total area in hectares of each EVC in existing public land categories which comprise the conservation reserve system recommended by VEAC in this Final Report.

Column 8: Other Public Land

The total area in hectares of each EVC in all public land categories outside the permanent reserves recommended by VEAC in this Report.

Column 9: VEAC Percent Change to Permanent Reserves

The percentage increase in representation in recommended permanent reserves (column 7) compared to existing permanent reserves (column 6), for each EVC.

Column 10: Recommended Permanent Reserves as Percent of Pre-1750 Extent

The area of recommended permanent reserves (column 6), as a percentage of the pre-1750 extent (column 2), for each EVC.

Threatened Species and Geological Sites

While a CAR reserve system is implemented with a view to optimising protection of biodiversity, including those elements about which little is known, there are often key values that are reasonably well known and which are desirable to protect in permanent reserves. It is important that specific provisions are made to protect these values rather than relying on ecosystem representation. Threatened species are common examples of such values—they are often reasonably well researched because of their conservation status, and many threatened species require a high level of protection and even active management for their conservation. Inclusion of such threatened species in permanent reserves is a high priority.

Sites of geological and geomorphological significance in the Otways are also reasonably well documented, particularly those of international, national, and state significance.

Tables 5 and 6 show the representation of a range of threatened species and significant geological sites in existing and recommended permanent reserves in the Otways.

Cultural Heritage Sites

Sites of European cultural heritage are documented in the Victorian Heritage Register (VHR) and in the Land Conservation Council's (LCC's) South-western Victoria Historic Places Special Investigation. These sites are listed in Table 7.

All sites within the study area recorded on the VHR are within the recommended national park. Lorne Pier has recently been nominated for listing on the VHR and is not included in this summary.

Over half of the sites included in the LCC study will also be afforded additional protection within the Otway Ranges National Park. The remaining sites are largely buildings utilised for education or transport purposes located within townships.

Table 5. Representation of Selected Threatened Species in Existing and Recommended Permanent Reserves

Threatened Species

Common Name (see Appendix 2 for scientific names)	Victorian Conservation Status (see Appendix 2 for key to symbols)	Total Number of Records in Study Area	Number of Records in Permanent Reserves (and percent of total)	Number of Records in Recommended Permanent Reserve Additions	Number of Records in Permanent Reserves (and percent of total)	Number of Records in Other Public Land	Number of Records in Freehold Land
Animals							
Australian Grayling	v, L	26	2 (8)	7	9 (35)	15	2
Common Bent-wing Bat	L	9	5 (56)	3	8 (89)	0	1
Ground Parrot	e, L	9	3 (33)	5	8 (89)	0	1
Masked Owl	e, L	16	8 (50)	7	15 (94)	1	0
Spot-tailed Quoll	e, 15	46	7 (15)	20	27 (59)	9	10
White-footed Dunnart	v, R	30	9 (30)	3	12 (40)	10	8
Plants							
Beech Finger fern	v, L	14	1 (7)	9	10 (71)	4	0
Brooker's Gum	r	34	7 (21)	18	25 (73)	4	5
Dwarf Boronia	r	2	1 (50)	1	2 (100)	0	0
Forest Bitter-cress	v	1	0 (0)	1	1 (100)	0	0
Slender Fork-fern	v	9	2 (22)	6	8 (88)	1	0
Starry Daisy Bush	k	7	2 (28)	3	5 (71)	1	1
Tall Astelia	v, 7	8	0 (0)	8	8 (100)	0	0

Table 6. Representation of Sites of Geological and Geomorphological Significance in Existing and Recommended Permanent Reserves

Significance (see below for list of individual sites)	Total Number of Sites	Number of Sites in Current Permanent Reserves (and percent of total)	Number of Sites in Recommended Permanent Reserve Additions	Number of Sites in Recommended Permanent Reserves (and percent of total)	Number of Sites in Other Public Land	Number of Sites in Freehold Land
International	2	1 (50)	1	2 (100)	0	0
National	6	5 (83)	1	6 (100)	0	0
State	9	4 (44)	4	8 (89)	1	0

Feature Name	Significance
Dinosaur Cove	international
Torquay to Aireys Inlet coastline	international
Lake Elizabeth and landslide	national
Lion Headland to Slippery Point	national
Pebble Point	national
Point Lewis dinosaur locality	national
Port Campbell National Park	national
Sentinel Rocks fossil locality	national
Binns Road quarry	state
Cape Otway	state
Cape Volney fossil locality	state
Devils Kitchen fossil locality	state
Racecourse Steps, Moonlight Head	state
Ramsdens Cave, Cape Patton	state
Kaanglang Road quarry	state
Love Creek pillow basalt	state
Point Franklin	state

Table 7. Representation of Sites of European Cultural Heritage Significance in Existing and Recommended Permanent Reserves

Significance (see below for list of individual sites)	Total Number of Sites	Number of Sites in Current Permanent Reserves (and percent of total)	Number of Sites in Recommended Permanent Reserve Additions	Number of Sites in Recommended Permanent Reserves (and percent of total)	Number of Sites in Other Public Land
Victorian Heritage Register	3	0 (0)	3	3 (100)	0
LCC Historic Places	11	1 (9)	5	6 (55)	5

Feature Name-Victorian Heritage Register
Cape Otway Lighthouse (H1222)
Knott's No. 3 Sawmill (H1818)
Henrys No. 1 Sawmill (H1815) tramway and tunnel (H1817)
Feature Name-LCC Historic Places South-western Victoria SI
Great Ocean Road and associated features (A70)
Marchbank sawmill, tramway and double incline, Weeaprounah (A8)
Knott's No. 3 Sawmill, Wyelangta (A9)
Dinosaur Cove fossil discovery site, Otway National Park (A69)
Lighthouse complex, Cape Otway (A186)
Telegraph station, Cape Otway (A187)
Henry and Sanderson sawmill and features, Barramunga (A10)
Primary School No. 2162, Lorne (A140)
School Principal's residence, Lorne (A141)
Erskine House, Lorne (A142)
Railway Station, Pirron Yallock (A137)

APPENDICES

APPENDIX 1 RESPONSE TO THE MAIN PROPOSALS MADE IN SUBMISSIONS

This appendix provides VEAC's response to the main proposals made to the Council during the Angahook-Otway Investigation.

More than 1800 submissions were received during the course of the Investigation indicating a strong interest by both the local community and others. Many people attended community forums and meetings and VEAC received numerous phone calls and emails from interested individuals. The response to the Draft Proposals Paper alone was significant with over 1000 different proposals made, many of them repeatedly. With so many submissions and proposals, it is inevitable that a very broad range of views and information was presented. As well as an overall summary of issues, a summary of each of the major proposals raised throughout the investigation is provided below with VEAC's response following each summary.

Overall Summary of Issues Raised

Various proposals responded to issues such as the importance of the Otways for water supply to local towns and cities, tourism, threatened species, logging impacts, fire management, recreational uses, pest plants and animals, Aboriginal community interests, hunting and the Great Ocean Road.

A wide range of suggested changes to VEAC's proposed boundaries were also received, some more specific than others. Many submissions proposed significantly expanding the existing parks (and other conservation reserves) while many others were focussed primarily on recreational access, either for a particular activity (especially horseriding, dog walking and four wheel driving) or for several activities. Nearly all of these pro-recreation submissions proposed existing access be maintained, with most specifying minimal or no change to the existing public land-uses or exclusion of specific areas from the proposed national park.

VEAC's proposal for an Otway Forest Park received a mixed reaction. In response to the Draft Proposals Paper some proposed that the area of forest park be increased to accommodate and disperse high-impact recreation over a larger area.

Others opposed changes and park expansion more generally—that is, not from any particular perspective other than being broadly comfortable with areas outside the existing park and reserve system and/or unhappy with areas within that system. A relatively small number of submissions (in the overall context) presented a diversity of views from a broad range of other interest groups and individuals—such as particular industries, government agencies, community groups and adjacent landholders.

Supporters of expanded parks and reserves often mentioned particular values, notably cool temperate rainforest, old-growth and senescent forests, veteran trees, water (supply) catchments and natural landscapes, for inclusion in an expanded national park. The rationale for national park expansion was usually the protection of these values and areas, typically from logging or other uses. Among the areas more commonly mentioned in the response to the Draft Proposals Paper were the drier forest on the northern slopes of the ranges, West Barwon reservoir catchment, Ford River catchment, the headwaters of the Aire River, Warrnambool's water supply catchment, Callahans Creek area, Barongarook forest, Link Track–Arkins Creek area and Charleys Creek area. The desirability of having a contiguous park, with blocks linked by wildlife corridors, was a common theme, and the area between Lavers Hill and the existing Carlisle State Park was identified as a key site in this context.

Some also wanted additional national park areas to preclude activities such as trail bike riding and, notably, timber harvesting before 2008. There was much greater concern shown for the protection of the Geelong water supply catchments than those for Colac or Warrnambool.

In addition to making comments about the national park boundaries, several submissions suggested that regional parks be created in the vicinity of townships in the study area to accommodate dog walking, horseriding and fire wood collection. A few suggested the retention of, or creation of, additional nature conservation reserves or bushland reserves.

The inclusion of areas considered to be of low conservation value in the proposed national park was queried in some submissions, as was the exclusion of some areas considered to have high conservation value (such as the West Barwon catchment). Some supporters as well as opponents of a large national park perceive that the principle of a contiguous, consolidated national park was not met in the Draft Proposals Paper.

The other main view about boundaries was that some of the national park boundaries were too complex, making the park difficult to manage (especially where narrow or linear) and making it difficult for users, especially four wheel drivers with dogs or firearms, to travel across the Otways. It was commented that the forest park was also very fragmented (or the boundary convoluted).

Many submissions requested that public land water frontages be excluded from the Otway Forest Park, for management reasons and to protect existing licence arrangements.

Recreational users generally wanted to continue to practise their activities much as they do now, with some wanting increased access or special areas for some activities. Very often the maintenance of vehicular access tracks or roads was identified as a key factor and a number proposed an increased involvement of the community in public land management planning through an advisory committee or other similar structure. Parks and reserves—and national parks in particular—were seen as likely to result in further restrictions and therefore expansion of parks and reserves were usually opposed in pro-recreation submissions. Some gave examples of restrictions that had been applied in particular existing parks or reserves.

Many trail bike riders and four wheel drivers were opposed to the recommendations or wanted a greater area of Otway Forest Park or state forest to be retained. Additionally, they wanted to be identified in tourist numbers because they bring economic value to the local community.

Some horseriders similarly saw the increased area of national park as excluding their activity especially near towns, notably Aireys Inlet. Nearly two thirds of all submissions that mentioned horseriding also gave an opinion on parks. Those that mentioned the forest park were supportive, while national parks were opposed because they were seen as restricting access. Areas seen as important for horseriding included Aireys Inlet, Barongarook forest, Jancourt forest, and the Barwon Downs area.

Dog walking, both with and without horseriding, was seen as a very important recreation activity that was likely to be excluded from national parks. Access to existing areas around townships was important but also in areas traditionally used including existing parks and reserves.

In contrast, bushwalkers generally saw national park status as favourable for their activity, and focussed on the implementation of the Trans-Otway walk and multi-day walks as key proposals.

Those more generally opposed to park and reserve expansions were also often concerned that new parks and reserves would result in track closures and, therefore, reduced access to public land users. A long list of potentially-affected recreational and commercial activities were flagged but there was also just the more general perception—that simply going for a walk or drive in the bush would be adversely affected and that people would be completely excluded from the park. Related to track closures was the issue of fire protection and control, which was paramount for many national park opponents.

Specific Issues Raised

Aboriginal Interests

A number of submissions proposed a greater involvement and employment of Indigenous people in public land management and that the Aboriginal community should have access to the national and forest park for legitimate cultural pursuits. Proposals were made for the development of an interpretation centre focussing on the Otways from the Indigenous community's perspective.

In addition, VEAC commissioned a consultant to formally seek a response to the Draft Proposals Paper from the Indigenous community. The consultant's report is presented as Appendix 3. This consultation indicated that the Indigenous community favoured more specific recommendations, such as for Indigenous employment in the management of public land.

Response

VEAC has recommended that Aboriginal cultural customs, traditions and contemporary practices, and continued spiritual association with the study area be recognised. In particular, it is recommended that the Government support the aspirations of Indigenous people for their inclusion in the day-to-day public land resource-use, decision-making processes and park management.

Conservation

Individuals and conservation groups often requested that particular areas be added to the national park. These areas were seen to have important values that warranted their inclusion, such as, habitat for threatened species, old-growth or senescent forest, landscape values and linkages to provide wildlife corridors. Many argued that water catchments should be included in the national park for the protection of their natural values, as well as ensuring the quality and quantity of domestic water supplies. The immediate cessation or more rapid phase-out of logging in the study area prior to 2008 was often proposed. Some conservationists believed that all the forest park should be included in national park or, if this was not possible because of other requirements, then the forest park should be designated regional park and included in the parks and reserves system.

Alternatively other submitters proposed that it was not necessary to expand the area of national park to protect threatened species or to protect water catchments. Some argued that threatened species required forest disturbance by logging and opposed the expansion of the national park.

Response

VEAC designed the Otway Ranges National Park to protect representative areas of natural ecosystems including a range of natural values or outstanding features of the Otways. The national park area contains most threatened species records (see Table 5, Chapter 13) and will form a protected core area within the wider land-use framework of the Otways. Biodiversity conservation is a key objective of the national park.

Since the Draft Proposals Paper, VEAC has recommended additional habitat links at particular locations, for example the Link Track–Arkins Creek and Triplet Falls areas. These links will provide for large contiguous areas of habitat protection in the national park. Wide-ranging species such as the spot-tailed quoll and powerful owl are dependent upon this contiguous habitat. VEAC has recommended that the Otway Ranges National Park be managed to give particular emphasis to programs that will conserve and enhance threatened species such as spot-tailed quolls and ensure the quality and yield of domestic water supply catchments. Additional water catchments—notably the West Barwon—were added to the national park subsequent to the Draft Proposals Paper primarily on their natural, recreational, historic and other values, as well as to protect water supply.

Importantly, the Otway Forest Park will provide complementary protection for natural values outside the national park while also providing recreation and minor resource utilisation.

Water Catchments

Many proposed that water supply catchments be included in the national park. The reasons for including water catchments were: to protect the quality and quantity of domestic water supplies to surrounding towns and the cities of Geelong and Warrnambool, and to protect other values, including habitat for threatened species, old-growth forests and natural landscapes. Cessation of logging in catchments was seen as desirable because of its perceived impact on water quality and quantity, and on undisturbed forest. Several people believed that the remaining timber licences should be compulsorily acquired by the government to protect water catchments.

Response

Research findings relevant to the effect of timber harvesting small parts of a catchment, do not support claims of significant impacts of logging on catchment yield and water quality, and this issue has a decreasing relevance with the phase-out of timber harvesting in the Otways in 2008. Fire is by far the greatest threat to water quality in the Otways. Many fires are started as a result of human activity. Cooperative management is recommended between the national park manager and water authorities, to determine access provisions for water supply catchments within the national park.

VEAC is recommending that the water supply catchments above the Arkins Creek weir, and the West Gellibrand, Olangolah, Allen and Painkalac Reservoirs be included in the national park and managed as closed catchments. VEAC has also recommended that these, and the West Barwon catchment, be managed cooperatively between the national park manager and the relevant water authority. These areas are especially important for particular water supply systems. The actual water storage and reservoir infrastructure has been excluded from the park as water production areas to be managed by the water authority.

Much of the forest park area is within either the Geelong or Warrnambool declared water supply catchment. These areas generally form small and/or fragmented parts of catchments,

often with much of the rest of the catchment on freehold land. VEAC has recommended that the forest park manager protect water supply and quality as part of the management objectives of this new land-use category.

Water Frontages

In response to concerns about apparent confusion of the different land-use categories and management bodies, VEAC proposed to include most public water frontages in the Otway Forest Park. Many submissions were received on this proposal. Several licence holders proposed that grazing be allowed to continue or for the exclusion of water frontages from the forest park. Reasons given for the continuation of water frontage licences included to maintain workable farming arrangements, to avoid conflict with the park manager, prevent flooding and pest animals and plants increases, and to mitigate the cost of fencing.

Some submissions identified a management difficulty with long linear strips of public land being maintained by a park management authority.

Response

Water frontages have a diverse range of environmental values depending on the amount of native vegetation remaining, and they also have an economic value to adjoining licensed primary producers. VEAC is recommending that all water frontages, except where they abut or form an integral part of the forest park or national park, be excluded from these parks and retained as water frontage reserves. Those water frontages that were proposed for inclusion in the national park have remained as such. Water frontages range from those with remnant native vegetation to those highly modified with introduced vegetation. Different sectors of water frontage require different management regimes and current management arrangements provide the most workable approach. That is, VEAC strongly supports the work being undertaken by Corangamite Catchment Management Authority and DSE to restore biodiversity to these important areas.

Tourism

Most submissions from the tourism industry and many from visitors to the Otways shared the belief with conservationists that the expanded national park would significantly enhance tourism in the region, and would also encourage coastal visitors to explore the natural attractions found in the hinterland of the park. However, many of the conservationists opposed accommodation or commercial visitor infrastructure such as cafes within the national park, while others opposed commercial developments on any public land. Some visitors and locals supported the development of a visitor centre for the Otways with several proposing the development of a centre at Apollo Bay to introduce the Otways from an Aboriginal perspective.

Several tourism related submissions supported visitor infrastructure (including accommodation and other constructed facilities) near to and, in some cases, in the national park in order to provide the highest quality

experience for tourists as well as funding park management from the proceeds of leases over the infrastructure or land. Some of these people were of the view that community opposition to commercial infrastructure development in national parks was so strong that it would be unlikely to eventuate even if VEAC recommended it. Some suggested that VEAC identify suitable development sites or 'nodes' adjacent to the recommended national park but excluded from it to facilitate subsequent development. In some cases, specific sites were proposed such as the former freehold land north of Little Aire waterfalls.

Some timber industry supporters maintained that tourism would not be enhanced by an expanded national park and it would not replace either revenue generated by the timber industry or support for local infrastructure such as roads.

Response

VEAC does not believe that new accommodation development should occur within the national park—as opposed to the maintenance of existing facilities such as in the Cape Otway lightstation precinct and the promotion of such development on freehold land. One area of public land identified as a potential tourism node—part of former freehold land north of Little Aire waterfalls—has few natural values and has been excluded from the adjoining national park. A recent increase in visitors to the Otways hinterland, promoted largely by the Otway Fly treetop walk, indicates that there is substantial potential for tourism development away from the currently popular coastal areas. Additionally, there is potential for the enhanced promotion of visitation outside the peak holiday periods when the coastal towns are placed under increasing pressure from large numbers of visitors. VEAC believes that the expanded national park with provision for improved visitor facilities and nearby accommodation will facilitate tourism to the Otways and in particular the hinterland.

Firewood

Domestic firewood users called for continued access for firewood collection particularly around towns such as Barwon Downs and in the proposed Jancourt Nature Conservation Reserve. They generally proposed that the key areas remain in their current public land-use category. The issue of continued access to firewood for dispersed camping in the study area was also raised. Many submissions opposed the collection of firewood from national or forest park, with some proposing that firewood should be sourced from private land plantations and not come from public land native forests at all.

Response

Council recognises that firewood harvesting and collection are important to rural communities both socially and economically, but that it must be undertaken in a sustainable and accountable manner. The level of firewood production appears to be sustainable and this level may be maintained in the forest park to meet existing and foreseeable future local requirements. The forest park manager will need to work closely with licensed operators to ensure that the

level and manner of minor forest produce harvesting including firewood, is both sustainable and conducted with minimal impact on other users and values. Sustainability will need to be demonstrated through a continuous review process and therefore both the level and location of all harvesting must be accurately recorded.

Four Wheel Driving

Four wheel drivers generally proposed that access should not be reduced in an extended national park and forest park. Many sought the boundaries of the national park to be restricted to the coastal fall of the Otways to ensure that controls on their use of tracks would be constrained to a smaller area. There were concerns about park management closing tracks that were formerly open to four wheel drives. Some clubs and individuals pointed out the contribution that they made to land management through the removal of rubbish such as car bodies and fallen trees across tracks. On the other hand some conservationists called for restrictions or a general ban on four wheel driving in parks, or in particular sensitive areas, or in specific water catchments to reduce potential damage the environment.

Response

VEAC considers that four wheel driving is appropriate in a large national park such as the Otway Ranges National Park and has specifically recommended that provision be made for this use. Nonetheless, it is considered essential that public land managers have the flexibility to open and close tracks as required, for example, in response to safety factors such as bushfires and wet weather. In regard to the perceived unnecessary closure of tracks, VEAC is now recommending the formation of one or more advisory committees to ensure that the community and public land users have input into management decision-making processes.

Trail Bike Riding

For similar reasons to four wheel drivers, trail bike riders generally did not support any expansion of the existing national park and proposed that access for trail bikes should not be reduced in national park or forest park compared to existing access in state forest. A view expressed at community forums was that if a track was visible it should be available for trail bike riding, particularly for recreation registered trail bikes as these tracks were 'challenging'. One proposal called for VEAC to make a recommendation that a network of suitable 'single lane' tracks for trail bike riding be established. One request asked for a large area to be set aside for 'free access' trail bike riding. Trail bike riders also wanted to be acknowledged as tourists and as bringing economic benefits to the Otways community.

Some people called for a ban on trail bike riding because of concerns about environmental damage, noise and safety of other park users. Many sought enhanced enforcement.

Response

VEAC has provided for trail bike riding in national and forest parks on formed vehicle tracks and roads. VEAC has recommended the use of advisory committees to give recreation users an ongoing opportunity to be involved in management decision-making processes outside the existing management planning process. Proposals such for off-track riding and 'free access' or other exclusive-use areas have significant potential to generate environmental damage and to effectively turn park areas that would otherwise be available for multiple uses into single-use areas. Such proposals are not supported in these recommendations.

Horseriding

Horseriders largely viewed the increased area of national park as an exclusion for their activity, especially the upgrading of the Angahook-Lorne State Park to national park. Individual horseriders or horse drivers and clubs called for access to continue around some towns such as Aireys Inlet, Barwon Downs, Anglesea and other specific locations such as Barongarook forest and Jancourt forest. The Otway Forest Park was generally supported while national parks were opposed because they were seen as restricting access. Having a dog accompany riders was seen as important by some and there was concern that this would also be excluded from national parks.

Response

Generally horseriding is permitted in larger national parks on vehicular tracks (subject to seasonal closures) including specified management vehicle only tracks and, in some instances, on beaches (generally only in intertidal areas at low tide). VEAC has recommended that horseriding be permitted in the Otway Ranges National Park on designated beaches and formed vehicular tracks and roads and associated firebreaks. Horse-based camping is generally not permitted. The forest park area will largely cater for this form of recreation and provides for camping with dogs.

The provision of horseriding and other recreation activities near townships has been reflected in changes to national park and forest park boundaries at Barwon Downs and the northern portion of Barongarook forest. Other areas that contain nature conservation values that require protection in the permanent reserve system have been retained in the national park and nature conservation reserves. VEAC has recommended that provision be made for continued horseriding in the traditionally used western portion of Jancourt Nature Conservation Reserve comprising the current Jancourt state forest, on designated tracks and roads.

Dog Walking

Dog owners requested expanded areas for dog walking particularly around towns. Specific areas of concern raised were at Johanna Beach, Barongarook, Barwon Downs, Aireys Inlet, and Anglesea. They argued that such areas are currently used for such activities and that dog walking was important to them. Some submissions proposed that

continued dog walking could be achieved by either expanding the area of forest park or designating these areas as regional park. Some did not believe that dog walking should be allowed in parks because dogs were a threat to native wildlife, or because dogs can conflict with other uses such as families with small children. Several people were against dog walking in sensitive areas but agreed to dog walking on leads in areas near towns and on beaches. Access to traditionally used areas at Johanna Beach camping area was also an issue for some people including local tourist accommodation operators. The designation of dog areas, including the previously proposed Old Coach Road block at Aireys Inlet was not supported.

Response

The primary conservation objective of national parks, that being for the conservation of native flora, fauna and natural features, is generally not compatible with the presence of domestic dogs. VEAC recommends that domestic dogs generally not be permitted in the Otway Ranges National Park, but may be accommodated on a limited number of tracks or beaches in close proximity to urban areas.

These tracks will be defined through management planning processes but VEAC anticipates that popular areas such as Johanna Beach, Urquharts Bluff Beach, Sunnymead Beach (at Aireys Inlet) and 'tracks in the vicinity of Moggs Creek and Fairhaven' will be included. Other areas for dog walking may be established at the land manager's discretion as part of the implementation and management plan process, in which advisory committees will play an important role.

VEAC has not recommended any specific restrictions for dog walking in the forest park.

Integrated Management

Few submissions following publication of the Draft Proposals Paper explicitly mentioned the proposed Otways Park. The concept of an overlying Otway Park forming an integrated management framework was developed during the consultation period following the Discussion Paper. In particular it was a response to the concerns many people raised about public land management issues and a perceived lack of consistency between land managers. Suggestions for improved coordination and mechanisms for integrated management were subsequently included as key elements of the Otways Park proposal.

Response

Submissions received indicated that the Otways Park concept was not well understood and many people viewed it as an over-arching national park rather than integrated management framework. VEAC has removed reference to the Otways Park concept but retained recommendations supporting integrated management across the public land of the Otways. In particular, VEAC has recommended that most public land be allocated to just two categories. By approaching land management issues in a regionally coordinated manner, Council believes that more cost-effective and improved land management can be achieved, regardless of land-use category.

Great Ocean Road

Many submissions proposed including the Great Ocean Road in the national park, particularly following publication of the Discussion Paper. Others noted that the road was not used exclusively for park visitors and that the local community has needs for the Great Ocean Road as a commuter and transport route. Some people were concerned that the road would be subject to tolls if included in a national park.

The protection of visual amenity and natural values along major touring routes, including the Great Ocean Road, were major issues for many groups, particularly conservation and tourist organisations. In many instances biodiversity protection was the primary rationale for proposals to include the Great Ocean Road in the national park.

Response

VEAC has recommended that the Great Ocean Road and the major hinterland roads not be included in the national park. However, the scenic vistas and environs adjoining the road formation are special values that require protection and significantly influence the function of these roads as tourist routes. Council has recommended that these roads be contained within a dedicated road reserve and that the adjoining roadsides be managed under agreements established between the road authority and the national park manager. Any road re-alignments or major works outside the road reserve would require revision of the park boundary and should be subject to environmental assessments including factors such as the maintenance of the essential road character and touring experience.

Public Land Management

Resourcing for public land management, including national park management was an important issue raised in many submissions. Many proposed a review of public land in general and a greater involvement for park users in determining management practices.

Other criticisms of public land managers were focussed on pest plant or animal control, fire protection and prevention, and unjustified track closures or poor infrastructure maintenance particularly at camping areas. A number of people called for the maintenance of an adequate network of access tracks and trails for fire protection on public land. Some people argued that national parks were more fire-prone than state forests and that where the national park abuts private property, adequate firebreaks should be maintained. Others argued that it would be difficult to find skilled fire-fighting personnel and equipment with the phase-out of the timber industry from the Otways.

Response

Most public land in Victoria is managed, directly or indirectly (through delegation), by DSE. While land status changes do not necessarily imply a greater level of management, community expectations may differ between land-use categories. Additional resources may be required

to respond to these expectations, particularly in national parks and high-use areas.

VEAC has recommended that the Government allocate adequate resources for the implementation of its approved final recommendations. In addition, implementation involves establishment costs, such as fencing, signs and management planning, as well as an on-going commitment to ensure that the management objectives of each particular land category are met.

Additionally, Council has responded to the community's desire to be involved in public land decision-making processes by recommending the establishment of advisory committees to provide a voice for the community at not only the implementation stage but also during preparation of management plans, and in an on-going capacity.

Fire protection on all public land in Victoria is the responsibility of DSE. All public land regardless of tenure is managed according to regional fire protection plans that are developed in consultation with the community. VEAC supports this approach and recommends that mechanisms for coordination across the Otways public land be enhanced with advisory committees having input into public land management processes.

Expanded National Park

Some submissions asserted that the new national park was not based on a set of specific national park criteria or scientific values. Creating the park to protect specific values such as the slender tree-fern and endemic Otway black snail were seen as reducing the integrity of the proposals as these species were viewed as prolific or common in the Otways.

More general opposition to the expanded national park was based largely on recreation access issues, or a particular interpretation of the Terms of Reference. This approach favoured a new national park consisting of the Angahook-Lorne State Park and a link with the existing Otway National Park without considering national park values in other areas of the Otways. The drier forests inland of the Otways ridge were seen as areas to be excluded from the expanded national park because this area had no perceived special or national park values.

Response

VEAC has established the Otway Ranges National Park and new conservation reserves based on the comprehensive, adequate, representative reserve system principles to maximise protection for all significant natural values within the Otway Ranges and more widely within the study area.

The Otway Ranges National Park provides a large permanently protected area for biodiversity conservation and comprises the existing national and state parks plus a number of other areas. The natural values contained in the new national park are representative of the ecosystems and biodiversity of the Otways and contain highly significant sites and important plants and animals as identified by DSE and

others. The areas included in the national park were selected on the basis of rare and threatened plants and animals, representative vegetation types, significant geological and geomorphological sites, important cultural sites and outstanding landscape values. The new national park contains the largest undisturbed forest areas in the Otways and all identified cool temperate rainforest sites of national or state significance. Large areas of contiguous habitat are important for some threatened animal species such as the masked owl, grey goshawk and spot-tailed quoll. The Otway Ranges National Park will permanently protect areas and habitats where these species are known to occur.

Although a number of submissions questioned the rationale for such a large increase in national park area, there are no large areas in the national park without national park values, and most areas have many highly significant park values.

Taking a broader perspective, the existing national park is small and—even with the larger areas of state parks—does not include many major geographic areas and some of the most significant features in the Otways, such as the Devondale heathlands, the Aire Valley, Lake Elizabeth and Triplet Falls. In addition, the existing state and national parks are widely separated and other reserves are small, scattered and often without consolidated boundaries. To some extent they reflect the fact that there has been no systematic and strategic assessment of public land across the Otways since the LCC Corangamite Study in 1978.

Since that time a great deal of new information has become available, and community attitudes have progressed greatly. These changes are encompassed in many of the park's key features: large, contiguous areas providing permanent links across the range of habitats and between core areas; high level protection for values such as rainforest and old-growth forest that take centuries to replace; permanent adequate reserve system protection for the full range of ecosystems; enhanced protection for precious water resources; secure natural environments to support the burgeoning nature-based tourism sector; and increased protection of many more threatened species.

Proposed New Land-Use Categories

While some submissions supported the new over-arching Otways Park outlined in VEAC's Draft Proposals Paper, many people did not support the concept and some appeared to confuse it with national park. Wording such as 'over-arching national park' in submissions was indicative of this. Some submitters saw the Otways Park as an unnecessary layer of complexity.

The apparent confusion of the Otways Park concept with the Otway Ranges National Park and Otway Forest Park, led many people to believe that under VEAC's recommendations there would be one land manager for the majority of public land in the Otways. This was apparent in objections or support for a single land manager for the majority of public land in the Otways.

The new land-use category forest park was supported in some submissions but often a new name was proposed such as 'conservation park', regional park or retaining state forest. Some conservation groups were concerned that the new category would affect existing access or national parks by changing the meaning of 'parks'.

Many people called for the establishment of regional parks near townships to allow multi-use areas where firewood could be collected, with dog walking and horseriding to continue.

The name forest park had an established link to the harvesting of timber in some people's minds. Some people were adverse to establishing another land-use category and believed that VEAC should use an existing category that has similar uses such as regional park.

Response

The Otways Park land-use category has not endured however the emphasis on integrated management across public land of the Otways has been retained. Council believes that by including most public land in two categories, approaching land management issues in a regionally coordinated manner, and promoting use of community-based advisory committees, improved and more cost-effective land management can be achieved.

The new forest park category has been recommended by Council to provide for the protection and conservation of extensive areas of forest, recreation, and minor resource utilisation where timber harvesting will be prohibited after 2008. A wide range of recreational activities which rely on extensive areas of land may be enjoyed in the forest park together with a limited range of utilisation (in a manner consistent with recreation and conservation). Existing land-use categories do not meet these management objectives. Regional parks do not always allow for resource utilisation such as firewood collection, and state forests are focussed on sustainable hardwood timber harvesting with recreation permitted rather than actively encouraged. VEAC has now also recommended that the forest park be proclaimed under the *Forest Act 1958* rather than the *National Parks Act 1975* to emphasise that the forest park is intended to be a distinct land-use category.

Boundary Changes

Many submissions to the Draft Proposals Paper suggested changes to proposed park and reserve boundaries. The key changes in land status since the Draft Proposals Paper are presented as a list at beginning of this Report.

Some of the key changes in land-use category proposed in submissions include areas to be excluded from the national park such the dry forests north of the divide, Callahans Creek catchment and areas around Aireys Inlet. These areas were largely identified by recreational users who felt that their activity would be excluded from the national park.

Areas commonly proposed for inclusion in the national park were water supply catchments, all old-growth or senescent forests, west Barwon catchment, Ford River catchment, and Arkins water catchment. These areas were identified as important sites for biodiversity protection and/or water supply protection.

Some people called for the Jancourt state forest to be retained for continued firewood collection and horseriding. Others recommended Jancourt forest be changed to a state park because of its natural values and distance from the Otway Ranges National Park core area.

Response

VEAC has added areas with significant values to the national park, but typically these values complement existing values in the park. Values such as water catchments are not in themselves of national significance, and these values will be protected adequately in other land-use categories such as forest park. Conversely, extensive areas such as the drier forests north of the divide do contain important biodiversity values that warrant protection in the permanent reserve system.

Council has determined that the Jancourt forest area has natural values worthy of protection in a dedicated permanent reserve, being one of the largest remaining areas of the former Heytesbury forest. The area has been recommended to be a nature conservation reserve with horseriding permitted and firewood collection to be phased-out.

VEAC Process Issues

Throughout the investigation submissions commented on the amended Terms of Reference and the need for community consultation prior to the commencement of the amended investigation. Others requested additional time be given, up to six months, for submission periods.

Some submissions proposed that the Community Reference Group established for the investigation reflect the broadest range of interest groups utilising public land in the study area. In particular, that local interest groups be well represented on the Group. Some suggested that the Group should include all landholders that adjoin public land.

A few submissions proposed that the impact of the Government's decision to phase out timber harvesting in the Otways in 2008 should be considered in VEAC's social and economic assessment of benefits or costs to the region. Those in favour of continued timber harvesting emphasised the importance of the industry to local communities. Specific proposals included the retention of state forest areas for timber harvesting, and Government assistance for industry transition to plantations.

Some proposed that public land outside the study area such as Bells Beach, Alcoa lease area or wetlands west of Princetown be included in the study or specifically in the new national park.

Response

The VEAC investigation process starts with the State Government providing Terms of Reference to VEAC, then VEAC developing recommendations in response to those Terms of Reference (and in accordance with the *VEAC Act*). Finally the Government can either accept or modify and implement, or reject those recommendations. In each of these stages, while they may keep each other informed of progress, the Government and the Council operate independently of each other. VEAC can only respond to Terms of Reference developed by Government. The submission periods are set under the *VEAC Act* as a minimum of 60 days which has been exceeded on each occasion in this Investigation. However, production of recommendations and consideration of submissions constrains the length of the submission period if the investigation period established by the Minister is to be met.

The phasing out of logging and woodchipping in the Otways, and the details of that phase-out are outside the scope of the Angahook-Otway Investigation. Nonetheless, this issue attracted much comment, with many submissions proposing either an end to timber harvesting on one hand, or continued timber production from public native forests on the other.

Establishing a group like the Community Reference Group is always a balance between achieving as broad a representation as possible without ending up with meetings that are unworkably large. The Community Reference Group (see Appendix 6) provided a balance of representativeness and workability, and Council is grateful for the involvement of the Group's members and the expertise and insights that they brought to the Investigation. It should be understood that the Community Reference Group makes a critical contribution to the Investigation but ultimately, it is the Council which makes decisions and develops the recommendations.



APPENDIX 2 NAMES AND STATUS OF FAUNA AND FLORA SPECIES REFERRED TO IN THE TEXT

Species are listed by common name, in alphabetical order.

LEGEND:

EPBC: status under Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

IUCN (1994) categories (lower case):

- x – extinct
- ce – critically endangered
- e – endangered
- v – vulnerable
- lr – lower risk
- dd – data deficient

Vic: conservation status in Victoria, following the Department of Sustainability and Environment's Victorian Fauna Display and Flora Information System

Fauna – IUCN (1994) categories (lower case):

- x – extinct
- ce – critically endangered
- e – endangered
- v – vulnerable
- lr – lower risk
- dd – data deficient

Flora – IUCN (1990) categories (upper case):

- X – extinct
- E – endangered
- V – vulnerable
- R – rare
- D – depleted
- K – poorly known

FFG: status under the *Victorian Flora and Fauna Guarantee Act 1988*

- N – nominated for listing, awaiting recommendation;
 - R – recommended for listing;
 - X – rejected or ineligible for listing;
 - L – listed, no action statement published;
 - D – de-listed
- numbers indicate action statement number where published

FAUNA

Common Name	Scientific Name	EPBC	Vic	FFG
Australian Grayling	<i>Prototroctes maraena</i>	v	v	L
Australian King-Parrot	<i>Alisterus scapularis</i>			
Australian Mudfish	<i>Galaxias cleaveri</i>		ce	115
Azure Kingfisher	<i>Alcedo azurea</i>		l	
Barking Owl	<i>Ninox connivens</i>		e	116
Bibron's Toadlet	<i>Pseudophryne bibronii</i>			
Black Bream	<i>Acanthopagrus butcheri</i>			
Broad-toothed Rat	<i>Mastacomys fuscus</i>		lr	
Brown Trout ¹	<i>Salmo trutta</i>			
Chestnut-rumped Heathwren	<i>Hylacola pyrrhopygia</i>		v	L
Common Bent-wing Bat	<i>Miniopterus schreibersii</i>			L
Common Wombat	<i>Vombatus ursinus</i>			
Dog ¹	<i>Canis familiaris familiaris</i>			
Dwarf Galaxias	<i>Galaxiella pusilla</i>	v	v	L
Eastern False Pipistrelle	<i>Falsistrellus tasmaniensis</i>			
Eastern Quoll	<i>Dasyurus viverrinus</i>		X	14
European Rabbit ¹	<i>Oryctolagus cuniculus</i>			
Fallow Deer ¹	<i>Cervus dama</i>			
Forest Bat	<i>Vespadelus sp.</i>			
Gang-gang Cockatoo	<i>Callocephalon fimbriatum</i>			
Glenelg Freshwater Mussel	<i>Hyridella glenelgensis</i>		R	L
Grey Goshawk	<i>Accipiter novaehollandiae</i>		v	N
Ground Parrot	<i>Pezoporus wallicus</i>		e	L
Growling Grass Frog	<i>Litoria raniformis</i>	v	e	L
Horse ¹	<i>Equus caballus</i>			
Hooded Plover	<i>Thinornis rubricollis</i>		v	9
King George Whiting	<i>Sillaginodes punctata</i>			
Koala	<i>Phascolarctos cinereus</i>			
Long-nosed Bandicoot	<i>Perameles nasuta</i>			
Long-nosed Potoroo	<i>Potorous tridactylus</i>	v	e	L
Macquarie Perch	<i>Macquaria australasica</i>	c	e	L
Masked Owl	<i>Tyto novaehollandiae</i>		e	L
Mountain Dragon (Anglesea form)	<i>Tympanocryptis diemensis</i>		dd	
New Holland Mouse	<i>Pseudomys novaehollandiae</i>		e	74
Otway Black Snail	<i>Victaphanta compacta</i>		V	L
Otway Burrowing Cray	<i>Engaeus fultoni</i>			
Otway Caddisfly	<i>Taskiria otwayensis</i>		e	
Otway Stonefly	<i>Eusthenia nothofagi</i>			D 45
Platypus	<i>Ornithorhynchus anatinus</i>			
Powerful Owl	<i>Ninox strenua</i>		v	92
Red Deer ¹	<i>Cervus elaphus</i>			
Red Fox ¹	<i>Canis vulpes</i>			
River Blackfish	<i>Gadopsis marmoratus</i>		dd	
Rufous Bristlebird	<i>Dasyornis broadbenti caryochrous</i>		lr	49
Sambar Deer ¹	<i>Cervus unicorn</i>			
Satin Bowerbird	<i>Ptilonorhynchus violaceus</i>			
Shortfin Eel	<i>Anguilla australis</i>			
Smoky Mouse	<i>Pseudomys fumeus</i>	e	e	L
Snapper	<i>Pagrus auratus</i>			
Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>		lr	
Southern Toadlet	<i>Pseudophryne semimarmorata</i>	v	v	
Spot-tailed Quoll	<i>Dasyurus maculatus</i>	v	e	15
Swamp Antechinus	<i>Antechinus minimus</i>		lr	L
Swamp Skink	<i>Egernia coventryi</i>		v	L
White-footed Dunnart	<i>Sminthopsis leucopus</i>		v	R
Yellow-bellied Glider	<i>Petaurus australis</i>			
Yellow-tailed Black-Cockatoo	<i>Calyptorhynchus funereus</i>			

¹ – denotes introduced species

FLORA

Common Name	Scientific Name	EPBC	Vic	FFG
Angahook Pink-fingers	<i>Petalochilus maritima</i>		E	
Anglesea Grevillea	<i>Grevillea infecunda</i>	v	V	N
Anglesea Sun-orchid	<i>Thelymitra</i> sp. aff. <i>pauciflora</i> (Anglesea)		V	X
Beech Finger-fern	<i>Grammitis magellanica</i> ssp. <i>nothofageti</i>		V	
Blackberry ¹	<i>Rubus fruticosus</i> spp. agg.			
Blackwood	<i>Acacia melanoxylon</i>			
Bog Gum	<i>Eucalyptus kitsoniana</i>		R	
Brooker's Gum	<i>Eucalyptus brookeriana</i>		R	
Brown Stringybark	<i>Eucalyptus baxteri</i>			
Californian Redwood ¹	<i>Sequoia sempervirens</i>			
Cinnamon Fungus	<i>Phytophthora cinnamomi</i>			
Currant-wood	<i>Monotoca glauca</i>		R	
Dense Leek-orchid	<i>Prasophyllum spicatum</i>	v	V	
Dwarf Boronia	<i>Boronia nana</i> var. <i>nana</i>	r	R	
Dwarf Silver Wattle	<i>Acacia nano-dealbata</i>		R	
Feather-fan Germanderwort	<i>Riccardia eriocaula</i>		E	L
Forest Bitter-cress	<i>Cardamine papillata</i>		V	
Grass-tree	<i>Xanthorrhoea australis</i>			
Ground Spleenwort	<i>Asplenium appendiculatum</i> ssp. <i>appendiculatum</i>		R	
Heart-lip Spider-orchid	<i>Arachnorchis cardioclila</i>			
Long Clubmoss	<i>Huperzia varia</i>		V	
Madeira Moss	<i>Echinodium hispidum</i>		R	
Manna Gum	<i>Eucalyptus viminalis</i>			
Messmate	<i>Eucalyptus obliqua</i>			
Mountain Ash	<i>Eucalyptus regnans</i>			
Mountain Grey-gum	<i>Eucalyptus cypellocarpa</i>			
Myrtle Beech	<i>Nothofagus cunninghamii</i>			
Naked Sun-orchid	<i>Thelymitra circumsepta</i>		V	
Narrow-leaf Peppermint	<i>Eucalyptus radiata</i>			
Netted Daisy-bush	<i>Olearia speciosa</i>		K	
Otway Bush-pea	<i>Pultenaea prolifera</i>		R	
Parsley Xanthosia	<i>Xanthosia leiophylla</i>		R	
Pine ¹	<i>Pinus</i> sp.			
Ragwort ¹	<i>Senecio jacobaea</i>			
Satinwood	<i>Nematolepis squamea</i> ssp. <i>squamea</i>		R	
Showy Lobelia	<i>Lobelia beaugleholei</i>		R	N
Skirted Tree-fern	<i>Cyathea X marcescens</i>		V	
Slender Fork-fern	<i>Tmesipteris elongata</i> ssp. <i>elongata</i>		V	
Slender Tree-fern	<i>Cyathea cunninghamii</i>		V	L
Southern Blue-gum	<i>Eucalyptus globulus</i> ssp. <i>globulus</i>		R	
Starry Daisy-bush	<i>Olearia stellulata</i>		K	
Swamp Gum	<i>Eucalyptus ovata</i>			
Tall Astelia	<i>Astelia australiana</i>	v	V	7
Tea-tree	<i>Leptospermum</i> sp.			
Tufted club-sedge	<i>Isolepis wakefieldiana</i>		R	
White Daddy-long-legs	<i>Calonema capillatum</i>			
Wine-lipped Spider-orchid	<i>Arachnorchis oenochila</i>		V	
Wiry Bossiaea	<i>Bossiaea cordigera</i>		R	
Wrinkled Buttons	<i>Leiocarpa gatesii</i>	v	V	98
Yacca	<i>Xanthorrhoea semiplana</i> ssp. <i>semiplana</i>		R	

1 – denotes introduced species



APPENDIX 3 REPORT ON CONSULTATIONS WITH THE
INDIGENOUS COMMUNITY

VEAC Angahook-Otway Investigation

**REPORT ON CONSULTATIONS WITH THE
INDIGENOUS COMMUNITY**

Prepared for
Victorian Environment Assessment Council

by
Atkinson Kerr and Associates

September 2004

1 Introduction

The purpose of this consultation was to provide input to VEAC on Aboriginal interests regarding VEAC's Angahook-Otway Draft Proposals Paper, to inform the preparation of the Angahook-Otway Final Report. The task of the project was to consult with appropriate people and groups, and report on the findings of this process. Indigenous perspectives were sought on public land in general, and particularly views on:

- The current public land management situation
- Places and values of particular significance
- Relationships with the area
- Future relationships/aspirations in public land and water management
- Knowledge of other models of Indigenous land and water management
- Benefits of involvement in public land and water management
- Potential or existing barriers to Indigenous involvement in land and water management
- Opportunities for involvement and solutions to existing barriers to involvement
- Any other special issues

The consultants would like to acknowledge all respondents who contributed to the report and particularly the groups who took the time to make written submissions to the study. Special thanks go to staff of VEAC for their assistance and support during consultations and background materials on the study.

1.1 Methodology

- Tasks and scope of consultations were clarified with the Project Steering Committee including the framing of key questions for consultations with Indigenous groups and communities associated with the study area.
- The groups and individuals to be consulted were confirmed.
- VEAC distributed the project's terms of reference (background and specific questions) and the consultation schedule to the Aboriginal people and groups to be consulted.
- Meetings were arranged with the people and groups and responses to the consultation questions were documented.
- Notes on meetings and on the progress of consultations were presented to VEAC.
- Responses were collated and analysed to form the basis of this report's recommendations for protocols relating to Aboriginal involvement in the Angahook-Otway Investigation and its implementation.

Attachment 1 is a list of the Indigenous groups, individuals and community organisations consulted.

2 Overview of Key Resource Documents

Angahook-Otway Investigation Draft Proposals Paper, 2004

In May 2004 VEAC issued the Angahook-Otway Investigation Draft Proposals Paper, as the second report of the Investigation. It followed the Discussion Paper published in September 2003.

Strategy for Aboriginal Managed Lands in Victoria (SAMLIV), 2003

This statewide planning and research project identified lands in Victoria under Aboriginal control as well as the landholders' priorities and aspirations for developing their lands. Secondary objectives included informing the non-Aboriginal community about different aspects of Victorian Aboriginal cultures, values and perceptions of land and relationships to land. While the lands in this project were not public lands, the issues of natural resource management were in many ways comparable.

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Box-Ironbark Forests and Woodlands Investigation Final Report, 2001

A 2001 report from the Environment Conservation Council (VEAC's predecessor) on the Box-Ironbark Forests and Woodlands Investigation was especially relevant as a model for the consultation process and in the issues it raised, although it looked at a different region of Victoria (central and northern Victoria) and consulted different groups of Aboriginal people from those in the present study. The box-ironbark forests consultation process with Aboriginal people and groups was undertaken by Mirimbiak Nations Aboriginal Corporation (later replaced by Native Title Services Victoria (NTSV)).

3 Indigenous Responses

A range of issues emerged from specific meetings with members representing Indigenous groups, individuals and community organisations associated with the study area (see Attachment 1). Summarized below are Indigenous issues arising from the consultations and where applicable relevant reports and submissions.

3.1 General Issues

The consultants' dialogue with community members was generally responsive and productive. However, at most meetings we detected some mistrust and wariness of government consultation processes among some members who pointed to earlier consultations¹ in which they had been involved but where their views were subsequently disregarded or ignored. The consultants reassured all meetings that the process adopted for this part of the study aimed to be genuinely inclusive, transparent and sensitive to the diversity of views provided.

3.1.1 Current Public Land Management Situation

Most group members consulted had no major objections to the current management arrangements but wanted to remain involved, particularly in the implementation of VEAC's recommendations, in the development of management plans and on-going public land management. They insisted, however, that indigenous involvement must be predicated on genuine active partnership rather than passive involvement.

Under State, Commonwealth and local government acts every activity on Crown land includes a notification process to ensure the protection and preservation of existing Aboriginal sites and assessment of newly found sites and materials. Most Indigenous groups believed the process is not always administered appropriately. Insufficient capacity to administer this process was given as the main reason for this deficiency. Instances were given of sites reported to the relevant organisations not being properly investigated, creating further alarm for the local community.

The consultants identified several local and broader examples of initiatives considered to be working well.

- **Great Ocean Walk Apollo Bay.** Part of the walkway was diverted when a Parks Victoria archaeologist located a cultural site along the planned track. The good relationship between the local Aboriginal community and Department of Sustainability and Environment (DSE) aided this outcome.
- **Corangamite Catchment Management Authority.** The CCMA has an Indigenous Facilitator to liaise with the local communities in the catchment area.
- **DSE Indigenous Employment Strategy.** Through the State Government's Indigenous Employment Strategy, DSE is recruiting and employing Indigenous staff throughout its regional offices, including Indigenous Facilitator positions to liaise between Parks Victoria and local communities on land management, parks, employment and enterprise opportunities.
- **Present land management and forestry practices** are currently engaging local Aboriginal communities in the areas of cultural matters especially through archaeological assessments of newly found sites.

Conversely, a number of practices that were considered not to be working well were also raised.

- **Recording of Aboriginal sites.** Though some sites have been recorded in the study area, local Aboriginal knowledge suggests this is a significant under-representation of all sites.
- **Old-growth forest.** It was felt that logging here should not continue since these forests may contain scar trees and other culturally important sites.

¹ These criticisms were not necessarily directed at the VEAC study but to other previous consultation projects.

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- **Low public awareness.** The study area has high tourism activity, but public awareness of Aboriginal cultural heritage issues is deemed low.
- **Insufficient signage.** A significant opportunity to educate public land visitors is available along the Wathaurong Walk, but along its entire length the walk has only one sign showing Indigenous occupation of the area.
- **Indigenous place names.** Groups would like to see more use of local language for place names.
- **Indigenous under-representation in land management structures.** At strategic levels of land and water management authorities there is a lack of Indigenous representation.
- **Education programs.** There is an urgent need for the implementation of education programs both for public land users and for the broader community.
- **Cultural and spiritual importance of sites.** Education programs should highlight the importance of sites in the recommended national and forest parks to the broader non-Indigenous community, and the need to avoid damage to sites within the study area.
- **Issuing of licences and leases.** Leases and licences are invariably renewed without consultation or assessment regarding impact on cultural sites (e.g. grazing licences around Lake Corangamite). Additionally, the enforcement of licence conditions is regarded as minimal to non-existent.

3.1.2 Places and Values of Particular Significance

General Locations

River wetlands. The Gellibrand River near Princetown (Kirrae) and the lower Aire Valley – and their associated key wetlands – were recently targeted by community members as possible locations for a Men's Group. However, access could be a problem if VEAC makes it a restricted area.

Dedicated cultural practice area. As with the Men's Group, a dedicated area that did not have prominent signage is proposed for use by different Indigenous groups and community organisations from the surrounding districts.

Apollo Bay Golf Course. Situated on Crown land, the local Golf Club's lease expires in 2010. The Southern Otways Indigenous Group are endeavouring to have the land revert back to Indigenous ownership rather than transferred to private development. Located on the course is the Point Bunbury Aboriginal Well that the group believes links ideally to the Wathaurong Cultural Walk and could be used as an educational node along the route.

Cultural Sites

Aboriginal middens. Many Aboriginal middens lay along the Great Ocean Road's coastline. Some have been recorded but others are not registered, which is a key issue for the local Aboriginal communities responsible for site notification in the study area.

Telstra cable (circa 1997–98). When this cable was laid along an old trail, an archaeological survey found up to 10 new sites. This adds to local concerns that new sites are continually being discovered.

Accuracy of data on Aboriginal cultural sites. This is a key concern amongst Indigenous community members and agency representatives. Though Aboriginal Affairs Victoria's (AAV) register of sites lists at least 250 sites in the study area, community members know of many unregistered sites which suggests that the actual number of sites is under-represented. Within the Wathaurong Aboriginal Cultural Heritage boundary area alone it is estimated there are approximately 4500 sites, with perhaps many more located within the entire survey area. New sites are said to be reported virtually on a daily basis. Explanations offered for the disparity between AAV's figures and local community knowledge include the limitations of earlier site surveys and secrecy over the location of sites to avoid vandalism.

Creating new campsites. Members request they be consulted before a campsite or other major works are planned so that a site assessment can be done, rather than being called in after site clearance has occurred.

Protection of sites. High levels of tourism and recreational activities such as bush walking, camping, horseriding, trail biking and four-wheel-driving within the study area puts sites at risk of damage. A better system for protecting existing and unregistered sites is required.

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3.1.3 Relationships with the Area

Traditional Occupation and Affiliation with the Angahook-Otway Area

The Kirrae Wurrung Native Title Group states that 'the Otways area has been managed by various Language Groups and Nations for many generations. These Language Groups are effectively Land Managers. With regard to Traditional Owners of the Otways, four bodies are recognized: the Wada Wurrung of the east, Gulidjan of the north, Katabanud of the south and Kirrae Wurrung of the west. Under current Cultural Heritage legislation, Wathaurong Aboriginal Cooperative (Geelong) & Framlingham Aboriginal Trust (Framlingham) have the designated legal responsibility'.

Aboriginal groups invited to comment on the draft proposals were: Kirrae Wurrung Native Title Group, Native Title Services Victoria, Southern Otways Indigenous Group (SOIG), Gunditjmara Aboriginal Cooperative, Framlingham Aboriginal Trust, South West Cultural Heritage Program, and Wathaurong Aboriginal Cooperative. Some individuals belong to more than one of these groups and also some of the language groups and nations are represented in more than one of the groups listed here.

Framlingham Aboriginal Trust is the statutory body responsible under the Commonwealth *Aboriginal and Torres Strait Islander Cultural Heritage Protection Act 1984* for overseeing cultural heritage sites and places in a large part of the Angahook-Otway geographical area.

Gunditjmara Aboriginal Cooperative has had a long caring role in the area. The word Gunditjmara means 'we are from here'. The Cooperative also employs a cultural officer and is the base for the Regional Manager for the South West Aboriginal Cultural Heritage Program.

Kirrae Wurrung Native Title Group has separately submitted detailed points for the way they would like to see the recommended Otway Ranges National Park and Otway Forest Park managed. These include many suggestions for co-management by identified traditional owners and the State of Victoria.

Southern Otways Indigenous Group (SOIG) was formed in response to the VEAC Angahook-Otway Investigation. SOIG regard themselves as the Indigenous custodians of the area around Apollo Bay, and assert a traditional connection to the area. SOIG shares with other groups the common goal of involving Traditional Owners in the creation and management of the new national park. The Group is eager to explore partnerships with Parks Victoria. While the Group supports the work being done by other bodies (such as the South West Cultural Heritage Program), they remain concerned that local people in Apollo Bay are being left out of the process. SOIG has made a formal submission to VEAC, in which they have outlined a number of issues and concerns, focusing on 2 main locations – the Point Bunbury well at the Apollo Bay Golf Course, and the Aire River. The group also believe that Hordern Vale, and the lakes along the lower Aire should be included in the national park. The Group liaises with both Framlingham and Wathaurong on cultural matters that relate to the study area, but believes that more capacity building needs to be done with these groups to ensure that their cultural resources are delivered appropriately.

South West Cultural Heritage Program is part of the Regional Cultural Heritage Program (RCHP) that was established by AAV in conjunction with Victorian Aboriginal Communities in the 1980s. It aims to promote Aboriginal control of the management of Aboriginal cultural heritage, to provide advice to the Minister for Aboriginal Affairs, AAV and other government agencies and statutory bodies on issues relating to Aboriginal cultural heritage. Both Framlingham Aboriginal Trust and Wathaurong Aboriginal Cooperative are part of South West Cultural Heritage Program.

Wathaurong Aboriginal Cooperative (Geelong) is responsible for cultural heritage matters affecting the north eastern section of the Otways and came into being at the same time as the South West Cultural Heritage Program. Tensions have arisen between some Traditional Owners who wish to be involved more in the management and control of cultural heritage in their traditional areas.

The Gunditjmara Native Title Group *per se* is not necessarily part of the study area, since the boundary of its native title claim does not cover the area.

Native Title Services Victoria (NTSV) performs the functions of a Native Title Representative Body whose functions and powers are detailed in Division 3, section 203B of the *Native Title Act 1993*. Primarily its role is to provide professional services and support to native title holders and claimant groups under that Act, including claimant, objection, future act and compensation applications. ('Future acts' are any proposed activity/development on land or waters that may affect native title rights). NTSV is also involved in the negotiation of Indigenous Land Use Agreements (ILUAs) – voluntary agreements about the use and management of land or waters made between one or more groups and others (such as miners, pastoralists and governments). An ILUA is legally binding on all

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parties. If native title has not been extinguished in the study area then NTSV would assist traditional owners to pursue their native title aspirations through one or more of the above native title measures.

Continuing Indigenous Connections and Affiliations

Indigenous archeological and historical evidence of early occupation of the region is still strongly valued by all Indigenous groups that identify with the study area. As recently as 1998 a review of surveys conducted in the early 1990s found that Aboriginal sites are virtually everywhere in the study area, leading to the development of a predictive model of Aboriginal archeological site distribution in the Otway Ranges (Richards, 1998).

The spiritual, cultural and traditional connection to the area still survives in those who claim to be descendants of the original inhabitants. Some have always resided there while others live outside the area but continue to identify strongly with the Otways public lands.

Traditional practices such as hunting and the performance of cultural rites and celebrations are still being practised within the study area. As mentioned earlier, local groups would like greater access to the park and public lands to continue or revive their cultural practices such as fishing, hunting or preserving their heritage in the study area.

Emerging Work Practices

Collaborative relationships with park management authorities have emerged. Current arrangements with Parks Victoria and DSE, such as for the control of 4WDs and trail-bikes, are being developed. However, a more effective monitoring and enforcement practice is required – often, for example, when fences have been erected to restrict access, these have been knocked down or driven over.

Regional agreements on park, public land and water management are seen as the preferred basis for future negotiations between Indigenous members and other park users and managers. No member expressed a desire to dictate terms to existing and future users of the national and forest parks. Rather, Indigenous people within the area wish for a process of negotiation to occur in partnership, where the needs of each group may be met mutually. An example was given of negotiating with horse-riders to allow access to areas, but only on agreed or defined trails.

3.1.4 Future Relationships

Particular themes that emerged included future and ongoing management arrangements, management of cultural sites, potential for joint partnerships, recognition of Indigenous cultural knowledge, further training, regional agreements and better use of local cultural knowledge.

Joint Management Model (JMM). All groups generally supported this notion but believe all aspects of the model must be defined, especially its structure. They recognized that the development of a joint management model is a complex task but believe Indigenous people should be informed about every aspect of public land management through inclusion in joint forward planning and collaborative management processes.

National park boundaries appear largely determined by environmental values but should place cultural values on an equal footing. Support was given for the establishment of a Cultural Centre in the national park to serve as a meeting place/nexus for Indigenous groups in the areas.

Land and water management are seen as interconnected, so Indigenous involvement is considered essential and perhaps is a larger, stand-alone issue, rather than a sub-point or issue of the current study. Moreover, a greater level of consultation with local Indigenous bodies/people must occur such as through the relevant agencies of DSE and Parks Victoria. The creation of more Indigenous positions within agencies is seen by most members as an appropriate step to involving the community in land and water management.

Overall public land management that genuinely encourages Indigenous involvement is regarded as essential, and an area where substantial opportunities exist for Indigenous people. Applied to each of these management areas should be a 'joint management model' where policies and programs are devised in collaboration with Indigenous employees/board members or representative Indigenous groups. Joint management would include ongoing communication about projects and governance.

Use of local cultural knowledge. Groups seek to stay involved in public land management through offering services and ideas on sustainable management. One area of interest is in keeping the rivers free-flowing. The use of cultural interpreters on park projects and trails would not only help preserve the culture but also share the culture. Recognition also needs to be given to traditional knowledge and inherited skills but free of tokenism.

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Regional Agreements. Recently the Victorian Attorney-General supported what he called an innovative plan for a regional agreement to settle six native title claims in the state's north-west. The Attorney-General is now exploring the possibility of one registered body representing the interests of all native title claimants in the north-west region and regards this approach as 'a quicker and fairer' way to meet the aspirations of native title claimants. 'If they could reach agreement with the Government over issues such as cultural heritage, hunting, fishing, gathering rights and the like, and access to national parks they may well then not pursue through the courts the actual native title aspect of their claims,' he said (ABC Online News, 5 August 2004). With regard to the number of different Indigenous groups expressing an interest in the Angahook-Otway public lands, the notion of an overarching agreement may be a feasible approach to reconciling such diverse needs.

Enhancing Indigenous Involvement. Qualified support was given to the specific recommendations in the Draft Proposal Paper for enhancing Indigenous involvement which members discussed. Of particular interest was the broad support for these recommendations echoed in submissions to the study from other non-Indigenous groups.

3.1.5 Existing Models

Examples provided were further researched by the consultants and showed Indigenous involvement in land and/or water management is being actively supported across Australia, often closely linked to the principles of reconciliation: *recognition, rights and respect*.

Commonwealth: Booderee National Park and Booderee Botanic Gardens, near Jervis Bay in NSW, are jointly managed by the Wreck Bay Aboriginal Community Council and the Commonwealth Department of the Environment and Heritage. A memorandum of lease between the Director of National Parks and Wildlife and the Wreck Bay Aboriginal Community Council was signed in December 1995, after the park was handed back to the Community. The park and Botanic Gardens are managed in accordance with relevant legislation, a management plan and the decisions of the Board of Management which was established in 1996 (www.deh.gov.au/parks). The Booderee Board of Management includes a majority of Aboriginal traditional owners. The board oversees the management of the park and Botanic Gardens and preparation of plans of management.

The Wreck Bay Aboriginal Community's interest in Booderee is legally reflected in the lease agreement, the *Environment Protection and Biodiversity Conservation Act 1999* and the *Aboriginal Land Grant (Jervis Bay Territory) Act 1986*. The lease agreement requires that the park is managed with the interests of the traditional owners in mind. The lease sets out the terms and conditions governing joint management for a period of 99 years with provision to review the lease every five years.

These 'hand back - lease back' arrangements are similar to the more famous agreements for the Uluru-Kata Tjuta and the Kakadu National Parks, in the Northern Territory, which are also managed jointly by their Aboriginal traditional owners and the Commonwealth Department of the Environment and Heritage. The Uluru-Kata Tjuta National Park has been managed in this manner since the hand back to traditional owners in 1985. The joint management of Kakadu National Park commenced with the establishment of the park in 1979, although about half of the park is currently not Aboriginal land (albeit subject to native title claim).

New South Wales: National Parks and Wildlife Services (NPWS) is a leading agency in the area of **Aboriginal co-management of parks**. NPWS has established at least 9 co-managed parks throughout the state and acknowledges that the Indigenous peoples of Australia are the original custodians of the lands and waters, animals and plants of New South Wales and its many and varied landscapes. The NPWS staff Statement of Reconciliation gives a commitment to invite greater involvement of Aboriginal communities in the management of all areas under NPWS control (www.nationalparks.nsw.gov.au). Under an Aboriginal co-management arrangement, the government and local Aboriginal people share responsibility for a park's management, in planning and decision making for the park or reserve, while maintaining access to parks for everyone.

Victoria: In June 2004 the Yorta Yorta Clans and the State Government signed the Yorta Yorta Co-operative Management Agreement for the Barmah forest, Kow Swamp and other areas of Crown land along the Murray and Goulburn Rivers in northern Victoria. A joint-management body, comprising Yorta Yorta and government representatives, will be established to advise the Minister for the Environment on works programs and land and water protection plans for these areas, although the Minister retains ultimate authority for decision making. The Agreement was negotiated after the Yorta Yorta's nine-year pursuit of a native title claim was ultimately dismissed by the High Court. The government envisages reaching future land management agreements with other Indigenous communities outside the native title process.

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In the Otways area, the Framlingham Aboriginal Trust has also developed an agreement with Parks Victoria on the Framlingham Forest area.

As part of their responsibility to integrate planning frameworks for land, water and biodiversity management in Victoria, the 10 regional Catchment Management Authorities have received Commonwealth funding to appoint Indigenous Facilitators to liaise with local Aboriginal communities. Some appointments have been made – including that by the Corangamite Catchment Management Authority – but others are still to be filled.

Recognising that Indigenous communities – as the traditional owners of the State's land and waters – have a fundamental role in the management of Victoria's natural resources, DSE has developed an Indigenous Partnership Strategy, which seeks to strengthen its relations with Aboriginal communities and empower them to become actively involved in natural resource management. Key themes of the strategy include cultural awareness, community partnerships, capacity building, cultural heritage, employment, economic development and clear communication.

South Australia: The SA Department of Wildlife and Heritage, under its National Parks and Wildlife (NPWSA) division has established an Aboriginal Partnerships Section to coordinate the development and implementation of parks and wildlife programs with Traditional Owners, Aboriginal communities and representative organisations.

The focus for these programs is *reconciliation* (respect, recognition and cultural awareness), resolution of Native Title (ILUA), training, employment and enterprise development, Aboriginal heritage and cooperative management of parks and wildlife.

The key functions for the Aboriginal Partnerships Section are policy development and strategic directions, resolving Native Title issues, promoting reconciliation and cultural awareness, and establishing cooperative parks and wildlife management arrangements between NPWSA and Traditional Owners and local communities.

Queensland: In the implementation of the South East Queensland Forests Agreement (SEQFA) – which added approximately 425,000 hectares to the protected area system – a number of community consultative groups were formed, representing the interests of Indigenous people, local government, recreation and conservation groups and beekeepers.

Western Australia: 'Dan-joo Dabacaan' - meaning 'together, steady, steady' - describes the Department of Conservation and Land Management's approach to ensuring that Indigenous people are strongly represented, and involved, in conservation and land management. The Department acknowledges the need for 'traditional owners' with a cultural responsibility to care for country, and as managers of conservation lands and waters for the State. To achieve this outcome the Department has initiated the Mentored Aboriginal Training and Employment Scheme (MATES). This is a multi-faceted employment and training program in conjunction with non-government training providers and land management organizations.

Native Title Act 1993: Indigenous Land Management Agreements were another model that could involve co-management with SOIG, Framlingham, Kirrae Wurrung Native Title Group, Wada Wurrung and local people. The ILUA is a negotiated agreement which must gain the support and agreement of all parties for it to be accepted as a legal document. However, it is not an agreement that can be imposed on any single party involved in the negotiation process. It largely rests on 'constructive dialogue and engagement' between parties who have common needs.

3.1.6 Benefits of Indigenous Involvement in Public Land and Water Management

Key benefits of Indigenous involvement in land and water management highlights a range of areas along with their underlying issues.

Economic: Indigenous expertise in land and water management, and Indigenous knowledge of the area may result in more effective land and water management strategies. Those people consulted in this study regarded employment and business opportunities as key benefits for Indigenous communities. However, they want meaningful and not tokenistic involvement. This shift stems from local perceptions of Aboriginal groups often being excluded from key management practices. They want the opportunity to renegotiate resource utilisation but seek the capacity, skills and support to perform this role appropriately.

Tourism: There should be opportunities for Indigenous people and groups to be engaged in tourism activities associated with the national park, which creates significant opportunities for employment and economic capacity-building within this field. For example, Wathaurong's partnership with Echidna Tours, a mainstream general tourism operator which has aligned itself with Wathaurong, offers cultural heritage style tours.

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Recognition of Traditional Ownership Rights: Indigenous communities may develop their capacity through exercising their Traditional Ownership rights in relation to economic activities in the park. One example is at Wilsons Promontory where access is by payment of an admission fee. Part of this fee could be paid in trust to Traditional Owner groups.

Cultural Awareness Training: Parks Victoria's Cross-cultural training workshops are recognized as important but more important is government bodies letting local people know about what the departments are planning and doing. That is, there should be a two-way information exchange, e.g. techniques of park management and in turn, cultural knowledge and practice. Licensed tourist operators may be interpreting some Aboriginal culture wrongly, so accreditation of tour operators on cross-cultural awareness could be a license condition. In addition a portion of tour profits should be returned to the local people, such as is the case at Port Fairy 'Moonbird Tours'.

Cultural Protection Industry: This important responsibility presents a potential opportunity for Indigenous people within the study area. Cultural protection covers the protection of registered and unregistered sites, as well as the protection of the environment. Indigenous "monitors", should work alongside work teams and archaeologists. The identification and registration of new heritage sites associated with surveys can create increased local employment opportunities.

Strengthening Partnerships: Effective partnerships were seen by local Indigenous people as a tool for overcoming communication and structural barriers. People preferred not to talk about barriers, but more about the scope for future partnerships. All groups agreed that benefits and opportunities would emerge from partnerships. A written partnership in the form of an agreed Memorandum of Understanding (MoU) with the provision of an annual review could involve several groups, not by dividing the area into ownership areas but as a whole, with local contact people. Any agreement must recognize traditional ownership and will have more meaning for the signatories to such a document.

3.1.7 Potential and Existing Barriers to Indigenous Involvement in Land and Water Management

The general lack of capacity of Indigenous groups is a key barrier to Indigenous involvement in management processes. Often partnerships, agreements or joint management models are based on the assumption that Indigenous groups and organisations have the capacity in terms of time, resources and skills to fully participate and contribute to the process. Yet by engaging Indigenous people, management authorities will cross existing barriers to reconciliation. For instance, the partnership or joint management models are useful examples of how the policy of reconciliation can be practically implemented.

Communication protocols. To maintain partnerships with Indigenous groups there should be more communication between the various arms of Government and with the local groups outlined in the agreement document.

Potential legislative barriers may deny access to traditional practices such as hunting which will be allowed in many parts of the study area but potentially not in the new national park.

3.1.8 Opportunities and Solutions

The Joint Management or Co-management model, whereby Indigenous communities/representatives work with management authorities in the formulation and implementation of policies and programs, was the preferred option of the Indigenous people and communities in the Otways. The Indigenous Partnership Agreement between Parks Victoria and Framlingham is an existing example that is working beneficially for both parties. This Agreement emerged from the DSE's Indigenous Partnerships Strategy, which provided a framework for developing effective partnerships.

Management from the ground upwards. A key point of any land management initiative is that it must be managed upwards. Most groups felt that successful top-down management of such programs is difficult, owing to problems inherent with fully implementing these programs at ground-level.

Participation in policy formulation. There exists a strong desire on the part of Indigenous groups within the area to be in the formulation of land management policies. By including traditional owners and/or other Indigenous groups in policy and program making, it was felt that better outcomes may be realized for park and forest management, the preservation of heritage sites, and respect for cultural and spiritual values.



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Developers and cultural heritage issues. Some organisations have an arrangement with their local municipal councils whereby no development is permitted unless the local community is consulted. If artefacts are found within a proposed development, they are often relocated to "open areas" within the development. These open areas are then registered with AAV.

4 Recommendations

The Indigenous community is generally happy with the recommendations but is keen to optimize and enhance Indigenous involvement in their implementation. To simplify, if you like, the Indigenous community is generally less concerned about whether a particular area of public land is, say, national or forest park than they are about Indigenous involvement in its management regardless of its category.

Accordingly, to optimize and enhance Indigenous involvement in the implementation of VEAC's Angahook-Otway recommendations, we recommend that the following principles and protocols be included in the legislation under which the national park, forest park, and natural features reserves (and other public land units where relevant) are to be established and managed:

- 4.1 Recognize and provide access to public land for Aboriginal cultural customs, traditions and contemporary practices and continued spiritual and cultural association with the study area;
- 4.2 Acknowledge that the unique relationship derives from Aboriginal political, economic and social structures and from diverse Aboriginal cultures, tradition, histories and philosophies across the regions;
- 4.3 Recognize and support the aspirations of Indigenous people to self management and their inclusion in the management of park and forest areas located on their traditional lands through appropriate joint partnership structures;
- 4.4 Empower Indigenous people as equal parties in the management of land and waterways and resource management through capacity building, education and training and employment opportunities; and
- 4.5 Foster and promote a greater understanding of cross cultural issues, past and present achievements and validity of contemporary Indigenous cultures and skills and knowledge of Aboriginal people.

In addition the community felt that, in any future proposals and consultations in relation to changes in the Otways, that:

- 4.6 Sufficient time and resources be made available to the Indigenous community to fully participate in the process.

In our view, it would be highly desirable to embed adequate consideration of Indigenous views in future strategic public land planning and that the best way to achieve this would be for the government to:

- 4.7 Appoint to VEAC a person who can bring an Indigenous perspective on land and cultural heritage management.

That as part of any increased resourcing of public land management in the implementation of VEAC's recommendations, that within 12 months of Government acceptance of VEAC's recommendations:

- 4.8 The public land managers employ five Indigenous rangers or other field staff.

To preserve and protect the Indigenous culture, management practices and connection to country that:

- 4.9 The government funds the establishment of one or more Indigenous cultural and interpretation centres.

Victorian Environmental Assessment Council (VEAC) Angahook-Otway Investigation: Consultation with Aboriginal Communities

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- Richards, T. 1998. A Predictive Model of Aboriginal Archaeological Site Distribution in the Otway Range, Occasional Report No. 49, Aboriginal Affairs Victoria.
- Victorian Environmental Assessment Council. 2003. Angahook-Otway Investigation Discussion Paper. VEAC, Melbourne.
- Victorian Environmental Assessment Council. 2004. Angahook-Otway Investigation Draft Proposals Paper. VEAC, Melbourne.

Attachment 1. List of Groups, Individuals and Community Organisations Consulted

Framlingham Aboriginal Trust

Jeremy Clark
Lionel Harradine
Herbie Harradine
Neil Martin (Community Development Officer)

Kirrae Wurrung Native Title Group

John Clarke

Native Title Services Victoria

Eileen Alberts

Southern Otways Indigenous Group (SOIG)

Edna Arnold
Ron Arnold
Nieka Brewster
Richard Collopy
Peter Collopy

Gunditjmara Aboriginal Cooperative and South West Cultural Heritage Program

Joe Chatfield
Richard Collopy

Wathaurong Aboriginal Cooperative and South West Cultural Heritage Program

Trevor Edwards

Apologies received from.

Brian Powell, Geelong community member.
Mary Kingsley, Geelong community member/Traditional Owner.
Len Clarke, Framlingham Community.
Andrew Alberts, Framlingham Community.
Reg Abrahams, Framlingham Community.

Local land managers from DSE and Parks Victoria: DSE:

Andrew MacLean, Regional Forest Manager, Ballarat.
David Rourke, Forest Manager, Otways, Colac.
Chris Marshall, Senior Land Use Planner, Anglesea.

Parks Victoria:

Rachael Robertson, Chief Ranger, South West Coast.
Will Cox, Ranger in Charge, Apollo Bay.
Dale Antonyson, Ranger in Charge, Lorne.
Dale Fuller, Ranger, Anglesea.



APPENDIX 4 SOCIAL AND ECONOMIC STUDIES IN
THE ANGAHOOK-OTWAY STUDY AREA

**SOCIAL AND ECONOMIC STUDIES
IN THE ANGAHOOK-OTWAY STUDY AREA**

STAGE 3

Summary*

Prepared for

Victorian Environment Assessment Council

by

URS

October 2004

* This Appendix is a summary of the much larger report which is available on VEAC's website (www.veac.vic.gov.au) or by request from the VEAC office (see the page before the 'Message from the Council' for contact details).

SOCIAL AND ECONOMIC STUDIES IN THE ANGAHOOK-OTWAY STUDY AREA

1.1 STAGES AND TASKS OF THE SOCIO-ECONOMIC STUDIES

There were three stages to the Angahook–Otway socio-economic studies. These were:

- Stage 1:* Baseline study – assembled and synthesised baseline data on the Angahook–Otway economy and social setting.
- Stage 2:* Assessment of VEAC Draft Proposals – assessed the effects of proposals in VEAC’s Draft Proposals Paper on economic and social components of the Angahook–Otway study area
- Stage 3:* Assessment of VEAC Final Report Recommendations – assess draft recommendations under consideration for the Final Report.

The study tasks for Stage 3 ‘Assessment of VEAC draft Final Recommendations’ included:

1. Identify and, as far as possible, evaluate the social benefits and costs that could arise as a result of implementation of Council’s draft recommendations. These benefits and costs are to include non-market values, and are to be distinguished from anticipated changes that are unrelated to the recommendations, in particular the Government’s decision to phase out timber harvesting by 2008.
2. Allocate the estimated social and economic benefits and costs of the draft recommendations to each industry or land use sector, and outline any assumptions made.
3. Estimate the likely social effects in terms of employment gain or loss, at the regional and State levels, and other community effects, and outline possible measures to mitigate negative effects.

1.2 APPROACH

Areas proposed to be subject to draft recommendations were identified by VEAC, to enable the Stage 3 social and economic assessment, building on the baseline information collected in Stage 1, and the Stage 2 social and economic assessment of the draft proposals. VEAC papers detailed the structure and basis for the draft recommendations, and indicated the range of implications expected.

VEAC also provided advice as to the practical implications of the draft recommendations, for economic appraisal by the consultants.

Social benefit-cost analysis was used for the economic analysis. Only those benefits and costs attributable to changes to existing uses and activities which result from the Council’s draft recommendations were assessed and included.

Some of the benefits and costs were not readily assessed in monetary terms, but every effort was made to do so. Where this was not possible, non-monetary or intangible benefits and costs were quantified where possible, or are at least scaled, ranked or described.

In the social effects assessment, the consultants built on the baseline study (Stage 1) to predict and describe likely effects; to identify communities or social groups who may benefit, or for whom there may be particular employment or ‘quality of life’ effects arising from the draft recommendations; to highlight locations or communities that would be substantially affected; and to advise on relevant measures that could be applied to mitigate any adverse effects.

The 1800 submissions received in the four public consultation periods, and VEAC’s analysis of them, were available to assist with Stage 3 of the project.

1.2.1 ESTIMATING THE ECONOMIC CONTRIBUTION OF PARKS

Change in net economic value

Benefit Cost-Analysis (or Social Benefit-Cost Analysis) is the methodology most commonly used for estimating the net public benefits of investing in community assets such as parks.

The appropriate measure of the benefit of parks to the Victorian community is termed the *net economic value* and represents the satisfaction people derive from visiting parks, expressed as a money value over and above what they actually pay to visit parks.

The net economic value of tourism and recreation is a prime focus of the study because the value of tourism and recreation is what brings visitors to parks where they contribute to the local and regional economies.

Contingent valuation and choice modelling surveys, and travel cost methods are applicable for estimating the net economic contribution of parks, and these methods are described in our main report.

SOCIAL AND ECONOMIC STUDIES IN THE ANGAHOOK-OTWAY STUDY AREA

Regional economic activity

The economic activity generated by the spending of visitors in the local area and in the region is the other main focus of the study. From the viewpoint of the State such spending is not regarded as a benefit of parks (in the context of benefit-cost analysis) because it could occur if the investment was made elsewhere in the State. From the viewpoint of the local area, however, the economic activity created by parks is an important consideration.

Recreational use of parks provides direct economic benefits to the region from recreational and tourism expenditure, and flow on or multiplier effects as that expenditure works its way back through the suppliers of the goods and services that the tourists consume. As a general rule, the greater the local content of goods and services sold, or alternatively the larger the region within which economic effects are studied, the bigger the multiplier effects will be for a given amount of direct expenditure.

Changes in the level of economic activity of one sector or region of the economy will affect activity levels in other sectors and regions. Multipliers are a means of relating the effects of direct changes in one sector, to the indirect and induced effects felt elsewhere in the economy. 'Input-output analysis' is the analytical technique that is commonly used to derive those multipliers.

Deriving input-output multipliers specifically for the Otway Ranges parks would require detailed regional modelling which was outside the scope of this study and was not justified due to the relatively small negative impacts on local industries. Instead we approximated the multipliers that might apply at the regional level by adapting the results of other work.

1.3 BIODIVERSITY VALUES

Biodiversity values in economic terms are the dollar values that well-informed respondents to surveys would be willing to pay in order to achieve additional protection of biodiversity. In the case of the Otway Ranges National Park respondents to a willingness to pay survey would be informed, as follows.

- A. That the parks and reserves will protect a large range of values encompassing almost all significant values; that they are of adequate size to actually protect the values they are intended to protect, and across the range of environments in which the values are found. That is, essentially, that they meet the nationally-agreed criteria for a Comprehensive, Adequate and Representative (CAR) reserve system for biodiversity conservation.
- B. That the parks and reserves are genuine parks and reserves, especially that the national park has large contiguous, essentially natural areas, covering and linking a range of landscapes and land and habitat types; that it is well managed and provides adequate, long term protection of these attributes ; and that it is not compromised or threatened by over-development or large degraded areas.
- C. That the parks and reserves have many of the best examples of the features that people associate with national parks and the Otways – wet forests, rainforests, waterfalls, historic sites, Aboriginal heritage, wild places and beaches, landscape-scale scenery (e.g. the whole coastal fall, whole catchments, the main Otways ridge and the Otways coastline).

The extent and scale of these improvements to biodiversity protection would of course affect the amounts that respondents would be willing to pay to gain access to them – whether through use or non-use attributes. In practice, the changes from the existing situation would need to be significant in order to elicit significant payments.

It is not likely that responses would be very sensitive to the differences in biodiversity protection recommended by VEAC between the Stage 2 (Draft Proposals Paper) and Stage 3 (Final Report) studies. While this does not imply that they have no value, we have not attempted to quantify them.

Willingness to pay for biodiversity restoration and protection in forests in the studies listed in our main report has ranged from \$5 (for revegetation of farmland) to \$100 per household per year, with a 'modal' value of approximately \$35. The response rate for surveys used to elicit these values are up to 60 percent. If we take the conservative view that the 40 percent who didn't respond attached zero value to conserving biodiversity, the modal value becomes \$20 per household per year.

In the case of expanding the area of national park in the Otway Ranges, the increase in value will be some proportion of the assumed total value. The VEAC recommendations increase the area of national park in the study area approximately eight-fold, with a doubling in the area of Ecological Vegetation Classes (EVCs) protected in CAR reserves.

SOCIAL AND ECONOMIC STUDIES IN THE ANGAHOOK-OTWAY STUDY AREA

If people are willing to pay \$20 per household per year for a CAR system of permanent reserves, and the VEAC recommendations are responsible for half of that system (that is, through doubling the existing extent of protected EVCs), then the added non-use value that can be attributed to the expansion of the permanent reserve system is \$10 per Victorian household per year. The ABS 2001 Census shows 1.73 million households in the State. Total annual value is therefore \$17.3 m.

Given the level of uncertainty that surrounds estimates of biodiversity values, in the benefit-cost analysis we adopt a range of assumptions corresponding to pessimistic, conservative and optimistic scenarios.

For the purposes of the benefit-cost analysis, non-use values for biodiversity protection in the expanded national park are assumed to be \$5m per annum for the pessimistic case, \$15m per annum for the conservative case, and \$25m per annum for the optimistic case. These figures correspond to annual per household figures of about \$3, \$9, and \$15, respectively. They are higher than the values assumed in the assessment of the Environment Conservation Council's Box-Ironbark recommendations (\$0.75, \$1.50, \$3,) but can be justified by the nature of the two study areas concerned. People appear to be more willing to pay to protect mountain ash forests and rainforests than forests in low rainfall areas.

We make the additional assumption that there will be no increase in the value associated with biodiversity protection in the proposed new forest park as a result of VEAC recommendations, compared with those that applied to state forests. There may be some increase associated with the forest park compared to state forest, but primarily this will result from the cessation of timber harvesting in 2008 by Government decision, not as a result of VEAC recommendations.

1.3.1 ADDITIONAL PARK MANAGEMENT COSTS

DSE will have administrative responsibility for managing recreation on public land recommended to be included in the new parks. Although the total area of public land to be managed will not increase at all under VEAC's recommendations, national parks in particular generally have higher management costs with respect to visitors because of the higher level of facilities and promotion associated with national parks compared with state forest. Also, it was evident from submissions that there is widespread community support for the view that public land management is currently poorly resourced and should be improved. As a package, VEAC's recommendations should make a substantial commitment to realising this improvement.

In the most recent example of management cost estimates (for the ECC Box-Ironbark recommendations), Parks Victoria supplied an estimate of the unit costs of their role in managing additional areas of parks and NRE (now DPI/DSE) provided an estimate of its unit costs for management of recreation in state forests.

- NRE estimated that it expended annually, on average, \$0.50 per visitor.
- Parks Victoria estimated that it expended annually, on average, \$0.61 per additional visitor and \$0.83 per additional hectare of park.

In this example, the results of the benefit cost analysis were additional park management costs of \$400,000 per year. This was over and above the costs of the NRE employees that were involved in managing, regulating and administering these public land areas for timber harvesting, roading, fire protection, pest plant and animal control, recreation, and various other uses. Responsibilities for fire protection, management of pest plants and animals, and researching ecological management, are standard costs of managing public land, regardless of who is the managing authority, hence those costs should not be affected.

In the end, the government invested considerably more than this amount in implementing and managing the Box-Ironbark public lands (see below). In addition, our review of submissions and discussions with stakeholders since the Stage 2 project has identified several additional aspects to improving public land management (and especially park management), particularly in relation to improving tourism yield and attracting visitors to the Otways hinterland.

Accordingly, in the case of the Otways recommendations we assume that the net additional management costs will be in the order of \$2m per year (double our Stage 2 estimate, in response to the factors cited in the previous paragraph). The new national park will also require a capital injection in order to raise the standards of services in the park to those required by its new status. The level of funding required will depend on the level of services the Government wishes to provide, but our overall analysis (as summarised below) assumes sufficient investment to adequately protect the parks values and to attract more tourists, particularly to the hinterland. Up to a point at least, additional investment in visitor services and infrastructure is likely to be recouped in additional visitor expenditure.

SOCIAL AND ECONOMIC STUDIES IN THE ANGAHOOK-OTWAY STUDY AREA

Several people submitted the view to VEAC that the existing parks in the Otways were already under-resourced and that adding to the area of parks would only exacerbate this problem. The most recent example of park implementation contradicts this assertion, as funding allocated to implementing the Box-Ironbark parks and reserves (and other recommendations) was \$20.8m over four years. This amount included financial assistance to those that were directly disadvantaged by the establishment of the parks, and a range of other programs for park management, recreation and firewood supply. Our main report provides further details on this example, and also details expenditure on park management by DSE/NRE and PV over the past eight years. Expenditure on park management has trended upwards over this period, even in real terms (i.e. net of inflationary increases), showing an increase of about 75 percent over the period. These figures include a component of the \$20.8m referred to above.

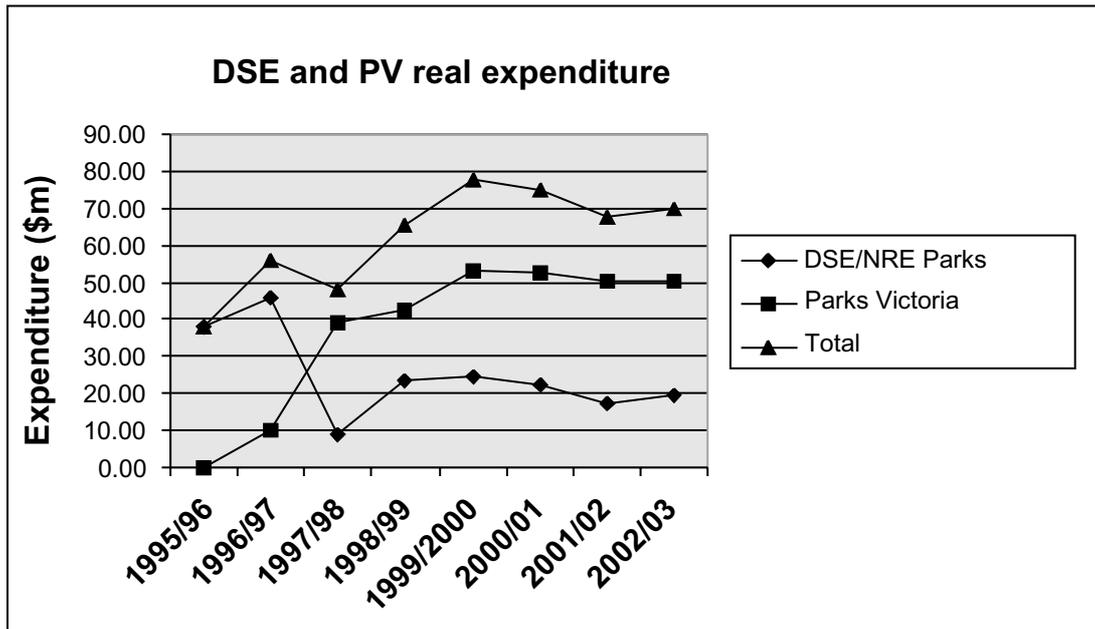


Figure 1 DSE and PV real expenditure on park management

(Source: National Parks Act Annual Reports)

- Notes:
1. National Parks Act funding varies from year to year according to whether it includes capital asset charges or one-off funding (for example for fire fighting or roading), and whether any funds have been carried over from the previous year. The parks estate also grew during this period, primarily with the addition of the Marine National Parks and sanctuaries, and Box-Ironbark parks.
 2. Parks Victoria expenditure above excludes all metropolitan park costs, but includes expenditure on numerous other areas managed by Parks Victoria.

1.4 TOURISM AND RECREATION

The study area is located in the *Great Ocean Road Tourism Product Region* (GOR) as defined by Tourism Victoria. This is an extensive region which covers ten municipalities and extends from Geelong to Nelson on the South Australian border. This region has experienced considerable growth in tourism in the past few years. Significantly, the GOR region attracts the highest share of visitors outside metropolitan Melbourne according to Tourism Victoria, and the region has become an icon in the marketing of Victoria as a tourism destination.

In 2000, the GOR region attracted an estimated nine million visitors and this comprised 66% domestic day trip visits, 30% domestic overnight stays, and 4% international visitors.

1.4.1 TOURISM AND RECREATION ACTIVITIES ON PUBLIC LAND

The study area offers a combination of natural and developed tourism attractions for visitors. Public land in the region provides the basis for a diverse range of recreation activities including bushwalking, picnicking, fishing, surfing, diving, forest drives, camping and four-wheel driving. The coastal environment includes shipwreck sites and high sea cliffs.

Visiting national parks and state forests, along with bushwalking, were included among the ten most popular visitor activities in the West RFA region.

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The Otway Ranges are the setting for many visits by tourists:

- many of the cultural heritage attractions of the area are located in forest reserves;
- people visiting friends and relatives may use the local forests for recreational activities;
- tourist drives travel through Otway Ranges landscapes; and
- forest scenery provides the setting for historic towns.

Most recreation and tourism activities will continue to be permitted activities in the national and forest parks recommended by VEAC, although it should be noted some have been or will be subject to conditions or restrictions such as some activities not currently permitted in closed catchments. Some activities will be only allowed in certain areas or under defined circumstances.

The contribution of the proposed parks to tourism in the region is likely to be significant. Parks Victoria is currently undertaking a 'Levels of Service Program' which inventories and compares the services offered by parks in the state. With appropriate government support, the existing Otways National Park could rise from a Level C or D park, to Level A (as the Otway Ranges National Park) – giving it the same ranking as the Grampians and Wilsons Promontory National Parks. This elevated status would clearly have significant implications for the added value of tourism, subject to the caveats that we discuss elsewhere with respect to possible congestion problems and the attractiveness of hinterland sections of the parks.

1.4.2 ESTIMATED NUMBERS OF VISITORS TO PARKS IN THE STUDY AREA

There is some evidence that visitation has been increasing for the Angahook-Lorne State Park but decreasing for the Otway National Park. Visitor numbers are dependent on weather and the activities permitted in parks, among other things. However, there is a perception among some Parks Victoria staff that people are shifting their interests from outdoor activities in parks to other sources of recreation.

There were approximately one million visitors each year to parks in the study area during the period 1997/98 to 2000/2001.

These visitors comprise:

- **visitors** from the local area who use the public lands for recreation — estimated at approximately 350,000 visit days per year; and
- **tourists** — estimated at approximately 650,000 visit days per year.

These estimates are based on the proportion of local visitors (35 percent) versus tourists (65 percent) in the most recent comparable study.

We have adopted a definition used by Tourism Victoria which describes a tourist as someone who has travelled more than 50 km for a day-trip or overnight stay.

The visitor figures from Parks Victoria may be based on vehicle counts at the entry to parks, or sample head counts by staff at irregular intervals, and are therefore not rigorously based.

1.4.3 ECONOMIC VALUATION OF RECREATION AND TOURISM

The unit values for the net economic contribution for visitors to parks/reserves are based mainly on another consultancy undertaken for NRE (Read Sturgess & Associates 1999¹). That consultancy developed a generalised travel-cost model for the repeatable measurement of the economic value of recreation in parks. Valuations of recreational use were undertaken for approximately 30 metropolitan parks in Melbourne and 35 national parks in rural Victoria.

It included consideration of the following parks of relevance to VEAC's recommendations: the Otway National Park; the Angahook-Lorne State Park; the Melba Gully State Park; and the Carlisle State Park.

Three of the parks in the study area are in the top twelve parks in the State in terms of their economic contribution, measured as 'consumer surplus' (refer to the main report). Carlisle State Park is the only park in the study area that has relatively little economic impact – largely due to low visitor numbers.

¹ See the full report for complete citations.

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In the period since the Read Sturgess & Associates study was completed (1997/98), visitor numbers for Angahook-Lorne State Park appear to have increased, while those for Carlisle State Park, Melba Gully State Park and Otway National Park appear to have decreased.

The existing Otway National Park attracts consumer surpluses of approximately \$36 per visitor day while the state parks range from \$10 to \$20 per visitor day.

Based on the figures from the Read Sturgess & Associates study, we assume unit values of \$30 per visitor day for national parks in the area; and \$15 per day for state parks, state forests, and forest parks.

There appear to be few reliable visitor data for state forests in the study area. A 1995 Read Sturgess & Associates study estimated that there were approximately 55,000 visitors to state forests in the Otway Forest Management Area in 1994-95, consisting of 24,000 day visitors, 15,000 campers and 16,000 'disperse' uses. However, these figures may be underestimates.

We assume no change in the visitation to the state forest areas that VEAC proposes to be included in Forest Park.

By applying the above unit values to the estimates of present visitation at each park, it was estimated that the net economic surplus due to the *existing* level of recreation and tourism at sites affected by VEAC's recommendations would be approximately \$25m per year.

A change in status from state forest to forest park, or from state park to national park, is likely to increase visitation in most instances. The precise scale of change cannot be predicted with certainty, since this depends on a variety of factors including:

- accessibility to major markets
- nature of the scenic resource
- presence of key attractors (including well-known natural or cultural heritage attractions)
- potential activities available for visitors
- existing level of investment in surrounding tourist facilities
- expenditure by park managers on facilities and promotion

The likely increase in visitation, based on two previous cases where land has changed designation from state forest to national park, is an increase of 30 percent in visitation following designation as a national park. This assumption is important to the benefit-cost analysis and to the analysis of regional economic activity.

From a State-wide perspective, increasing visitor numbers for expanded Otway Ranges parks may be at the expense of visitation to other parks in the State. It is also debatable whether all of the increases noted should be attributed to the nature of the parks. For example, it may not be necessary to increase the area of the national park to the extent proposed as many of the additional tourists may go no further than the existing boundaries of the Angahook-Lorne State Park (this is not to suggest that reducing the proposed size of the national park would be desirable as the biodiversity benefits would be diminished). For these reasons we discount the increases to 10 percent for the pessimistic case, and 20 percent for the conservative case, while setting the optimistic case at 30 percent.

We make the conservative assumption that the above increases apply to visitors to the expanded national park and not to the establishment of forest parks.

As a result of these analyses, (10, 20 or 30 percent increases in current visitor numbers multiplied by \$30 per day for every extra visitor) the increases in net economic values for tourism that potentially arise as a result of VEAC's recommendations for the national park are estimated to be approximately \$2.4m per year in the pessimistic case, \$4.8m per year in the conservative case, and \$7.2m per year in the optimistic case. These figures are unchanged from the Stage 2 report as they are unlikely to be sensitive to the changes made by VEAC between the Draft Proposals Paper and the Final Report.

1.4.4 REGIONAL ECONOMIC ACTIVITY: EXPENDITURE AND EMPLOYMENT

Tourism expenditure represents income for the study area. Direct expenditure on tourism to the public lands of the study area generates upstream and downstream jobs in other parts of the local and Victorian economy. In this case, a significant proportion of these indirect jobs is likely to be in the main towns of the study area — for example in retailing, wholesaling and distribution.

It is assumed that the average expenditure by *local visitors* on their recreation on public land is spent mainly on food and transport, and is equivalent to the food expenditure of tourists in the Victorian Regional Travel and Tourism

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Survey (approximately \$10 per person). We earlier estimated that there were approximately 350,000 local visit days to existing parks in the study area. Local expenditure on recreation in public lands in the study area is therefore approximately \$3.5 million per year (not including visits to state forests).

The expenditure by visitors to public land is estimated as follows:

- Nearby residents account for 35 per cent of all visitors to public land, with an average expenditure of approximately \$10 per person per day.
- Tourists (i.e., those travelling more than 50 km) account for 65 percent of all visitors to public land, with an average expenditure of \$36 per person per day.

The contribution of the existing 650,000 *tourists* to the regional economy is estimated to be approximately \$23.4 million. It is estimated that each \$100,000 in expenditure on tourism and recreation would support one full-time job equivalent. The expenditure by tourists would therefore lead to the employment of about 234 people. The expenditure by local visitors would support an additional 35 jobs.

The balance of visitation between local visitors and tourists will vary depending on the park in question.

The total contribution of tourism and recreation, in terms of expenditure, is therefore currently about \$27 million per year, employing approximately 270 people.

In the optimistic case (30 percent increase in visitation), additional *expenditure* is estimated to be approximately \$6.5 million per year. The additional total expenditure would therefore support approximately 65 additional jobs, located mainly throughout the study area, but also at service outlets along the highway between Melbourne and the study area.

In the conservative case, additional expenditure is estimated to be approximately \$4.3m, supporting an additional 43 jobs.

In the pessimistic case, additional expenditure is estimated to be approximately \$2.1m, supporting an additional 21 jobs.

The additional expenditure from tourism would be expended mainly in the towns where commercial facilities are able to cater for visitors. The towns likely to benefit most from the increase in visitation are the coastal towns of Anglesea, Aireys Inlet, Lorne, and Apollo Bay. The inland city of Colac should also benefit.

Smaller inland and coastal towns would only benefit significantly if additional attractions and visitor facilities were located near them. The DSE Otway hinterland proposal to establish tourist nodes and zones in inland areas is consistent with attracting a greater share of visitor expenditure to these areas.

There is a strong case for upgrading infrastructure in the hinterland of the study area in order to ameliorate the adverse congestion effects of increased tourism along the coastal fringe. This would also have the effect of redistributing benefits to inland towns.

Various regional strategies point to the need to increase the number of overnight visitors while decreasing the number of day trips to ease congestion, particularly on the Great Ocean Road.

Geelong Otway Tourism in its submission to the VEAC Draft Proposals Paper claims that these strategies are already working and provides the following data for the region:

- the number of *day trips* to the Geelong Otway Tourism region is *declining*. The number of day trips has decreased from 4.68 million in 1998 to 3.38 million in 2002 – an average decrease of 4.5 percent per year;
- the number of *domestic overnight trips* to the region is *increasing*. The number of domestic overnight trips has increased from 1.97 million in 1998 to 2.15 million in 2002, almost a 2 percent increase per year; and
- the number of *international visitors* to the region is *increasing*. The number of international visitors has increased from 73,000 visitors in 1998 to 83,000 in 2002, an average annual increase of 2.7 percent.

Our estimates of additional tourism values provided by the expanded parks do not distinguish between coastal and hinterland effects, or allow for the costs of congestion. Rather, we assume that the VEAC recommendations for the new parks should be seen in the light of other strategies being developed for the region – such as that for the Great Ocean Road Region (DSE 2004). These strategies point to the need to attract tourists to hinterland areas through improved infrastructure – including roads, accommodation and dining facilities, and through additional attractions such as the Otway Fly. The development of appropriate visitor facilities within parks which include information and dining services should also be investigated – at least for the hinterland sections of the forest park.

1.4.5 INDUSTRY TRENDS

Tourism as a whole is an industry which is forecast to grow strongly throughout Australia. In 1997, growth in the number of international visitors to Victoria was forecast by Tourism Victoria to be 9 percent per year, although these forecasts were revised downwards following the economic downturn in Asia, and more recent terrorism-related events. The Tourism Forecasting Council forecasts that total domestic nights are expected to grow at an annual rate of about 2 percent during the period 2001-2012. Day visitors to the Great Ocean Road Region increased by about 5 percent per annum over the period 1998-2000.

An Arup (2002) study² estimated that over the next 8 years, growth rates in traffic (including industry and tourism) in the study area are likely to be:

- Great Ocean Road – 4 percent per annum
- Princes Highway West (Geelong to Colac) – 3.5 percent per annum
- Princes Highway West (Colac to Warrnambool) – 2.5 percent per annum

Small towns that are highly reliant on broadacre farming for their economic survival are most likely to be in decline. An ABARE (2000) report shows that the demand for farm services has not kept pace with the growth in other services such as tourism and hospitality and in remote areas, employment in agriculture, forestry and fishing fell by 15 per cent between 1986 and 1996. In contrast, employment in accommodation, cafes and restaurants rose by 40 per cent and by 56 per cent in cultural and recreational services over the same period.

Real growth in visitor numbers to the study area will depend on the development of new attractions and better marketing of existing tourism products. The various tourism development plans for the regions comprising the study area suggest the development of a variety of new tourism attractions.

While it is important to avoid over-estimating potential visitor numbers and tourism benefits from VEAC recommendations, it is also important not to under-estimate them. Tourism numbers will be subject to fluctuations from year to year but the underlying forces leading to increased tourism include shifts in consumer preferences from consumption of primary commodities to participation in nature-based activities as disposable incomes rise.

1.5 TIMBER HARVESTING AND RELATED ACTIVITIES

It is Government policy to phase out logging and woodchipping in the Otways by 2008 and the implications of this policy are outside the scope of this study. Our role is to assess the effects of the VEAC recommendations with the impacts of existing government policy appearing in the base case for the benefit-cost and social impact analysis.

Several submissions to the Draft Proposals Paper maintained the criticisms of earlier submission periods, namely that our study should include assessments of all the economic, environmental and social impacts of both the government's decision to phase out logging in the Otways, and the impacts of VEAC's recommendations. Some also suggested that we should have undertaken a regional input/output analysis to quantify the income and employment effects of the phasing out of logging.

We agree in principle that it is normally preferable for public policy proposals to be assessed against economic, environmental and social criteria before being implemented by government. In practice it is frequently the case that other considerations override this course of action. To our knowledge there has been no such assessment of the phasing out of logging and woodchipping. The brief and budget for the present study did not cover this issue. Therefore our study does not assess all the economic, environmental or social impacts resulting from the land use changes that may take place as a consequence of both the government's decision and VEAC's subsequent recommendations. We deal only with the latter.

One aspect of the VEAC recommendations relates to the possibility of immediate cessation of logging in the areas recommend for national park. One remaining sawlog licensee is affected by the recommendations – with entitlements amounting to approximately 20,000 cubic metres of sawlogs per year until 30 June 2008. The entitlements under the licence conditions include access to Mountain Ash and Mixed Species sawlogs.

Based on information provided by DSE, the potential to harvest sufficient quantities of Mountain Ash in the recommended forest park area is limited and may not be sufficient to meet fully the entitlements to 2008.

The outcome for Mixed Species harvesting as a consequence of the recommendations is such that commitments for these sawlogs could probably be met outside the new area of national park. However further field work would be

² The Arup technical report supports the DSE (2004) strategy document for the Great Ocean Road Region – see our main report for the full citation.

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necessary to confirm the availability of Mixed Species outside the national park area.

In our view there are **at least** three and potentially many more options:

- allow harvesting to continue for the next four years within the new national park areas in order to meet commitments (that is, delay implementation of the relevant areas of the national park). This option would represent a significant compromise to the integrity of the national park concept and the resultant controversy is likely to lead to associated added costs in terms of management, legal proceedings, enforcement and so on.
- buy out the rights for the sawlog committed. Because it is likely that the Mixed Species can be sourced from the forest park areas, the buy out could be restricted to the remaining Mountain Ash component of the entitlement.
- investigate the possibility of providing Mountain Ash logs from east of Melbourne, including the possibility of salvage logs from the areas damaged by the 2002/03 fires or from the Central Highlands. Transport costs may be a constraint. This option would need to be adopted soon in the case of fire salvage material, due to degradation of log quality over time.

In the absence of detailed information on benefits and costs, we favour some combination of the second and third options.

We are assuming in all this that there would be no constraints on harvesting within the forest park areas for the next four years, other than those which currently exist in state forest. However, we note that due to their 'park' status, there may be opposition to continued harvesting from these areas.

1.6 OTHER FOREST-BASED PRODUCTS

In preparing its recommendations, VEAC has endeavoured to minimise the negative effects on industries operating on public land in the Otways. In our main report we include consideration of the impacts of VEAC recommendations on all industries in the study area.

Minor Wood Products - In addition to the production of eucalypt sawlogs and woodchips, the public land forests are a source of specialty timber, firewood, timber for fencing, poles and spars, hobby wood, logs for competitive wood chopping, and tea-tree stakes. Minor wood products are not included in the Government policy to phase out logging and woodchip production in the Otways.

Firewood is harvested by commercial firewood cutters as well as by individuals – and mostly supplies local markets including Geelong and Colac. Specialty timbers, predominantly blackwood, are mostly sourced during eucalypt logging programs, with the other forms of forest product mostly harvested from the foothill forests on the northern flank of the Otways.

An Otways timber cutter sells blocks of fiddleback Blackwood to the Maton Guitars factory in Melbourne. Maton produces Australian Blackwood Guitars, which are mostly exported – they are a prized item and sell for up to several thousand dollars each. The harvesting of fiddleback Blackwood is selective – involving the identification and cutting of about one in 300 trees. This is clearly a high value-added activity but there are no data on the extent of available fiddleback Blackwood. URS foresters doubt that the activity is sustainable in the medium to long term. Despite the high value-added nature of the activity, its net economic contribution is likely to be small relative to other values in the parks.

The most economically significant minor product from the state forests is firewood. For 2002/03 it is estimated that a total of about 4,000 cubic metres was harvested for commercial and domestic uses. The gross value of this output at \$80 per cubic metre is \$320,000.

The net economic contribution of firewood is calculated to be about \$7 per cubic metre, this gives a net economic contribution from firewood for the study area of \$28,000 per year. The economic importance of the firewood industry in the Otways is small compared with other areas of the State.

Our conclusion is that the net economic contribution of minor wood products for the Otways is unlikely to be significant and we exclude it from the benefit-cost analysis. However, some producers may be adversely affected by the impacts of the VEAC recommendations and we recommend that their cases be considered individually. Some local consumers of firewood may also be adversely affected but the reductions in volumes available as a consequence of the VEAC recommendations are likely to have little impact on prices in the State's market for firewood.

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Apiculture - Much of the public lands of the study area are available for apiculture. In the past, beekeepers have used sites in the Otway National Park, throughout the state forests, and on other public land. Most of the sites previously used have fallen into disuse. Beekeeping is no longer permitted in the Otway National Park. Currently there are three designated apiary sites, of which two are currently unoccupied and have been unlicensed for a number of years. The currently licensed (but, in recent years, unoccupied) public land apiary right is in the Eumeralla Flora Reserve. Bees from hives located on private land may make use of honey flows and nectar resources located within adjoining public land. The eucalypt species of the foothill forests are an important source of honey.

ABS provides estimates of the annual production of honey in each State, but those estimates exclude beekeeping operations with less than 320 hives. Gibbs and Muirhead (1998) have taken the ABS estimates and added an allowance for the likely level of production from bee keeping operations with less than 320 hives, and concluded that the total annual production from all hives registered in Victoria would be about 5,000 tonnes from Victoria in an average season.

The apiary industry is of growing importance to the Victorian economy, partly because of the growing need for pollination services in the state's northern irrigation districts – particularly for almond production. We estimate the *gross economic value* of apiculture in Victoria to be approximately \$20-30m per year, based on data contained in Essential Economics and Read Sturgess & Associates (1998). These figures include returns to beekeepers and processors. The *net economic contribution* of Victorian beekeepers (above basic wages) is in the range \$1-2m per year.

Available bee sites in Victoria are largely all allocated – both on private and public land. It is therefore difficult to find alternative sites if some are lost due to VEAC's recommendations. The return on capital for beekeepers is high relative to that for most other industries so there is active competition for sites. Net economic contribution per site is of the order of \$1,000-1,500 per year, but from the perspective of beekeepers faced with losing a site, the net losses may be of the order of \$5,000-15,000 per site per year, partly because they would factor in their lost return on labour, assuming that no other sites became available and that they were reluctant to take up some other form of part-time employment. However, there appears to be little demand for sites in the Otways and there is considerable potential to find alternative sites for that recommended to be incorporated in the national park and closed – notably in the 40,000 ha recommended forest park.

As in the case of minor wood products, we have excluded honey production from the benefit-cost analysis while recommending special consideration for the sole producer if a disadvantage as a result of the VEAC recommendations can be demonstrated.

Extraction of Sand, Gravel and Stone - The Otways public lands are an important source for many extractive industry products, and no current operations will be affected by the recommendations – they will continue either outside the proposed national park, or under provisions of the *National Parks Act 1975* that allow existing operations to continue. New licences can be issued in all public land categories (generally subject to approval by the Minister for the Environment) except the proposed national park.

Mining and Exploration - There are no operating mines on public land in the Angahook-Otway study area, although some public land is subject to exploration licences. It is proposed that these licences be allowed to continue until they expire when they may be renewed. New licences can be issued in all public land categories (generally subject to approval by the Minister for the Environment) except the proposed national park.

Although there is very little history of mining, and little current mining or exploration activity in the Angahook-Otway study area, the mining industry raised several issues in the submission period following the Draft Proposals Paper – including claims that the establishment of new or expanded national parks delayed, prohibited or in other ways led to Victoria missing out on potentially profitable mining operations.

In industry submissions it was estimated that the cost to mining of designating 15 percent of Victoria in state and national parks could amount to as much as \$100m per year. This is a gross figure and would approximate a net economic contribution of about \$10m per year. The expanded Otway Ranges National Park represents about a 3 percent increase in the total area of parks in Victoria, so on this basis the claimed reduction in net economic contribution could be about \$0.3m per year.

However, the Otways do not have a history of significant exploration expenditure or mining – other than for gravel and stone. It is our view that it is unlikely that the future expected returns from mining in the Otways would approach the estimates for gold mining in the Box-Ironbark parks (about \$0.05-0.15m per year for an area which *does* have a history of mining). In other words, they would be likely to be small relative to the other values in the recommended national park.

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Industry submissions also referred to two other matters – costly delays in processing Section 40 consents for exploration licences that existed before a national park was established; and loss of knowledge acquisition through prohibiting any drilling in national parks. The second matter involves an argument that environmentally benign drilling in national parks might allow the acquisition of new knowledge that may facilitate successful mining operations *outside parks*. It was claimed that exploration on public land is more easily undertaken than in farmland where geological features are masked by various forms of land use. This argument may reinforce the case for improving the administration of existing exploration licences that fall within the new national park but there would be strong opposition outside the industry to drilling in other areas of the park.

In summary, we agree that the opportunity costs of discouraging or prohibiting mining in the Otways are not zero, but it is likely that they are small relative to other values in the park. The Section 40 issues should be investigated and reviewed from operational and policy points of view – as was recommended by the ECC in the case of the Box-Ironbark parks.

Agricultural Use of Public Land - There have been some changes since the Stage 2 report in terms of the number of licences and the areas affected – mainly due to improved mapping and data rather than new areas added to parks.

There are around 602 current licences, covering about 2138 ha, for grazing domestic stock on public land in the Otways. Nearly all of these licences (94 percent by number, 92 percent by area) will remain unaffected. The proposals will result in cancellation of all or part of 39 licences, covering about 300 ha, although only around 196 ha is actually grazed. Also, implementation of the proposals may require fencing of some of the currently licensed areas, particularly public land along river and stream frontages.

The net economic impact of VEAC proposals on grazing licences is likely to be small (approximately \$20,000 per year) but special consideration should be given in the implementation phase to those licensees who may be adversely affected – the costs to them will appear to be greater than the loss of net economic contribution to the economy. The loss of the licences may have a greater impact in some cases than is apparent from simply considering the size of the area affected as they may play a strategic role in grazing systems. However, it is unlikely that farm viability will be at risk due to the licence cancellations.

Eel Production – The eel fishery is a relatively small but important export fishery for Victoria. While greatly affected by seasonal factors, including drought, state-wide production averages around 280 tonnes per year with a gross value of \$1.4-4.7m. The catching and processing sectors of the fishery employ up to 70 people across Victoria in a good season (DNRE 1999).

If we assume a 10 percent return on capital invested in the industry, the net economic contribution for Victoria is about \$140,000 to \$470,000 per year.

Under VEAC recommendations, eel fishing would be phased out within ten years from sections of the lower Gellibrand and lower Aire Rivers, and prohibited immediately from Lake Elizabeth. In consultation with the industry, VEAC staff have estimated that the existing eel harvest in the study area employs about three full time equivalents and has a gross value of around \$100,000 per year, representing two to seven percent of the total for Victoria. The net economic contribution of the local fishery is about \$10,000 per year – small by comparison with other values in the parks. Nevertheless, there are likely to be claims for assistance if these sections of the fishery are ultimately closed.

Horseriding – A number of submissions to the Draft Proposals Paper suggested that horseriding in general, and commercial horseriding activities in particular, would be adversely affected by VEAC's recommendations. The submitters felt that there would be restrictions placed on where horses could be taken and that because dogs were to be excluded from the national park, many of their customers would go elsewhere.

VEAC has responded to these concerns, at least in part, by removing some areas, such as parts of Barongarook forest and areas near Barwon Downs, from the national park and placing them in forest park. VEAC has also provided for horseriding in the former state forest area of the Jancourt Nature Conservation Reserve and made specific reference to continuing access to currently used tracks in key areas such as around Aireys Inlet, Anglesea and Cape Otway.

Despite these adjustments, it is likely that there will still be some restriction on recreational and commercial activities involving horses and accompanying dogs. However, for the commercial activities there should be expanded opportunities arising out of the increased numbers of visitors to the region that are expected as a result of the significant upgrading of parks. Individual cases of genuine disadvantage that might remain should be dealt with on a case by case basis.

1.7 BENEFITS AND COSTS OF VEAC'S RECOMMENDATIONS

As stated earlier, it is Government policy to phase out logging and woodchip production in the Otways and the implications of this policy are outside the scope of this study. Our role is to assess the effects of the VEAC recommendations with the impacts of existing Government policy appearing in the base case for the benefit-cost and social impact analysis. In other words, we do not include the net loss of timber value from the phasing out of logging in what follows.

We have concluded that a number of industrial and commercial economic impacts of the VEAC recommendations are relatively small and, most particularly, are too small to be included in the comparison of benefits and costs.

The main economic impacts of the VEAC recommendations are to be found in the broad category of biodiversity conservation; and in recreation and tourism. Because of lack of visitor data we were not able to quantify net changes in the recreational impacts in moving from state forest to forest park or national park.

The estimates of the additional costs of park management (\$2m per year) are provisional and may be subject to change – partly depending on whether all of VEAC's recommendations are accepted by government.

Non-use economic values for biodiversity protection in the expanded national park are assumed to be \$5m per annum for the pessimistic case, \$15m per annum for the conservative case, and \$25m per annum for the optimistic case.

The increases in net economic values for tourism that potentially arise as a result of VEAC's recommendations for the national park are estimated to be approximately \$2.4m per year in the pessimistic case, \$4.8m per year in the conservative case, and \$7.2m per year in the optimistic case.

In summary, we estimate that the net increase in economic value that may arise as a consequence of adopting VEAC's recommendations lies in the range \$5.4 - \$30.2m per year, with the 'conservative case' yielding net benefits to Victorians of about \$18m per year, including the 'non-use' value obtained from increased biodiversity protection and after deducting the additional costs of public land management.

Regional impacts

In the optimistic case (30 percent increase in visitation), additional expenditure is estimated to be approximately \$6.5 million per year (excluding the additional expenditure of \$2m per year associated with managing the new parks). The additional total expenditure would therefore support approximately 65 additional jobs, located mainly throughout the study area, but also at service outlets along the highway between Melbourne and the study area.

In the conservative case, additional expenditure is estimated to be approximately \$4.3m, supporting an additional 43 jobs.

In the pessimistic case, additional expenditure is estimated to be approximately \$2.1m, supporting an additional 21 jobs.

The towns likely to benefit most from the increase in visitation are the coastal towns of Anglesea, Aireys Inlet, Lorne, and Apollo Bay and the inland city of Colac.

Smaller inland and coastal towns would only benefit significantly if additional attractions and visitor facilities were located near them. The DSE draft hinterland tourism development plan to establish tourist nodes and zones in inland areas is consistent with attracting a greater share of visitor expenditure to these areas.

There is a strong case for upgrading infrastructure in the hinterland of the study area in order to ameliorate the adverse effects of increased tourism along the coastal fringe. This would also have the effect of redistributing benefits to inland towns.

We have suggested that the individual businesses that actually are adversely affected by VEAC's recommendations should be assisted on a case by case basis in the implementation phase of establishing the parks – should VEAC's recommendations ultimately be adopted by Government.

APPENDIX 5 LIST OF ALL SUBMISSIONS RECEIVED TO THE ANGAHOOK-OTWAY INVESTIGATION

The following lists document submissions received from organisations and individuals in all four submission periods: Submissions were numbered in order of receipt.

- 1 = the submission period following release of the original Angahook-Lorne Notice of Investigation
- 2 = that following release of the revised Angahook-Otway Notice of Investigation
- 3 = that following publication of the Angahook-Otway Investigation Discussion Paper
- 4 = that following publication of the Angahook-Otway Investigation Draft Proposals Paper.

In accordance with the *Victorian Environmental Assessment Council Act 2001*, a copy of each submission has been provided to the Minister for the Environment.

A. SUBMISSIONS FROM ORGANISATIONS

Organisation	Contact	Sub. Period No.			
		1	2	3	4
Aboriginal & Torres Strait Islander Commission	Mr David Pollack	3			
Aboriginal & Torres Strait Islander Services	Mr John Paterson		701		
Aboriginal Affairs Victoria	M- A.V. Cahir		4		
Aireys Inlet District Association	Ms Barbara Leavesley; Dr T.T. Gibson		572	423	
Aireys Inlet Foreshore Reserve Committee of Management	Mr Brian Williams			142	
Aireys Inlet Tourism Association	Mr John Anderson			606	
AKD Softwoods	Mr Neil Harris		597		
Alcoa World Alumina Australia	Mr Phil Cooke; Mr Chris Rolland		227	574	
ALP Otway Ranges Interest Group	Mr Trevor Poulton		223		
ANGAIR Inc	Mr Neil Tucker; Ms Philippa Hesterman		234	386	160
Anglesea Heath Consultative Committee	Dr Barbara Wilson; Ms Elise Jeffery		462	565	
Anglesea Recreation Camp	Mr Trevor Mildenhall			508	
Apollo Bay Chamber of Commerce & Tourism Inc	Ms Liz Carr ; Ms Jackie Carroll		159	720	
Apollo Bay Kennett River Public Reserves Committee of Management	Mr Gary McPike		583	557	
Apollo Bay Landcare Group	Mr Roger Hardley		282	458	480
Ararat & Stawell District Field & Game Inc	Mr Trevor Curran		232		
ARP Inc	Mr Horst Pfeifer			732	
Australian Conservation Foundation	Mr Lindsay Hesketh		458		
Australian Deer Association, Western Victorian Branch	Mr E.H. Wohlers		419		
Australian Greens Party, South West Region (Vic)	Mr Stephen Chenery		321	628	715
Australian Greens Victoria, Otways Branch	Ms Sally-Anne Brown		440		
Australian Heritage Commission	Dr Annabel Wheeler		16		
Australian Motorcycle Trail Riders Association	Mr Peter Ellard		452	499	562
Australian Recreational Fishing Alliance	Mr Horst Pfeifer		730		
Ballarat & District Gem Club	Ms Jan Dyett		406		
Ballarat Bushwalking and Outdoor Club	Mr Ron Kemp			718	
Barwon Water	Mr Ian Davis; Mr Paul Northey; Mr DB. Brockenshire		229	621	387
Bayside Bushwalking Club	Ms Merrill Jusuf		405		
Birds Australia, Victorian Regional Group Conservation Committee	Mr Stuart Dashper		216	605	
Black Rock & Sandringham Conservation Association Inc	Ms Janet Ablitt		93	143	
Blazing Saddles	Ms Caroline Wood; Mr Tim Wood		45	114	
Boroondara Bushwalkers Inc	Ms Jan Clark			446	
Bush Users Group Victoria Inc	Ms Rita Bentley		318	591	
Bush Users Group, Mt Alexander Region	Mr Robin Taylor		430		

Organisation	Contact	Sub. Period No.			
		1	2	3	4
Bushcraft & Mountain Leadership Advisory Board	Ms Margaret Leigh			292	
Calco Timbers Pty Ltd	Mr David Colless		157	9	
Camp Wilson Baptist Centre	Mr Geoff Caldwell		71		
Cape Otway Caravan & Camping Park & Bimbi Park Trail Rides	Mr Cyril Marriner		314		
Cape Otway Centre for Conservation Ecology Pty Ltd	Ms & Mr Lizzie Corke & Shayne Neal			90	
Central Highlands 4X4 Club	Mr Carl Nelson		499		
City of Greater Geelong	Mr Stuart Walker		632		
Colac & District Adult Riding Club	Ms Lisa Stephenson; Ms Robyn Perrin		252	105	
Colac & District Gem Club Inc	Mr Russell Adams		640		
Colac Motorcycle Club	Ms Sandra Barry		146		
Colac Otway Archers	Ms Barbara Kelly			388	
Colac Otway Shire	Mr Rob Davis; Mr Rob Small; Ms Wendy Briggs		471	559	102
Concerned Residents of East Gippsland	Ms Jill Redwood		180		
Construction Forestry Mining and Energy Union	Ms Jane Calvert			566	
Construction Material Processors Association	Mr Mark Halliday; Mr David Eldridge		607	506	
Corangamite Catchment Management Authority	Mr Donald Forsyth; Mr David May		717	695	
Corangamite Shire	Ms Corie Jenkins		417		
Country Fire Authority Barwon Corangamite Area	Mr Bob Flett; Mr Paul Stacchino		716	585	
Country Fire Authority, Otway	Mr Neville Telfer		711		
Deniliquin Four Wheel Drive Club	M- Leigh Carter		699		
Department of Defence	Ms De-Arne Peel		703		
Department of Education and Training	Ms Dina Guest		109		
Department of Primary Industries	Mr Scott Ashby; Mr Dale Seymour		457	452	457
Department of Sustainability & Environment	Prof Lyndsay Neilson		738	587	
Doctors For Native Forests Inc	Dr John Piesse		338		
E.T. & E.W. Murnane Pty Ltd	Mr Michael Murnane		146	713	
Earth Resource Analysis Pty Ltd	Mr Ian Roberts		3		
East Otway Landcare Group	Ms Nicky Stewart		450		
East Otway Residents Group	Ms Noelle Taylor; Mr David Harris; Ms Patricia Dressel		196	199	64
Echuca Moama YMCA Bushwalking Club	Ms Ann Lyons		281		
Edmonds Honey	Mr John Edmonds		490		
Environment Victoria Inc	Ms Nicky Moffat		456		
Essendon Bushwalking Club	Ms Sylvia McLean		148		
Fairhaven - Aireys Inlet Recreation Ground Organisation	Mr Adrian Kennelly; Fr David Clayden		2	68	

A. SUBMISSIONS FROM ORGANISATIONS (continued)

Organisation	Contact	Sub. Period No.			
		1	2	3	4
Federal Chamber of Automotive Industries	Mr Ray Newland				710
Federation of Victorian Walking Clubs (VicWalk) Inc	Mr David Rimmer	68	255	166	
Field & Game Australia Inc	Mr Rod Drew	222	588		
Field Naturalists Club of Ballarat	Mr John Gregurke	73	130		
Field Naturalists Club of Victoria Inc	Mr Jim Walker	331	335	583	
Flinders Environmental Action Group	Mr Christopher Day				698
Forgard Victoria	Mr Roger Smith				290
Forrest & District Community Group	Ms Susan Langridge				470
Four Wheel Drive Victoria	Mr Michael Coldham; Mr Barry Chare				580
Friends of All Rainforests	Mr Gerhart Scheerer				739
Friends of Angahook-Lorne State Park	Ms Margaret MacDonald	13	337	247	165
Friends of Bannockburn Bush	Mr Stuart McCallum	200	367	194	
Friends of Lorne	Mr John Wilson; Ms Carol Baker		224		164
Friends of Moggs Creek	Mr John Dangerfield				181
Friends of Otway National Park	Ms Judi Forrester		226		603
Friends of Queens Park	Ms Ruth Wilson; Ms Nancy Rashleigh		37	578	
Friends of the Earth	Ms Gillian Blair				604
Geelong Bushwalking Club Inc.	Mr David Pinney; Mr Ken Mahar		17	418	434
Geelong Community Forum	Ms Sue Kelly-Turner		221	210	
Geelong Environment Council Inc	Ms Joan Lindros		162	528	659
Geelong Ferret Club	Mr Horst Pfeifer				729
Geelong Field Naturalists Club Inc	Ms Alison Watson; Mr John Bottomley		19	69	634 601
Geelong Four Wheel Drive Club	Mr Darryl Marsland		233		289
Geelong Gem & Mineral Club	Mr Des McKiernan				5
Geelong Greens	Ms Andrea Marian				498
Geelong Gun & Rod Association	Mr Horst Pfeifer; Mr Norm Tanner				728 161
Geelong Otway Tourism Inc	Mr Ross Ebbels		50	443	507
Gellibrand Kawarren Progress Assoc. Inc.	M- R. Shoebridge				672
Gerangamete Flats Landcare Group	M- Chris Callahan		210	258	198
Glen Eira Environment Group Inc	Mr Paul Caine		208	411	605
Great Ocean Road Adventure Tours	Mr Richard McVean				712
Hamilton District 4WD Club Inc	Mr Ross Ball				502
Hancock Victorian Plantations Pty Limited, Ballarat District	Mr Terry McAliece				163
Heritage Victoria	Mr Ray Tonkin				374
Heytesbury District Landcare Network	Ms Rebecca McCann				696
Inkavar Pty Ltd	Mr Peter Nash				474
Jan Juc Coast Action	Mr Graeme Stockton		11		
Johanna River Farm & Cottages	Ms & Mr Helen Chambers & Julian Flack				606
Johanna Seaside Cottages	Ms Joy Evans				152
Kennett River Association Inc	Mr Dennis Livingston		34		
Killalua Alternative Pty Ltd	Mr Stephen Stuart				354
King Valley Educational Pty Ltd	Mr Ken Widdowson				115
Kooroongoora Rockhounds	Ms Jennie Harvie		539	94	
Lakes & Craters Horse Driving Club	Mr Garry Richardson; Mr John Chapman		446		189
Lavers Hill & District Progress Assoc, Community Forestry Committee	Mr Matt Zurbo				10
Lavers Hill & District Progress Association	Mr Steven Lawson				325
Lochard Pony Club					603
Lorne Coast Pty Ltd / Great Ocean Road Tourism Pty Ltd	Mr St John Sutton				88
Lorne Foreshore Committee of Management	Ms Karen Pritchard				106
Lornecare	Mr & Mr Alain Purnell & Michael Callanan				584
Marengo Residents Group	Mr Philip Lawson		64	498	447
Maroondah Gem Club	M- J. Knight				246

Organisation	Contact	Sub. Period No.			
		1	2	3	4
Maton Guitars	Mr Neville Kitchen				24
Melton & District 4WD Club	Mr Gordon Morris				437
Midway Pty Ltd	Mr Paul Backen			156	375
Mitlow Nominees Pty Ltd	Mr Malcolm Clarke				41
Mordialloc Lapidary Club Inc	Ms Suzanne Jones				347
Mr Fern Pty Ltd	Mr & Mrs Les & Rosemary Vulcz				83
National Native Title Tribunal	Mr Tony Shelley			4	
National Parks Advisory Council	Ms Annette Hatten				364
National Trust of Australia (Victoria)	Mr Jim Gardner				505
Nunawading & District Lapidary Club Inc	Mr Phil Toland				500 706
Otway Blackwood Furniture	Mr & Mrs Julie & Alistair Watt			53	294
Otway Environment Council	Mr Stephen Chenery				564
Otway Four Wheel Drive Club Inc	Mr Geoff Wallace; Mr Geoff de la Rue; Ms Lyn Symonds				168 362 518
Otway Gypsy Wagons and Wagon Hire	Mr Graham Nowell				418
Otway Plains Venturer Unit	Mr Geoff de la Rue				316
Otway Planning Association Inc	Mr Hans Fankhanel				160 545 471
Otway Ranges Environment Network	Mr Simon Birrell				211 582 483
Otway Ranges Walking Track Association Inc	Mr Les Nosedo				72 630
Otways Tourism Inc	Ms Bronwynne Calvert; Ms Helen Chambers			220	429
Our Parks	Mr Jim Speirs, Mr Geoff Beilby				332 551 586
Painkalac Pastoral Company Pty Ltd	Mr Graeme McKenzie; Mr Angus McKenzie		6	6	416 126
Parratte Eel Company	Mr James Taylor				295
Powercor Australia	Mr Graeme Fleming				47
Preshil, The Margaret Lyttle Memorial School					639
Prospectors & Miners Association of Victoria	Ms Rita Bentley				590
Purus Energy Limited	Mr Dick Sandner				169
Queenscliffe Community Association Inc.	Ms Joan Kenwood				14
Range Rover Club of Australia , Victoria Branch					450
Sabine Falls Community Management Committee	Dr John Plesse				323
Safetrek Four Wheel Drive Services					448
Santos Ltd, Environment Health & Safety	Ms Catriona McTaggart				61
Scouts Australia, Geelong Region	Mr Bryce Hutton				230 551
Sea Mist Horse Riding	Mr & Mrs Brett & Tina Reid				324
Soudan Holdings Pty Ltd	Mr Christopher Tipler				166 600
South Gippsland Walking Adventure Club	Mr Tim Rothberg				261
South West Victoria Deer Advisory Group	Mr Damien Knight; Mr Craig Mitchell			219	84 488
Southern Otways Indigenous People	Ms Nieka Brewster				433 598
Southwest Ragwort Reference Group	Mr Basil Ryan				285
Sporting Motorcycle Club, Otway Trail Riders	Mr Phil Voigt			9	431 673
Sporting Shooters' Association of Australia	Mr Philip Brown				77 453 117
St Bernard's College, Santa Monica Campus	Mr Mark Smith				170 445
Surf Coast Shire	Cr Beth Davidson; Mr Peter Bollen			20	340 425
Surfers Appreciating Natural Environment	Mr Graeme Stockton			12	614 670
Tallawalla Camp Management Committee	Ms Val Lestrangle				5
Threatened Species Network	Ms Julie Kirkwood				422
Timber Communities Australia Ltd, Northern Tasmanian Regional Office	Mr Adrian Coward				338
Timber Communities Australia, Meander Resource Management Group	Mr Rodney Stagg				320
Timber Communities Australia, Otway Branch	Mr Peter Dynes; Mrs Rosemary Vulcz; Mr Steve Lawson			218	62 411
Timber Communities Australia, Tasmanian State Office	Mr Barry Chipman				307

A. SUBMISSIONS FROM ORGANISATIONS (cont.)

Organisation	Contact	Sub. Period No.			
		1	2	3	4
Timber Communities Australia, Victorian State Office	Ms Kersten Gentle	217			554
Timber Towns Victoria	Cr Malcolm Hole				438
Timboon Field Naturalists Club Inc	Ms Helen Langley		544		538
Tourism Victoria	Mr Wayne Kayler-Thomson		547		
Toyota Landcruiser Club, Geelong Branch	Mr Joe Mortelliti				291
Toyota Landcruiser Club of Australia, Victoria Division	Mr Gary Cooper				693
United Dairyfarmers of Victoria, No 8 District Council	Mr Graeme Prince		635		
United Dairyfarmers of Victoria, Simpson/Princetown Branch	Mr Daniel van Someren			95	
Velkvale Pty Ltd	Mr Peter Duff	21			
VicRoads	Mr David Anderson	459	622	627	
Victoria Police	Mr Vincent Duggan				500
Victorian Association of Forest Industries	Mr Pat Wilson	214	608		
Victorian Eel Fisherman's Association	Mr W.J. Allan				107
Victorian Farmers Federation	Mr Paul Weller	637	705		
Victorian Farmers Federation, Geelong-Colac District	Mr Jim Bufton		413		
Victorian Field and Game Association Colac Inc	Mr Rod Amos				485
Victorian Gem Clubs Association Inc	Ms Jennie Harvie; Mr Tony Annear	464	61	92	
Victorian Hang Gliding & Paragliding Association	Mr Mark Pike				589
Victorian Minerals & Energy Council	Mr Chris Fraser	228	286		
Victorian Mountain Tramping Club Inc	Mr W.Woods, Dr Celesta Fong	326	18		
Victorian National Parks Association	Mr Michael Fendley; Ms Jenny Barnett; Ms Joan Lindros	18	202	532	560
Victorian Piscatorial Council Inc	Mr George Hardwick				628
VicTrack	Mr John Sutton				104
Warrnambool City Council	Mr Paul Gray				472
Warrnambool Four Wheel Drive Club	Ms Diane Riordon		149		
Waverley Gem Club of Victoria Inc	Ms Rae De Niese		485		
Werribee District 4WD Club Inc	Mr Paul Crowe				103
Westcoast Adventure	Mr Graham Turner				196
Western Coastal Board	Mr Adrian Volders; Ms Jennifer Lilburn	215	287		
Western Victorian Axeman's Association Inc	Ms Ann Duryea		158		
Wilderness Society	Mr Gavan McFadzean	197	582		
Workers for Wetlands	Mr Horst Pfeifer		731		
Wye River Residents Action Group	Ms Sherryl Smith	186	706	516	

B. SUBMISSIONS FROM INDIVIDUALS

Name	Sub. Period No.			
	1	2	3	4
M- A.M. Abraham				686
M- G. Abraham				687
M- K.E., G. & K. Ackerley		705		
Mr & Ms John & Judy Adams				589
Ms Judy Adams	213			
Mr Nick Adams				363
Mr Russell Adams				617
Mr Adam Addison	402			
Mr Michael Adler				341
Mr Jack Aisbett				210
Ms Andrea Aitken				333
M- Emrana Alavi		60		
Ms Julie Alexander				355
Ms Mary Alexander		263		
Mr Troy Alexander		243		
Mr Des Alford				580
Mr Neville Alford				513
Ms Patricia Alford	303			
M- Trush Alford				569
Mr & Ms Garry & Justine Allan		178	307	
Ms Gwenda Allan				558
Mr Peter Allard				512
Mr Graeme Allen				56
M- Jai Allison				317
Miss Samantha Ambrosy		190		
Ms Flora Anderson				156
Mr Ian Anderson				267
Ms Julie Anderson				40
Ms Sharyn Anderson				370
Ms Pam Andrews	421			
M- Mirjam Anschuetz				28
Mr Evan Anson				256
Mr Robert Anson				681
Mr Ryan Anthony				586
Ms Angela Antonas		200		
M- Jamie Antonio				503
Mr Kenneth Apted				619
Mr Anthony Aristidou				339
M- Ariane Armstrong	418			
Mr & Mrs G. Armstrong			32	
Ms Kallie Armstrong				355
M- E. Arnaud	361			
Mr Ken Asplin	48	11	121	
Ms Daisy Atkin-Harrison	400			
Ms Lynda Avery				303
Mr Phil Avery			16	
Mr & Ms Ed & Marsha Babington				177
Mr Daryl Backwell				192
Mr Rodney Bahn		125		
Ms Rosemary Baillie				206
Ms Janet Baird		99	129	
Mr Rob Balaz			303	
Ms Elana Balderstone				297
Mr Robert Baldwin			212	
Ms Jocelyn Banks	36	15	78	
Ms Fiona Baranowski	238	537		
Mr Ian Barbour			300	
Ms Kat Barker				634
Mr David Barkley				306
Ms Beryl Barlow		376	380	
Mr Theo Barlow	250	663	399	
Mr Marcel Barnard			460	
M- S. Barnes			195	
Ms Alison Barr			525	

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.				Name	Sub. Period No.				Name	Sub. Period No.			
	1	2	3	4		1	2	3	4		1	2	3	4
Mr Peter Barr			709		Mr & Ms Peter & Lori Bowditch			3		Ms Joan Cashion			459	
Mr Carlos Barrientos		293			Ms Linda Bradburn			704		Mr John Cashion			456	
Mr Doug Barry		51			Mr Bill Bradshaw			421		Mr & Ms Frank & Angela Cassar			283	
Mr Glenn Barry		49			Ms Delia Bradshaw			462		Ms Karina Castan			212	
Ms Lorraine Barry		50			Mr David Brain			389		Mr Alan Cauthorn			610	
Ms Makayla Barry		45			Mr Rodney Brain			611		Mr Simon Cave			694	
Ms Sandra Barry		145			M- R.A. Bramich			574		Mr Louis Center			188	
Mr Robert Barton		624			Ms Julie Brand			37		Mr Luke Chamberlain			239	
Ms Vicky Basdeo			230		Mr Geoffrey Brauer			258 420		Ms Debra Chant			549	
Mr Frederick Bassett		43			Mr Andy Breaden			481		M- Alex Chapman			27	
Mr Denis Battersby		123			Mr Chris Breaden			378		Mr Graeme Chapman			517	
Mr Alan Baxter			58		Ms Joy Breaden			391		Ms Monica Chapman			570	
Mr David Baxter			384		Mr Lance Breguet			565		Mr Barry Chare			535	
Mr Graeme Baynes		698			Ms Nieka Brewster			161 592		Mr Adam Charleston			598 597	
Mr Kim Bazley		166			Mr Brett Bridges			239 571		Mr Dwight Cheesman			577	
Ms Georgina Beale			406		Ms Emily Brien			327		Mr Tommy Chen			227	
Mr Grant Beale		256			Mr Michael Briese			273		Mr Stephen Chenery		15 319 474	525	
Mr Len Beale			373		Mr Roger Brink			149		Mr Russell Chidgey			647	
Ms Rosamond Beale			133		Ms C.M. Bronk			724		Mr Jason Childs			617	
Ms & Mr Anne Beaumont & John Cecile			38		Mr Andrew Brook			132		Ms Jan Chivers			182	
Ms Kylie Beck			519		Ms Susan Brook			129		Ms Kate Clapton			329	
Ms & Mr Helen & John Becley		383			Ms Anna Broome			503		M- Chris Clare			36	
Mr Lionel Beer			171		Mr Greg Brown			312 155		Ms Fiona Clark			153	
Mr Reinhard Behrend			46		Ms Lea Brown			438		Ms Margaret Clark			73	
Mr & Mrs G.V. & Z.R. Beilby		70 473	494		Ms & Mr Mary & Simon Brown			399		Mr Rod Clark			318 309	
Mr Chris Bell		103			Mr & Ms Robert & Glenys Brown			377		Ms Sharon Clark			326	
Ms Judy Bell		38			Mr Tony Brown			128		Ms Susanne Clark			112	
Mr Ron Bell			625		Mr Brian Browne			702		Ms Lucille Clements			69	
Mr Marc Bendel			34		Ms Frances Bruce			254		Mr David Close			351	
Ms Justine Benne			455		Mrs Margaret Brumley			398		Mr Neil Clough			221	
Ms Christa Bennett		177 461	716		Mr Chris Bryce			464		Ms J. Cock			284	
Mr Denis Bennett			304		Ms Janelle Bryce			80		Mr Harold Cockerell			30 428	
Mr Michael Benson			395		Mr John Bryoges			394		Mr James Cockine			271	
Mrs Rita Benson			639		Mr Anthony Buckle			725		M- Selime Cocoli			346	
Dr Robert Benson			637		Ms Mia Bullen			350		Mr Graham Coe			82	
Mr Andrew Benthe			553		M- D.W. Bunting			453		Mr Serge Coffa			296	
Ms Anny Beresford		63			Mr David Burgess			58 414		M- & M- Cohen			228	
Mr Phillip Bernoth			532		Mr Ian Burgess			177		M- Chris Cole			109	
Mr Ken Best		56 4	71		Mr & Ms Beryl & Howard Bush			371		Ms Mary Coleman			536	
Mr Wim Bezemer		444			Ms Helen Butler			363		M- R.A. Coleman			527	
Ms Gian Bhogal			511		Mr Bob Butt			16 425		Ms & Ms Janine Coles & Carol Barnes			534	
Mr Nathan Biggins			196		Mr James Butt			462		Mr Neil Collard			469	
M- Kim Billington		407			Mr & Ms John & Lyn Butt			28		Mr Michael Colledge			546	
Mr Malcolm Bird		101			M- R.A. Butt			220		Ms Eileen Colless			26	
Mr & Mrs Henry & Marjorie Birrell		237			Ms Annie Cain			100		Mr Jason Colless			34	
Mrs J. Black		394			Mr Andrew Cairns			108		Mr Shane Colless			25	
Ms Lorraine Black			116		Ms Margaret Cairns			660		Mr Serge Collichia			279	
Mr Steve Black			495		Mr Russell Cairns			657		Ms Angela Collins			39	
M- W. Black		393			Ms Jan Calaby			184 669		M- C.J. Collins			122	
Mr Michael Blair		733			Mr & Ms Julian & Alyssa Calaby			685		Ms Michelle Collins			17	
Ms Susan Blandford		661			Ms Brooke Caldwell			526		Mr Tim Collins			229	
M- Erwin Bleskatit			343		Ms Catherine Callahan			316		M- T.N. Collis			313	
Ms Kirsten Blood			203		Ms Judy Cameron			178 510		Mr Richard Collopy			147 373	
Mr Sharon Blum-Caon			211		Ms Anita Campbell			347		M- S.P. Colvin			104	
Mr John Boaler		167			Mr David Campbell			555		Mr Geoff Connors			253	
Mr Robert Boekel			167		Mr Peter Capp			140		Mr Brett Constable			184	
Mr Nigel Boettiger			195		Mr Steve Cardigan			515		M- Salvina Conti			429	
M- J. Bohauy		377			M- Tamar Carpenter			328		Ms Tracy Cook			47	
Mr Matthew Bolton			197		Mr Hugh Carrigan			454		Mr Trevor Coon			31	
Ms Chloe Booker		433			Mr Russell Carrington			442		Mr Mike Corcoran			595	
Ms Sonia Borg		163			Mr Andrew Carson			607		Ms Meredith Costain			344	
Ms Jennifer Borlingieri		395			Mr Andy Carter			354		Mr Henry Costin			120	
Mr Ian Borrie			113		Mr Gerry Carter			342		Ms Fiona Cottingham			559	
Ms Jenny Bourguignon			157		Mr Patrick Casey			508		Mr Gavin Coulthard			295	

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.			
	1	2	3	4
Ms Danielle Courtney				320
Ms Elaine Coutinho		245		
Mr Brett Cox	141			
Mrs Noel Cox	124			
Mr Benedict Coyne			190	
M- Punjchl Crane			233	
Mr Lachlan Cranitch			330	
Ms Carol Criddle		39		
Ms Ingrid Crosser		180	439	
Ms Christine Croydon		366		
Ms Marietta Cully		377		
Mr & Mrs Dale & Michelle Cunnington		65		
Ms Jenny Cunnington	79	478		
Mr Ron Cunnington			408	
Mr & Mrs Ron & Jenny Cunnington	66		381	
Ms Karen Currell		655		
Ms Mariae Curtain		301		
Ms Edith Cutcliffe		383	646	
M- B.J. Cuth	420			
Ms Stanley Cutler		352		
Ms Jayne D'Arcy-Houlgate		359		
Ms Moreen Dainty	30			
Ms Heather Dale		286		
Ms & Mr Sally & John Daly		85	97	
M- N.E. Daniel			310	
Mr Wayne Daniel		683		
Ms Erin Darbyshire			514	
Ms Mary Daveson		522		
Mr & Ms John Davies & Judy Taylor		358		
Mr Daniel Davies			224	
Mr David Davies		164		
Mr David Davies		20		
Mr Ryan Davies		135		
Mr Wilfred Davis		272		
Mr N. Dawson		455		
Mr Christopher Day			595	
Mr Jos de Jong		317		
Mr Geoff de la Rue		306		
Ms Rhonda Dean			366	
Ms Tanya Deans		87		
Ms Geraldine Debono		290		
Mr Rod Deering		451	322	379
M- & M- Kerr & Robyn Delaforce		14		
Ms Kay Demmler		248	575	709
Mr Neil Dendle			615	417
Ms Kaz Denton		428		
Ms Karin Derkley		246		
Mr Ralph Deszcz	1			
Ms & Mr Jacqui & Ben Deylen		684		
Mr Richard Deylen		676		
Mr Rob Deylen		682		
Mr Tony Deylen		675		
Mr Jim Dhaeze		471		
M- W.J. Dickenson			609	
Ms Janet Dickie		409		
Ms Barbara Dickinson		111		
Ms Lisa Dickinson		110		
Ms Laila Dickson		424		
Ms Pam Dodsworth		390	205	
Mrs Elizabeth Doery		327		
Mr David Dombroski			338	
Mr Alex Donald		289		
Ms & Mr Janet & Alec Donald		85		
Ms Cathy Donovan		183		

Name	Sub. Period No.			
	1	2	3	4
Mr Christian Dorfler				20
Mr David Dorman				209
Dr J.G. Douglas		143	667	
Mr Alan Dow				578
Ms Annabel Dowling			165	
Mr Tony Dowling			206	
Ms Patricia Dressel		21	63	
Ms & Mr Linda & Jaris Drezins		116		
Mr Peter Driscoll			496	
Mr Ryan Drobek			331	
Ms Atrielle Drury		424		
Mr Dean Duckmanton		228		
M- Tien Dung Ta			82	
Mr Brian Dungey			591	
Ms Betsy Dunne		666		
Mr Merv Dunstan		13		
Mr Bruce Dupe		151	23	
Mr Geoff Durham		285	467	
Mr & Ms Ian & Ann Duryea		155		
M- A.G. Duynhoven		106	557	
Mr Anthony Duynhoven		144	495	523
M- J.A. Duynhoven		138		
Ms Julia Duynhoven		145		
M- W.A. & C.A. Duynhoven		87		
Mr & Ms Mark & Wendy Dwyer			226	
Mr Nathan Dyer		167		
Mr Nathan Dyer		193		
Mr & Mrs R. & J. Dykstra			719	
Ms Kerri Eberle		121		
Ms Rebecca Eberle		287		
Mr Michael Eblinger			26	
Ms Wendy Eden		10		
M- & M- R. & L. Edwards			209	
Ms Stephanie Edwards		643		
Ms L.M. Egan		615		
Ms Cheri Elder		694		
Mr Marcus Ellard		315		
Mr Peter Ellard			131	
Mr & Ms John Ellis & Dianne Jones			91	
Ms Catherine Ellis		186		
Ms Janet Ellis			275	
Mr Emmanuel Ellul		253		
Mr Norm Endacott		2	125	
Mr Cornelius Endres			77	
Dr Johannes Engesser			51	
M- Francis Ernens			491	
Mr Paul Ernst		292		
Ms Bianca Erwand			12	
M- D. & A. Evans		268		
Ms Deborah Evans			701	
Mr Reg Evans		381		
Ms Angela Evers			345	
Mr Leo Eyssens		299		
Ms Rosemary Eyssens		298		
Ms Jenny Fabri			451	
Mr Paul Falvey		112		
Ms Rosemary Faris		141		
Mr Tom Farquare		76		
Mr & Ms Rob Faulkner & Judith Cogle			511	
Mr Colin Fehsler			519	
Mr Helmut-Martin Felbel			18	
Mr Michael Feller			154	714
Mr Adam Fenderson		380		
Mr Andrew Ferrari		109	259	

Name	Sub. Period No.			
	1	2	3	4
Mr Anthony & M- D.M. Ferrari	97	664	255	
Mr Craig Ferrari		130	267	
Mr Darren Ferrari		128	270	
Ms Debra Ferrari			492	376
M- G. & S. Ferrari		270		
Ms Hayley Ferrari		123	269	
Ms Jennifer Ferrari		126	266	
Mr & Ms Kevin John & Jennifer Joy Ferrari		140	265	
M- Leon, Sue, Josie, Tim & Daniel Ferrari		463	533	
Mr Michael Ferrari		125	264	
Ms Michelle Ferrari		273		
Mr Darren Ferrier			633	213
Mr James Fiddian				463
Ms Vicky Fifs		425		
Mr Bernard Filbay			451	
Mr Wayne Filby				679
Mr Peter Fillmore			568	
Mr Cliff Finch			658	
M- Nakia Firebrace		288		
M- G. Fithall		342		
Mr Sean Fitzgerald				539
Ms Tess Fitzgerald		345		
Mr James Fitzsimons	2		82	146
Mr Shannon Fitzsimons			133	
Mr Bruce Fletcher			17	57
Mr Jon Floreani			134	
Mr Gerhard Foell				38
Mr Kenneth Fok				316
Mr & Ms Inga & Adam Ford				410
Mr Ray Ford		286		
Ms & Mr Judi & Ken Forrester			543	470
M- J.M. Forster				572
Mr Craig Forsythe			669	
M- A. Fra		366		
Ms Yvonne Francis		448	1	
Mr Chris Fraser		8		
Mr Matthew Fraser			465	
Mr Ashley Free			164	691
Mr & Dr Karl & Silvia Freiverts		115	291	
Mr Ronald Freiverts		114		
Mr Lloyd French				703
Ms Jackie Fristacky			204	
Mr Adam Frost			263	
Mr Craig Fryers		12	75	
Ms Carol Fulford				664
Ms Claire Fulton				323
Ms Nadia Galanopoulos		406		
Mr Mark Gale		91		
Ms Diane Gamble				635
Ms Belinda Gardiner			509	
M- J.L. & I. Gardiner		154,	300,	
		251	305	
Ms Connie Gardner			529	
Mr Rick Gardner			655	
Mr & Mrs Raymond & Theresa Garland				648
Ms Geraldine Gartland			513	
Mr Tony Gartland			444	
Mr & Ms Michael & Sharon Gaut		266		
Mr Scott Gavens			8	
Mr Andrew Gaylard			432	
Mr Jeff Gazzard			59	
Mr Matthew Gedge		362		

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.				Name	Sub. Period No.				Name	Sub. Period No.					
	1	2	3	4		1	2	3	4		1	2	3	4		
Ms Kersten Gentle			631		Mr Jason Harman				350	Ms Rani Hunt				37		
Ms Marina Georgioa			188		M- B. Harper			27		Mr Jack Hurst				384		
Ms Verena Gerz			35		Mr David Harris			54	79	476	Mr David Hut			412		
Mr Colin Gibson		29	217		Ms Sue Harris				569		Ms Christine Hutton			707		
Mr Tim & Roslyn Gibson	10		382		Mr & Ms Terry & Lynette Harris				260,		M- D.R. Hutton	249	587			
Mr Antonino Giglio			10		M- N. Harrison				387		Mr Jakob Igelspacher			31		
M- N.P. Gilbert			273		M- C. Harrowfield				103		Mr Tony Jablonski			214		
Mr & Mrs Geoff & Jill Giles			725		M- K. Harrowfield				122		Mr Robin Jackel			169		
Mr James Gill			77		Mr & Mrs Brian & Julie Hart				6		Mr Andrew Jackson			680		
M- Ohid Gilovitz			225		Mr Andrew Harvey				712		Ms Jennifer Jackson			15		
Mrs A. Gilson		107			Mr Carl Harvey				356		Mr Peter Jackson			227		
M- Gilvray			364		Ms Audrey Hay				127	268	M- S.R. Jackson			36		
Ms Bianca Giudici			649		Ms Pasha Hayat				40		Ms Simone Jackson			51		
M- J.D. Gladstone			93		Mr Phillip Hayes					624	Mr Greg Jacob			411		
Mr A. Glasby			309		Ms Beatrice Head				67		M- Aylah James			348		
Mr Ken Gledhill		305	363		Ms Joanne Heatlie				254		Ms Candy James			479		
Ms Rachel Gleeson			401		Mr Darron Hedge				310		Mr & Ms Craig & Gayle James			239		
Miss Steph Glover			185		Ms Eva Maria Heger				53		Ms Louise James			632		
Mr Simon Gloyne			695		Mr Gunther Heger				52		Mrs Wendy James			259	223	
M- Florian Gnadinger			56		M- S. Hendricks				297		M- A.B. Jamieson			33		
Mr Kristen Godby			272		Ms Robyn Henriksen				172		M- Sievers Jan			83		
M- A. Goddard		341			Mr Neil Henry				98	403	544	Mr & Mrs Nick & Justine Jane		151		
Ms Janelle Goddyn		117			Mr David Henshaw				482		Mr G.L. Jarratt			81		
Mr Frank Gogol			294		Ms Delys Henshaw				552		Ms Christine Jeal			349		
Mrs Elizabeth Goldberg			250		Mr Stefan Herzog				29		Ms Olive Jeffery			528		
Mr Pierre Goss		307			Ms Dominique Hes				293		Mr Greg Jeffrey			671	176	
Mr Glynn Gracie			344		Ms Philippa Hesterman				128		Ms Anne Jenkins			441		
Mr Peter Graham		21			Miss Sylvie Heywood				192		Mr Wallis Jenkyn			520	420	
Mr John Grattton-Wilson			407		M- M.S. Hibbs				673		Ms Barbara Jenner			238		
Ms Patricia Grattton-Wilson			409		Mr Andrew Hill				469		Mr Ronald Jenner			237		
M-Adrian Gray & Renee & Liliith Armstrong			48		Ms Belinda Hill				652		M- J.L. Jennings			458		
Mr Rob Gray			556		Mr & Ms Norm Hite & Coral Fitton				497		Mr & Ms Jeff & Noreen Jennings	84		683,	684	
Mr Wayne Grayson			616		Mr Greg Hocking				194		Ms Margaret Jennings			1		
Mr Clarrie Green			66		Mr Ross Hodge				727		Mrs & Mr Margaret & Ian Jennings			330	626	
Mr Anthony Greene			175		Mr Tim Hodgson				229		M- R. Jennings			99	459	
Ms Meredith Greenwood			352		Ms Chris Hollanby				403		Ms Sandra Jennings			242		
Mr Jim Grellis			324		Mr Russell Holloway				441	531	661	Mr Peter Jensen		395		
Mr Robbie Grieg			386		Ms & Mr Pearl & Steve Hollowood				423		Mr Colin Jevons			278	65	122
Mr Phil Grigg			722	235	M- Centauris Holly-Schwaerzler				187		Ms Deborah Johnson			562		
M- S. Groeneveld			445		Ms Bev Holt				493	671	Ms Di Johnson			384		
Ms Renata Grossi			370		Ms & Mr Kirstin Honey & Sebastian Melendez				211		Mr Gary Johnson			95		
Ms Vittoria Grossi			369		Mr Duncan Hopkins				321		Mr Graham Johnson			467		
Mr Loyd Grosvenor			240		Mr Ian Hopkins				72		Mrs & Mr Jenny & Ian Johnson			472		
Mr Simon Grummett			108		Mr Tom Horne				334		Ms Laura Johnson			399		
Ms Melissa Gunner		344			Ms Elizabeth Horner				378		Mr Peter Johnson			402		
Ms Jennifer Guthrie Morrow			336	576	Miss Caitlin Horton				194		Mr Ben Jones			715		
Mr Sean Halge			332		Mr Peter Hotker				612		Ms Beryl Jones			640		
Ms Melissa Hall			369		Mr Stephen Hotker				613		Ms Catherine Jones			334	282	
Ms Samantha Hall			359		Mr & Ms Murray Howard & Helen Barclay				118		M- D.E. Jones			432		
M- J.T. Hamilton			295		Ms Marcia Howard				665		Mr David Jones			150		
Ms Liz Hamilton			550		Mr John Howell				328		M- & Ms Gwyn & Dianne Jones			24		
Mr Paul Hampshire		112			Ms Norm Howell				92		Ms Kaylene Jones			153		
Mr Matt Hand			735		Mr & Ms Joe & Val Hubbard				102		Mr Paul Jones			631		
Mr Paul Hand			223		Ms Lisa Hue				443		M- Andruscha Junge			67		
Mr Lawrie Hanson			33		M- C.W. Huggins				663		Ms Marijana Juresko			331	277	
Mr Vern Hardie			281		Ms Rachel Hughes				453		Ms Merrill Jusuf			516		
Mr & Ms Peter Harding & Kerry Martin			599		Mr Robert Hughes				187		Mr Luke Kainuz			360		
Mr & Ms Matthew & Kendra Harding			147		Mr Ken Hui				319		Mr Alexander Kaltenbacher			50		
Mr Roger Hardley			458		Mr Keith Hull				288		Ms Jenni Kamp			98		
Mr Ben Hargreaves			9		Mr Alistair Hume				581		Mr Brian Kavanagh			385		
Mr Jim Harker			22		Mr Michael Hunt				629		Mr & Ms Bernie & Diane Keating			667	477	
Mr Chris Harkin			44	59							M- R.B. Kee			308		
											M- E.L. Keegel			207		

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.			
	1	2	3	4
Ms Narelle Keenan				527
Mr Darren Keet				611
Ms Estelle Kefford	209	484		
Mr Nathan Keilar				232
M- L.L. Kelleher				117
M- Pat Kelleher				119
Mr Gerard Kelly				422
M- Dave Kelman, & Jane & Brynnie Rafe			282	61
Mr Geoff Kennedy			241	
Ms Lisa Kennedy			434	
Mr Stephen Kennedy			266	
Mr Steve Kennedy			250	
Mr Frank Kennersley			242	
Mr Stewart Kerr			217	202
Mr Johannes Kick				43
Mr Murray Kidman				179
Dr Jim Kiellerup			247	
Mr Alex King				89
Mr D.F. King				130
M- Alex Kirkham			397	
Mr Robert Kiss				681
Ms Dawn Kneen				271
Mr Steve Knope				170
Ms Benita Knox				100
Mr Paul Koczak				719
Ms Leeanne Koenig				541
Mr John Koniw				252
Mr Peter Koop		315	540	588
Ms Joan Korn				397
Mr Tiber Korn				398
Mr Walter Krafft				54
Mr Gordon Lalonde				225
Mr Simon Lamacraft				700
Dr David Lancaster			19	93
Miss Stacey Lancy				171
Ms Anne Lane				415
Ms Jennifer Lane				365
Mr Benno Lang				215
Miss Claire Lang				252
Mr Phil Langdon			185	484
Ms & Mr Betty & Eric Larson			119	
M- Jeff, Alex & Debbie Larson				241
Mr Les Lasham				522
Mr Henry Laskowski				654
Mr Andrew Lauder				668
Ms Cecily Lawrie				135
Ms Cassandra Lawson			339	
Mr & Ms David & Yvonne Lawson				356
Ms Dorrie Lawson				301
Mr Kevin Lawson				334
Mr Shane Lawson				354
Mr Steven Lawson			242	409
Ms Juliet Le Feuvre				18
Mr & Ms Dennis & Barbara Leavesley				388 505
Mr Peter Leavesley				173
Ms Josephine Lee				42
Mr Rod Lee				645
Ms Kristen Lees				361 486
Ms & Ms Jill Leisegang & Grace McCaughey				576
M- Magaer Lennox				533
M- Alex Leonard				401
Mr & Ms Thomas & Janet Leslie				473

Name	Sub. Period No.			
	1	2	3	4
Ms & Mr Catherine & Harry Lewis				175
Ms Marina Lewis				454
Ms Carol Liebscher			449	400 674
Ms & Mr Heather & Ian Light				253
Mr Simon Liley				185
Ms Joan Lindros				535
Mr Barry Lingham				697
Mr Peter Linke				17
Mr Matthew Linscott				382
Mr & Ms Robert & Marie Liston				678
Mr Anthony Locke				113
Mr Glen Lockman				265
Mr Matt Lockwood				232
Mr Ryan Long				136
Ms Rachel Lopes				573
Mr Daniel Lopez				726 537
Mr Richard Los				91
M- Hilary Louey				26
Mr Colin Low				74
M- Kim Low				555
M- M. Low				538
Mr Sydney Low				556
Ms Karen Lucas				263
Mr Owen Lucas				260 262
Dr Mary Lush				444
Mr Stefan Lustig				13
Ms Suzanne Luxton				243 201
Mr Iain Lygo				280 193
Ms Diana Lyon				111
Ms Ellen Mac Lennan				460 144
Mr Gary Mac				191
Ms Catriona MacDiarmid				174
Ms Margaret MacDonald				246
M- Shem Macdonald				488
Ms Michelle MacEwan				279
Ms Kylie MacFarlane				443 687
M- Vytautas Maciulis				65
Ms Alexandra Mack				186
M- S.H. & V.J. MacKenzie				86
Mr Robert Macnab				371
Mr David Maertin				41
Mr Bruce Maggs				374
Mr Noel Maggs				127 99
Mr Noel Maggs				689
Mr Christopher Mahney				396
Ms Sheryl Mahoney				151 549
Mr Siegfried Makulla				21
Mr & Ms Steven & Susan Male				469
M- Hannah Maloney				336
M- G.A. Manintveld				299
M- J. Manintveld				298
M- J.T. & L.A. Manintveld				264
Ms Bernice Manley				501
M- W. Manley				506
M- P. Marchant				277
Ms Andrea Marian				199 492
Ms Julie-Anne Markham				287
Mr Sean Marler				468 46
Mr & Ms Allan & Susan Marriner				148
M- & M- Andrew & Lesley Marriner				134
Mr Cyril Marriner				387 174
Mr John Marriner				83
Mr John Marriner				424
Ms Patricia Marriner				466

Name	Sub. Period No.			
	1	2	3	4
Mr Steve Marriner				184
Mr Darian Marshall				356
Mr Don Marshall				435
Ms Sonia Marshall				347
Ms Janet Martin				353
Ms Jayne Martin				431
Mr Leigh Martin				736 515
Mr Nathan Martin				593
Mr Paul Martin				504
Mrs Mary Maslen				627
Mr Tony Maslen				274
Mr Steve Mason				172
M- & M- G.A. & N.J. Matheson				659
Mr Greg Maxwell				302
Ms Beverley McCallum				487
Mr Darren McClelland				115 70
M- L.W. McDonald				52
Ms Sarah McDonald				357
Mr Wayne McDonough				268 711
Mr Luke McGill				325
M- S. McGuirk				427
Ms Gillian McInnes				245
M- C., M., M. & F. McIntyre				517
Mr Angus McKenzie				534 568
Mr Anthony McKenzie				137
Mr Cameron McKenzie				546
Mr Graeme McKenzie				5
Mr Tony McKenzie				348
Mr Kenneth McKeown				44
Ms Sarah McLarty				198
Mr Jim McLaughlin				504
Mr Bruce McLean				577
Mr Haydn McLean				213
Mr Ian McLean				132
Ms Sue McLean				279
Ms Sylvia McLean				110
Mr Jasper McMullan				373
Mr John McMullan				368
Ms Jenny McNamara				304
Mr & Ms Ian McNaughton & Lee-Ann Monk				501
Mr Andrew McNay				243
Mr Richard McNay				464
Mr & Ms Doug McNeil & Rani Hunt				686
Mr Darren McRae				251
Mr R. McShane				278
Ms Yolanda McVilly				102
Mr Robert McWama				430
Ms Libby Mears				100
Ms Marilou Meehan				335
Mr & Mrs John & Fran Meesen				311
M- A.V. Melzak				567 563
Ms Belinda Melzak				641
Mr & Mrs Peter & Anne Mercer				415 416
Mr Shannon Merika				375
Ms Doris Merk				22
Mr Joe Merrett				682
Mr John Middleton				72
Miss Samantha Mielke				172
Ms Shelley Millard				368
Ms Sharon Miller				613
Mr Alex Milne				383
Mr Ron Milne				435 386
Ms Paula Milo				326

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.				Name	Sub. Period No.				Name	Sub. Period No.			
	1	2	3	4		1	2	3	4		1	2	3	4
Mr Paul Milosavljevic			325		M- K. Nieuwenhuizen			494		Mr Rod Parr			724	
Ms Barbara Minchinton	176	529	465		Ms Jelena Nikolic			214		Mr Rod Paterson			197	
Mr Mark Minchinton			442		Ms Annie Nilsson			685		Mr Bradley Paton			658	
Ms Rhonda Minchinton			437		Ms Alice Nixon			244		Mr Mark Paton			680	
Ms Jodie Minton			276		Mr Michael Nocera	269	382			Mr Nathan Pearce			427	
Mr & Ms Jack & Jennifer Mitchell	240	449			Mr Charles Norman			94		Mr Rodney Pearce			276	
Mr & Ms David & Jennifer Mitchell	147				Mr Mark Norris			379		Mr Peter Pearson			410	
Mr & Mrs John & Eathorne Mitchell			120		Ms Paula Northfield			330	645	Mr Leo Pecar			123	
Ms Amanda Mitchell-Taverner			222		Mr & Mrs Bill & Lorraine Norton	80				Ms Donna Peek			438	
Mr Stefan Mobius			39		M- Darcy Norwood			365		Ms Anna Pegg			144	
Ms Christine Modra		8			Mr Lesley Nosedá			200		Mr Tim Pellemeier			49	
Mr John Modra		553			Mr Bruce Noske			656		Mr Ian Penman			428	435
Ms Annette Molloy		648	600		Mr Rod Novak		86	479		Mr Stephen Pennells		190		
Mr George Molloy		381	594		Mr Antone Nulley			182		Ms Susan Perron			139	
Mr Jacob Molloy			599		Mr Danny Nulley			180		M- A.J. Perry			408	
Ms Kasey Molloy			596		Mr Max Nulley			178		Ms Gwen Pescott			249	
M- K. Molnar		410			Mr Anne O'Brien			337		Mr Trevor Pescott			251	
Mr Michael Moolenaar		158			Mr Grant O'Brien			697		Mr David Petrie			150	
Ms Carolyn Moore			452		Ms Genevieve O'Connell			455		Ms Pam Petschack			224	
Ms Julia Moore			647		Mr Brian O'Donnell			234		Dr Roger Peverill & Ann Williams			231	
Mr Lawrence Moore		275			Mr John O'Donnell			674		Mr Bill Pheasant			235	
Mr Michael Moore			208		Ms Ruth O'Dowd			340		M- Alix Phelan			148	
Mr Jarrod Morey			692		Mr Geoffrey O'Dwyer			267		Mr Glenn Phelps			107	
Mr & Ms Roger Morgan & Richter			288		Mr & Ms Mark & Roz O'Loughlin			475		M- Cush Phillips			480	
Mr Roger Morgan			42		Mr & Ms Trevor O'Shannesy & Taza Aratz			348		Mr Craig Philip			372	
Mr Guy Morris			126		Mr Justin O'Shea			376		Ms Glenyse Pianta			309	
Mr Richard Morrow			524	540	Dr Colin Officer			226		M- Chris Pierce			414	
Mr Skeet Morrow		261			Mr Rob Oke			447		Ms Janet Pierce			415	
Mr Joe Mortelliti			723	5	Mr Brett Oldfield			270		Mr John Pierce			329	594
Dr Geoff Mosley		7	434	412	M- Nils Ole Prub			33		Mr Nick Pierce			413	
Dr Julie Muchauser			670		Ms & Mr Janelle Oliver & Ean Droomer			426		Prof Robert Pierce			320	
Mr & Mrs Peter & Susan Muir			63		M- & M- D. & E.S. Olliff			162		Dr John Piesse			322	
Miss Eloise Muirhead			189		Mr Aaron Ong			160		Mr & Ms Angelo & Kerry Pietrobon			448	
Mr Peter Mulder			541		Ms Sky Opie			650		Mr David Pilley			402	421
Ms Andrea Muller			30		Dr Hector Orams			389		Ms Susan Pitman			493	
Mr Ralf Muller			47		Ms Wendy Orams			491		Ms Svea Pitman			339	
Mr Peter Mumre		364			Mr Neil Orr			349		Mr David Pitt			312	
Mr Jason Munari			311		Mr Kevin Osborne			358		Ms Elizabeth Pollock			220	90
Ms Tamara Muncey			329		Mr Valerie Osborne			351		Ms Franciszka Pomaranska			32	
M- A, S.J. & S.R Mundy			245		Mr Daniel Otten			41		M- P. Pongrac			44	
Mrs M. Munns			70		Ms Elizabeth Owen			168		Ms Monika Poray			620	
Mr Bruce Murray			447		Mr Trevor Owen			134		Ms Nora Potter			636	
Mr John Murray			610		M- Nienke Paap			660		Mr Stuart Pougher			173	
Ms Rachel Murray			436		M- & M- H. & I. Pacers		105	290	440	Ms & Mr Majorie & Kevin Poulton			13	
Ms Mary Mutton			573		Ms Mara Pacers			104	439	441	Mr & Ms Gavin & Doreen Poustie		89	548
M- Adeeba Nabulsi			231		Mr Peter Pacers			150		Mr Luke Power			526	
Ms Ellen Napper			394		Mr Italo Padovani			426		Mr Bill Poynton			490	460
Ms Sheila Nash			296		Mrs Lucy Padovani			427		Mr Scott Prendergast			161	
Mr & Ms Peter Natonewski & Debrah Lewis			191		M- N. Page			142		Mr Geoffrey Price			465	67
Mr Vaughn Neal			362		Mr Richard Pajewski			657		Mr Peter Price			392	
Ms Alana Neale		300			Ms E.J. Palmer			623		Ms Diana Primrose			97	
Mr Daniel Neale			207		Ms Gail Palmer			350		Mr Simon Pritchard			360	
Ms Heather & M- B.E. Neale	254	618	367		Mr Carl Pannuzzo		205	57	8	Mr Alan Provan			672	
M- A.D. Neave			139		Ms Sonja Paolinsan			426		Ms Anna Pumphrey			257	
Ms Anna Negri			370		Mr John Paras			321		M- D. Purcell			271	
Ms Fiona Nelson		225	467	593	Ms Judith Park			247		Mr Stefan Putyra			272	
Ms Valerie Newman			80		Mr Edwin Parke			285		Mr Darren Pyne			118	
Ms Lisa Newton			620		Mr Jared Parke			708		Ms Lucy Quarterman			84	
Mrs Dawn Neylan			521		Mr Gavin Parker			560	567	Ms Elizabeth Quinn			292	
Ms Beth Neyland			314		M- I. Parker			310		Ms Veronica Quinton			35	
Mr David Nicaastro		188	579		Mr Simon Parker			192	601	Mr Alan Rampal			11	
Ms Michelle Nielsen			349		Ms Tess Parker			372		Mr Peter Randall			293	
Mr Marko Niemann			42		Mr & Mrs Brian & Gill Parmenter			149		Mr David Rathbone			461	
										Mr Ian Ray			368	

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.			
	1	2	3	4
Mr Nick Ray		385		
Mr Carl Rayner			419	
Mr June Rea	20			
Ms Andreama Reale		208		
Ms Margot Reeve		531		
Mr Stephan Reichert		262		
Ms Emma Reid		58		
Ms Joanna Remengi	390			
Mr & Ms Douglas & Allison Retchford			313	
Ms Alison Reynolds		440		
Mr Chuck Reynolds		201		
M- Chris Rhodes		257		
Mr Len Rhodes		625		
Ms Shona Rich	392			
Mr Michael Richards		323		
Mr Noel Richards			393	
Mr Steven Richards		696		
Ms Andrea Richardson	193	457	602	
Mr Lachlan Richardson		249	124	
M- V. Richardson			717	
Ms Ilona Richter			308	
Ms & Mr Claire & Carl Rickard	183			
Ms Fay Rimmer		88		
M- Riordon		218		
Ms Diane Riordon		219		
Ms Fiona Ripon		468		
Mr Scott Risk		618		
Mr Rob Ritchie	294			
Ms Carmel Roads		708		
Ms Charmaine Robbins		345		
Ms Denise Robbins	90	547		
M- J. Robbins	259			
M- J.T. Robbins	94			
M- James Robbins		550		
M- K.M. Robbins	92			
Ms Kath Robbins		524		
Mrs Millie Robbins	96			
Ms Gillian Roberto		678		
Ms Almut Roberts		7		
Mr Craig Roberts		9		
Ms Joan Roberts		476		
Ms Regina Roberts		548		
Ms Robyn Roberts		446		
Mr Ashley Robertson		163		
M- L.C. Robertson	262			
Mr Gary Robinson		119		
Mr Ian Robinson		414		
Mr Ken Robinson		466		
Mr Kenneth Robinson		296		
Mr Peter Robinson		234		
Mr Russell Robinson		152		
Mr Mike Robinson-Koss		585		
Mr Dave Robson	398			
Ms Elizabeth Roche		676		
Mr Jos Roche		510		
Mr Michael Roche	231	468		
Ms Kerri Rodway		198		
Ms Wendy Roe		619		
Mr Alexander Rohler		11		
Ms Monika Roleff		1		
Mr John Romeril	74			
Mr Michael Roodhouse		691		
Mr Greg Rooke		133		
Ms Anna Rose		216		

Name	Sub. Period No.			
	1	2	3	4
Mr Mark Rosevear		105		
Ms Libby Ross		22		
Mr Peter Ross			726	
Mr Tim Rowley		305		
Mr Dale Rule		205		
Mr Jarrod Runciman		690		
Mr Scott Runciman		693		
Mr Frank Russell			101	
Mr Mick Rust		204		
Ms Judith Rutherford		397		
Ms Elizabeth Ryan		609		
Mr Gary Ryan		718		
Ms Geraldine Ryan		604		
Mr Graham Rye		621		
M- Saalii		405		
Mr David Salt		297		
Mr Mark Salter			721	
Ms Jennifer Samms		357		
Ms Mary Sammut		561		
Ms Christina Sanders		355		
M- Saturne		221		
Ms & Mr Carol & Bill Saunders		592		
Mr Hugo Saunders		24		
Mr Martin Saunders		25		
Mr & Mrs Noel & Anne Saunders			564	
Mr Peter Saunders		714		
Mr Willis Saunders		23		
Mr Anthony Sauter		332		
Miss Caroline Sauvign		170		
Ms Camilla Savage		280		
Mr David Savage		389		
Mr Peter Savic		179		
M- Chris Sayers		677		
Mr Joachim Schafer		54		
Ms Esther Schelvis		429		
M- T. Schermacher		367		
Ms Rebecca Schiff		404		
Mr Hannes Schimmelpfennig		6		
M- S. Schmidt		304		
Mr R. Schmitt		106		
Miss Charlotte Schollogal		173		
Mr Peter Schott		407		
Miss Amy Schuarts		248		
Mr Andrew Schudmak		76		
Mr John Schuliga		176		
Ms Emma Schwarcz		337		
Mr Jamie Scott		110		
Ms Kerrie Scott		199		
Mr John Seed		651		
Ms Anneke Segrave		507		
Ms Gayle Sell		131		
Ms Jennie Sell		644		
Mr John Sell		113		
Ms Deb Sestak		668		
Ms Ida Seward		396		
M- Kela Shakah		385		
M- Pat Shannon		461		
Mr Garth Shapiro		315		
Mr & Ms Laurie & Janet Shaw		489		
Mr David Shearer		614		
Mr Geoff Shepherd		737		
Mr Nathan Sherlock		358		
Mr Brendan Shoebridge		189		
Mr & Mrs Alistair & Kathy Sholl		207		

Name	Sub. Period No.			
	1	2	3	4
Ms Glenda Shomaly	174	596		
Mr & Ms Robert Sieminski & Maree Nicol			487	
Mr Charles Silk		311		
Mr Fred Silk		312		
Ms Sheila Silver			688	
Ms & Mr Pauline & Allan Simmonds		43		
Mr Steve Simmonds		132		
M- Paul, Betty, Riley & Georgie Simmons	237	590		
Ms Jena Simone		55		
Ms Freda Simons		68		
Mr David Simpson		124		
M- Rupinder Singh		342		
Ms Bianca Sirianni		388		
Mr Graeme Skinner		171		
M- M.R. Skovdam		141		
Ms & Mr Brooke Slagmolen & Tony Wilson		371		
Mr Andrew Slagmolen		374		
Mr Beav Slagmolen		360		
Mr Ed Smart		275		
Mr Leon Smart	152	346		
M- B.R. Smethurst	142	380	359	
Ms Joan Smethurst	143	379	357	
Ms Barb Smith		343		
Mr Cole Smith		277		
Mr Colin Smith	182	489	692	
Mr Colin Smith		89	154	
Ms Deborah Smith		629		
Miss Flick Smith		169		
Mr Jeff Smith		690		
Ms Lorey Smith		581		
Mr Paul Smith		276		
Mr Paul Smith		280		
Ms Penelope Smith		136		
Mr Roger Smith		96		
Mr Rowen Smith		131		
Mr Simon Smith		168		
Mr & Mrs Solak		284		
Mr Emil Somers		710		
Mr & Mrs E.R. & S.M. Southcombe		542	653	
Ms Judy Spafford	274	203	284	
Mr Arthur Speight		723		
Mr Graham Speight		722		
Mr Darren Speirs		202	530	
Mr Geoff Speirs	335	7	87	
Ms Helen Speirs	75	497	558	
Mr & Mrs Jim Speirs	15	343	85	
Ms Shirley Speirs		584	86	
Ms Sarah Spencer		14		
Ms Helen Spokes		88		
Mr Ross Spokes		120		
Mr Alistair Spong		218		
Mr Warwick Sprawson	29	23		
Mr Peter Stafford		215	3	
Mr Peter Stafford			630	
Mr Brendon Stahl		241		
Mr Edward Stanley		679		
Mr Devon Starbuck		236		
Mr & Ms Anthony & Helen Stary	81	412		
Mr & Mrs Lorant & Lynette Stary	212	518		
Mr M. Steiner		48		
Mr & Ms Peter & Sue Stephen	283			

B. SUBMISSIONS FROM INDIVIDUALS (continued)

Name	Sub. Period No.				Name	Sub. Period No.				Name	Sub. Period No.					
	1	2	3	4		1	2	3	4		1	2	3	4		
Mr Robert Stephen				301	Mr Neil Tucker				73	Mr John Wigley				111		
M- B. Stephenson				369	Ms Claire Turner				313	Mr Steve Wilkie				372		
Mr Michael Sterling			689		Mr Graham Turner				478	Ms Beverley Williams			496	137		
Ms Gwen Stevens		135			Ms Joanne Turner				298	Mr Brian Williams				563		
Mr Peter Stevens				665	Mr Stuart Turner				260	M- M. Williams				116		
Mr & Mrs Ian Stewart			71		Mr Bernard Tyers				235	M- P. Williams				114		
Mr Craig Stillman				158	Mr Dirk Uehlein				40	M- Pat Williams			165			
Dr Kim Stock			721		M- Tayfun Ugrasbul				155	140	Mr Stephen Williams				623	
Ms Danijela Stojanovski				333	Ms Yasemin Ugrasbul				156		Ms Carol Wilmink				319	
Ms Alexandra Stoley		423			M- P.J. Urqhart				306		Ms Demi Wilson				361	
Mr Ian Stone			137		Ms Tracey Urqhart				302		Ms Jenny Wilson			136	352	
Mr Dave Strawbridge			713		Mr & Ms Joel & Wilma Uwland				118		Mr & Ms John & Wendy Wilson				230	
Mr Edward Stuckey		57	463		Mr James Vagg				512		Mr Kennett Wilson				486	
Mr Ayman Suffolk				400	Ms Sandra Valeri				483		M- Kim Wilson				59	
Mr Jeff Sullivan				700	Mr & Ms Mark van den Enden						Mr Robert Wilson				450	
M- Gary, Jamie, Ella & Pip Summers & Cuming				482	& Leanne Prestipino		49	638	413		Dr Robin Wilson				616	
Ms Catherine Sutterby			445		Mr Mark van den Enden				62		Mr Robin Wilson				283	
Ms Linda Suttie			353		Ms Jennifer Venner		291	375	545		Mr Keith Wiltshire			328	351	579
Mr Robin Swan			554		Ms Melinda Venner				466		Mr Marc Wintle					162
Mr Geoff Swinton				702	Mr Theodore Vereker				255		Mr Matthew Wiseman					688
Ms Jenny Sykes			477	666	Mr & Ms Ian & Marg Vesey				153	240	Ms Clara Wittwer					191
Ms Hilary Tabrett				14	M- G.F. & E.A. Vickers				95		Mr Peter Wood			187		470
Mr & Ms David & Rhonda Tanis			265		Mr Adam Vincent				216		Mr Tim Wood			7		46
Mr Cliff Tann				60	Mr & Ms H. & S. Vogel-Schnider				633		Ms Helen Woodgate				269	575
Mr & Ms Brian & Sandra Tanner				561	Mr John Vogels MP				622		Mr Bill Woods					289
Mr David Tanus				454	Ms Martina Volkel				19		Miss Caitlin Woods					108
Ms Rhonda Tanus				456	Mr Martin Vrankin				502		Mr W.G. Woods					675
M- Knut Tanzer				45	Mr & Mrs Les & Rosemary Vulcz			55	740		Mr Brett Woolley					638
Ms Freda Tarr			101	79	M- & Ms Ilia & Lyn Vurtel				302		Mr Robert Woolley					353
Mr John Tatnell				55	Mr Robert Wagner				75		Ms Wendy Worner					646
Ms Anne Taylor				53	Mr Steven Waite				699		Ms Helen Wright					96
Mr James Taylor				264	Ms Gillian Walker			28	244	127	M- John Wright					636
Ms Myrtle Taylor				159	Ms Heather Walker				52	571	509	Mr Roger Wyatt				12
Ms Shannon Taylor				626	Mr Keith Walker				391		Mr Eamon Wyss					69
Ms Simone Terstra				27	Mr Peter Walker				662		Ms Lynne Yeaman					222
Mr Christian Thomas				62	M- R.J. Walker				66		Mr Alham Yusuf					602
Mr N. Thomas				644	Ms Margaret Walsh				138		M- Schmotz Zita					2
M- R. & L. Thomas				390	Mr Rod Walter				238		Mr Michael Zotz					32
Mr & Ms Barry & Tracey Thompson				612	M- C. Walters				346		Ms Debbie Zukerman					341
Mr & Ms Brad & Jenny Thompson				314	Ms Helen Wanman				419		M- Florian Zurheiden					25
Mr Bruce Thompson				720	Mr Andrew Ward				129							
M- T.W. & M.M. Thompson				145	Mr Marcus Ward				520							
Ms Miranda Thomson				31	Sir Colin Warner				543							
Ms Mary Tipago				340	Ms Valerie Warner			195	566	542						
Ms Ruth Tommerhalden				393	Mr Len Waterhouse				159							
Mr Ron Topp				401	Ms Alison Watson				475	677						
Mr Daniel Tout				318	Mr Doug Watson				481							
Ms Paula Tovey				248	Mrs Helen Watts				35							
Mr Derryn & Jean Towers				405	Mr Royce Watts				78							
Mr Simon Townsend			281	530	Mr Wayne Weathers				608							
Mr Craig Travis				299	Mr Tony Webber				521							
Ms & Ms Sharon Tredrea & Margaret Collins				274	Mrs & Mr Carole & David Webley				203	74						
Messrs Tom, Rowan and Noel Trefz				707	Mr Christian Weghaus					81						
Ms Gail Trenorden				570	Mr Josef Weib					4						
Mr Julian Tresidder				183	Mr Rob Wertheimer					181						
Mr Roger Trevaskis				233	Mr Geoff Wescott				236	436						
Ms Dorothy Trezise				704	236	436										
Ms Jenny Trezise				179	204											
Mr & Ms Graeme & Wilma Tribe				536	Mr & Ms John & Cheryl Westlau					396						
Mr & Mrs Neil & Ann Tribe				404	Mr Dave White					365						
M- M. Trotter				121	Mr Adam Whitehead					157						
Ms Patricia Trotter				333	Mr Adrian Whitehead					514						
					Mr A.J. Whitfield					64						
					Mr C. Whitfield					734						
					Mr Laird Whitten					392						
					Mr Simon Whitten					433						
					Ms Patricia Whittington					181	442					

Name incomplete or illegible:

2nd submissions
60, 76, 98, 138, 139, 175, 219, 258, 278, 322, 324, 378, 552, 642, 649, 656

3rd submissions
256, 308, 523, 641, 642, 643, 650, 651, 652, 653, 654, 662

4th submissions
19, 391, 403, 404, 408, 417, 422, 431, 432, 437, 439

APPENDIX 6 COMMUNITY REFERENCE GROUP AND GOVERNMENT CONTACT GROUP MEMBERS AND ORGANISATIONS

Community Reference Group

Name	Organisation
Mr Geoff Beilby	Our Parks
Mr Allan Billings	Timber Communities Australia
Mr Simon Birrell	Otway Ranges Environment Network
Mr Jim Bufton	Victorian Farmers Federation
Mr John Doran	Victorian Trades Hall Council
Mr John Edmonds	Public Land Council of Victoria
Mr David Eldridge ¹	Construction Material Processors Association
Mr Bob Flett	Country Fire Authority
Mr Mark Halliday ²	Construction Material Processors Association
Cr Stephen Hart	Colac Otway Shire
Mr Jim Kennedy ³	Four Wheel Drive Victoria
Ms Joan Lindros	Victorian National Parks Association
Ms Margaret MacDonald	Friends of Angahook-Lorne State Park and Angair Inc
Mr Ken Mahar ⁴	Geelong Bushwalking Club
Mr Trevor Pescott	Geelong Environment Council
Mr David Pinney ⁵	Geelong Bushwalking Club
Mr John Rial	Victorian Minerals and Energy Council
Ms Kate Robertson	Geelong Otway Tourism
Mr Chris Rolland	Alcoa World Alumina Australia
Cr Glenda Shomaly	Surf Coast Shire
Mr Des Symonds ⁶	Otway Four Wheel Drive Club
Mr Philip Voigt	Sporting Motorcycle Club, Otway Trail Riders
Dr Barbara Wilson	School of Ecology and Environment, Deakin University Geelong
Mr Pat Wilson	Victorian Association of Forest Industries

¹ from June 2004

² to January 2004

³ from November 2003

⁴ from September 2004

⁵ to September 2004

⁶ to November 2003



Government Contact Group

Name	Organisation
Ms Kate Adamson ⁷	Department of Primary Industries
Mr Paul Albone	Tourism Victoria
Mr John Edwards	Policy and Research, Department of Sustainability and Environment
Ms Rachel Faggetter	Western Coastal Board
Mr Richard Ford	Land Victoria, Department of Sustainability and Environment
Mr Ian Karutz	VicRoads
Mr John Johnstone	Catchment and Water, Department of Sustainability and Environment
Mr David May	Corangamite Catchment Management Authority
Mr George Mifsud	Land Victoria, Department of Sustainability and Environment
Mr Ian Miles	Forests Service, Department of Sustainability and Environment
Mr Paul Northey	Barwon Water
Ms Chantal Parslow ⁸	Department of Primary Industries
Mr Tom Richards	Aboriginal Affairs Victoria, Department of Victorian Communities
Ms Joan Phillips	Parks, Flora and Fauna, Department of Sustainability and Environment
Ms Janice Stanford ⁹	Department of Infrastructure
Mr Stuart Toplis	Tourism Victoria

⁷ from May 2004

⁸ to May 2004

⁹ to November 2003

