

# **Marine Coastal & Estuarine Investigation**

**Final Report**

August 2000  
Environment Conservation Council

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Our Reference:

Your Reference:

31 August 2000

The Honourable Sherryl Garbutt MP  
Minister for Environment and Conservation  
Parliament House  
Melbourne 3002

Dear Minister,

## MARINE, COASTAL AND ESTUARINE INVESTIGATION

In accordance with the requirements of Section 23(1) of the *Environment Conservation Council Act 1997*, the Environment Conservation Council is pleased to submit to you the Final Report for the Marine, Coastal and Estuarine Investigation.



JOHN F. LOVERING  
Chairman

## What is the ECC?

The Environment Conservation Council (ECC) was formed in mid 1997 replacing the Land Conservation Council. The ECC advises the Victorian Government on the use of public land; it makes recommendations, not decisions. It investigates issues at the request of the relevant Minister and, in doing so, takes into account resource use and social issues as well as environmental needs. The ECC's aim is to balance the competing needs of the environment and public land users, in order to achieve ecologically sustainable and economically viable public land use.

The ECC members are Professor John Lovering AO (Chairman), Mrs Eda Ritchie and Ms Jane Cutler who are supported by a team of professional staff.

Professor Lovering has held senior academic positions, chaired company boards and served on national and international scientific committees. He has also had considerable experience in natural resources management as Presiding Officer of the South Australian Natural Resources Council and as President of the Murray Darling Basin Commission.

Mrs Ritchie is a farmer from near Hamilton in Western Victoria with extensive experience in natural resources management. She is also Chairman of Rural Ambulance Victoria, a member of the Rural Finance Board, and Chair of the Ross Trust.

Ms Cutler has a Masters Degree in Environmental Science, holds a senior management position in the finance sector and has many years of experience managing environmental issues for the resources industry. She has served on a number of boards and trusts including as a Director of Landcare Australia.

The Council works with a wide range of groups including local government, Commonwealth and State agencies, business and industry, environment and conservation groups, Aboriginal people, recreation and tourism bodies, and interested individuals. The ECC is independent of other government agencies and develops its recommendations through data collection, the commissioning of expert research, and extensive consultation. Public input into investigations is encouraged and welcomed.

At the end of each investigation the ECC makes recommendations to the Minister. The State Government then considers these recommendations and makes decisions.

## About this report

This report contains the Environment Conservation Council's final recommendations for the protection, use and management of Victoria's marine, coastal and estuarine areas. It marks the culmination of an investigation process begun in 1991 by the then Land Conservation Council (LCC).

The Environment Conservation Council (ECC) has visited all the recommended areas and sought input from a wide range of stakeholders, interested groups and individuals to better understand the broad strategic issues as well as the finer detail of marine management. There have been six formal periods for public comment, and about 4 500 written submissions received throughout the life of the investigation have been considered in detail. A large number of special reports were commissioned by both the LCC and the ECC. Reports commissioned or prepared by other agencies, other States and the Commonwealth have also been considered. The ECC has consistently sought to embrace and integrate the policies and strategies of various levels of government and other agencies as they relate to the marine and coastal environment.

## Acknowledgements

The ECC wishes to gratefully acknowledge the assistance of all those individuals and government, community, and industry groups who have contributed to the investigation over the past nine years.

The report was prepared by Hania Bibrowska, Shane Dwyer, Peter Kinchington, Joan Phillips, Mandy Rossetto, Sue Street and Ari Vlassopoulos. Administrative assistance was provided by Geoff Blackman, Janet Hainsworth and Joy Vine.

Information and technical advice was provided by an Advisory Group, formed for the ECC investigation: Kate Brent, Lawrance Ferns, Tony Landy, Andrew Levings, Garth Newman, Tim O'Hara, Bernadette O'Neil, Peter Rankin and Ross Winstanley.

In addition to the support provided by many Victorian government and non-government agencies, the following organisations also provided a great deal of assistance: Australian Marine Sciences Association, Department of Natural Resources and Environment, various sub-committees of the Fisheries Co-Management Council, Mirimbiak Nations Aboriginal Corporation, Parks Victoria, Seafood Industry Victoria, Victorian Aquaculture Council, Victorian Coastal Council, Victorian Marine and Coastal Community Network, Victorian National Parks Association and VRFish.

Design and layout services were provided by Wendy Havard. Cartographic services were provided by Graham Kenneday Graphic Design.

The cover image is based on a photograph by Mary Malloy. Other photographs included in the report were provided by Aboriginal Affairs Victoria, Hania Bibrowska, Peter Kinchington and Melbourne Water.

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Professor John Lovering  
(Chairman)



Mrs Eda Ritchie



Ms Jane Cutler

## Council's Message

It is now more than 100 years since Victoria's first land-based national park was proclaimed at Wilsons Promontory. Since that time successive Victorian governments have established a system of national parks and conservation reserves covering about 15 per cent of the State which are recognised by our community as jewels in the environmental crown of Victoria. The people of Victoria are justifiably proud of their national parks and understand the critical role they play in protecting the State's unique biodiversity. They are enormously supportive of the fact that these parks are a haven for the protection of the plants and wildlife all Victorians can enjoy and which will always be available for the enjoyment and inspiration of future generations.

Until recent years the whole marine environment was seen as ripe for resource development in much the same way as was the land until our terrestrial national parks were created. But it is now obvious that harvesting of the ocean's biological resources has led in many areas to the degradation of marine ecosystems and threats to the sea's biodiversity. Unless a comprehensive, adequate and representative system of marine national parks with an adequate level of protection is established, we will not be able to hand on to future generations even some limited marine areas where our marine biodiversity is fully protected from human modification and degradation. This is the prime reason, and one which is widely accepted internationally, for the establishment of fully protected marine national parks and sanctuary areas.

The process of selecting and establishing marine protected areas is always a lengthy and controversial one. The sea and its resources are used for many purposes and the community and industry are accustomed to having access to virtually all marine waters. Different individuals and groups sometimes have legitimate but competing aspirations for particular areas and resolution of such issues is often protracted and always difficult. To these problems we must add the need to build community understanding that the balanced use of marine resources must include leaving some areas unused for the protection of marine ecosystems, for science and education, for non-consumptive recreation and for their own intrinsic value.

During the process of this investigation we have sometimes heard groups and individuals promoting multiple-use approaches to environmental management. The ECC is strongly of the view that its recommendations are an expression of multiple use of the whole marine environment. It is a central component of multiple use planning and management that some areas are specifically set aside for conservation of marine biological diversity.

In drawing up the recommendations and proposals in this Final Report, the ECC has given full consideration to possible social and economic impacts. On balance, the ECC believes that the environmental outcomes will, in the medium term, outweigh the possible initial economic and social costs. Nevertheless, if the possible short-term costs can be demonstrated to fall disproportionately on any individual or particular group, then it would be reasonable for the Government to develop a strategy to minimise any such hardship.

It is inevitable that for some, these recommendations and proposals will go too far and for others they will not go nearly far enough. However we suspect that twenty years from now, Victoria without a system of marine national parks would be as unthinkable as Victoria today would be without the Wilsons Promontory or the Grampians National Parks.

It was also part of the ECC's terms of reference to recommend areas suitable for marine aquaculture. The ECC believes that an environmentally sensitive aquaculture industry has the potential to contribute substantially to the Victorian economy, but preparing these aquaculture recommendations has been a difficult task, for technical, environmental and social reasons. There has been a lot of concern expressed to us about the perceived environmental risks associated with aquaculture in open marine waters, although there appears to be considerable support for land-based aquaculture. As well, from an industry perspective relatively few areas in Victoria are suitable for existing species and technologies, and several of these areas are ruled out because of their environmental significance and sensitivity.

The ECC is recommending aquaculture zones which are significant expansions of existing licence areas, as well as some new areas, and further recommends monitoring programs to clarify and document the nature and extent of the environmental impacts. Wide availability of the results of monitoring will assist in responsible management of marine aquaculture, and should assist in addressing community concerns.

# Contents

Council's Message	v
Executive Summary	xi
<b>Part One</b> The investigation	
1.1 Introduction	3
1.2 Addressing the terms of reference	8
1.3 Policy context	9
1.4 Consultation and information	12
1.5 Economic and social assessments	12
<b>Part Two</b> Protection, use and management of Victoria's marine and coastal environment	
2.1 Aboriginal interests	19
2.2 Objectives for use	22
2.3 Protection of biodiversity	23
2.4 Catchment management	24
2.5 Threats	25
2.6 Use of marine resources	26
2.7 Implementation and management	28
2.8 Coastal reserves and coastal land use	30
<b>Part Three</b> Marine protected areas	
3.1 Victoria's marine biodiversity	35
3.2 Recommended approach to marine conservation	36
3.3 A comprehensive, adequate and representative system of marine protected areas	37
3.4 Community views	38
3.5 Principles for the selection and management of marine protected areas	38
3.6 Identification and selection of candidate areas for marine national parks	39
3.7 The proposed system	42
3.8 Existing parks and other areas	48
3.9 Biosphere Reserves	50
<b>Recommendations for the Western biophysical region</b>	51
A1 Discovery Bay Marine National Park	52
A2 Twelve Apostles Marine National Park	55
B1 Merri Marine Sanctuary	58
B2 The Arches Marine Sanctuary	59
C1 Cape Bridgewater	60
C2 Lawrence Rocks	60
C3 Portland Bay	61
C4 Deen Maar (Lady Julia Percy Island)	62
C5 Logans Beach	63
C6 Dinosaur Cove	63

<b>Recommendations for the Central and Wilsons Promontory biophysical regions</b>	65
A3 Point Addis Marine National Park	66
A8 Bunurong Marine National Park	69
A9 Wilsons Promontory Marine National Park	71
B3 Marengo Reefs Marine Sanctuary	74
B4 Eagle Rock Marine Sanctuary	75
B5 Point Danger Marine Sanctuary	76
B6 Barwon Bluff Marine Sanctuary	77
B10 Mushroom Reef Marine Sanctuary	78
C15 Summerland Peninsula (Phillip Island)	79
<b>Recommendations for the Eastern biophysical region</b>	81
A11 Ninety Mile Beach Marine National Park	82
A12 Point Hicks Marine National Park	84
A13 Cape Howe Marine National Park	87
B11 Beware Reef Marine Sanctuary	90
C16 The Skerries	91
C18 Gabo Island harbour	91
<b>Recommendations for the Bays, Inlets and Estuaries biophysical region</b>	93
Port Phillip Bay	95
A4 Port Phillip Heads Marine National Park	96
B7 Point Cook Marine Sanctuary	100
B8 Jawbone Marine Sanctuary	101
B9 Ricketts Point Marine Sanctuary	102
C7 Clifton Springs	103
C8 Werribee River estuary	104
C9 Capel Sound	104
Western Port	105
A5 Yaringa Marine National Park	106
A6 French Island Marine National Park	108
A7 Churchill Island Marine National Park	110
C10 Honeysuckle Reef	112
C11 Crawfish Rock	112
C12 Bass River delta	113
C13 San Remo	113
C14 Rhyll	114
Other bays, inlets and estuaries	115
A10 Corner Inlet Marine National Park	117
C17 Mallacoota Inlet (parts)	119

<b>Part Four</b>	<b>Marine aquaculture areas</b>	
4.1	Overview	123
4.2	Victoria's aquaculture programs and the ECC's role	123
4.3	Community views	124
4.4	Nutrient management and finfish culture in Port Phillip Bay	125
4.5	Principles for selection and management of marine aquaculture areas	126
4.6	The proposed areas	127
4.7	Recommended marine aquaculture zones	127
	<b>Recommended aquaculture zones</b>	128
E1	Portland Aquaculture Zone	129
E2	Grassy Point Aquaculture Zone	129
E3	Clifton Springs Aquaculture Zone	130
E4	Point Lillias Aquaculture Zone (land-based)	130
E5	Avalon Aquaculture Zone (land-based)	131
E6	Bates Point Aquaculture Zone	131
E7	Kirk Point–Werribee Aquaculture Zone	132
E8	Beaumaris Aquaculture Zone	132
E9	Mount Martha Aquaculture Zone	133
E10	Dromana Aquaculture Zone	133
E11	Pinnacle Channel	134
E12	Flinders Aquaculture Zone	134
	<b>References</b>	135
	<b>Glossary</b>	151
	<b>Acronyms</b>	154
	<b>Appendices</b>	155
1	List of submissions received on the Draft Report (December 1999)	
2	ECC's response to major issues	
3	Mirimbiak Nations Aboriginal Corporation Consultation Report	
4	Socio-economic assessment of the implications of the Final Report	
5	Assessment of commercial fisheries catch and value	
6	Victorian marine ecological data	
6.1	Summary of marine ecosystem mapping in Victoria (1992–2000)	
6.2	Marine habitat classes and ecological communities	
6.3	Marine invertebrate species of conservation concern and significant locations	
7	Technical criteria for marine aquaculture sites	



## Executive Summary

Victoria's marine and coastal environment is unique in its natural diversity – nowhere else in Australia is there such a rich diversity of flora and fauna, and cultural sites and landscapes, along such a compact and easily accessible coastline. In addition to its environmental values, the marine and coastal environment is a valuable economic resource. Victoria's commercial fish and shellfish industries generate jobs, exports and income. Recreational fishing, boating and sightseeing are important leisure activities and, together with tourism, provide significant economic benefits to coastal towns. Coastal and marine waters are used for shipping and trade, and Victoria's commercial ports are amongst the busiest in the southern hemisphere.

There is increasing pressure on marine environments, arising from agricultural, urban and industrial development in catchments draining to the coast, physical disturbances, fishing and harvesting, and the introduction of exotic marine organisms. The cumulative effects of commercial and recreational fishing are demonstrable for many fish and shellfish stocks in Victorian waters, and evidence of overfishing is available for at least two important fisheries: sharks and rock lobster. The alarming spread of introduced marine species in Port Phillip Bay is a serious threat to marine biodiversity.

### The investigation

The Environment Conservation Council (ECC), at the request of the Victorian Government, has carried out an investigation of the State's marine, coastal and estuarine areas. The ECC's investigation built on earlier work of the Land Conservation Council (LCC) and also took into account work done by the Victorian Coastal Council and actions associated with the implementation of Australia's Oceans Policy. Government programs, such as the major buy-back of bay and inlet fishing licences, were also taken into account.

### Terms of reference

The Government requested that the ECC make recommendations on the protection of significant environmental values and the sustainable use of Victoria's marine environment, with priority given to recommendations for a representative system of marine parks and for areas suitable for marine aquaculture. The full terms of reference are included in Part One of this report.

### In accordance with its terms of reference, the ECC recommends:

- 13 highly protected **marine national parks**, covering the major habitats and biological communities of Victoria's five biophysical regions;
- 11 smaller highly protected **marine sanctuaries** to complement the marine national parks and to protect special values;
- 18 **special management areas** where special values are highlighted, but which generally require a lower level of protection;
- retaining the remaining **existing multiple-use marine parks** under current management arrangements;
- 12 **marine aquaculture zones** totalling 2 682 ha;
- reservation of all other marine areas as **Coastal Waters Reserve**;
- objectives and recommendations for protection, use and management of marine environments; and
- zoning of existing **coastal reserves** into Coastal Protection and Coastal Recreation zones, consistent with the Victorian Coastal Strategy.

The recommended highly protected marine national parks and marine sanctuaries total 63 136 ha or **6.2%** of Victoria's marine waters.

### ***Scope of the Final Report***

For completeness, this final report comprises all the ECC's recommendations for Victoria's marine, coastal and estuarine area, including the review of the Port Phillip Heads Marine Park requested by the Minister in December 1998, and the two aquaculture recommendations contained in the Interim Report (1988) currently under consideration by Government.

### ***Consultation program***

The recommendations in this report conclude a nine-year process which included six formal periods for public comment, as well as ongoing consultation with a broad range of community and industry groups, government agencies and interested individuals. An Advisory Group was established to provide input and advice regarding technical issues associated with the investigation.

About 4500 written submissions have been taken into account in the preparation of this report, almost 2500 of them received following the release of the Draft Report. This is a huge resource of information and informed comment which was enormously valuable in helping the ECC finalise its recommendations.

In addition to consideration of written submissions, the ECC has conducted numerous briefings and public meetings. Mirimbiak Nations Aboriginal Corporation was commissioned to facilitate and coordinate the input of Aboriginal people.

### ***Major changes since the Draft Report***

Following public consultation on the Draft Report the ECC has made several significant changes to its recommendations:

- an expanded discussion and recommendations relating to broad protection, use and management issues in the marine environment;
- changes to marine national park boundaries to address user issues, to improve habitat representation and to provide for easier boundary identification;
- minor changes to marine sanctuaries and special management areas, and additional special management areas recommended;
- a re-assessment of commercial fisheries catch estimates, and a social and economic assessment of impacts on coastal communities;
- existing multiple-use parks to retain their current names and management arrangements;

- a small number of changes to marine aquaculture zones to address user issues; and
- aquaculture investigation areas have either been removed or a smaller zone identified.

A summary of the changes to area recommendations is provided at the end of this Executive Summary.

### ***Social and economic assessments***

Both the ECC and the LCC have commissioned social and economic assessments throughout this investigation.

The annual value of commercial fisheries in the recommended marine national parks and marine sanctuaries is estimated to be approximately \$7 million, with most of the value derived from abalone harvesting.

The ECC recently commissioned Essential Economics Pty Ltd to carry out an assessment of the social and economic implications of its final recommendations, particularly on coastal communities. The full report is provided in Appendix 4. The assessment indicates that impacts on commercial fishers depend on whether or not catch can be secured from other areas. In the event that foregone catch is not sourced from elsewhere, the potential job loss is around 0.3% of all employment in towns located near recommended marine national parks and marine sanctuaries. However it is expected that individual incomes would be reduced rather than jobs lost, and the net effect on a town's economy is not expected to be significant.

The recommendations are assessed as unlikely to have any significant adverse impact on recreational fishing expenditures in the State.

Marine aquaculture is likely to generate significant employment for Victoria, with Portland a potential major beneficiary.

Employment generation in coastal towns may also be associated with management of marine protected areas.

The primary tourism benefit flowing from the recommendations is the opportunity for increased tourism marketing and development of new products associated with the new marine national parks or sanctuaries. However, tourism numbers are considered to be unlikely to increase as a direct result of implementing recommendations, and benefits are likely to be small and not measurable in terms of new jobs.

Environmental benefits flow from preservation of the State's coastal and marine biodiversity. Although difficult to quantify, improved scientific understanding, access to education opportunities and preservation of Victoria's natural assets for future generations are some of the benefits generated through implementation of the recommendations.

It was noted that the structural change evident in many of Victoria's coastal communities is driven by an ongoing shift from resource to service economies and, for some coastal communities, the net result has been population decline. Flowing from such structural shifts are community perceptions of loss and isolation and, in these circumstances, additional change through policy implementation can further entrench these sentiments.

### **Addressing the terms of reference**

Maintaining the health and integrity of marine ecosystems is fundamental to good management of Victoria's marine and coastal environments. Care must be taken not to threaten the biological diversity and ecological processes on which continued use of the sea depends. Victoria's marine biodiversity is a significant part of the State's wealth. As a society we have a responsibility to pass on an environment to future generations that will continue to give them the benefits that it has given us.

In this report the ECC addresses the two priorities established in its terms of reference:

- a representative system of marine parks in Victoria, and
- areas suitable for marine aquaculture.

### ***Marine protected areas***

The recommendations for a system of highly protected areas within a framework of sustainable management are an expression of multiple-use management of the marine environment.

The ECC recommends a system of **13** highly protected **marine national parks** along the Victorian coastline. These parks, which are representative of the major habitats and biological communities in Victoria's five marine biophysical regions, form the major component of the marine protected areas system.

The marine national parks will be complemented by **11** smaller highly protected **marine sanctuaries**, recommended for protection of special features.

**18 special management areas** are also identified where a lower level of protection is sufficient to protect special features.

The **existing multiple-use marine parks** (other than the areas recommended to be included in marine national parks or marine sanctuaries) are recommended to be retained to be managed for a variety of uses which do not impact on the values and objectives of the park.

Out of a total Victorian marine area of 1 017 400 ha, the areas recommended as highly protected marine national parks and marine sanctuaries total 63 136 ha or about 6.2% of Victoria's marine waters. More information on all these areas is provided in Part Three of this report.

### ***Coastal reserves and coastal land use***

Coastal reserve zones provide protection for, and recognition of, the often narrow public foreshore land outside parks and other conservation reserves. These areas are a focus of recreational use and public enjoyment, and support often fragile coastal ecosystems and landscapes.

The Coastal Protection Zones should be managed to provide for conservation, or low impact recreation consistent with protection of the natural values of the areas. The Coastal Recreation Zones are capable of sustaining recreation for larger numbers of people, and should be managed for appropriate recreational use whilst minimising impacts on remnant values and the coastal environment.

The ECC, in conjunction with the Victorian Coastal Council, has mapped coastal zoning for coastal public land outside parks and reserves, and recommends that the zoning be incorporated into the Victorian Coastal Strategy.

### ***Marine aquaculture***

The ECC is recommending **12 marine aquaculture zones**. The zones total 2 682 ha. More information on all the proposed zones is provided in Part Four of this report.

The ECC also considers that there are major opportunities, and broad community support, for land-based aquaculture, and encourages its development.

## Summary of changes to area recommendations since the Draft Report

### Marine national parks

Final Report Recommendation	<i>the change</i>	<i>the reasons</i>
A1 Discovery Bay	straightening the offshore boundary –area reduction of 260 ha	easier identification of seaward boundaries
A2 Twelve Apostles	additional shoreline exclusions; offshore boundary straightened –area reduction of 530 ha	easier identification of boundaries, and additional areas for shore-based recreational fishing
A3 Point Addis	straightening the offshore boundary –area reduction of 215 ha	easier identification of seaward boundary
A4 Point Cook in Draft Report – see B7 below		
A4 Port Phillip Heads	Recommended in Interim Report 1998. Not included in Draft Report 1999. Change from multiple-use park to marine national park – for details see Part Three.	
A5 Yaringa	no change	
A6 French Island (formerly A6 North Western Port)	Post Office Channel included; name change –area increase 130 ha	easier identification of boundaries and better representation of channel habitats
A7 Churchill Island (formerly A7 Rhyll Inlet)	parts of channels used for fishing excluded; name change –area reduction of 335 ha	reduced impact on boat-based recreational fishing
A8 Bunurong	straightening the offshore boundary	easier identification of seaward boundary
A9 Wilsons Promontory	Glennies group of islands excluded –area reduction of 930 ha	reduced impact on commercial abalone fishery
A10 Corner Inlet (formerly B10 Corner Inlet Marine Sanctuary)	change of southern and eastern boundaries, name change to Marine National Park –area increase of 740 ha	better representation of <i>Posidonia</i> and <i>Halophila</i> seagrass
A11 Ninety Mile Beach (formerly A10)	the park relocated to the west of Seaspray; offshore boundary straightened –area reduction of 160 ha	reduced impact on shore-based recreational fishing; easier identification of boundaries
A12 Point Hicks (formerly A11)	Clifton Rocks excluded, Whaleback Rock included; offshore boundary straightened –area reduction of 1 800 ha	reduced impact on shore-based recreational fishing; easier identification of seaward boundary
A13 Cape Howe (formerly A12)	straightening the offshore boundary –area reduction of 380 ha	easier identification of seaward boundary

### Marine sanctuaries

Final Report Recommendation	<i>the change</i>	<i>the reasons</i>
B1 Merri	La Bella reef area excluded –area reduction of 23 ha	easier identification of boundaries and reduced impact on commercial abalone fishery
B2 The Arches	no change	
B3 Marengo Reefs	no change	
B4 Eagle Rock	adjustment of east and west boundaries –area increase of 9 ha	easier identification of boundaries from land and improved representation of nearshore reefs
B5 Point Danger	no change	
B6 Barwon Bluff	no change	
B7 Point Cook (formerly A4 Point Cook Marine National Park)	Sheoak reef excluded and entire Point Cook reef included; change of name to Marine Sanctuary –area reduction of 215 ha	reduced impact on commercial abalone fishery and recreational fishing, ecological monitoring facilitated by inclusion of entire Point Cook reef complex
B8 Jawbone (formerly B7)	adjustment of western boundary –area reduction of 12 ha	the boundary moved away from Kororoit Creek mouth
B9 Ricketts Point (formerly B8)	reduction of the offshore area –area reduction of 120 ha	easier identification of boundaries and reduced impact on boat-based recreational fishing
B10 Mushroom Reef (formerly B9)	minor boundary adjustment	easier identification of boundaries
B11 Beware Reef	no change	

## Special management areas

<b>Final Report Recommendation</b>	<i>the change</i>	<i>the reasons</i>
<b>C1</b> Cape Bridgewater (formerly D1)		
<b>C2</b> Lawrence Rocks (formerly D2)	no change	
<b>C3</b> Portland Bay (formerly D3)		
<b>C4</b> Deen Maar (Lady Julia Percy Island) (formerly D4)	name change	to reflect significance of area for Aboriginal people
<b>C5</b> Logans Beach (formerly D5)	adjustment of the offshore boundary –area increase of 160 ha	consistency with the proposed Wildlife (Whales) (Logan’s Beach) Regulations 2000 under the <i>Wildlife Act</i> 1975
<b>C6</b> Dinosaur Cove (formerly D6)	adjustment of the offshore boundary –area increase of 9 ha	easier identification of boundaries
<b>C7</b> Clifton Springs (formerly D7)	no change	
<b>C8</b> Werribee River estuary (new area)	new area –51 ha	to protect estuarine environment
<b>C9</b> Capel Sound (formerly D8)	straightening of the boundary –area increase of 126 ha	easier identification of boundaries
<b>C10</b> Honeysuckle Reef (formerly D9)		
<b>C11</b> Crawfish Rock (formerly D10)	no change	
<b>C12</b> Bass River delta (formerly D13)		
<b>C13</b> San Remo (formerly D12)	no change	
<b>C14</b> Rhyll (formerly D11)	adjusting the offshore boundary and additional areas –area increase of 246 ha	easier identification of boundaries and enhanced protection for wading birds
<b>C15</b> Summerland Peninsula (Phillip Island) (formerly D14)	additional area –area increase of 372 ha	improved protection for seal and penguin populations
<b>C16</b> The Skerries (formerly D15)	no change	
<b>C17</b> Mallacoota Inlet (parts) (new area)	new area –340 ha	to protect areas of flora, fauna and geomorphological significance
<b>C18</b> Gabo Island harbour (new area)	new area –23 ha	to protect nature based tourist values of Gabo Island harbour including little penguins and reef fish

## Aquaculture zones

<b>Final Report Recommendation</b>	<b><i>the change</i></b>	<b><i>the reasons</i></b>
<b>E1</b> Portland (formerly F1)	investigation area changed to zone –area reduction of 800 ha	to specify the area to be used for aquaculture
<b>E2</b> Grassy Point (formerly E1)	no change	
<b>E2</b> Clifton Springs (formerly E2)		
<b>E4</b> Pt Lillias (formerly F2)	investigation area changed to zone –area reduction of 33 ha	to specify the area to be used for aquaculture
<b>E5</b> Avalon	no change to previously recommended 17 ha area, possible additional 30 ha removed from recommendations.	more suitable area for aquaculture
<b>E6</b> Bates Point (formerly E3)	no change	
<b>E7</b> Kirk Point-Werribee (formerly F3)	investigation area changed to zone –area reduction of 5 600 ha	to specify the area to be used for aquaculture
<b>E8</b> Beaumaris (formerly E4)	no change	
<b>E9</b> Mount Martha (formerly E5)	–area reduction of 150 ha	reduced environmental impacts
<b>E10</b> Dromana (formerly E6)	–area reduction of 130 ha	reduced impact on recreational boating
<b>E11</b> Pinnacle Channel Recommended in Interim Report 1998. Not included in Draft Report 1999– for details see Part Four.	no change to previously recommended 1000 ha area	
<b>E12</b> Flinders (formerly E7)	no change	
<b>Areas previously listed in Draft Report</b>		
F4 Corinella	investigation area removed from recommendations	community concerns about environmental sensitivity of the Ramsar-listed Western Port environment; not sought by industry
F5 Bass River	investigation area removed from recommendations	community concerns about environmental sensitivity of the Ramsar-listed Western Port environment; not sought by industry
F6 Anderson Inlet	investigation area removed from recommendations	community concerns of environmental risks; not sought by industry
E8 Waratah Bay	zone removed from recommendations	community concerns of environmental risks; visual amenity and coastal infrastructure issues; not sought by industry
F7 Corner Inlet	investigation area removed from recommendations	environmental sensitivity of this Ramsar wetland; potential conflicts with other uses; not supported by industry