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Marengo Reefs Marine Sanctuary



Management Plan April 2007

**MARENGO REEFS MARINE SANCTUARY
MANAGEMENT PLAN**



April 2007

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Cover: Australian Fur Seals (Photo: Mary Malloy)

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Acknowledgement of *Country*. In their rich culture, Indigenous Australians are intrinsically connected to the continent – including the area now known as Victoria. Parks Victoria recognises that the sanctuary is part of *Country* of the Traditional Owners.

Parks Victoria is grateful to all those organisations and individuals who have contributed to this management plan. Special thanks go to the Marengo Reefs Marine Sanctuary Management Plan Advisory Group: Lisa Deppeler, Tim Godfrey, Tony James, Gary McPike, Paul Millar, Fiona Nelson, Andrew Orchard and Tim Smith.

Note

Technical terms used in this plan are explained in the **Glossary** at the end of the plan.

Disclaimers

This plan is prepared without prejudice to any negotiated or litigated outcome of any native title determination applications covering land or waters within the plan's area. It is acknowledged that any future outcomes of native title determination applications may necessitate amendment of this plan; and the implementation of this plan may require further notifications under the procedures in Division 3 of Part 2 of the *Native Title Act 1993* (Cwlth).

The plan is also prepared without prejudice to any future negotiated outcomes between the Government/s and Victorian Indigenous communities. It is acknowledged that such negotiated outcomes may necessitate amendment of this plan.

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FOREWORD

The Apollo Bay and Marengo communities have every reason to be proud of Marengo Reefs Marine Sanctuary. The sanctuary makes an important contribution to Victoria's system of Marine National Parks and Marine Sanctuaries, and protects a range of marine habitats, diverse marine life and historic shipwrecks. This outstanding example of our marine environment is a real asset for the community, creates yet another attraction on the Great Ocean Road and gives visitors the chance to experience Victoria's marine life close up, including Australian Fur Seals.

Implementation of this Management Plan will help protect and conserve the sanctuary's natural and cultural values, make the sanctuary more widely known and appreciated, and ensure visitors both enjoy and respect its importance for current and future generations.

The care of Marengo Reefs Marine Sanctuary is not a task for the government alone, nor only for those who live on the coast. It is a task for the whole Victorian community. This Management Plan sets out the ways in which we can work together to learn about, protect and sustain an important part of our marine environment.

I am pleased to take the opportunity to thank the Marengo Reefs Marine Sanctuary Management Plan Advisory Group for their valuable contribution and I also wish to thank those individuals and organisations who made submissions on the draft plan.

I look forward to the community's ongoing support for the management of Marengo Reefs Marine Sanctuary.

JOHN THWAITES MP
Minister for Environment

APPROVED MANAGEMENT PLAN

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

The plan provides the basis for the future management of Marengo Reefs Marine Sanctuary. It was finalised following consideration of the ten submissions received on the Draft Management Plan.

PETER HARRIS
Secretary to the
Department of Sustainability and Environment

MARK STONE
Chief Executive
Parks Victoria

INTRODUCTION TO THE MARINE ENVIRONMENT

Victorians are custodians of some of the most remarkable, diverse, and culturally important marine environments on Earth. They include deep open water, shallow embayments, rocky reefs, canyons, seagrass meadows, tidal sandflats and mudflats, and estuaries, and support more than 12 000 known species. Around 90% are found only in the waters of southern Australia.

Broadly speaking, Victoria has responsibility for the waters which extend off-shore to three nautical miles and cover around 70 000 square kilometres. Marine National Parks and Sanctuaries make up about 5% of this area, but provide protection for a range of significant species and important habitats as well as maritime artefacts and evidence of past Indigenous occupation and use.

The vast, three-dimensional marine environment has characteristics that are very different from those of the land and atmosphere. The fundamental physical properties — pressure, temperature, salinity, density and availability of nutrients and gases — are all very different. There are also great differences in the types of substrates, and the physical and biological processes that occur, such as tides, currents, light penetration, erosion, sedimentation, oxygen uptake, life cycles and even the food chains.

The organisms that occupy the marine environment are different. On land vascular plants dominate, but in marine habitats they are very rare, occurring only in very shallow water on sheltered coastlines. In most marine environments their ecological roles in photosynthesis and oxygen production are undertaken by algae, which range in size from giant kelps to minute single-celled species. Other single-celled organisms such as diatoms, cyanobacteria, dinoflagellates and forams, together with invertebrate larvae and marine fungi, make up most of the abundant marine plankton that is the basis of all marine food chains.

As on land, invertebrates, including molluscs (e.g. octopuses, abalones, snails), crustaceans (e.g. crabs, lobsters, tiny amphipods) and echinoderms (e.g. sea cucumbers, sea stars and sea urchins), dominate the marine fauna but

insects — the most abundant invertebrates on land — are almost absent. The dominant vertebrates are fish, although mammals and reptiles also inhabit the marine environment and many birds inhabit both realms.

Although they are very different physically and biologically, the land, atmosphere and marine environments are interconnected. Water and gases are transferred between oceans and the atmosphere. There are animals with both marine and freshwater life stages, and some species breed in estuaries where fresh water from the land mixes with oceanic salt water. Fresh water and sediments from catchments far inland are dispersed into coastal waters, bringing with them nutrients needed to maintain inshore marine ecosystems but also pollution from human activities.

The sea interconnects marine habitats over great distances. Tides and currents move sediments, plankton and organic matter into and through habitats, along with flotsam, jetsam, ballast water and oils released from ships on the open seas, or washed from the shores of other countries. Many marine animals migrate long distances, passing freely into and out of Victorian waters and spending much of their lives in the open ocean.

A vision for Victoria's system of Marine National Parks and Marine Sanctuaries

‘A world-class system of Marine National Parks and Marine Sanctuaries that conserves the diversity of Victoria's marine environments, protected and enjoyed by Victorians and visitors, forever.’

This vision for Victoria's system of Marine National Parks and Marine Sanctuaries is detailed in the Marine National Park and Sanctuary Management Strategy 2003–2010 (Parks Victoria 2003a). It is summarised in the following extract:

The vision for Victoria's system of Marine National Parks and Marine Sanctuaries is to maintain marine ecosystems in their natural state, enjoyed by visitors and protected from the effects of inappropriate activities. The system will safeguard representative examples of undisturbed natural marine habitats, respect cultural heritage values, and be a place of

inspiration, enjoyment and renewal for all people. The system will complement our world-class national parks system on land.

This vision aims to preserve the diversity of our marine environment, its flora and fauna, its natural beauty, and the diversity of activities that may be enjoyed there. It is a vision that invites all Victorians to become involved, to take pride in our Marine National Parks and Marine Sanctuaries, and to share in their stewardship' (Parks Victoria 2003a).

Contribution of Marengo Reefs Marine Sanctuary to the statewide system

Marengo Reefs Marine Sanctuary is one of eight Victorian marine protected areas in the Central Victoria Bioregion. The sanctuary was recommended for its value for public education and underwater recreation and is a popular dive site. It also protects a number of different microhabitats, an Australian Fur Seal haul out area and several shipwrecks.

Implications for management

The differences and connections in the marine environment mean that Victoria's Marine National Parks and Marine Sanctuaries must be managed somewhat differently from land environments. Natural, recreational and cultural values may be affected by the use of both land and marine areas some distance away, over which sanctuary managers have no

direct control. Impacts on one marine habitat can quickly affect another marine habitat, and human activities and natural events on land and in the atmosphere can have widespread consequences for the marine environment. Boundaries in the ocean can be difficult to define, and the effects of human activities can be hidden from view. Like the atmosphere, but in contrast to land, the marine environment is a common resource for which there is no private ownership and few natural or artificial barriers to movement. Many of the strategies used to concentrate the impacts of recreational activities in terrestrial parks (e.g. creation of walking tracks and picnic areas) are not feasible in the marine context.

Conservation of cultural places and objects is also a challenge because it is difficult to identify an underwater place or monitor activities that take place on the open sea or under water. *Sea Country* and cultural connection to, or past use of, underwater places which were exposed prior to sea level rise, must also be considered.

The long-term protection of the Marine National Parks and Marine Sanctuaries relies on the support and goodwill of the community, together with the help of coastal managers and government agencies. The plan seeks to foster a strong sense of custodianship of the sanctuary and to strengthen its protection while respecting cultural and community associations with the area.

SUMMARY

This Management Plan covers Marengo Reefs Marine Sanctuary located at Marengo, near Apollo Bay on the Great Ocean Road.

The sanctuary protects Indigenous cultural values, shipwrecks, a range of fascinating marine species and other values. The sanctuary's values and close proximity to the towns of Marengo, Apollo Bay and Skenes Creek make it important for the development of community awareness of Marine National Parks and Marine Sanctuaries, community education, and community involvement.

Indigenous people and their communities have a long association with the area and its resources. There are many important Indigenous cultural sites on land near the sanctuary and there are also likely to be submerged sites and artefacts within the sanctuary. The sea *Country*, coast and marine life are components of *Country*, which are of fundamental spiritual relevance and importance to Indigenous people of the area including Traditional Owners.

The 1858 wreck of the international trader *Grange*, and the 1923 wreck of the coastal trader *Wollomai* in combination with the wreck of the *Casino* just outside the sanctuary, make an important contribution to Victoria's maritime cultural heritage. Their proximity to Apollo Bay provides opportunities for interpretation and education.

Marengo Reefs Marine Sanctuary protects a mixture of habitats, including exposed intertidal reef, sand and subtidal reef. The reefs provide sheltered habitat for many algae and fish species, a haul out area for Australian Fur Seals and roosting areas for seabirds such as the Pacific Gull and Black-faced Cormorant.

The sanctuary is accessible by boat, sea kayak or swimming, and provides one of the best areas for snorkelling and scuba diving along the Great Ocean Road. It also provides excellent opportunities for visitors to see marine life and learn about Marine National Parks and Marine Sanctuaries.

The sanctuary will be managed as a world class marine protected area for conservation and appropriate recreation consistent with its status. To be successful, this will require a sound basis of scientific knowledge and a foundation of ongoing community support, including agency partnerships.

Major management directions for the sanctuary include:

- Development of baseline information about marine biodiversity, marine habitats, threatening processes and management requirements.
- Enhancement of opportunities for visitors to observe, enjoy and learn about marine life, and undertake water sports.
- Special protection of the seal haul out area from disturbance.
- Encouragement of local communities, the Traditional Owners and government agencies to become involved in sanctuary management.
- Innovative action to ensure that the sanctuary and values become well known and appreciated in the community.
- Recognition of Indigenous cultural heritage associated with the sanctuary, and respect for the views of the Traditional Owners and cultural obligations of Indigenous people.
- Reflection of the Traditional Owners' knowledge, interests, rights and aspirations for the area, in all planning and management.
- Cooperation with Colac Otway Shire, Barwon Water, Fisheries Victoria– Department of Primary Industries, Corangamite Catchment Management Authority and other relevant agencies to ensure integrated management of the sanctuary with surrounding areas.

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1 INTRODUCTION

1.1 Location and planning area

Marengo Reefs Marine Sanctuary (12 ha) is in Victorian State waters near Marengo and Apollo Bay, which are on the Great Ocean Road, approximately 220 km south-west of Melbourne (figure 1).

The sanctuary is approximately 150 m offshore. The sanctuary surrounds and includes a reef system known as Little Henty Reef. Two sections of the reef, known as the Inner Reef and the Outer Reef, are usually exposed, separated by a narrow channel known as 'The Gap'.

1.2 Creation of the sanctuary

Marengo Reefs Marine Sanctuary forms part of a representative system of 13 Marine National Parks and 11 Marine Sanctuaries in Victorian waters. The selection of these areas was based on more than 10 years of research, investigation and community consultation by the former Land Conservation Council (LCC) and Environment Conservation Council (ECC), summarised in the *Marine, Coastal and Estuarine Investigation Final Report* (ECC 2000). The recommendations of the ECC accepted by government (Government of Victoria 2002) included reservation of the new parks and sanctuaries under the National Parks Act.

Marengo Reefs Marine Sanctuary was included on Schedule 8 of the *National Parks Act 1975* (Vic.) on 16 November 2002 (appendix 1).

When created, much stronger penalties were applied for all forms of fishing, including shellfish collection in Marine National Parks or Marine Sanctuaries than apply for taking or damaging other fauna, plants or objects from these areas.

1.3 Plan development

This first Management Plan for the sanctuary was prepared by Parks Victoria, with significant input from the Marengo Reefs Marine Sanctuary Management Plan Advisory Group and other stakeholders. It takes into account existing information, reports and

research findings that relate to the sanctuary and is informed and supported by a range of best practice management systems.

The strategies outlined in this plan have been guided by the statewide *Marine National Parks and Marine Sanctuaries, Management Strategy 2003–2010* (Parks Victoria 2003a).

The plan is a strategic guide for future management of the sanctuary. As a public document, the plan establishes how Parks Victoria will protect the natural and cultural values of the sanctuary, and describes the services and facilities that will be provided to help visitors to enjoy, appreciate and understand the sanctuary in ways that are consistent with this. The plan also serves to inform and encourage cooperative land management and participation in community-based programs between Parks Victoria and the managers of areas adjacent to the sanctuary.

As a working document for the sanctuary, the plan informs Parks Victoria's development of Corporate Plans, serves as a framework for subsequent detailed planning and governs management activities.

The Draft Management Plan was published for public comment in May 2006, and ten submissions were received (appendix 2).

Where necessary, further consultation with the community and stakeholders was undertaken.

Several minor changes were made to the Draft Plan in preparing this Final Management Plan in response to submissions. Changes to the plan included:

- clarification of boat speed management in the sanctuary and the safety reasons behind not restricting speed through The Gap
- clarification of water quality management with Barwon Water
- reduction in repetition and clearer accountabilities for management strategies.

The final management plan will direct future management of Marengo Reefs Marine Sanctuary, until reviewed.

2.1 Regional context

Marengo Reefs Marine Sanctuary forms part of a representative system of 13 other Marine National Parks and 10 other Marine Sanctuaries in Victoria, established within the broader context of a National Representative System of Marine Protected Areas (NRSMPA). The NRSMPA contributes to the establishment of a global representative system of marine protected areas (ANZECC TFMPA 1999).

Marengo Reefs Marine Sanctuary is one of eight Marine National Parks and Marine Sanctuaries in the Central Victoria marine bioregion, as identified by the Interim Marine and Coastal Regionalisation for Australia (IMCRA). This regionalisation identified 60 marine bioregions, five of which apply to Victorian waters. The Central Victorian marine bioregion extends from Cape Otway to west of Wilsons Promontory. It does not include Port Phillip Bay and Western Port, or the offshore waters of Bass Strait. It is characterised by steep to very steep offshore gradients, sandy beaches and cliffs. Sea surface temperatures are representative of Bass Strait waters, and wave energy is moderate (IMCRA Technical Group 1998). The sanctuary is small relative to other protected areas within the bioregion, contributing less than 1% towards the total protected area within this bioregion.

Indigenous tradition indicates that the sanctuary is part of *Country* of Gadubanud people. Other Indigenous communities, including the Kirrae Wurrung, Framlingham Aboriginal Trust, Wathaurong Aboriginal Co-operative and the Southern Otways Indigenous Group, share a strong interest in the planning area (section 5.1).

The Barham River flows into Mounts Bay near the sanctuary. The sanctuary, Barham River, and associated catchment are within the Otways Coast Basin, within the Corangamite Catchment Management Authority's area of responsibility. Marengo Reefs Marine Sanctuary is surrounded by similar sand and subtidal reef habitats which are a part of Victorian State waters. Nearby beaches, dunes and coastal wetlands are within a coastal reserve managed by the Kennett River –

Apollo Bay Foreshore Reserve Committee of Management. The coastal communities of Marengo and Apollo Bay are also nearby.

The Apollo Bay harbour is 2.5 km to the north of the sanctuary. The harbour is used by a finfish, crayfish and abalone fishing fleet as well as charter boats and recreational craft.

The planning area is within Tourism Victoria's Great Ocean Road Product Region. Marengo, Apollo Bay and surrounding areas provide a range of camping and accommodation alternatives close to the sanctuary. The Great Ocean Road Product Region receives 14% of all tourist visits to Victoria (Tourism Victoria 2003), comprising 2.6 million domestic overnight visitors, 4.6 million domestic day visitors, and 164 000 international overnight visitors (Tourism Victoria 2003).

The values of the sanctuary are complemented by the seven other marine protected areas in the Central Victoria marine bioregion:

- Point Addis Marine National Park
- Port Phillip Heads Marine National Park (outer Point Lonsdale and outer Point Nepean)
- Bunurong Marine National Park
- Eagle Rock Marine Sanctuary
- Point Danger Marine Sanctuary
- Barwon Bluff Marine Sanctuary
- Mushroom Reef Marine Sanctuary.

There is a range of other natural attractions in the region, including:

- Great Otway National Park
- the Apollo Bay foreshore
- the Great Ocean Walk.

2.2 Sanctuary significance and values

Marengo Reefs Marine Sanctuary makes a valuable contribution to Victoria's parks system, which aims to protect viable, representative samples of the State's natural marine and terrestrial environments. Parks and reserves provide opportunities for visitors to

enjoy and appreciate natural and cultural values, and make contributions to tourism.

The sanctuary is assigned the International Union for the Conservation of Nature and Natural Resources (IUCN) Category III of the United Nation's List of National Parks and Protected Areas. Category III areas are managed primarily for conservation of specific natural features.

The area included in the sanctuary is significant to many people in the community, especially the Traditional Owners who are connected to the area by tradition. Extensive middens adjacent to the sanctuary show how generations collected and used marine species as a food source.

The exposed reefs within the sanctuary form islands protected from predators and also create some interesting underwater habitats.

Important values of the sanctuary are listed below.

Natural values

- Subtidal soft sediments, subtidal rocky reefs and intertidal reefs.
- A high diversity of algal, invertebrate and fish species.
- An Australian Fur Seal haul out area.

Cultural values

- Evidence of a long history of Indigenous use, including many Indigenous places and objects nearby.
- Wrecks of coastal and international trade vessels in the vicinity of the sanctuary.

Recreational and tourism values

- Spectacular underwater scenery for snorkelling and scuba diving.
- Intertidal areas for exploring rock pools.
- Opportunities for a range of aquatic recreational activities including seal watching.

2.3 Evidence of past use

For many generations, reefs within the sanctuary as well as nearby rivers and wetlands were important sources of food and fresh water for Indigenous communities. Middens and

artefacts found in areas near the sanctuary demonstrate its importance (L. Haradine pers. comm.).

Prior to the creation of the sanctuary, recreational and commercial collection of Rock Lobster and Abalone occurred in these waters. The Inner Reef in particular was subject to extensive collection. Anecdotal evidence suggests that fish, Abalone and Rock Lobster sizes and numbers have declined significantly over the years. Anecdotal evidence also indicates that seals were occasionally killed or harassed in the past.

The sanctuary provides some shelter for boats as they leave Apollo Bay and enter the open ocean. There is a history of maritime incidents in the vicinity of the sanctuary, including several known shipwrecks. Boats continue to pass through or close by the sanctuary regularly.

The area has been a popular scuba diving and snorkelling area for many years. Sea-kayak seal-watching tours have been established by licensed tour operators.

2.4 The sanctuary visitor

Most visitors access the sanctuary by boat or sea kayak, although visitors occasionally can walk to the Inner Reef during a very low tide.

Divers undertake boat-based dives around the Outer Reef and shore-based dives around the Inner Reef. Visitors watching seals usually do so as a part of an organised activity, often from outside the sanctuary.

A passage between the inner and outer reef known as 'The Gap' provides the most practicable route for many boat users as they head to sea or to fish in adjacent waters.

Many car-based tourists travelling the Great Ocean Road stop briefly on the foreshore near the sanctuary, but are often unaware of the sanctuary. Facilities adjacent to the sanctuary are shown in figure 2.

Many visitors have a low level of knowledge about Marine National Parks and Marine Sanctuaries along the Great Ocean Road. A recent survey indicated that although 82% of people surveyed had heard of Marine National Parks and Marine Sanctuaries, only 18% identified Marengo Reefs as a Marine Sanctuary (Market Solutions 2005).

2.5 Legislation and ECC recommendations

Legislation

Marengo Reefs Marine Sanctuary is reserved and managed under the provisions of the *National Parks Act 1975* (Vic.). The Act requires the Secretary to the Department of Sustainability and Environment to preserve and protect the natural condition of the sanctuary and its natural and other features and, subject to this, to provide for the use of the sanctuary by the public for enjoyment, recreation and education. Appropriate research activities are also provided for under the Act. The National Parks (Park) Regulations 2003 apply to the Marengo Reefs Marine Sanctuary.

All forms of extraction, including recreational and commercial fishing and shellfish collection, are prohibited within the sanctuary under the National Parks Act and regulations. A Statewide Compliance Strategy and Regional Compliance Plan have been developed in partnership with Fisheries Victoria – Department of Primary Industries – to manage compliance with the no-fishing provisions within the sanctuary (section 8.3).

The objects and provisions of the National Parks Act set the framework for the management of Marengo Reefs Marine Sanctuary (appendix 1). Specific legislation including that listed below, and ECC recommendations relating to management and accepted by government, also govern particular aspects of the management of the sanctuary as described below and in subsequent sections of the plan.

The *Coastal Management Act 1995* (Vic.) applies to the use and development of the whole of the sanctuary.

The *Archaeological and Aboriginal Relics Preservation Act 1972* (Vic.) and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth) apply to the sanctuary and protect all Aboriginal cultural heritage values, including places and objects (section 5.1).

The *Native Title Act 1993* (Cwlth) applies to the management of the sanctuary.

The *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) applies to the sanctuary with respect to actions that have, will

have, or are likely to have a significant impact on matters of national environmental significance including listed threatened species and communities and listed migratory species in the sanctuary.

The *Parks Victoria Act 1998* (Vic) enables management services for Marengo Reefs Marine Sanctuary to be provided by Parks Victoria on behalf of the Secretary to DSE.

Policies and guidelines (section 2.6) at both the Commonwealth and State levels apply to management of the sanctuary and specific activities and uses.

ECC recommendations

The former Environment Conservation Council (ECC) recommended the Marengo Reefs Marine Sanctuary for its value for public education and underwater recreation (ECC 2000).

In the *Marine, Coastal and Estuarine Investigation Final Report* (ECC 2000), the ECC made a number of recommendations that relate to the sanctuary. The recommendations included:

Recommendation B Use of Marengo Reefs Marine Sanctuary (B3) in accordance with the general recommendations for Marine Sanctuaries.

R3 Planning and management relating to traditional interests and uses in coastal marine areas will be based on recognition and respect for the traditional relationship of Aboriginal people with the land and sea.

R13 Further research will be undertaken on biological community composition and structure, both within and external to marine protected areas, with an emphasis on assessing the impacts of harvesting marine fauna.

R14 Assessments will be made and strategies developed for protection of vulnerable or threatened marine species and communities, using the provisions of the *Flora and Fauna Guarantee Act 1988* (Vic.) as appropriate.

R18 Measures will be implemented by responsible agencies to reduce the risk of marine pest species arriving in Victoria,

and to ensure a rapid and effective response in the event of an introduction.

R26 Public land and waters will continue to be available for a wide range of tourism and recreational uses. Development should not preclude public access to foreshore and offshore areas, other than to meet safety and security requirements that cannot be achieved in other ways.

All of these recommendations were accepted by the State Government in 2002 (Government of Victoria 2002).

2.6 Policies and guidelines

The sanctuary is managed in accordance with Parks Victoria's operational policies and as appropriate, consistent with other relevant policies and guidelines, including:

- *Victoria's Biodiversity Strategy* (NRE 1997)
 - *National Strategy for Ecologically Sustainable Development* (COAG 1992).
- The sanctuary is also managed within the broader context of a number of other plans and strategies, including:
- *Nature Based Tourism - Directions and Opportunities for Victoria 2000–2003* (Tourism Victoria 2000)
 - *Policy for Sustainable Recreation and Tourism on Victoria's Public Land* (NRE 2002a)
 - *Victorian Coastal Strategy* (VCC 2002)
 - *Corangamite Regional Catchment Management Strategy* (Corangamite CMA 2003)
 - *Great Ocean Road Regional Development Plan 2004–2007* (Tourism Victoria 2004)
 - *Great Ocean Road Region — Land Use and Transport Strategy* (DSE 2004b)
 - *Coastal Spaces Landscape Assessment Study, Protection and Management of Victoria's Coastal Landscapes* (DSE 2006)
 - *South West Victoria Regional Coastal Action Plan 2002* (Western Coastal Board 2002).
 - *Victoria's Heritage – Strengthening our Communities* (Heritage Victoria 2006).
- *Victoria's System of Marine National Parks and Marine Sanctuaries, Management Strategy 2003–2010* (Parks Victoria 2003a)
 - *Heritage Management Strategy* (Parks Victoria 2003b)
 - *Indigenous Partnership Strategy and Action Plan* (Parks Victoria 2005)
 - *Guidelines for Working with Aboriginal Communities and Protection of Cultural Sites* (Parks Victoria 2002a)
 - *National Strategy for the Conservation of Australia's Biological Diversity* (ANZECC 2001)

3 STRATEGIC DIRECTIONS

3.1 Sanctuary vision

A future visitor to Marengo Reefs Marine Sanctuary finds a haven for Australian Fur Seals, as well as beautiful underwater environments including many fish, algae and invertebrates.

Marengo, Apollo Bay and surrounding communities work with Parks Victoria to catalogue, understand and monitor the special values of the sanctuary. The sanctuary is regularly used by schools, local residents and visitors as a place to discover and learn about marine environments and their conservation. The contribution of the sanctuary to marine conservation, education and underwater recreation is widely understood and appreciated in the region.

The sanctuary's values are effectively protected and conserved by the application of specialist technical skills and knowledge of the underwater environment and its management needs by Parks Victoria, in partnership with the Traditional Owners, community groups and government agencies.

The health and integrity of sanctuary ecosystems is effectively guaranteed by Parks Victoria's ongoing partnership with the community.

3.2 Zoning

A park management zoning scheme is normally used to define areas where various types and levels of use are appropriate. However, management zones do not need to be defined in Marine National Parks and Marine Sanctuaries because the management aims for these areas are clearly outlined in the National Parks Act and are consistent across all Marine National Parks and Marine Sanctuaries (section 2.5 and appendix 1).

In this sanctuary, a Special Protection Area is used to highlight and support special protection of the Australian Fur Seal haul out area.

The Special Protection Area—Australian Fur Seal haul out area characteristics are listed in table 1. The boundary of the Special Protection Area is shown in figure 2.

3.3 Management directions

Natural values conservation

- Natural processes, including competition, predation, recruitment and disturbance, will be protected to ensure an overall benefit to the biodiversity and variety of marine ecological communities in the sanctuary.
- Identified threats to the sanctuary will be minimised through addressing the outcomes of ongoing monitoring, risk assessment and, where feasible, complementary adjacent, coastal and catchment management.
- Special protection for the seal haul out area from disturbance from visitors and boats.
- Compliance with legislated provisions that prohibit extractive activities, including fishing and shellfish collection, will be ensured through education, information, community support, and improved surveillance and enforcement.
- Research and monitoring to improve the scientific basis for management, including baseline data collection, marine habitat mapping and threat assessment, will be undertaken as outlined in the statewide Management Strategy (Parks Victoria 2003a) and through collaborative research links.
- Impacts of changes to water quality will be minimised through cooperation with catchment managers and agencies.

Cultural values conservation

- Indigenous places and objects will be protected from interference or damaging activities.
- The Traditional Owners' knowledge, interests and rights in the waters and land, and aspirations for *Country*, will be reflected in the sanctuary's management, in accordance with legislation and policies.

TABLE 1 MANAGEMENT OVERLAY

OVERLAY	AREA / LOCATION	VALUES	GENERAL MANAGEMENT AIM
Special Protection Area–Australian Fur Seal Haul Out Area	Approx. 3 ha, 25% of sanctuary. All areas of the Outer Reef above water and waters 20 m from the Outer Reef shoreline.	Australian Fur Seal haul out area.	Protect the Australian Fur Seal haul out area from disturbance by restricting visitor access onto the Outer Reef and in boats within 20 m of the Outer Reef (no anchoring, landing or launching).

- Indigenous cultural obligations relating to *Country* will be respected, and their knowledge promoted and interpreted in accordance with the views of the Traditional Owners.
- Research into Indigenous and non Indigenous cultural heritage of the sanctuary will be encouraged and supported as appropriate, in consultation with the relevant Indigenous communities and wider communities.
- Historic relics and places will be conserved by protecting them from damaging or inappropriate activities.

The sanctuary visit

- Visitor understanding and appreciation of the sanctuary's natural and cultural values will be enhanced by a range of information services and interpretation and education programs.
- Recreation opportunities will be provided in accordance with table 2. Visitors will be encouraged to adopt minimum impact techniques and to adhere to industry-developed standards appropriate to their activity.
- Visitors will enjoy opportunities to observe marine life, enjoy water sports and participate in other recreational activities compatible with conservation objectives.

Community awareness and involvement

- Strong collaborative partnerships will be developed with the Traditional Owners to facilitate the reflection of their knowledge, rights, and interests and aspirations, in the sanctuary's planning and management.
- Friends, volunteers and other interest groups will be encouraged to develop an understanding and appreciation of the sanctuary's values and the rich and diverse knowledge and aspirations of the Traditional Owners.
- Friends, volunteers, Indigenous and other community groups will be motivated, encouraged and supported to participate in areas of sanctuary management that relate to their interests.
- The wider community will be encouraged to become more aware of the sanctuary and appreciative of its values.
- Local communities and visitors will be encouraged to adopt and share custodianship of the sanctuary.
- Ongoing opportunities will be given for individuals, groups, communities and government agencies to discuss aspirations and issues of mutual concern relating to the sanctuary.
- Collaborative partnerships will be established with local community groups, relevant agencies and institutions to ensure that protection of the sanctuary is not compromised by other activities in the area.

TABLE 2 SUMMARY OF RECREATIONAL OPPORTUNITIES

ACTIVITY	ALL OF SANCTUARY EXCLUDING SPECIAL PROTECTION AREA (75% OF SANCTUARY)	SPECIAL PROTECTION AREA— AUSTRALIAN FUR SEAL HAUL OUT AREA (25% OF SANCTUARY)
Aircraft landing or launching (incl. hang-gliding, paragliding)	N	N
Aircraft flying above Sanctuary	Y	Y
Anchoring (sections 3.2 and 6.3)	Y	N
Beachcombing (no collecting)	Y	N
Bait collecting	N	N
Bird watching	Y	Y
Boat (including sea kayaks) landing/launching (section 6.3)	Y	N
Camping	N	N
Diving and snorkelling (section 6.4)	Y	Y
Dog walking	N	N
Education/guided activities (section 6.1)	Y	N
Feeding wildlife	N	N
Filming and photography	Y	Y
Fishing (all forms)	N	N
Fossil collecting	N	N
Kite boarding / wind surfing (section 6.3)	Y	N
Licensed tours (section 6.5)	Y	N
Mooring (sections 3.2 and 6.3)	N	N
Motorised boating (general) (section 6.3)	Y	N
Non-motorised boating (section 6.3)	Y	N
Personal watercraft / jet skiing (section 6.3)	Y	N
Rock pool rambling	Y	N
Sailing (section 6.3)	Y	N
Scenic viewing (sections 4.4, 6.2 and 6.3)	Y	Y
Sea kayaking (section 6.3)	Y	N
Shell collecting	N	N
Swimming	Y	Y
Walking (exposed reef and intertidal zone of rock platform) (section 6.2)	Y	N

Key:

- Y Permitted, subject to overlay prescriptions and conditions prescribed by legislation, permits or elsewhere in the plan as indicated.
- N Not permitted.

4 STRATEGIES FOR NATURAL VALUES CONSERVATION

4.1 Geological and geomorphological features

Little Henty Reef is the sandstone remnant of islands which have been planed off by marine erosion (Bird 1993). The Inner Reef and Outer Reef are the only islands between Cape Schanck and Peterborough on the outer coast. The Inner Reef is usually submerged at high tide but the Outer Reef is only occasionally inundated by high tides and large seas. Little Henty Reef lies within Mounts Bay, a small bay with a sandy beach facing east. The bay is flanked by two shore platforms: Haley Point near the sanctuary and Point Bunbury further north.

The geological features of the sanctuary and their influence on local hydrology are key determinants of the habitats available for benthic biota (section 4.4). Reefs in particular may be fragile and susceptible to physical damage.

There are no known sites of geological or geomorphological significance in the sanctuary (Buckley 1993), however limited hydro-geographical data is available for this area. According to Indigenous tradition, geomorphological features of the landscape result from the activities of ancestral spirits in the Dreamtime.

Depth, the compositions of substrates and locations of reefs may also be important in managing threatening processes such as pollution. Coastal modifications, including modifications to the harbour, could impact on geological values though changes to natural patterns of erosion and deposition in the area. Anchoring could also impact on geological and geomorphological features (section 6.3). Visitor impacts are currently not thought to have a significant impact on geological values.

Aim

- Protect significant and fragile geological and seabed features from damaging activities.

Management strategies

- *Manage visitor activities to minimise impacts on sensitive geological values.*

- *Disseminate detailed geological information about the sanctuary from the statewide habitat mapping program, to interested educational and other groups or individuals.*

4.2 Catchment and water quality

Water composition within the sanctuary is extremely dynamic and is influenced by many factors, both natural and modified. Offshore currents predominantly carry water from the south-west towards the Outer Reef while the Inner Reef is also influenced by inshore processes within Mounts Bay.

Pollution events at sea such as an oil spill could be catastrophic for life on these small exposed reefs. Pollution events within Mounts Bay, Marengo or near the Barham River would also have a direct impact. Ecological impacts within the sanctuary from changing land uses nearby are likely to be gradual with the risks remaining undetected.

Pollution of the sanctuary could be derived from:

- the Barham River Estuary
- the Marengo waste water outfall
- offshore waters.

Parks Victoria seeks to work collaboratively with other agencies to minimise the impact of pollution on sanctuary values (section 8.3).

The health of the sanctuary and the adjacent local environments could be improved through the implementation of a Neighbourhood Environment Improvement Plan (NEIP). NEIPs are action plans developed in partnership by all parts of the community and administered by EPA Victoria under the *Environment Protection Act 1970* (Vic.). They are designed to address environmental issues of importance to the community at a local scale and build on and support other efforts to protect Victoria's environment (section 8.3).

Estuaries

Water from the Barham River estuary discharges into Mounts Bay, 2 km north of the sanctuary.

Most of the upper Barham River catchment is forested or used for agriculture, although urban areas near the sanctuary are expanding rapidly in the lower catchment. Although the catchment is in relatively good condition, urban developments near the river have the potential to impact on water quality. The national catchment, river and estuaries audit (NLWRA 2002) classified the Barham River Estuary as a modified system subject to impacts from changed land uses, catchment vegetation clearing and mechanical river mouth opening. The estuary is expected to have low sediment trapping efficiency, naturally low turbidity, a salt wedge effect and a low risk of habitat loss due to sedimentation (NLWRA 2002).

The sanctuary and Barham River catchment are within the Corangamite catchment, which is the Corangamite Catchment Management Authority's area of responsibility. The *Corangamite Regional Catchment Strategy 2003–2008* (Corangamite CMA 2003) provides a strategic management framework for the protection of assets within the catchment and recognises the threats posed to marine environments from catchment activities. The *Corangamite River Health Strategy* (Corangamite CMA 2004) identifies the values and threats to the Barham River. The Corangamite CMA implement a river health program which seeks to protect the values of the river.

The *Apollo Bay Estuaries Management Action Plan* identifies strategies for the protection of local estuaries including the Barham River (Harty 1992).

Oil spills

Marine pollution, especially oil spills, is a significant threat to natural values, aesthetics and public safety. An oil spill in the vicinity of the sanctuary could have dramatic impacts, including the oiling of seals and seabirds, and oil accumulation over intertidal areas.

Response to pollution at sea is guided by the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances (AMSA 1998).

As the manager of around 70% of Victoria's coastal areas, Parks Victoria plays a significant support role in the response to marine incidents (section 8.3). Response to marine incidents

often requires a diverse range of skills and resources, involving coordination between multiple agencies including Parks Victoria and members of the community. In Victorian waters the *Victorian Marine Pollution Contingency Plan (VICPLAN)* (MSV 2002) outlines broad response arrangements to a potential oil or chemical spill. Oil or chemical spills in or near the sanctuary are reported and managed in accordance with the Port Phillip Region Marine Pollution Contingency Plan (section 8.3).

Potential impacts of oil and chemical spills on marine flora and fauna include:

- smothering and light reduction caused by sediments
- changes in algal composition as a result of nutrient enrichment with nitrogen and phosphorus.

Stormwater

Stormwater flows into the Barham River and Mounts Bay from urban areas around Marengo. Pollutants in stormwater adjacent to the sanctuary, including sediment, plastic litter and nutrients, have the potential to impact on sanctuary values. Urban subdivision proposals, industrial areas and sewer systems are all quite close to the Barham River and sanctuary. Industrial accidents or inappropriate construction could release pollutants which would reach the sanctuary with little warning. The Colac Otway Shire has developed a Stormwater Management Plan Strategies Paper which identifies stormwater management needs in the shire (Halliburton KBR 2002).

An alternative to traditional urban drainage systems is water-sensitive urban design which seeks to protect waterways and marine environments while protecting urban areas from floods (CSIRO 1999). The sanctuary may have a role in building community awareness of the importance of minimising stormwater pollution.

Waste water outfall

The Marengo waste water outfall is managed by Barwon Water. The outfall discharges waste water from Apollo Bay, Skenes Creek and Marengo to the west of the sanctuary.

Barwon Water is required to comply with the requirements of the State Environment

Protection Policy – Waters of Victoria, and an Environment Protection Authority Waste Discharge Licence. Barwon Water undertakes a monitoring program to assess the impact of the outfall on marine values. It also undertakes community education and seeks to optimise treatment efficiency and minimise pollution of the sea.

The close proximity of this outfall is cause for concern. Conditions for outfalls are managed by the Environment Protection Authority (EPA Victoria), but Parks Victoria can support strategies which seek to reduce risks to the marine environment (section 8.3). Greater community awareness of marine sanctuary values and threats from waste water may also support alternative water management options in the longer term.

Litter

Littering is illegal within and outside the sanctuary. Litter may be carried to the sanctuary by stormwater or as flotsam or jetsam originating from vessels elsewhere (section 4.3).

Litter, particularly thin plastics, may cause entanglement and smothering of marine flora and fauna. Promotion of sanctuary values can help to increase awareness of the need to prevent litter entering the sea.

Aim

- Prevent where practicable, and minimise the impact of pollution and litter on sanctuary values.

Management strategies

- *Work collaboratively with agencies including the Western Coastal Board, Corangamite CMA, Barwon Water, DSE and DPI and other relevant groups to:*
 - *minimise the impacts of pollution on the sanctuary*
 - *develop consistent and complementary marine and pollution education themes in education programs*
 - *share scientific information, including scientific monitoring information for the sanctuary, Barham River estuary and the waste water outfall.*

- *encourage research that increases knowledge of estuarine values, processes and potential impacts on the marine environment, to improve the understanding of impacts on the sanctuary*
- *identify and communicate potential impacts of catchment management activities on sanctuary values to relevant agencies.*
- *Work collaboratively with Colac Otway Shire to identify pollution threats to the sanctuary and to incorporate measures to protect sanctuary values in Council plans where practicable.*
- *Report oil spills in and near the planning area in accordance with the Port Phillip Region Marine Pollution Contingency Plan and respond accordingly.*
- *When required, remove any accumulated litter from the Inner and Outer Reefs.*
- *Work collaboratively with EPA Victoria to identify opportunities for a NEIP which incorporates the sanctuary.*

4.3 Hydrodynamics

The mean average surface water temperature within the Central Victoria Bioregion is 15.5°C. The coastline faces south-east towards the open and relatively shallow waters of Bass Strait. The West Wind Drift causes a predominantly south-westerly current through the sanctuary, however this changes from time to time depending on weather conditions (IMCRA Technical Group 1998). Currents, tides and wave energy produce complex local hydrodynamics, contributing to a high diversity of habitats within a small area.

Because further human-induced changes to local hydrodynamic processes could affect the values of the sanctuary, any proposals for new infrastructure, including artificial reefs will generally be inappropriate in Marine National Parks or Marine Sanctuaries. Parks Victoria participates in statutory planning processes where developments present a risk to sanctuary values (section 7.2).

Erosion and accretion of sand within Mounts Bay is dynamic and cyclical (Vantree 1997) and is likely to influence hydrodynamics around the sanctuary. Natural hydrodynamic

events such as storm surges and regular sand erosion or deposition are considered to be ongoing natural processes. Research on local hydrodynamics would facilitate improved understanding and protection of sanctuary values.

Aim

- Minimise impacts on sanctuary values from human-induced changes to local hydrodynamics.

Management strategies

- *Work collaboratively with research partners and other interested institutions and agencies to focus research on local hydrodynamics that facilitates improved understanding and protection of sanctuary values.*
- *Do not permit the construction of any infrastructure in the sanctuary.*

4.4 Habitats and communities

The natural values of the sanctuary, including the diversity and abundance of waterbirds and aquatic species are an intrinsic element of *Country*. Traditional Owners maintain a sophisticated knowledge of the communities and species.

All forms of extraction, including recreational and commercial fishing, are prohibited within Marine National Parks or Marine Sanctuaries. The feeding of animals, including fish and birds, is also not permitted.

Subtidal reef and intertidal reef are the main habitat types in the sanctuary, although there is a small area of subtidal sand sediment in the gutter between the two reefs.

A survey undertaken by Tsernjavski (1995) and the Victorian subtidal reef monitoring program provide the only published surveys of subtidal reefs in Marengo Reefs Marine Sanctuary (Hart et al. 2004). Bubble Weed forms a canopy above reefs protected from high wave energy by the Outer Reef. Fourteen other species of brown algae and seven species of red algae, including encrusting coralline algae, form an understorey below the canopy (Hart et al. 2004). Common invertebrates recorded include Black-lip Abalone, Periwinkles and sea urchins. Leather Jackets, Purple Wrasse, Blue-throated Wrasse, Red

Mullet and Magpie Perch were the most frequently recorded fish species. There are many sponges in the area around The Gap. In recent years Killer Whales have passed through the area annually.

Intertidal reefs in the sanctuary support an Australian Fur Seal haul out area, seabirds, and many species of algae and invertebrates. Dominant algae species include Bubble Weed and Bull Kelp. Two surveys of intertidal invertebrates have been undertaken, identifying 96 species (Tsernjavski 1995) and 108 species (Handreck & O'Hara 1994). Species recorded include sea stars, bryozoans, crabs, barnacles and many species of snails. Black-faced Cormorants, Crested Terns, Silver Gulls and Pacific Gulls are often seen roosting on the reef. Fairy Terns, Hooded Plovers Australasian Gannets, and Shy Albatrosses have also been seen in the area.

The Outer Reef supports a haul out area for approximately 200 Australian Fur Seals which is relatively small in comparison to other Victorian colonies. Pupping has occurred here although it is not an established breeding site. Australian Fur seals travel long distances to feed and often travel between Victorian colonies. The sanctuary may act as a rest area during long foraging trips (R. Kirkwood pers. comm.). Increasing numbers of Australian Fur Seals around Bass Strait indicates that haul out areas such as this may also increase or become established as breeding colonies in the future.

The playful behaviour of Australian Fur Seals gives the impression that they are not threatened by low levels of human disturbance. Research indicates that this may not be the case, and that any disruption of normal activity can lead to behavioural responses which restrict long-term survival chances (Kirkwood et al 2003; Patkin 2005).

The exposed Outer Reef and surrounding waters have been designated a Special Protection Area—Australian Fur Seal Haul Out Area (table 1, figure 2). Within the Special Protection Area, access onto the exposed reef (section 6.2) and access for boats and sea kayaks within 20 m of the Outer Reef will not be permitted (section 6.3). The killing or harassment of seals is prohibited under the *Wildlife Act 1975* (Vic.).

Sand sediment areas have not been surveyed but were popular areas for fishing prior to the creation of the sanctuary. These areas contain significant biodiversity and are an important component of the sanctuary.

Subtidal reefs could be affected by anchoring and illegal fishing activity. Intertidal reefs are susceptible to pollution and trampling. The seal haul out area is particularly susceptible to human disturbance (section 6.3).

All species recorded within the sanctuary or nearby that are listed as threatened or protected by international agreements or other legislation (i.e. JAMBA, CAMBA) are either birds or the large marine mammals, including Humpback and Southern Right Whales and, in recent years, Killer Whales. This reflects the current vertebrate focus of threatened species management. Environmental management within the sanctuary takes a habitat-based rather than species-based approach. Management of marine ecological communities within the sanctuary, rather than threatened species, is also likely to protect and enhance threatened species populations. Whole-of-habitat management may also result in the protection of species not yet identified, because of their rarity, cryptic nature, or lack of search effort.

Current research and monitoring aims to collect baseline biological information that will be used to understand long-term changes in population, abundances, community structure and ecological processes during the life of this plan. Further research on threatening processes and knowledge gaps would facilitate improved understanding and protection of communities.

As a part of the Victorian subtidal reef monitoring program, a long-term monitoring site in the sanctuary has been surveyed since 2003. Research and monitoring compares this site with others outside the sanctuary boundaries including one at Bunbury Point nearby (Hart et al. 2004; Edmunds & Hart 2005). This work will assist in identifying indicator species and habitats. The results, available on Parks Victoria's website, will enable an assessment of the ecological condition of the sanctuary to be made.

Aims

- Protect marine ecological communities and indigenous flora and fauna, and allow natural processes to continue.
- Improve knowledge of marine ecological communities, flora and fauna and threatening processes to improve management, protection and appreciation.

Management strategies

- *Continue the long-term subtidal reef habitat monitoring program within and adjacent to the sanctuary, as part of the Victorian Subtidal Reef Monitoring Program.*
- *Undertake a long-term intertidal reef habitat monitoring program as part of statewide marine habitat mapping programs.*
- *Map habitats at scales suitable for management purposes, in accordance with statewide marine habitat mapping programs.*
- *Assess the major threats to the sanctuary, including disturbance to the seal haul out area and catchment-derived pollution, and develop risk management responses as appropriate.*
- *Work collaboratively with research partners and other agencies to target potential research priorities to respond to key threats and major knowledge gaps.*
- *Implement priority actions from approved action statements or recovery plans to address threats to threatened species or communities listed under the Flora and Fauna Guarantee Act and Environmental Protection and Biodiversity Conservation Act.*
- *Work with Traditional Owners to identify and where appropriate, integrate Indigenous knowledge into management programs.*
- *Respect the cultural obligations of Traditional Owners in relation to flora and fauna and their significance in all management and visitor activities.*
- *Manage visitor activities to minimise impacts to flora, fauna and communities,*

particularly in relation to compliance with no-fishing provisions and access restrictions to the Outer Reef.

- *Regularly observe the welfare of Australian Fur Seals, including entanglements, and work with DSE to initiate a response as required.*
- *Regularly observe the breeding status of the Australian Fur Seal haul out area and review the Special Protection Area and access restrictions should it become established as a breeding colony.*

4.5 Landscape and seascape

The landscapes and seascapes associated with the sanctuary are part of a key element of the local coastal setting. They are also an intrinsic element of *Country* for Traditional Owners, and are significant for Indigenous communities.

Views of the sanctuary and seal haul out area from a lookout at Haley Point are an attraction for many visitors to Marengo. Visitors also enjoy this seascape while walking on the nearby beach or passing by in boats.

For local residents, the sanctuary is an important component of the seaside character of Marengo. Many boat users also have a strong affinity with the beauty of the coast, an awareness of local landmarks and an appreciation of sea conditions in and around the sanctuary. Divers and snorkellers see the sanctuary as a fascinating underwater experience, full of marine life.

Key visual experiences include:

- large south-westerly swells crashing into the Outer Reef
- an array of underwater colour and diverse marine life
- a variety of colours, textures and patterns associated with rock pools and rocks and rock platforms on the Inner Reef
- Australian Fur Seals.

The *Colac Otway Shire Planning Scheme* (Colac Otway Shire Council 1999) provides a framework for assessing proposals for developments that could impact on the landscapes associated with the sanctuary (section 7.2). The planning scheme includes

local provisions to minimise the visual impact of development on coastal environments, including the Marengo area. A landscape character study is currently being prepared for Apollo Bay and Marengo.

Boundary markers and signs have the potential to impact on landscape values. Careful design of signs for the coastal setting and avoidance of multiple signs through coordination with council should minimise these problems.

Landscape character types are used to broadly characterise different landscape types. The sanctuary is within Landscape Character Type 2 Otway Foothills, Valleys and Uplands, Precinct 2.4 Apollo Bay Coastal Valleys and Hills. It lies within a landscape setting of national significance which stretches from west of Marengo to Lorne (DSE 2006). Further details about landscape management objectives and guidelines will be provided in the municipal reference document for the area.

The *Great Ocean Road Region Landscape Assessment Study* (DSE 2003a) was prepared as a component of the *Great Ocean Road Region – Land Use and Transport Strategy* (DSE 2004b). The assessment of seascapes associated with Marine National Parks and Marine Sanctuaries were not within the scope of the study. The study makes recommendations for the protection of landscapes within the Apollo Bay Coastal Valleys and Hills precinct, although recommendations do not relate specifically to the sanctuary.

The *Siting and Design Guidelines for the Victorian Coast* (VCC 1998) provide guidelines to assist in the protection of coastal landscape values.

Aims

- Protect landscape and seascape values.
- Minimise the visual impact of signs, infrastructure and management activities associated with the sanctuary.

Management strategies

- *Work with Traditional Owners to identify and protect significant landscapes from management and visitor activities, and where appropriate, include in interpretation and education programs (sections 5.1, 6.1 and 7.2).*

- *Work collaboratively with The Apollo Bay – River Public Reserves Committee of Management and Colac Otway Shire Council to minimise the visual impact of infrastructure on the foreshore, including signs, on the landscape and seascape values of the sanctuary.*

4.6 Marine pests

Over 100 exotic marine species are known to have become established in Victorian marine waters (Hewitt et al. 1999). Some have become marine pests. A survey of marine pests has not been undertaken in the sanctuary nor in the adjacent harbour area, however there are no serious pest species known to be present.

Marine pests can have a devastating impact on Marine National Parks and Marine Sanctuaries. The introduction of marine pests into Victorian waters is listed as a potentially threatening process on Schedule 3 of the Flora and Fauna Guarantee Act. Victoria's management priorities in relation to marine pests are set out in an Action Statement (NRE 1999).

Prevention of marine pest invasions is the most effective management option. Prevention involves reducing the risk that a pest will be introduced to the sanctuary. In a very limited number of cases, with specific criteria, control measures may be attempted for established pest populations, generally as part of a coordinated regional or national response. However, experience elsewhere has shown that proposals to control established marine pests need to consider fully their likely effectiveness. The interconnectedness of the marine environment and the ability of many marine pests to migrate over long distances mean that control measures may be feasible only in limited circumstances. For example, using techniques that are successful on land, such as physical removal by hand, might make the situation worse, as some marine pests regenerate fully from fragments dislodged during removal. Where implemented, control measures will meet national guidelines for managing marine pests. Because of the possibility of misidentifications or exacerbating the pest problem, control measures will need to be part of authorised programs. In some cases, further nationally

coordinated research is required into control measures.

Victorian marine pest emergency management arrangements (*Interim Victorian Protocol for Managing Exotic Marine Organism Incursions*) (NRE 1999) will form the basis for responding to new introductions and existing incursions of marine pests. The adoption of the *Waste Management Policy (Ships' Ballast Water)* (EPA 2004) for Victorian waters will help reduce the risk of marine pest incursions from ships' ballast water. Emergency responses to marine pest outbreaks in Victoria are managed as part of agreed national arrangements for marine pest emergencies. The Consultative Committee for Introduced Marine Pest Emergencies provides national oversight. Parks Victoria actively supports the protocol by adopting best practice within the organisation and educating and informing the community about prevention measures.

Marine pests could be transported to the sanctuary from the nearby Apollo Bay harbour on boat hulls or equipment. The harbour is used by smaller commercial and recreational vessels which generally operate locally, and by smaller vessels from elsewhere that visit from time to time. Preventing marine pest incursions into the harbour is important for the protection of the sanctuary (section 8.3).

Vessel cleaning and maintenance guidelines to help prevent the spread of marine pests (DSE 2004a) aim to reduce the risk of spreading marine introduced pests by providing practical solutions for vessel operators for cleaning gear and hulls. Supporting initiatives include *EPA Victoria's Cleaner Marinas Guidelines* (EPA 1998).

Parks Victoria rangers, Fisheries Victoria Fisheries Officers, community-based organisations (e.g. dive clubs), and visitors play an important role in the monitoring and early detection of marine introduced pests in the planning area.

Aims

- Minimise the risk of introduction of marine pests by human activities, and their subsequent establishment in the sanctuary.
- Establish arrangements for the detection of new incursions within the sanctuary in

support of Victorian marine pest management arrangements.

- Implement national or Victoria-wide control arrangements as they relate to the sanctuary.

Management strategies

- *Support DSE in educating Parks Victoria staff, Fisheries Victoria Officers and the community to identify marine pests.*
- *Encourage community groups, researchers, licensed tour operators and contractors to integrate the identification of marine pests into their activities and to report any sightings.*
- *Ensure that the detection of marine pests is reported in accordance with Victorian pest management arrangements and recorded on Parks Victoria's Environmental Information System and other relevant databases.*
- *Establish an ongoing program to minimise the risk of marine pest introduction and subsequent spread that improves the*

understanding of the potential means of introduction and spread, and formalises arrangements for prevention, reporting, monitoring and response.

- *Undertake authorised programs only where research indicates that control or eradication is feasible and likely to be effective or as part of a coordinated regional or national response.*
- *Avoid translocation or new introductions by promoting boat-cleaning protocols for all recreational boats and contractors in accordance with the DSE brochure 'Aquatic Pests: Treat 'em mean – keep your boat clean'.*
- *Ensure that management vessels operating in the sanctuary are maintained according to Victorian Government boat-cleaning protocols.*
- *Include boat-cleaning protocols in contracts, licences or permits of contracted vessels, research vessels and licensed tour operator vessels operating in or near the sanctuary.*

5 STRATEGIES FOR CULTURAL VALUES CONSERVATION

5.1 Indigenous cultural heritage

The Gadubanud (King Parrot language) belong to the forest and coastline of the Cape Otway peninsula (Clark 1990). Some records indicate that they were considered 'wild' by the Kirrae Wurrung to the west and the Wathaurong to the north east. It is thought that they may have had some association with the Gulidjan to the north (Clark 1998). In response to the death of a member of a white surveying party in 1846, a retaliatory expedition killed seven Gadubanud near the Aire River (Clark 1995). There are few written records of the Gadubanud people in the Otways since then.

Despite the myth that all Gadubanud people died, many Indigenous people have linkages to the Gadubanud and *Country*, but tracing ancestry is difficult because there is little information about early social organisation.

Middens near the sanctuary containing turban shells and abalone demonstrate the use of resources from this area by the Gadubanud (Pascoe 1997). Australian Fur Seals were hunted by many coastal Indigenous communities around Australia and were likely to have been a significant resource.

Local Indigenous communities, including Kirrae Wurrung, Framlingham Aboriginal Trust, the Southern Otways Indigenous Group and Wathaurong Aboriginal Co-operative, have an interest in the sanctuary. Indigenous people of south-western Victoria are concerned about the state of *Country* and their role in its protection. Framlingham Aboriginal Trust and Winda Mara Aboriginal Corporation have recently prepared the *Kooyang Sea Country Plan*, which seeks to establish partnerships with relevant agencies for the protection of Sea *Country* values (Framlingham Aboriginal Trust and Winda Mara Aboriginal Corporation 2004).

All Indigenous places and objects are protected under the Archaeological and Aboriginal Relics Preservation Act and the Aboriginal and Torres Strait Islander Heritage Protection Act. It is an offence to damage, interfere with or endanger an Aboriginal place or object without obtaining prior written consent from the scheduled Aboriginal community.

Issues relating to the protection of such cultural heritage and the involvement of the scheduled Aboriginal community are approached in accordance with these Acts. Under the Commonwealth Act, the Framlingham Aboriginal Trust is the scheduled Aboriginal community.

Works programs are assessed to integrate relevant Indigenous practices and minimise the potential for impact of management activities on Indigenous cultural heritage, in consultation with the Traditional Owners and the scheduled Aboriginal community.

Issues relating to native title, including management actions, are dealt with according to the Native Title Act (section 2.5).

Parks Victoria respects the views of the Traditional Owners and seeks to reflect their knowledge, interests, rights and aspirations for *Country* in planning and management of the sanctuary (Parks Victoria 2005). Parks Victoria protects Indigenous places and objects from disturbance and damage in partnership with the Traditional Owners and in cooperation with the scheduled Aboriginal community and AAV (section 8.3), and in accordance with relevant legislation including the Archaeological and Aboriginal Relics Preservation Act and the Aboriginal and Torres Strait Islander Heritage Protection Act. Guidelines for Working with Aboriginal Communities and Protection of Cultural Sites (Parks Victoria 2002a) guide the development of management programs to ensure the protection of cultural sites.

Aims

- Protect Indigenous places and objects from interference or damage.
- Support the views of the Traditional Owners in managing the sanctuary.

Management strategies

- *Respect the views of the Traditional Owners' and the cultural obligations of Indigenous communities.*
- *Maintain confidentiality in respect of the Traditional Owners cultural obligations, knowledge, places and objects, in*

accordance with the views of the Traditional Owners.

- *Reflect the Traditional Owners' knowledge, interests, rights and aspirations for Country in all planning and management of the sanctuary, in consultation with the scheduled Aboriginal community and in accordance with Parks Victoria's operational policies.*
- *Share detailed habitat information about the sanctuary and in collaboration with the relevant Indigenous communities and in liaison with AAV, target protection and other management activities.*
- *Collaborate with the Traditional Owners when developing interpretive programs and to identify Indigenous cultural heritage suitable for promotion and interpretation (such as bush tucker) in liaison with the adjacent land managers.*

5.2 Maritime and other cultural heritage

Marengo is one of several features on the Victorian Coast named by Nicolas Baudin, a French explorer who commanded a scientific expedition to Van Diemen's Land and the southern coast of New Holland in 1802. It is presumed the name 'Marengo' commemorates Napoleon's great victory over the Austrians at Marengo in northern Italy at the battle of Marengo in 1801 (Australian National Placenames Survey 2002).

During the 1800s, Apollo Bay was an important anchorage for ships involved in trade across Bass Strait and along the Victorian coast. A number of maritime accidents occurred in the vicinity, including several around Little Henty Reef.

The *Grange*, a wooden barque involved in international trade, struck the reef in 1858. Most of the hull, sails and fittings were salvaged before the wreck broke up. This is one of the few shipwrecks on the Great Ocean Road where divers can see the remains of an old wooden hull (Anderson & Cahir 2003).

The *Wollomai*, a wooden ketch, was driven ashore by storms in Mounts Bay in 1923. Most of the cargo and sections of the vessel were salvaged, but the windlass and some decking is occasionally visible in shallow water. Further,

well-preserved remains are thought to be buried beneath sand. The wreck is a significant example of a late 19th century Australian-built coastal trading ketch (Anderson & Cahir 2003).

These wrecks, together with the wreck of the *SS Casino*, located outside the sanctuary near the Apollo Bay Harbour, form an important collection of maritime cultural sites with interesting interpretive themes (section 6.1). Signs, brochures and underwater guides provide information for people about these shipwrecks.

Places of historic and cultural significance are managed in accordance with the Burra Charter of Australia ICOMOS and the provisions of the *Heritage Act 1995* (Vic.) and Parks Victoria's *Heritage Management Strategy* (Parks Victoria 2003b). Heritage Victoria has primary responsibility for the management of shipwrecks within the sanctuary (Heritage Victoria 2006) in accordance *Historic Shipwrecks Act 1976* (Cwlth). Parks Victoria has established a Memorandum of Understanding with Heritage Victoria, which identifies respective roles and responsibilities with regard to protection, compliance and interpretation of shipwrecks, shipwreck artefacts and other archaeological sites within the boundaries of Marine National Parks and Marine Sanctuaries.

Little Henty Reef is a culturally important place for many local residents. The sea, reef and sea life in this area are an integral component and characterise the cultural connections between local people, visitors and the sanctuary.

Aims

- Conserve and protect places of historical significance.
- Encourage learning and understanding about the historical heritage of the sanctuary.

Management strategies

- *Support Heritage Victoria's maritime heritage protection and research programs in accordance with the Memorandum of Understanding. Consult Heritage Victoria about management activities that might*

- affect known wrecks or artefacts in the sanctuary.*
- *Integrate stories relating to the ‘Shipping along the Coast’ theme and artefact and wreck protection messages into educational and interpretive materials for the sanctuary.*
 - *Liaise with Heritage Victoria and the local community to identify and document heritage values of the sanctuary in Parks Victoria’s Asset Management System.*
 - *Investigate opportunities to further develop the interpretation of shipwrecks as part of the Great Ocean Road Historic Shipwreck Discovery Trail in conjunction with Heritage Victoria.*
 - *Recognise and respect cultural and social values associated with the sanctuary in planning and management.*

6 STRATEGIES FOR VISITORS

6.1 Information, interpretation and education

Providing information, interpretation and education can help orientate and inform visitors, increase visitor enjoyment and satisfaction, foster an understanding and appreciation of the sanctuary's special natural and cultural values, build understanding of management activities, and help visitors to experience the sanctuary in a safe and appropriate manner. Parks Victoria delivers information, interpretation and education to visitors by various means, including its website, ranger patrols, Park Notes, signage, tourism brochures and other publications, displays, and licensed tour operators. These services may be developed and provided in collaboration with other agencies.

Marengo Reefs Marine Sanctuary, being close to the Great Ocean Road and Apollo Bay and including a diverse range of values, presents an outstanding opportunity to communicate the features of marine areas and the benefits of a statewide system of marine protected areas, as well as key features of the planning area, to visitors and the broader community. However, the sanctuary is difficult to access without specialised skills and equipment such as a boat, scuba equipment or snorkelling equipment (section 6.2). The Inner Reef is a relatively sheltered area for snorkelling while the beach adjacent to the sanctuary is a good location for off-site interpretive activities.

The sanctuary's intertidal reefs are important sites for interpretation and education about a diverse range of microhabitats. Intertidal activities on the Inner Reef, however could adversely affect these delicate ecosystems through trampling or disturbance (section 6.2).

Parks Victoria (2003c) has developed minimal impact guidelines (available on its website) in partnership with providers of education to help manage impacts on sensitive intertidal communities such as the Inner Reef.

Promotion, orientation and information

Promotion of the sanctuary and its special values is the first step in gaining community involvement in management. Parks Victoria

implements a range of promotional strategies throughout the State, complemented by local initiatives that increase awareness among all sections of local communities.

Orientation helps visitors to navigate as they approach or enter the sanctuary, and to understand appropriate and safe behaviour. Key orientation information is available from:

- www.parkweb.vic.gov.au
- Park Notes
- signage at the Apollo Bay boat ramp, Marengo Beach and Haley Point.

The irregular boundaries of the sanctuary will be difficult to mark. Boundary markings are proposed (section 7.2).

Interpretation

Interpretation is a means of communicating ideas, feelings and values to help people enrich their understanding of natural and cultural values. Interpretation also fosters positive attitudes towards the conservation of natural areas and to increase awareness of the relationship between people and the natural environment.

Park interpretation involves the use of innovative communication tools, skills and approaches to present knowledge of the marine environment and management practices to visitors.

An annual summer interpretive program is implemented by Coast Action / Coastcare in conjunction with Parks Victoria. Marengo Reefs Marine Sanctuary will become an important focus of summer interpretive programs.

The reefs provide a sheltered area for boat tours, and boat-based interpretation including seal-watching. The Inner Reef is an interesting and relatively sheltered location for snorkelling and scuba diving. The perimeter of this reef is well suited to an underwater interpretive trail supported by off-site interpretive methods and would not require any underwater infrastructure (section 6.4).

Education

Local primary and secondary schools often use the sanctuary for educational purposes.

Teachers need to be aware of access restrictions, weather constraints and tide information to ensure they are able to plan a safe visit.

Schools are encouraged to notify Parks Victoria of any intended school group visit so that teachers can be alerted to safety hazards, and the availability of relevant safety information, education resources and protection guidelines (section 6.5).

Aims

- Promote and encourage visitors' discovery, enjoyment and appreciation of the sanctuary's natural and cultural values in a safe and appropriate manner through information, interpretation and education.
- Encourage public support for marine national parks and marine sanctuaries and management practices.

Management strategies

- *Work collaboratively with the Colac Otway Shire Council to provide appropriate visitor orientation, safety messages, and minimal impact information at the Apollo Bay Boat Ramp and other suitable locations.*
- *Liaise with the Kennett River – Apollo Bay Foreshore Reserve Committee of Management to develop and install an interpretive sign about the values of the sanctuary, which incorporates information about an underwater snorkel trail on the adjacent foreshore reserve.*
- *Work collaboratively with divers and boat tour operators to develop a Park Note for the sanctuary including a guide to an underwater Inner Reef snorkel trail.*
- *Encourage and assist the range of user groups to develop high-quality opportunities to discover, experience and understand the sanctuary's natural and traditional and cultural values (without damage to the values).*
- *Deliver messages to improve community understanding of the marine environment including the following values and themes:*

- *the location and nature of activities permitted in the sanctuary*
- *the fascinating and diverse marine life in the sanctuary and the sensitivity and beauty of the local marine environment*
- *Indigenous cultural heritage and the importance of the marine environment to local Indigenous communities*
- *the role of coastal shipping as a vital supply route to the west coast and as a significant cultural value*
- *human impacts on the sanctuary, especially if pollution is carried into Mounts Bay*
- *visiting the sanctuary safely.*
- *Encourage the development of stimulating and innovative approaches to the presentation of sanctuary values by use of scientific information and audio-visual aids.*
- *Continue to encourage and support educational and interpretive activities that improve community understanding of the marine environment and are consistent with management objectives for the sanctuary, on site, at schools and during events, including the Coast Action / Coastcare program.*
- *Promote greater public understanding, appreciation and respect for Indigenous culture by incorporating information about Indigenous tradition, places and objects in information, interpretation and education programs in collaboration and accordance with the views of the Traditional Owners.*
- *Provide appropriate opportunities and encourage and support relevant Indigenous communities to participate in the interpretation of Indigenous cultural heritage relating to the sanctuary with the agreement of the Traditional Owners.*
- *Use Indigenous language for natural features, plants and animals in interpretive material and signs.*
- *Encourage the development of a brochure on Marine National Parks and Marine Sanctuaries along the Great Ocean Road.*

6.2 Access

Generally access to the sanctuary is by boat, although visitors can swim or, occasionally, walk to the Inner Reef at low tide. The sanctuary is quite close to the Apollo Bay harbour and boat ramp managed by the Colac Otway Shire (section 8.3).

Visitors undertaking scuba diving and snorkelling can swim to the Inner Reef from the beach adjacent to the sanctuary. The foreshore adjacent to the sanctuary is managed by the Kennett River – Apollo Bay Foreshore Reserve Committee of Management (section 7.2), and incorporates a caravan park, car parks and beach access (figure 2).

Visitors can explore intertidal areas on the Inner Reef and are encouraged to adopt minimal impact guidelines. Generally, dogs would be unable to access the Inner Reef except during some low tides. Dogs and horses are not permitted in the sanctuary, unless confined to a vessel.

Visits, and launching and landing boats, occur infrequently on the Outer Reef but cause significant and unnecessary disturbance to Australian Fur Seal colonies (Shaughnessy 1999). The Outer Reef is designated a Special Protection Area for the protection of Australian Fur Seals (table 1, section 4.4, figure 2). Access will only be permitted for management or scientific purposes (section 7.1).

Aim

- Support and manage the provision of appropriate and safe access to the sanctuary.

Management strategies

- *Permit recreational activities in accordance with table 2.*
- *Encourage visitors accessing the Inner Reef to adopt safe and minimal impact practices, as identified in the brochure 'Living Between the Tides'.*
- *Do not permit unauthorised access onto the Special Protection Area–Australian Fur Seal Haul Out Area.*
- *Do not permit dogs or horses in the sanctuary, unless confined to a vessel.*

6.3 Recreational boating and surface water sports

Boat-based sightseeing and seal-watching are popular in the sanctuary, in Mounts Bay. Under ideal conditions, the sanctuary is also popular for surfing and sea-kayaking.

Vessels leaving the bay and heading south usually use The Gap between the Inner and Outer Reefs, which provide some shelter. There is a concern that vessels travelling at excessive speed could compromise visitor safety and disturb wildlife.

Vessels are permitted to pass through the sanctuary. Normal boating regulations and safety guidelines apply in these waters. As in all Victorian coastal waters, a speed limit of five knots applies within specified circumstances in the sanctuary (MSV 2005). Marine Safety Victoria and the Victoria Police enforce recreational boating regulations (section 8.2).

Parks Victoria rangers, Victoria Police and Fisheries Officers undertake regular patrols and work closely with recreational boat users (section 8.3). These patrols offer an opportunity for boat users to learn about the sanctuary.

The Australian Fur Seal haul out area does not appear to be disturbed by transient boat traffic; however, vessels travelling through The Gap or vessels at speed too close to the Outer Reef present an unnecessary risk to the seal haul out area and to roosting seabirds. A voluntary speed restriction of five knots for boat users in the sanctuary would lessen disturbance and improve safety for other visitors. This would allow boat users to travel faster than five knots if they need to do so for safety reasons.

Currently a licensed tour operator conducts sea-kayak tours of the sanctuary (section 6.5). A boat-based licensed seal-watching tour also operates during the summer period.

Boats, including sea-kayaks, kite-boards and wind-surfers, will not be permitted within 20 m of the Outer Reef (within the Special Protection Area). This restriction seeks to avoid unnecessary disturbance to seals, but is not expected to diminish seal-watching opportunities or inconvenience visitors (figure 2, sections 3.2 and 4.4). Sea-kayaks and seal-watching craft generally operate well clear of

the reef and outside the Special Protection Area for safety reasons.

Anchoring inside the Special Protection Area has the potential to impact natural values. Visitors can minimise any impacts by anchoring in sand areas or outside the sanctuary.

In Victorian waters, breeding colonies of Australian Fur Seals are usually protected from disturbance by exclusion of boating. Should the haul out area in the sanctuary become established as a breeding colony, further protection measures will be investigated (section 4.4).

Incidents such as oil spills, discharges of sewage or other pollutants, introduction of marine pests and disturbance to wildlife are hazards that can threaten sanctuary values.

State Environment Protection Policies prohibit vessel operators from discharging sewage, oil, garbage, sediment, litter or other wastes to surface waters in any Victorian State waters. While EPA Victoria has primary responsibility for pollution management, Parks Victoria supports the provision of waste-receiving and pump-out facilities at marinas, ports, and other suitable sites.

Aim

- Provide for boating activities in the sanctuary consistent with management objectives.

Management strategies

- *Permit boating and surface water sports in the sanctuary accordance with table 2 and the five knot speed restriction within:*
 - *50 m of a swimmer*
 - *100 m of a vessel or buoy with a 'diver below' signal*
 - *300 m of a whale or dolphin.*
- *Communicate opportunities for boat users to gain access to the sanctuary by:*
 - *signage at the Apollo Bay Boat Ramp (sections 6.1 and 6.6)*
 - *water-based patrols*
 - *Park Notes.*

- *Encourage all boat users and personal water craft operators to adopt a speed limit of five knots in the sanctuary.*
- *Liaise with boat users during patrols within or near the sanctuary to:*
 - *ensure compliance with relevant legislation and guidelines*
 - *encourage observance of safe operating guidelines relevant to their activity.*
- *Update boat ramp signage to:*
 - *clarify boundary locations*
 - *identify the Special Protection Area*
 - *incorporate information about the five knot speed limit and anchoring.*
- *Continue to permit anchoring in the sanctuary outside the Special Protection Area but encourage anchoring outside the sanctuary or on sand areas within the sanctuary. Monitor use and take appropriate action should impacts become evident.*
- *Liaise with anglers concerning awareness of the sanctuary and participation in its management.*
- *Liaise with Marine Safety Victoria and Victoria Police to reduce boat speed in the sanctuary and to assist with recreational boating safety.*

6.4 Diving and snorkelling

Suitable depths, sheltered conditions and fascinating underwater scenery make Marengo Reefs Marine Sanctuary an excellent site for scuba diving and snorkelling. The Outer Reef is usually accessed by boat, while the Inner Reef is relatively easy to access from the adjacent beach.

The Inner Reef is a suitable location for the development of an underwater snorkel trail. The perimeter of the reef provides a defined route without the need for any infrastructure such as markers or underwater signs. Information for the trail could be incorporated into a Park Note and interpretive sign (section 6.1).

Educating divers and snorkellers, particularly people new to these activities, about minimal

impact practices, will help minimise impacts and assist with sanctuary management. Divers should refer to the Dive Industry Victoria Association (DIVA) *Code of Practice: for Commercial Providers of Recreational Snorkelling and Scuba Diving Services in Victoria* (DIVA 2004) or the Scuba Divers Federation of Victoria (SDFV) *Codes of Practice: General Operating Guidelines for Recreational Scuba Diving and Related Activities* (SDFV 2005). Snorkellers and scuba divers should refer to the *Snorkelling, Scuba Diving, and Wildlife Swims – Adventure Activity Standards* at www.orc.org.au (ORC 2004).

Divers and snorkellers need to be aware of the no-take provisions and can assist in the early detection of marine pests in the sanctuary (sections 4.6 and 8.2), and the detection of unrecorded cultural places and objects.

There are currently no licensed tour operators providing dive charter services in the sanctuary.

Aim

- Provide opportunities for diving and snorkelling that are consistent with the protection of sanctuary values.

Management strategies

- *In conjunction with local diving clubs, encourage the use of clean diving equipment to prevent the translocation of marine pests (section 4.2).*
- *Promote compliance of snorkellers and recreational scuba divers with relevant codes of practice and Adventure Activity Standards.*
- *Integrate minimal impact messages into existing information, interpretation and education programs pests (section 6.1).*
- *Support dive clubs and industry representatives to develop a code of practice that promotes environmentally responsible diving practices.*

6.5 Tourism services

Parks Victoria's licensed tour operators play a key role in nature-based tourism in Victoria by offering guided tours and supported recreation

activities, and information that promotes park values and appropriate use.

Licences for tour operators, which are issued by Parks Victoria, include conditions that detail access, permitted activities and site-specific restrictions. Licensed tour operators must also adhere to industry standards for safety (section 6.6).

Boat-based tours provide interpretation about the sanctuary and include seal watching. A sea-kayak and a yacht charter business are also licensed to operate in the sanctuary. Generally, vessels are able to leave motors running during seal watching on the sheltered side of the Outer Reef to avoid anchoring. It is anticipated that there will be opportunities for additional tourism services as awareness of the sanctuary increases.

Aim

- Provide opportunities for and encourage provision of external tourism services while minimising impacts on natural and cultural values of the sanctuary.

Management strategies

- *Ensure all tour operators using the sanctuary are licensed and promote awareness of Adventure Activity Standards and Minimal Impact Guidelines.*
- *Continue to work with licensed tour operators and the tourism industry to assist with the delivery of appropriate sanctuary information.*
- *Encourage and assist licensed tour operators to provide a range of appropriate activities compatible with the protection of sanctuary values.*
- *Encourage licensed tour operators to avoid anchoring by leaving motors running while viewing seals on the sheltered side of the Outer Reef.*
- *Encourage and support licensed tour operators to assist in educating visitors about Marine National Parks and Marine Sanctuaries, and minimal impact.*
- *Monitor licensed tour operations to ensure compliance with permit conditions.*

- *Encourage and support Traditional Owners and other Indigenous communities to provide licensed tour operator services.*

6.6 Public safety

Visitors are exposed to a number of natural hazards when they visit the sanctuary. Some are unaware of local conditions and may not be proficient in the activities they undertake. Activities undertaken in the natural environment, particularly the sea, involve inherent risks. Inappropriate activities or behaviour can threaten visitor safety.

Industry developed adventure activity standards are available for a range of adventure activities that can be undertaken in the sanctuary. Parks Victoria encourages compliance with these standards to help ensure visitor safety.

The responsibilities for responding to emergency incidents in Victoria and Victorian waters are outlined in the *Emergency Management Act 1986* (Vic.). Relevant agencies respond to incidents within the sanctuary in accordance with Municipal Emergency Response Plans prepared by Colac Otway Shire. Parks Victoria is not the lead agency for most emergency response situations. Instead, it supports other agencies including Marine Safety Victoria, the State Emergency Service, the Apollo Bay Surf Life Saving Club, Victoria Police, Department of Sustainability and Environment and Country Fire Authority in emergency incidents, where required.

Parks Victoria's response to emergency incidents during normal operating activities within the sanctuary will be guided by an incident response plan when developed.

All powered recreational vessel operators and commercial masters operating in Victorian waters are required to have a current licence. The Victorian Recreational Boating Safety Handbook contains most necessary information for recreational boating (MSV 2005). Marine Safety Victoria also conducts safety and awareness programs.

Visitors need to be aware of safety risks to ensure that they enjoy a safe visit. Public information and education programs are one of the most effective ways to promote safety. A range of tools are required to convey safety messages, such as boating brochures, ranger patrols and Park Notes. A strategic and integrated approach to safety signage in partnership with Colac Otway Shire is essential to ensure boat-based visitors to the area receive clear and consistent messages.

Aims

- Promote awareness of safety issues and risks, and safe practices, in use of the sanctuary.
- Cooperate with emergency services.

Management strategies

- *Promote awareness of safety issues and potential hazards in the sanctuary through the use of Park Notes, Parks Victoria's website and information signs.*
- *Promote safe operating guidelines appropriate to activities being undertaken by visitors.*
- *Develop an Incident Response Plan for the sanctuary and review this plan annually.*
- *Liaise with Colac Otway Shire to ensure that Municipal Emergency Response Plans make adequate provision for likely incidents in the sanctuary, and that they identify Parks Victoria's roles.*
- *Increase visitors' awareness of safety issues and potential hazards in the sanctuary through the use of Park Notes, ParkWeb and information signs.*
- *Provide and maintain safety and information signage at the Apollo Bay boat ramp and the adjacent foreshore.*
- *Support emergency services in search and rescue activities and ensure that Parks Victoria staff have adequate levels of training.*

7 STRATEGIES FOR AUTHORISED AND ADJACENT USES

7.1 Authorised uses

A number of uses and activities may be permitted in the sanctuary, subject to specified conditions to minimise impacts.

Petroleum extraction, exploratory drilling, mineral exploration and mining, and invasive searching for or extraction of stone and other materials, are prohibited in the sanctuary under the National Parks Act and/or earth resources legislation. Petroleum exploration such as seismic survey from an aircraft or from a vessel that is carried out in a manner which does not detrimentally affect the seabed or any flora or fauna of the sanctuary may be allowed with the consent of the Minister. However, the Government has announced that it will not release any further areas in Victoria that contain Marine National Parks or Marine Sanctuaries for petroleum exploration. There is no petroleum exploration permit over this sanctuary.

Construction of pipelines or seafloor cables may be permitted with the consent of the Minister in some circumstances.

All research and monitoring undertaken in a Marine National Park or Marine Sanctuary including access to the Outer Reef by external organisations or individuals, requires a research permit under the National Parks Act, issued by DSE.

Protected areas are generally avoided as locations for Australian Defence Force training exercises, although they sometimes host search and rescue, field navigation and incident response activities. Activities are subject to a permit with conditions to ensure that values of the sanctuary are protected.

Parks Victoria recognises the significant role that the filming and photography industry plays in the social and economic well-being of the community and in providing for these activities seeks to ensure protection of the natural and cultural values of the planning area. This is achieved through a permit system for all filming and photography conducted as part of a trade or a business. Amateur photographers or people taking film or video for personal or hobby interest do not require a permit.

Aims

- Minimise the impact on sanctuary values of authorised uses.
- Manage authorised uses in accordance with legislation.

Management strategies

- *Manage any authorised uses in accordance with the requirements of legislation and Parks Victoria's operational policies.*
- *Monitor any authorised activities to ensure conditions of authorisations are met. Assess the effectiveness of conditions of authorisations in protecting the sanctuary and seek review of authorisations if necessary to minimise impacts.*
- *Liaise with Fisheries Victoria to ensure they are aware of all research activities in the sanctuary.*
- *Permit Defence Force adventure training and field navigation exercises in the sanctuary in accordance with Parks Victoria's operational policy.*

7.2 Boundaries and adjacent uses

In-water boundary markers are impractical in this high wave energy location. Shore-based boundary markers can be used to define where the sanctuary boundaries intersect the coastline. Two shore-based triangular yellow signs, aligned on the bearing of the boundary, are generally used to mark the boundary of Victorian Marine National Parks and Marine Sanctuaries. These markers allow boat operators and land-based visitors to orient their location with respect to the boundary.

There are currently no shore-based boundary markers, but it is proposed to install shore-based boundary markers to assist visitors and anglers to identify sanctuary boundaries (figure 2).

State waters and the underlying seabed adjoining the sanctuary are currently unreserved Crown land. The Victorian Government accepted the ECC's recommendation that a Coastal Waters Reserve

be established under the *Crown Land (Reserves) Act 1978* (Vic.) for a major portion of Victoria's marine area not otherwise designated for a particular purpose, to provide for a diverse range of activities that are compatible with long-term sustainable use (ECC 2000).

Collaboration with all adjacent land and water managers is essential to ensure a coordinated approach to management. The *Coastal Action Plan – Skenes Creek to Apollo Bay* provides strategic direction for areas adjoining the sanctuary (Colac Otway Shire undated).

The State Planning Policy Framework (DSE 2003b), in conjunction with the *Colac Otway Planning Scheme* (Colac Otway Shire 1999), provide a framework for development proposals on land near the sanctuary. The planning scheme is administered by the Colac Otway Shire (section 8.3). Under the scheme, the Apollo Bay and Marengo foreshore is a Public Conservation and Resource Zone. The planning scheme does not extend beyond the foreshore reserve to the sanctuary. Parks Victoria participates in municipal planning processes where developments may affect sanctuary values.

Aims

- Effectively communicate the location of sanctuary boundaries.
- Minimise impact on sanctuary values from adjacent developments.

Management strategies

- *Work collaboratively with the Kennett River – Apollo Bay Foreshore Reserve Committee of Management and the Colac Otway Shire to install land-based boundary markers in accordance with figure 2.*
- *Ensure that the installation of any new boundary marker or sign:*
 - *is endorsed by the Kennett River – Apollo Bay Foreshore Reserve Committee of Management*
 - *complements the design of existing foreshore signage.*

8 STRATEGIES FOR COMMUNITY AWARENESS AND INVOLVEMENT

8.1 Community awareness

Broad community support and the direct participation of interested groups will help to maintain Victoria's system of Marine National Parks and Marine Sanctuaries in the long term. It will be necessary to raise awareness and a sense of custodianship for the sanctuary among interest groups and the local community. The development of strong social networks around sanctuary activities can build mutual support and help spread awareness to the broader community. The processes will be greatly facilitated if the views of all those involved are respected and carefully considered.

For the sanctuary, a local promotional campaign involving local individuals, schools and groups, a public forum, and readily accessible local outlets for information about the sanctuary, preferably through existing public infrastructure, will be essential first steps in raising awareness. Regular public forums, participation in festivals and informal ranger contact will provide visitors and the local community opportunities to maintain a connection and learn more about the sanctuary and its management (section 8.2). The development of audio-visual resources and other products using research information will help to increase community awareness of the sanctuary's special values and threats.

Education and interpretation programs (section 6.1) also play an important role in raising the awareness of the sanctuary in the wider community. Parks Victoria aims to communicate the benefits of a healthy parks system and its contribution to the health of individuals and society through the 'Healthy Parks Healthy People' program.

Aims

- Increase community awareness and understanding of the sanctuary's values and management activities.
- Build a common vision and sense of shared custodianship for the sanctuary in community groups and individuals.

Management strategies

- *Provide information about the sanctuary at the Apollo Bay Visitor Information Centre and identify other suitable sites.*
- *Conduct a community-based workshop involving schools, government agencies, clubs, and interested members of the community to identify opportunities for increasing community awareness. Consider a range of innovative approaches such as commercial partnerships, local media, schools involvement or public art.*
- *Liaise with local fishing groups to ensure members are aware of sanctuary boundaries and permitted activities.*

8.2 Community participation

Participation of community groups and individuals can inform, enrich and strengthen the sanctuary's management, and will be pivotal in the effective long-term planning of the care and use of the sanctuary's values.

The Traditional Owners have considerable interest in and aspirations for the sanctuary as part of *Country*. They are an important potential source of traditional knowledge about the area that has yet to be documented. A strong working relationship with Traditional Owners will be essential to reflecting their views in the sanctuary's planning and management and reconciliation of their interests and aspirations with those of other members of the community.

Volunteers and community groups can provide valuable contributions to sanctuary management projects. They bring diverse and valuable information, knowledge, skills and experience to the sanctuary that may not otherwise be available to the sanctuary manager. Volunteers also bring great enthusiasm and add valuable resources to assist with the care of the sanctuary.

The interests of community groups in the sanctuary often overlap and may or may not be complementary. There can be considerable benefits to all where such groups work

together and with Parks Victoria to achieve common goals.

The community-based Sea Search program seeks to build community involvement in marine national parks and marine sanctuaries as well as support the involvement of Friends and community groups in the conduct of valuable scientific surveys on intertidal and subtidal reefs within Marine National Parks and Marine Sanctuaries (section 4.4). The group is supported by Parks Victoria staff and scientific monitoring protocols (Edmunds & Hart 2005).

Marengo Reefs Marine Sanctuary does not yet have a Friends group. A Friends group dedicated to protection of the sanctuary would be an invaluable source of support and a catalyst for the development of a sense of custodianship for the sanctuary within the wider community.

There are many individuals and several local groups committed to conservation of the coastal environment, and many local people interested in getting involved in the protection of the sanctuary. With encouragement and support it is envisaged that a range of existing community groups will include sanctuary projects in their activities.

Local students may also assist in developing custodianship. The formation of a local schools stewardship council would provide opportunities for community leadership in stewardship development.

The projects identified in this plan will provide a wide range of opportunities for community participation in sanctuary management.

Aim

- Support and encourage the whole community, including community groups and volunteers to contribute their knowledge, skills and enthusiasm to the sanctuary's management.

Management strategies

- *Develop a close inclusive working partnership with the Traditional Owners and close cooperation with the scheduled Aboriginal community. Welcome the involvement of other Indigenous groups with particular interests in the sanctuary.*

- *Explore means to involve and work with relevant Indigenous communities in the management of the sanctuary, reflecting the Traditional Owners' knowledge, and interests, rights and aspirations for the area.*
- *Identify and promote a variety of specific projects suitable for initiating community involvement in management.*
- *In addition to community monitoring projects, identify and promote other suitable projects and promote the work of volunteers and community groups within the Apollo Bay and surrounding communities.*
- *Seek to establish a Friends group for the sanctuary.*
- *Ensure all members of the community participating in the sanctuary's management have sustainable and rewarding volunteer experiences.*
- *Encourage visitors to assist with compliance management by:*
 - *reporting illegal fishing to the Fisheries Victoria offence reporting hotline*
 - *reporting other offences against the National Parks Act and Regulations to Parks Victoria.*
- *Support Coast Action / Coastcare programs within the sanctuary, particularly those focussing on community interpretation and education.*
- *Support initiatives such as a community marine resource centre, appropriate training or tools that build the capacity of Friends, schools, volunteers and groups to participate in the planning, use and care of the sanctuary.*
- *Support Friends, schools and other interest groups and volunteers to develop an understanding and appreciation of the sanctuary's values, and the rich and diverse knowledge, and aspirations of the Traditional Owners.*
- *Support groups that use or have an interest in the sanctuary to work together to pursue sources of funding, including Parks Victoria grants, for projects in the*

sanctuary. Encourage joint grants with other groups as appropriate.

- *In conjunction with local schools, investigate opportunities for students to participate in a marine stewardship council to help develop awareness and stewardship of the sanctuary within the community.*
- *Provide opportunities for tertiary students to undertake volunteer work experience and research activities that assist sanctuary management, and support their participation.*

8.3 Agency partnerships

Small coastal areas such as the Marengo Reefs Marine Sanctuary are subject to many external influences and potential threats.

Although Parks Victoria is responsible for overall management of the sanctuary, other agencies are responsible for planning, managing or regulating certain activities in the sanctuary.

All activities relating to the sanctuary that are carried out by Parks Victoria or other agencies need to accord with all legislation and government policy and, as far as practicable, be consistent with agencies' policies and guidelines. To ensure this occurs, sanctuary staff must work closely with staff of relevant agencies and collaborate in implementing activities where appropriate.

DSE establishes parks, oversees the management of land and resources of Victoria's coastal Crown land and waters, and provides strategic direction and policy advice for the management of the sanctuary, including marine flora and fauna values and threatening processes. Parks Victoria is a support agency for responses to oiled wildlife (section 4.2) and cetacean stranding or entanglement (section 4.4), operating at the direction of DSE.

As part of agreed service delivery arrangements, Fisheries Victoria – Department of Primary Industries has primary responsibility for enforcement of compliance with Fisheries Regulations, and in accordance with service delivery agreements, the fishing prohibitions under the National Parks Act. Parks Victoria collaborates with Fisheries Victoria and Victoria Police in accordance

with the *Statewide Compliance Strategy* (Parks Victoria 2002b) and the *Regional Compliance Plan* (Parks Victoria 2004).

The Western Coastal Board provides direction and policy advice to facilitate sustainable development of the west coast of Victoria through the implementation of the *Victorian Coastal Strategy* (VCC 2002), the *South West Regional Coastal Action Plan* (Western Coastal Board 2002) and the *Coastal Action Plan – Skenes Creek to Marengo* (Colac Otway Shire and Western Coastal Board).

Corangamite Catchment Management Authority is responsible for ensuring the protection and sustainable development of land, vegetation and water resources within the region, including the preparation of a regional catchment strategy which aims to integrate natural resource management across the region, including the coast and Victorian waters (section 4.2). A Regional Catchment Investment Plan helps to guide the allocation of funding for natural resource management projects across the Corangamite Catchment.

The Environment Protection Authority (EPA Victoria) has the primary responsibility for environment protection of all waters in Victoria and is responsible for administering and enforcing the *Environment Protection Act 1970* (Vic.), including all activities relating to the discharge of litter and waste to the environment (section 4.2). EPA Victoria also develops State Environment Protection Policies (SEPPs) for Victorian waters.

Barwon Water is responsible for providing water and sewerage services in the Apollo Bay-Marengo areas. A water reclamation plant, governed by EPA Victoria licensing requirements, releases recycled water through an ocean outfall adjacent to the Marengo Reefs Marine Sanctuary.

Parks Victoria works collaboratively with Marine Safety Victoria to ensure boating safety within the sanctuary and is a support agency for Marine Safety Victoria at a statewide and regional level for marine pollution incidents, contributing on-site response and incident management as well as technical advice.

The Port of Melbourne is the local authority responsible for administering the Marine Act, including planning and implementation of pollution response.

Colac Otway Shire manages the adjacent Apollo Bay harbour and has a key role in administering the planning scheme for land adjacent to the sanctuary, including assessing developments that could have an impact on sanctuary values. Parks Victoria provides input into planning applications via DSE.

Through Aboriginal Affairs Victoria (AAV), the Department for Victorian Communities (DVC) has responsibility for administering legislation protecting cultural heritage. AAV and the South West and Wimmera Cultural Heritage Unit advise Parks Victoria Indigenous matters, Parks Victoria also works with the Traditional Owners and the scheduled Aboriginal community (section 5.1).

Heritage Victoria (DSE) is the State government agency which provides information and advice about places listed on the Victorian Heritage Register and Archaeological Inventory. It supports the Heritage Council through research, recommends additions to the Register and issues permits for alterations to heritage places.

Tourism Victoria is the State government authority responsible for developing and marketing Victoria to Australian and international travellers.

Victorian agencies work cooperatively with the Commonwealth Department of the Environment and Water Resources on the management of regional ecosystem conservation issues and the EPBC Act.

Aim

- Enhance sanctuary management by collaborating with other agencies to ensure appropriate consideration to sanctuary values in planning and implementing activities that relate to the sanctuary.

Management strategies

- *Liaise with agencies including the Western Coastal Board, Corangamite CMA, Barwon Water, DSE and DPI and other relevant groups to highlight the protection of marine habitats and communities in the area from pollution.*
- *Work collaboratively with all agencies to implement the vision and directions of the*

management plan. In particular, work with:

- *DSE regarding future planning and management, including protection of marine flora and fauna from potentially threatening processes*
- *Fisheries Victoria to implement the fishing prohibition and the Regional Compliance Plan*
- *The Kennett River – Apollo Bay Foreshore Reserve Committee of Management regarding the management of the boundary markers, signs and access*
- *Western Coastal Board on any future plans and strategies that relate to the sanctuary*
- *Corangamite CMA to reduce the impacts of land use and management of the catchment on the sanctuary and development of appropriate actions in the Regional Catchment Strategy*
- *EPA Victoria to minimise impacts associated with discharge of waste and pollutants into the sanctuary and surrounding waters*
- *Barwon Water to minimise the impact of waste water discharge on the sanctuary (section 4.2)*
- *Geelong Otway Tourism, Otway Tourism, Great Ocean Road Marketing and the Colac Otway Shire to promote the sanctuary appropriately in local visitor information centres*
- *Marine Safety Victoria to maximise visitor safety and compliance with boating zone and other regulations*
- *Colac Otway Shire on measures to prevent marine pest incursions in the harbour and administration of the planning scheme, including input into adjacent or nearby developments that may impact on the sanctuary*
- *Commonwealth Department of the Environment and Water Resources on the management of regional ecosystem conservation issues.*

9 PLAN IMPLEMENTATION

9.1 Delivery and reporting

A range of approaches will be used to implement the strategies in this plan. Some will be undertaken as part of routine management activities such as ranger patrols; others will be addressed as part of broader regional programs undertaken across the State each year.

A priority list of all the strategies in the plan will be used to guide routine management and identify detailed actions in annual regional programs. Priorities for regional programs vary from year to year depending on available resources and emerging priorities.

At the end of each year, progress towards implementing strategies in the plan will be reviewed and the priority list updated. Staff report internally against 'on time and within budget' delivery of regional programs and whether the completed strategy has achieved the objective. Parks Victoria reports annually to government on the overall delivery of regional and divisional programs. This broader reporting on management performance is available in annual reports prepared on the National Parks Act and Parks Victoria.

In implementing the plan, Parks Victoria will work in partnership with the Traditional Owners and the scheduled Aboriginal Community. Ongoing collaborative activities with the relevant Indigenous community, interested members of the community, scientists and agencies in realising the vision and management directions for the sanctuary will be especially important as outlined in previous sections of the plan.

Implementation of the plan will be consistent with Parks Victoria's commitment to sustainable practices, which involves the delivery of operations, services and facilities in an ecologically and socially responsible manner with minimal use of expendable resources and minimal generation of waste.

In implementing the plan, management will respond to monitoring and research information as it emerges. Parks Victoria's environmental management framework makes this possible. Based on the International Standard for Environmental Management

Systems (ISO 14001), the framework ensures that the future condition of values is considered in identifying threats and developing actions to ameliorate them. Over time, the success of actions is reviewed against set objectives to ensure ongoing learning and refinement of management. The selection of actions and treatment of threats are guided by the precautionary principal. Management options are evaluated on the basis of least impact on the environment. Also, treatment of threats with a potential for serious damage, whether or not addressed in the plan, will be use best information available at the time.

Parks Victoria will use a variety of means to report to the community about the progress of implementation of the plan. The primary means will be through routine liaison between Parks Victoria, interested groups and individuals from the local community, and relevant government agencies. In addition to giving regular updates, there will be opportunities for input by interested members of the community into annual priority setting and feedback on management performance. Events such as sanctuary open days and community and volunteer forums will offer similar opportunities for reporting and discussions about annual programs.

The results of monitoring and research work will continue to be available to the community as technical reports available on Parks Victoria's website, www.parkweb.vic.gov.au.

Parks Victoria will also report on evaluation of the plan (section 9.3) at the start of the new or revised plan, through routine liaison and community forums and in the subsequent draft plan.

Future reporting on the statewide Strategy (Parks Victoria 2003a) and State of the Parks reports, which will be available on Parks Victoria's website, will also include information on management performance in the sanctuary.

9.2 Plan amendment

During the 10-year life of the plan, amendments to the plan may only be made by the Secretary to DSE, following an authorised

process which includes community consultation.

Circumstances that might lead to amendment of the plan include:

- the results of monitoring or research, management experience or new information (such as greater understanding of new threatening processes) which indicate the need for a change in management direction
- an activity, development or use which conflicts with the provisions of the plan is approved by government (such as native title outcomes)
- significant changes in visitation or use
- a change in policy that calls into question plan objectives
- new legislation (such as a significant boundary change).

The plan may also be amended if an activity, development or use which conflicts with the provisions of the plan is approved by government (such as native title outcomes).

9.3 Evaluation and review

Periodically through the life of the plan, Parks Victoria will assess overall progress towards implementing all the strategies in the plan, and also progress towards achieving the plan vision and directions. These evaluations will inform a decision about whether a new or revised plan is required. The achievements of the plan will be assessed by considering performance areas such as:

Protecting natural values

- Overall improvement in biodiversity.
- Compliance with no-fishing provisions and regulations.

- Timely management intervention to minimise threats.
- Minimal impact of permitted uses.

Protecting cultural values

- Progress towards working with Traditional Owners in managing the sanctuary and in protecting and interpreting Indigenous cultural heritage.
- Timely management intervention to avoid damaging activities and threats.

Managing recreation and visitor use

- Minimal impact from visitors, including individuals and school and tour groups.
- Meeting community expectations.
- Improving community and visitor awareness.

Providing for research and promoting understanding

- Improving understanding of the composition and distribution of habitats and ecological processes.
- Ongoing participation of the Traditional Owners and the wider community.
- Clear identification of major knowledge gaps.

Methods for evaluating the benefits of the plan are likely to be refined over time. Parks Victoria has partnered with external research agencies to establish benchmarks and indicators for major communities and habitats. Through sound monitoring and assessment methods, this monitoring and research work will strengthen the basis for comparing management performance over time.

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GLOSSARY

Algae (seaweed) – plant-like organisms that use light energy to create food. Unlike plants, algae are not differentiated into roots, stems and leaves.

Ballast water – water carried in a ship's tanks for stability. Normally discharged to the sea when the ship is loaded, and can be contaminated with pollution or exotic organisms.

Biodiversity – the natural diversity of all life: the sum of all native species of flora and fauna, the genetic variation within them, their habitats and the ecosystems of which they are an integral part.

Bioregion – an area with unique underlying environmental and ecological features.

Catchment – the area of land that drains to a watercourse or estuary.

Coast – in broad terms, the sea and the seabed to the State limit (three nautical miles or 5.5 kilometres offshore) and the land and inland waters within the coastal catchment.

Coastal action plan (CAP) – plan that identifies strategic directions and objectives for use and development in the region or part of the region to facilitate recreational use and tourism, and to provide for protection and enhancement of significant features of the coast, including the marine environment.

Coastline – generally, the line along which the land meets the sea.

Committee of Management – a committee appointed under the *Crown Land (Reserves) Act 1978* to manage reserved Crown land on behalf of the Minister. For coastal land, committees are either an agency (e.g. the local municipality, Parks Victoria) or a committee appointed through an expression of interest process.

Coralline algae – algae that contain calcified components. Can take a variety of forms.

Country – in Indigenous usage, all of nature, culture and spirituality relating to an area.

Crown land – public land not vested in a public authority, including land which has been temporarily or permanently reserved under the *Crown Land (Reserves) Act 1978*.

Customs – observances and practices of people (includes land management and resource use) in accordance with their tradition.

Dreaming – the primordial creative world of the spirit ancestors and the continuing reality for their totem ancestors.

Ecologically sustainable development (ESD) – development that improves the total quality of life both now and in the future, in a way that maintains the ecological processes on which life depends.

Ecosystem – a dynamic complex of interacting organisms and their associated non-living environment.

Effluent – a liquid, partially or completely treated or in its natural state, released into the environment from a water or sewage treatment plant.

Estuary – an inlet or river mouth that is influenced by tides and freshwater inputs from the catchment.

Foreshore – generally, the land between a coastal road and the low water mark.

Geomorphology – the scientific study of landforms and geological formations and the processes that shape them.

Habitat – the preferred location or 'home' of an organism.

Heritage – a place, activity, cultural way of life, structure or group of structures that has aesthetic, historic, scientific or social value for the past, present or future generations.

High water mark – the landward boundary of High Water Mark is the average of the highest tides (Spring and Neap).

Indigenous cultural heritage – all aspects of contemporary and traditional culture, and places and objects of significance to Indigenous people in accordance with tradition.

Indigenous people – people who are descendants of Aboriginal Australians.

Indigenous species – species that occur naturally in a region.

Infrastructure – physical structures that facilitate the use of an area (e.g. roads, paths, toilet blocks).

Integrated coastal zone management (ICZM) – a framework that attempts to integrate planning and management in a region (e.g. Victoria) across the land and sea interface and the private and public land interface, to treat the coastal zone as one biophysical entity.

Intertidal zone – the area between low and high tide levels, which is subject to daily changes in physical and biological conditions from tide movements.

Invertebrate – an animal without a backbone at any stage of development (e.g. worms, sponges).

Marine National Park – in Victoria, highly protected areas reserved and managed under the National Parks Act that represent the range of marine environments in Victoria, and in which no fishing, extractive or damaging activities are allowed.

Marine protected area – term used internationally to describe a marine area that has some form of protection and is managed for conservation objectives.

Marine Sanctuary – in Victoria, a smaller, highly protected area reserved and managed under the National Parks Act designated to protect special values, and in which no fishing, extractive or damaging activities are allowed. These areas complement Marine National Parks.

Mollusc – broad group of animals including snails, sea slugs, squids, octopuses, cuttlefish and mussels.

Nature-based tourism – tourism that provides a range of experiences associated with the natural environment, generally related to outdoor activity.

Neap tides – occur twice every month between spring tides and are slightly lower.

Outfall – the place where sewage is discharged to the ocean.

Pest – exotic organisms (plants, animals or pathogens) that, if introduced outside their natural or previous distribution, they cause significant changes to habitats, food chains, ecosystems or human health by feeding on or competing with native species. Can refer to either terrestrial or marine species.

Photosynthesis – the process by which organic molecules are made from carbon dioxide and water, using light energy. This process is essential for the growth and survival of plants and algae.

Private land – land under freehold tenure (i.e. privately owned).

Relevant Indigenous communities – includes the Traditional Owners, and any scheduled Aboriginal community for areas included in the sanctuary.

Scheduled Aboriginal community – body/s scheduled as the Local Aboriginal Community under the Aboriginal and Torres Strait Islander Heritage Protection Act relating to the sanctuary.

Sediment – insoluble material carried in water, consisting mainly of particles derived from rock,

soil and organic material; such material that has settled out of the water, onto the seabed.

Sessile organism – an organism that is attached to an underwater surface (e.g. pier, seabed, pile).

Spring tides – occur twice every month on the new and full moon and are the highest tides.

Stakeholder – an individual or group that has a vested interest in, or may be affected by, a project or process.

Stormwater – runoff from land during and following rain. Stormwater carries accumulated material, which may include litter, soil, nutrients, pathogens, chemicals, pesticides, oils and grease.

Threatening process – a source of potential harm or a situation with a potential to cause loss.

Tradition – the body of knowledge, beliefs and customs that is transmitted from generation to generation.

Traditional Owners – communities of people that reasonably assert an association with the sanctuary area that is based on direct descent from the original Indigenous custodians of *Country*, in accordance with Indigenous tradition.

Translocation – the process of transfer of pests from one area to a new area.

Values – natural and cultural assets (e.g. historic artefacts, features, species, communities) that have been given worth or are considered to be desirable.

Abbreviations

AAV – Aboriginal Affairs Victoria.

ANZECC – former Australian and New Zealand Environment and Conservation Council.

CSIRO – Commonwealth Scientific and Industrial Research Organisation.

DPI – Department of Primary Industries.

DSE – Department of Sustainability and Environment.

ECC – former Environment Conservation Council.

EPA Victoria – Environment Protection Authority.

NRSMPA – National Representative System of Marine Protected Areas.

APPENDIX 1 MANAGEMENT OBJECTIVES FOR MARINE SANCTUARIES

Management objectives for marine national parks and marine sanctuaries included on Schedule 7 or 8 of the National Parks Act are detailed in Sections 4 and 17D of the Act as listed below. For an up-to-date copy of the *National Parks Act 1975* (Vic.), refer to Victorian Acts on the Victorian Legislation and Parliamentary Documents website www.dms.dpc.vic.gov.au.

4. Objects of the Act

The objects of this Act are –

- (a) to make provision, in respect of national parks, State parks, marine national parks and marine sanctuaries –
 - (i) for the preservation and protection of the natural environment including wilderness areas and remote and natural areas in those parks;
 - (ii) for the protection and preservation of indigenous flora and fauna and of features of scenic or archaeological, ecological, geological, historic or other scientific interest in those parks; and
 - (iii) for the study of ecology, geology, botany, zoology and other sciences relating to the conservation of the natural environment in those parks; and
 - (iv) for the responsible management of the land in those parks;
- (c) to make provision in accordance with the foregoing for the use of parks by the public for the purposes of enjoyment, recreation or education, and for the encouragement and control of that use.

17D Marine national parks and marine sanctuaries

(3) The Secretary must –

- (a) ensure that each marine national park and marine sanctuary is controlled and managed, in accordance with the objects of this Act, in a manner that will –
 - (i) preserve and protect the natural environment and indigenous flora and fauna of the park and any features of the park which are of geological, geomorphological, ecological, scenic, archaeological, historic or other scientific interest; and
 - (ii) promote the prevention of the introduction of exotic flora and fauna into the park; and
 - (iii) provide for the eradication or control of exotic flora and fauna found in the park; and
- (b) subject to paragraph (a) –
 - (i) provide for the use, enjoyment and understanding of marine national parks and marine sanctuaries by the public; and
 - (ii) promote an understanding of the purpose and significance of marine national parks and marine sanctuaries; and
- (c) prepare a plan of management in respect of each marine national park and each marine sanctuary.

APPENDIX 2 SUBMISSIONS ON THE DRAFT MANAGEMENT PLAN

A total of ten submissions were received on the Draft Management Plan (May 2006 – July 2006), from the following organisations and

individuals. One submission was marked confidential.

Organisation	Submission No.
Submissions from groups	Total: 8
Barwon Water	7
Confidential	9
Department of Defence	10
Fisheries Victoria	4
Friends of Otway National Park	3
Phillip Island Nature Park	8
Scuba Divers Federation of Victoria, SDFV	5
Tourism Victoria	6

Individual	Submission No.
Submissions from individuals	Total: 2
Jill Heathcote	2
Kate Holmes	1

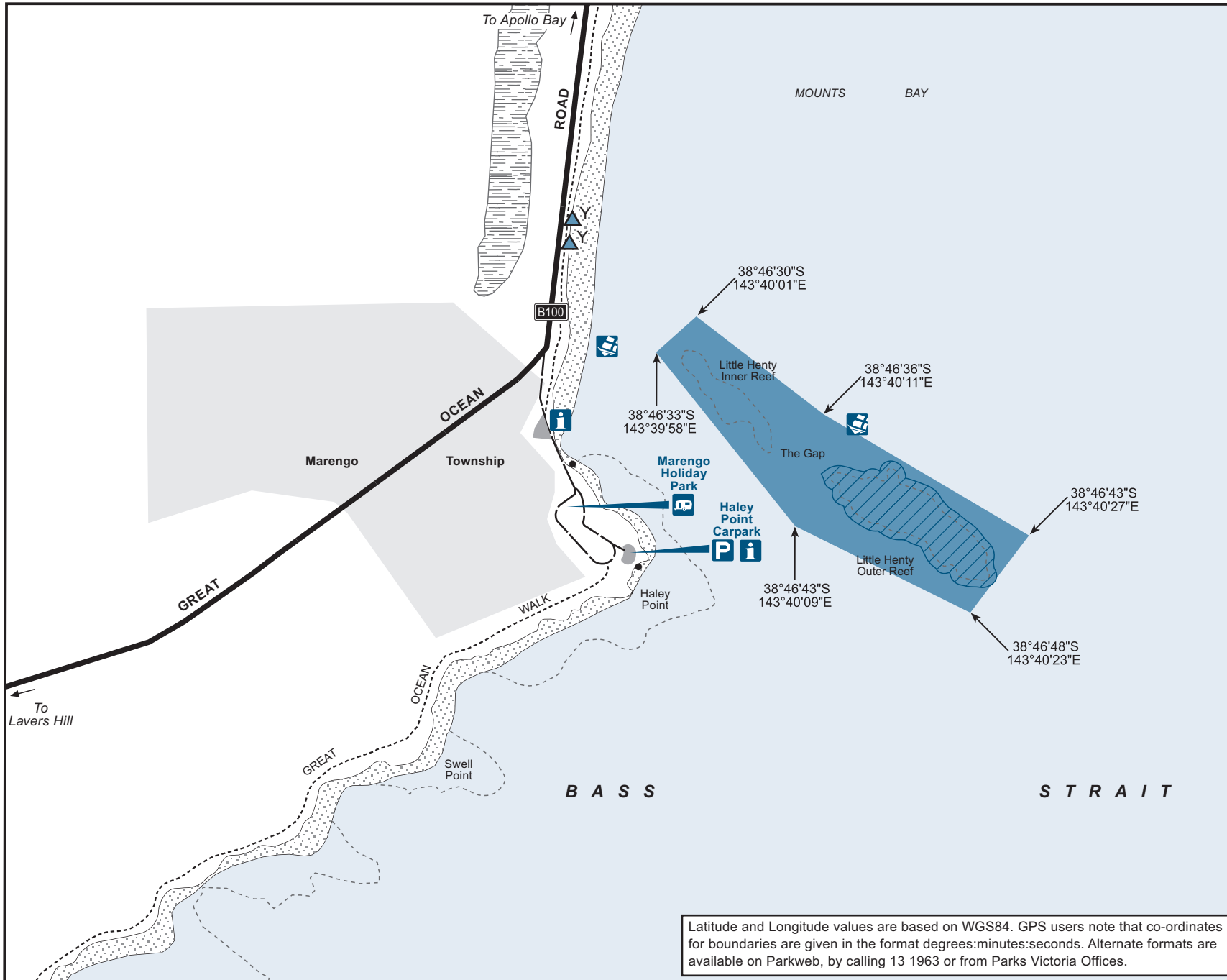


Figure 1
LOCATION
MARENGO REEFS MARINE SANCTUARY

- Highway/Major Tourist Route
- Major Sealed Road
- Marengo Reefs Marine Sanctuary
- Other Marine National Park & Marine Sanctuary
- Other Parks
- Waterbody



Figure 2
MARENGO REEFS
MARINE SANCTUARY



- Major road
- Minor road
- Walking track
- Boundary markers (proposed)
- Carpark
- Intertidal reef
- Beach / reef access
- Beach
- Wetland
- Marengo Reef Marine Sanctuary
- Special Protection Area - Australian Fur Seal Haul Out
- Shipwreck

Recreation Facilities

- Caravan Park
- Carpark
- Park information

