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Twelve Apostles Marine National Park The Arches Marine Sanctuary



Management Plan July 2006



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This Management Plan for Twelve Apostles Marine National Park and The Arches Marine Sanctuary is approved for implementation. Its purpose is to direct all aspects of management in the park until the plan is reviewed.

A Draft Management Plan for the park was published in November 2005. Ten submissions were received and have been considered in developing this approved Management Plan.

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**TWELVE APOSTLES MARINE NATIONAL PARK
AND THE ARCHES MARINE SANCTUARY
MANAGEMENT PLAN**



July 2006

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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 park and sanctuary are part of *Country* of the Traditional Owners.

Parks Victoria is grateful to all those organisations and individuals who have contributed to this Draft Management Plan. Special thanks go to members of the Shipwreck Coast Marine National Parks Management Plan Advisory Group: John Amor, Lynda Avery, Alecia Bellgrove, Matt Bowker, Joe Chatfield, Ian Fitzgibbon, Nathan Gass, Antoinette Hanna, Lionel Harradine, Phillip Kerr, Laurie Laurenson, Neil Martin, Julie Mondon, Marg O'Toole and Phillip Younis.

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 the 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.

Every effort has been made to ensure that the information in this plan is accurate. Parks Victoria does not guarantee that the publication is without flaw of any kind and therefore disclaims all liability for any error, loss or other consequence that may arise from you relying on any information in the publication.

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FOREWORD

Twelve Apostles Marine National Park and The Arches Marine Sanctuary protect representative habitats in the Otway marine bioregion. Habitats include extensive beaches, islands, rock stacks, intertidal reefs, subtidal sand sediments and complex reef systems. These habitats support a diverse array of species ranging from migrating sea birds and southern right whales to giant kelp and colourful invertebrates.

Twelve Apostles Marine National Park includes the internationally recognised icon of the Twelve Apostles. Walking tracks and lookouts provide visitors with spectacular views of the Twelve Apostles, Loch Ard Gorge and other features in the park. The Arches Marine Sanctuary is a dive site with magnificent underwater scenery.

Twelve Apostles Marine National Park also contains the wreck of the Loch Ard. The area is particularly significant to Indigenous communities.

The Twelve Apostles is a truly unique landscape and a special, spiritual place which we are proud to share with visitors from around the world.

The care of the Twelve Apostles Marine National Park and The Arches 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 thank the Shipwreck Coast Marine National Parks Management Plan Advisory Group for their valuable contribution to the plan, and also thank those individuals and organisations who made contributions and submissions on the Draft Management Plan. I look forward to the community's ongoing involvement in and support for the management of Twelve Apostles Marine National Park and The Arches 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 Twelve Apostles Marine National Park and The Arches Marine Sanctuary. It was finalised following consideration of the 10 submissions received on the Draft Management Plan.

PROF. LYNDSAY NEILSON
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. These include deep open water, shallow embayments, rocky reefs, canyons, seagrass meadows, tidal sand flats and mudflats, and estuaries, and they support more than 12 000 known species. Around 90% of these marine species 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 Marine Sanctuaries make up about 5% of this area, but protect a range of significant species and important habitats as well as maritime artefacts and evidence of 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 as well. 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. octopus, abalone, 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, runoff and oils from catchments or inshore waters, 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 Parks and Marine Sanctuaries Management Strategy 2003–2010* (Parks Victoria 2003a). It is described 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.'

Contribution of the park and sanctuary to the statewide system

Twelve Apostles Marine National Park is the second-largest Marine National Park in the State. It protects representative habitats in the Otways bioregion, including intertidal and subtidal rocky reefs, sandy beaches and subtidal soft sediments. The park includes the internationally recognised icon of the Twelve Apostles rock stacks and spectacular underwater scenery.

The Arches Marine Sanctuary is a spectacular dive site of limestone formations, rocky arches and canyons. The sanctuary is also ecologically significant, supporting habitats such as kelp forests and a diverse range of sessile invertebrates on the arches and canyons.

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 park and sanctuary managers have no direct control. Impacts on one marine habitat can quickly affect another 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 which is rarely in private ownership, and there are few natural or artificial barriers to movement. Many of the strategies used to concentrate the impacts of recreational activities in terrestrial parks (e.g. the creation of walking tracks and picnic areas) are not feasible in the marine context.

Conserving historic and 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 association with, or past use of, underwater places which were exposed before the sea level rose, 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. This plan seeks to foster a strong sense of custodianship of the park and sanctuary and strengthen their protection, at the same time respecting cultural and community associations with these areas.

SUMMARY

This Management Plan includes two marine protected areas on Victoria's Great Ocean Road near Port Campbell:

- Twelve Apostles Marine National Park (7500 ha)
- The Arches Marine Sanctuary (45 ha).

The Twelve Apostles are among Australia's most internationally recognised icons. These spectacular cliffs and rock stacks are now protected as a part of Twelve Apostles Marine National Park.

Countless generations of Kirrae Whurrong and Gadubanud people watched the powerful Southern Ocean sculpt the coastline to form these mighty rock stacks that stand defying the sea. Each year thousands of visitors marvel at this unique coastal landscape. The Southern Ocean has also formed an underwater environment which in many ways is no less spectacular or unique.

Sea *Country* is an integral element in the culture of Kirrae Whurrong and Gadubanud peoples, continuing to this day among Indigenous communities in the district. The Kirrae Whurrong and Gadubanud flourished along this coastline until the arrival of Europeans. The Indigenous language used in this plan is extracted from a dictionary of Keerraywoorroong and related dialects (Gunditjmara Aboriginal Cooperative 1996).

Early voyages of European immigrants past the Shipwreck Coast were shrouded in apprehension and mystery. Tragically, the Shipwreck Coast became the final resting place for many immigrants in search of a new life, including most of those on board the *Loch Ard*, the wreck of which lies within Twelve Apostles Marine National Park (section 5.2).

Twelve Apostles Marine National Park contains important examples of Victoria's marine habitats, including sand and limestone reefs. The park supports colourful seaweeds, sponge gardens and schools of fish, and whales migrate annually through these waters.

The Arches Marine Sanctuary is a relatively small area but has spectacular limestone formations that support a diverse range of algae, sponges, bryozoans and sea stars. These features make this a popular dive site.

Thousands of visitors each year will increasingly appreciate that there is more to the Twelve Apostles than meets the eye. Innovative information and interpretation techniques will begin to overcome people's fear and lack of knowledge of the sea and the Shipwreck Coast, enabling them to embrace Indigenous perspectives of sea *Country* and appreciate our unique marine biodiversity.

Future management will seek to protect the overall biodiversity of the park and sanctuary. This will require a sound basis of scientific knowledge and long-term support from local communities. Over time, Twelve Apostles Marine National Park will create outstanding opportunities to foster a broader appreciation of Marine National Parks and Marine Sanctuaries by revealing a new dimension to this established tourism icon.

Major management directions for the park and sanctuary include the following.

- Baseline information about marine biodiversity, marine habitats, threatening processes and management requirements will be progressively developed.
- Local community connections to the marine environment will be respected and acknowledged through ongoing opportunities for participation in planning and management.
- Views associated with the Twelve Apostles and other important seascapes will be protected.
- Visitor facilities to view and access Twelve Apostles Marine National Park will be maintained in a manner consistent with the management of Port Campbell National Park.
- Opportunities will be provided for the local community, visitors, schools and interested people to learn about the park and sanctuary.

- Indigenous cultural lore, interests in and aspirations for the planning area will be acknowledged, respected and reflected in planning and management, in cooperation with the Traditional Owners and other interested Indigenous communities.
- The wreck of the *Loch Ard* will continue to be protected.
- Community and interest groups, including the Indigenous community, will be encouraged and supported to become actively involved in all areas of park and sanctuary management, especially those that relate to their interests.

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1 INTRODUCTION

1.1 Location and planning area

The planning area comprises Twelve Apostles Marine National Park and The Arches Marine Sanctuary, about 280 km west of Melbourne on the Great Ocean Road. Port Campbell and Princetown are the main towns nearby (figure 1).

Twelve Apostles Marine National Park (7500 ha) is south-east of Port Campbell between Broken Head and Pebble Point, and extends offshore 3 nautical miles to the limit of Victorian waters (figure 2). The park includes some land above the high water mark, including Mutton Bird Island and a series of offshore rock stacks that includes the Twelve Apostles. It extends 200 metres beneath the sea bed, and the landward boundary extends up to the high water mark except in two beach areas which are not included in the park:

- Gibson Steps Beach (from approximately 200 m west of staircase) to Clifton Beach — a coastal strip between these points which extends 100 m out to sea from the high water mark
- Point Ronald to Rivernook — a coastal strip between these points which extends 100 m out to sea from the high water mark.

The Arches Marine Sanctuary (45 ha) is approximately 600 m offshore from Port Campbell (figure 2).

1.2 Creation of the park and sanctuary

Twelve Apostles Marine National Park and The Arches Marine Sanctuary form part of the 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 park and sanctuary under the *National Parks Act 1975*

(Vic.). Twelve Apostles Marine National Park was included in Schedule 7, and The Arches Marine Sanctuary in Schedule 8, of the National Parks Act 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 fauna, plants or objects from these areas.

Twelve Apostles Marine National Park includes the areas between high and low water mark that were formerly part of Port Campbell National Park and the former Otway National Park.

1.3 Plan development

This first Management Plan for the park and the sanctuary was prepared by Parks Victoria, with significant input from the Shipwreck Coast Marine National Parks Management Plan Advisory Group and other stakeholders. It takes into account existing information, reports and research findings that relate to the park 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 park and sanctuary. As a public document, the plan establishes how Parks Victoria will protect the natural and cultural values of the park and sanctuary, and describes the services and facilities that will be provided to help visitors to enjoy, appreciate and understand the park and 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 park and sanctuary.

As a working document for the park and 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 November 2005, and 10 submissions were received (appendix 2).

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

Key changes made to the Draft Plan in preparing this Final Management Plan included:

- clarification of public access to beaches within Twelve Apostles Marine National Park
- greater detail about bird habitats associated with beaches, islands and rock stacks

- establishment of a process for ongoing community involvement in the implementation of the plan
- greater detail about the role of Twelve Apostles Marine National Park in regional tourism
- development of new educational opportunities for visiting schools in conjunction with local businesses.

This Management Plan will direct future management of the Twelve Apostles Marine National Park and The Arches Marine Sanctuary, until reviewed.

2 BASIS

2.1 Regional context

Twelve Apostles Marine National Park and The Arches Marine Sanctuary form part of a representative system of Marine National Parks and 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).

The park and sanctuary form part of the Otway marine bioregion, as identified by the Interim Marine and Coastal Regionalisation for Australia (IMCRA). This identified 60 marine bioregions, five of which apply to Victorian waters (IMCRA Technical Group 1998).

The Otway bioregion encompasses waters from the coastline to the edge of the continental shelf and extends in an arc from Cape Jaffa in South Australia to Cape Otway in Victoria, King Island and the north-western tip of Tasmania. It is characterised by cold water, high wave energy, a steep offshore gradient and nutrient upwellings associated with the edge of the continental shelf (IMCRA Technical Group 1998).

The park and sanctuary are two of five marine protected areas in the Otway marine bioregion: four in Victorian waters and one in South Australian waters. Twelve Apostles Marine National Park forms 72% of the total protected area within this bioregion, and The Arches Marine Sanctuary less than 1%.

Indigenous tradition indicates that the park and sanctuary are a part of Gadubanud and Kirrae Whurrong *Country* (section 5.1).

The park and sanctuary are on the northern edge of the Otway Gas Basin, where there are several significant gas fields. The Minerva gas field, the closest of these, lies 10 km south of the planning area and commenced production in 2005.

Twelve Apostles Marine National Park abuts Port Campbell National Park and Great Otway National Park, which are linear coastal national parks, typified by clifftop grassland and open

coastal shrubland communities (Parks Victoria 1999; 2002a). Together, these three national parks protect a large area of land, coast and sea.

As part of the Gellibrand catchment of the Otways Coast Basin, the planning area is influenced by activities within the catchment, which is overseen by the Corangamite Catchment Management Authority. The Gellibrand River flows into Twelve Apostles Marine National Park, and Sherbrook River and Rutledge Creek enter the sea just east of the park. Campbells Creek flows into the sea west of The Arches Marine Sanctuary.

The planning area is within Tourism Victoria's Great Ocean Road product region. Princetown, Port Campbell, Peterborough, Warrnambool, Apollo Bay and surrounding areas have a range of camping and accommodation options reasonably close to the park and sanctuary. The Great Ocean Road Product Region is Victoria's most popular regional tourism destination. It receives 14% of all tourist visits to Victoria, comprising 2.6 million domestic overnight visitors, 4.6 million domestic day visitors, and 164 000 international overnight visitors (Tourism Victoria 2004a). The Twelve Apostles is the highest-profile destination within the region.

2.2 Park and sanctuary significance and values

Twelve Apostles Marine National Park and The Arches Marine Sanctuary make 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 also provide opportunities for visitors to enjoy and appreciate natural and cultural values, and many make important contributions to tourism.

Twelve Apostles Marine National Park is assigned the International Union for the Conservation of Nature and Natural Resources (IUCN) Category II of the United Nation's List of National Parks and Protected Areas. Category II areas are managed primarily for ecosystem protection and recreation. The Arches Marine Sanctuary is assigned Category

III. Category III areas are managed for conservation of specific natural features.

In recognition of the area's outstanding values and its heritage importance, the following sites have been listed on the Register of the National Estate:

- intertidal areas and rock stacks within Twelve Apostles Marine National Park
- the wreck of the *Loch Ard* within Twelve Apostles Marine National Park.

The wreck of the *Loch Ard* is also on the Victorian Heritage Register.

The area included in the park and sanctuary is significant to many people in the community, especially Indigenous communities who are connected to it by cultural lore and other people with traditional attachments to these areas.

Sea *Country* is central to the culture of Indigenous communities in south-western Victoria. The park and sanctuary are an integral part of this sea *Country* and present an opportunity to build community awareness of their cultural significance. Features of Twelve Apostles Marine National Park have particular spiritual significance and have provided resources for generations.

Important values for Twelve Apostles Marine National Park include:

- unique limestone rock formations, including the Twelve Apostles
- a range of marine habitats representative of the Otway marine bioregion
- Indigenous culture based on spiritual connection to sea *Country* and a history of marine resource use
- the wreck of the *Loch Ard*
- opportunities to view marine life and spectacular scenery within the park.

Important values for The Arches Marine Sanctuary include:

- underwater limestone formations of arches and canyons
- a diverse range of encrusting invertebrates
- Indigenous culture based on spiritual connection to sea *Country*

- a spectacular scuba diving site.

2.3 Evidence of past use

Many Indigenous cultural sites adjacent to Twelve Apostles National Park have been destroyed as the coastline has retreated. However, middens in Port Campbell National Park and Great Otway National Park, and oral history, illustrate the dependence of Indigenous communities on marine resources over a significant period.

Wild seas, sheer cliffs and spectacular rock stacks fringing Twelve Apostles Marine National Park have been the setting for the tragic maritime history of the 'Shipwreck Coast'. Shipwrecks like that of the *Loch Ard* resulted in significant loss of life and left an indelible mark on the history of the area.

For many years, the waters now included in the park and sanctuary were an important part of the Port Campbell rock lobster fishery. People who established livelihoods in these waters developed an extensive knowledge and deep appreciation of their special significance. As a result of this history, Port Campbell retains a unique fishing village character which is an integral part of the township's culture.

These areas were also a component of a commercial abalone fishery and were used for recreational boat-based fishing. Access for fishing in The Arches Marine Sanctuary ceased in November 2002, and in Twelve Apostles Marine National Park fishing ceased on 1 April 2004.

Exploration for oil and gas occurred within the area before the creation of the park and sanctuary.

Recreational activities in Twelve Apostles Marine National Park have included surfing, scenic tours, bird watching and scuba diving. Diving has been the primary recreational activity at The Arches Marine Sanctuary.

The scenery of this coastline appears to be unchanging, but its shape and position have altered constantly and dramatically over thousands of years. Social transformations have been no less dramatic and were forever changed by the dispossession of Indigenous people. The distinctive Port Campbell township evolved around the fishing industry and maritime transport and is now heavily

influenced by tourism. These changes in social context are an important consideration for management of the park and sanctuary.

2.4 The park and sanctuary visitor

An inaccessible coastline and often rough sea conditions mean that relatively few people physically visit Twelve Apostles Marine National Park and The Arches Marine Sanctuary. Visitors to the park and sanctuary comprise local Port Campbell and Princetown residents and visitors to the area. These people are usually scuba diving at The Arches Marine Sanctuary or undertaking charter boat scenic tours. Visitors on foot can access intertidal areas of Twelve Apostles Marine National Park at Loch Ard Gorge and Bowkers Beach and at beaches near Gibson Steps and Rivernook.

Twelve Apostles Marine National Park contains one of Australia's most recognisable icons, the Twelve Apostles. Visitors enjoy spectacular views of the Twelve Apostles from lookouts in Port Campbell National Park and from scenic flights and boat tours (figure 2). The Twelve Apostles area is the most visited site in Port Campbell National Park, with around a million visitors per annum, and the Loch Ard Gorge precinct is the second most visited site (approx. 700 000 visitors per annum) (Parks Victoria 2002b).

Visitors can also enjoy views of Twelve Apostles Marine National Park from the Great Ocean Walk, Gibson Steps, Clifton Beach, Bowkers Beach and walking tracks and lookouts within the Loch Ard Gorge precinct (figure 2). Views over The Arches Marine Sanctuary and surrounding ocean can be obtained from Two Mile Bay and Sturgess Point (figure 2).

As one of the key attractions on the Great Ocean Road, the Twelve Apostles site makes a major contribution to local and regional economies. Parks Victoria continues to monitor visitation trends and manage infrastructure to ensure the sustainability of this exceptional visitor experience (Parks Victoria 2001; 2002b).

2.5 Legislation and ECC recommendations

Legislation

Twelve Apostles Marine National Park and The Arches Marine Sanctuary are reserved and managed under the provisions of the National Parks Act. The Act requires the Secretary to DSE to preserve and protect the natural condition of the park and sanctuary and their natural and other features and, subject to this, to provide for the use of the park and 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 both the park and sanctuary.

All forms of extraction, including recreational and commercial fishing and shellfish collection, are prohibited within the park and sanctuary under the National Parks Act and regulations. A Statewide Compliance Strategy and a 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 planning area (section 8.3).

The objects and provisions of the National Parks Act set the framework for the management of the park and sanctuary (appendix 1). Specific legislation and ECC recommendations accepted by government also govern particular aspects of their management, as described below and in subsequent sections of the plan.

The *Coastal Management Act 1995* (Vic.) applies to the use and any development of the park and 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 park and 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 park and sanctuary. There is no native title determination application over the area at present.

The *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) applies to the

whole of the planning area 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 park and sanctuary.

The *Historic Shipwrecks Act 1976* (Cwlth) applies to any shipwrecks in the park or sanctuary including the wreck of the *Loch Ard*.

The *Parks Victoria Act 1998* (Vic.) enables management services for Twelve Apostles Marine National Park and The Arches Marine Sanctuary to be provided by Parks Victoria on behalf of the Secretary to DSE.

Other legislation, and policies and guidelines (section 2.6) at both the Commonwealth and State levels apply to management of the planning area and specific activities and uses.

ECC recommendations

The former Environment Conservation Council (ECC) in its *Marine, Coastal and Estuarine Investigation Final Report* recommended the creation of Twelve Apostles Marine National Park for its spectacular underwater scenery that is a continuation of the famous coastal limestone cliffs and stacks of the Port Campbell Area, and the creation of The Arches Marine Sanctuary for its ecological, scenic and tourism values (ECC 2000).

The ECC also made a number of recommendations that relate to the park and sanctuary. The recommendations included:

Recommendation A Use of Twelve Apostles Marine National Park (A2) in accordance with the general recommendations for Marine National Parks.

Recommendation B Use of The Arches 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 of 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.

R34 Priority will be given to establishing monitoring programs for Marine National Parks to determine the extent to which these areas are meeting their objectives.

The Victorian Government accepted the ECC's recommendations for The Arches Marine Sanctuary in full and accepted those for Twelve Apostles Marine National Park with the following variations:

- the expansion of an area excluded from the park to allow for beach fishing between Gibson Steps and Clifton Beach
- the movement of the eastern boundary to exclude the area east of Moonlight Head from the park (Government of Victoria 2002).

2.6 Policies and guidelines

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

- *Victoria's System of Marine National Parks and Marine Sanctuaries Management Strategy 2003–2010* (Parks Victoria 2003a)

- *Indigenous Partnership Strategy and Action Plan* (Parks Victoria 2005)
- *Victoria's Biodiversity Strategy* (NRE 1997)
- *National Strategy for Ecologically Sustainable Development* (COAG 1992)
- *National Strategy for the Conservation of Australia's Biological Diversity* (ANZECC 2001)
- *Heritage Management Strategy* (Parks Victoria 2003b).
- *Guidelines for Working with Aboriginal Communities and Protection of Cultural Sites* (Parks Victoria 2002c).

The park and sanctuary are managed within a broader context of a number of other plans and strategies, including:

- *Nature Based Tourism – Directions and Opportunities for Victoria 2000–2003* (Tourism Victoria 2000)

- *Victorian Coastal Strategy* (VCC 2002)
- *Corangamite Regional Catchment Management Strategy* (Corangamite CMA 2003)
- *Regional Tourism Development Plan –* (Tourism Victoria 2004b)
- *Great Ocean Road Region – Land Use and Transport Strategy* (DSE 2004)
- *Policy for Sustainable Recreation and Tourism on Victoria's Public Land* (NRE 2002)
- *Otway National Park Management Plan* (NRE 1996)
- *Port Campbell National Park and Bay of Islands Coastal Park Management Plan* (Parks Victoria 1998)
- *South West Victoria Regional Coastal Action Plan* (Western Coastal Board 2002a).

3 STRATEGIC DIRECTIONS

3.1 Vision

A future visitor to Twelve Apostles Marine National Park and The Arches Marine Sanctuary finds examples of intricate and diverse marine ecosystems, free from significant human impacts.

The park and sanctuary are well protected through management which is strongly supported by local communities. Ongoing research programs continue to make new discoveries and improve an established scientific basis for management.

The Twelve Apostles are synonymous with Twelve Apostles Marine National Park and its marine conservation values. The Arches continues to be a renowned dive site.

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).

3.3 Management directions

Major management directions for the park and sanctuary are outlined below.

Natural values conservation

- Natural processes, including competition, predation, recruitment and disturbance, will be protected to maximise overall benefit to the biodiversity of marine ecological communities in the park and sanctuary.
- Identified threats to the park and sanctuary will be minimised through addressing the outcomes of ongoing monitoring and risk assessment, and, where feasible, complementary adjacent, coastal and catchment management.

- 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.
- Impacts of changes in water quality will be minimised through cooperation with catchment managers and other relevant agencies.
- 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.
- The geological features of the park and sanctuary above and below the water will be protected from potentially damaging activities.
- The landscape and seascape values of Twelve Apostles Marine National Park and The Arches Marine Sanctuary will be protected from inappropriate development and other threats.

Cultural values conservation

- The strong social and cultural connections between the local marine environment and the Port Campbell community will be respected and maintained.
- The Traditional Owners' cultural lore, interests and rights in the waters and land, and aspirations for *Country*, will be reflected in the management of the park and sanctuary, in accordance with legislation and policies.
- Historic relics and places will be conserved by protecting them from damaging or inappropriate activities.

TABLE 1 SUMMARY OF RECREATIONAL OPPORTUNITIES

ACTIVITY	TWELVE APOSTLES MARINE NATIONAL PARK	THE ARCHES MARINE SANCTUARY
Aircraft landing / launching (incl. hang-gliding, paragliding) (section 6.7)	N	N
Anchoring (section 6.3)	Y	Y
Beachcombing (no collecting)	Y	N/A
Bait collection	N	N
Bird watching	Y	Y
Boat launching (no facilities, no trailers)	N	N/A
Camping	N	N/A
Filming and photography	Y	Y
Cycling	N	N/A
Diving and snorkelling (section 6.4)	Y	Y
Dogs (section 6.6)	N	N
Driving on beaches	N	N/A
Education / guided activities (section 6.1)	Y	Y
Feeding wildlife	N	N
Fires on beaches	N	N/A
Fishing (all forms)	N	N
Fossil collection	N	N
Horse riding (under permit) (section 6.6)	Y	N/A
Kite boarding / wind surfing	Y	Y
Licensed tours (section 6.8)	Y	Y
Landing / launching boats (section 6.2)	Y	N/A
Mooring	N	N
Motorised boating (general) (section 6.3)	Y	Y
Nature photography / painting	Y	Y
Non-motorised boating	Y	Y
Personal watercraft / jet skiing (section 6.3)	Y	Y
Picnicking	Y	N/A
Prospecting and metal detecting	N	N/A
Rock climbing / abseiling	N	N/A
Sailing	Y	Y
Scenic viewing (land & boat based)	Y	Y
Scenic viewing (aircraft) (section 6.7)	Y	Y
Sea kayaking	Y	Y
Shell collecting	N	N
Sightseeing	Y	Y
Surfing	Y	N/A
Swimming	Y	Y

Table 1 (contd.)

ACTIVITY	TWELVE APOSTLES MARINE NATIONAL PARK	THE ARCHES MARINE SANCTUARY
Walking on beaches (section 6.2)	Y	N/A
Whale / dolphin / seal watching	Y	Y
Wreck diving	Y	N/A

Key:

Y Permitted, subject to conditions prescribed by legislation, permits or elsewhere in the plan as indicated.

N Not permitted.

N/A Not applicable.

- Research into the Indigenous and historic cultural heritage of the planning area will be encouraged and supported as appropriate, in consultation with the Indigenous and wider communities

The park and sanctuary visit

- Visitor understanding and appreciation of the natural and cultural values of the park and sanctuary will be enhanced by a range of information services and interpretive information at the Twelve Apostles Centre and other appropriate locations within the area.
- Visitor enjoyment will be enhanced by appropriate management of recreation activities. Recreation opportunities will be provided in accordance with table 1.
- Visitors will be encouraged to adopt minimum-impact techniques and to adhere to industry-developed standards appropriate to their activity.
- Visitors will have opportunities to observe marine life, enjoy water sports and participate in other recreational activities compatible with management objectives.
- Visitors will have access to a range of lookouts and walking tracks providing outstanding opportunities to view Twelve Apostles Marine National Park.

Community awareness and involvement

- Friends, volunteers, Indigenous and other community groups will be encouraged and supported to participate in areas of park and sanctuary management that relate to their interests.

- An awareness and understanding of the park and sanctuary and its management, and a sense of custodianship, will be encouraged among local communities and visitors.
- Relationships will be further developed and maintained with people, groups and communities with strong connections with or interests in the park and sanctuary, as a basis for encouraging their appropriate participation in the planning area's management.
- A strong collaborative relationship will be developed with the Traditional Owners to facilitate the reflection of their cultural lore, and interests, rights and aspirations for the park and sanctuary, in their planning and management.
- Collaborative partnerships will be established with relevant agencies to ensure ongoing compliance and future protection of the park and sanctuary.
- Ongoing opportunities will be given for individuals, groups, communities and government agencies to discuss aspirations and issues of mutual concern relating to the park and sanctuary.

4 STRATEGIES FOR NATURAL VALUES CONSERVATION

4.1 Geological and geomorphological features

The geology and geomorphology of this coastline are unique. The coastal rock formations within and adjacent to Twelve Apostles Marine National Park are some of the most spectacular in the world. These geomorphological features, and the Twelve Apostles in particular, are a primary attraction for visitors from all over the world, and have established the Great Ocean Road as an economically very important tourism drawcard for Victoria.

Underwater, Twelve Apostles Marine National Park is a mixture of sand and limestone rocky reef with gutters, small rounded boulders and steeply sloping ridges. The sea floor of The Arches Marine Sanctuary consists mainly of limestone reef but includes a submerged labyrinth of arches and canyons similar to some of the well known above-water coastal rock formations. The subtidal reefs and soft sediments in the park and sanctuary are the remnants of an ancient eroding coastline; more recent geological processes have shaped features closer to the surface (Bird 1993).

Twelve Apostles Marine National Park spans two distinctive geological regions: the Port Campbell Coast and the Otways Coast. The geology of The Arches Marine Sanctuary and Twelve Apostles Marine National Park between Broken Head and Point Ronald is typical of the Port Campbell Coast to the west, whereas that of the park from Point Ronald to Pebble Point is typical of the Otways Coast (Bird 1993).

Limestone cliffs of the Port Campbell Coast, up to 60 m high, are exposed to high wave energy and a prevailing south-westerly swell. Over time, softer limestone has progressively eroded, creating rugged rock stacks, caves, arches, tunnels and blowholes. Various geological features in Twelve Apostles Marine National Park reflect different phases in the erosion of the coastline. The collapse of one of the rock stacks in July 2005 demonstrates the continuing erosion process.

Some intertidal reefs of hardened limestone have been formed where rock stacks have been

eroded away. Many cliffs also have a ledge at mid-tide level where softer rock has been eroded or the precipitation of carbonates from sea water has established a harder platform. The vertical cliff face is another intertidal area, sometimes sheltered but often prone to high wave energy. There are relatively few beaches along the Port Campbell coast, because of the lack of sand in the eroding cliffs (Bird 1993).

A series of sea caves around Loch Ard Gorge includes Thunder Cave, which extends into the cliff face for around 100 m. Caves have been formed by erosion along cliff joints caused by wave energy and the compression of air in cracks. Escaping air has resulted in the development of the Blow Hole. Several caves have been explored, but the number and extent of all caves in the park are unknown. The collapse of caves and tunnels has resulted in the development of coves and gorges such as Loch Ard Gorge and elongated promontories such as Broken Head. The erosion of these promontories forms archways which may eventually collapse, leaving islands and rock stacks (Bird 1993).

To the south-east of Point Ronald, limestone cliffs are replaced by dune-backed sandy beaches and bays between small promontories. The majority of the park in this area has a sandy sea floor, although there are several subtidal reefs (Bird 1993).

The geomorphological features of Twelve Apostles Marine National Park are significant elements of *Country* of the Traditional Owners in accordance with their tradition.

There are no registered sites of geological or geomorphological significance in The Arches Marine Sanctuary. The Twelve Apostles are registered as a geological/geomorphological site of national significance (Buckley 1993).

Other sites of geological/geomorphological significance associated with Twelve Apostles Marine National Park are also features in the adjacent Port Campbell and Great Otway National Parks (Buckley 1993). These include:

- Gibson Steps – Regional/Local Significance

- Pebble Point – Regional/Local Significance
- Point Ronald to Point Margaret – Regional/ Local Significance
- Loch Ard Gorge area – State Significance
- Port Campbell National Park – National Significance.

Activities within and adjacent to the park and sanctuary could impact on geological and geomorphological values. Anchor damage could occur in the park and sanctuary, depending on the level of use and vessel type. Vessel groundings are possible on this coastline and could physically damage reefs and other formations. Visitor access to sensitive sites such as rock stacks could also cause physical damage. Inappropriate developments or poor maintenance of infrastructure near Twelve Apostles Marine National Park could also damage features through altered water movement or physical damage to sea caves and blowholes.

Aim

- Protect significant and fragile geological and seabed features in the park and sanctuary.

Management strategies

- *Encourage research to identify landforms of special significance to the Traditional Owners and protect these landforms from damaging or inappropriate activities (sections 5.1 and 8.2).*
- *Consider the significance of landforms to the Traditional Owners in interpreting the planning area and implementing management programs (sections 4.5, 5.1, 6.1 and 8.2).*
- *Do not permit public access to rock stacks or islands for rock climbing or other activities within Twelve Apostles Marine National Park.*
- *Collect additional hydrographical data for the park and sanctuary.*
- *Ensure that future developments and facilities in Port Campbell National Park do not impact on the geological and*

geomorphological features of Twelve Apostles Marine National Park.

4.2 Catchment and water quality

The park and sanctuary are an important part of the Otways Coast Basin, which covers an area of 389 919 ha (Corangamite CMA 2003). Land use in the catchment is predominantly agriculture and forestry; parts of the catchment have some of the highest annual rainfalls in the State (Corangamite CMA 2003).

Water composition within the park and sanctuary is complex and extremely dynamic, and is influenced by many natural and unnatural factors. Continuous mixing of water on this coastline generally minimises cumulative pollution impacts, although events at sea such as an oil spill could have catastrophic impacts. Processes on land, such as erosion, could have severe local impacts.

Estuaries and creeks

Estuaries and other watercourses carry water into the park and sanctuary from higher in the catchment, but this fresh water is not known to have a significant influence on natural values. Estuaries are an important link between marine and terrestrial ecosystems and provide important habitat for many species. Water from estuaries, rivers and streams may be a source of litter, sediment, nutrients or other pollutants. Estuaries in the vicinity of the park and sanctuary include:

- Rutledge Creek – discharges 600 metres west of Twelve Apostles Marine National Park
- Sherbrook River – discharges adjacent to the western boundary of Twelve Apostles Marine National Park
- Gellibrand River – discharges into Twelve Apostles Marine National Park
- Campbells Creek – discharges 1 km from The Arches Marine Sanctuary.

These estuaries discharge significant amounts of fresh water into the park and sanctuary at times of high flow, and this water is likely to travel along the coast towards the east. There is no information available on the relationship between freshwater flow and the ecology of the park and sanctuary.

The largest of these estuaries is that of the Gellibrand River, which enters Twelve Apostles Marine National Park at Point Ronald in Princetown. The river mouth is predominantly closed during times of low freshwater flow. The estuary catchment is valued for being in a largely natural state, together with the adjacent Princetown wetlands. A number of significant plants and bird species have been recorded in the area. The National Estuaries Audit classified the Gellibrand estuary as being modified (National Land and Water Resources Audit 2002).

The park and sanctuary are within the Corangamite Catchment. The *Corangamite Catchment Management Strategy* (Corangamite CMA 2003) sets out a strategic management framework for the protection of assets within the catchment, including marine values. The *Draft Corangamite River Health Strategy* (Corangamite CMA 2001) identifies values and condition of, and threats to, waterways, and sets out a framework for improving the health of waterways in the catchment.

A detailed study of the biological characteristics of these and other estuaries in Western Victoria has helped to explain the dynamic relationship between these estuaries and the local marine environment (Western Coastal Board 2002a).

The *South West Estuaries Coastal Action Plan* (Western Coastal Board 2002c) provides a regional management framework for estuaries between Cape Otway and the South Australian border. The plan recommends the development of an estuary management plan for the Gellibrand River.

Sudden estuary-derived impacts may occur following the artificial opening of river mouths. Protocols for artificial river mouth openings in south-western Victoria are being developed in partnership with relevant agencies.

Arrangements for the opening of Gellibrand River are set out in a licence issued to Parks Victoria by the Corangamite Catchment Management Authority. An information analysis of estuary opening management (Barton & Sherwood 2004) summarises existing information and knowledge gaps for management of the estuary. Implementation of

a decision support tool for river mouth opening that considers impacts on the park and sanctuary will also help to provide a sound basis for estuary management.

Marine pollution

Marine pollution, especially oil spills, is a significant threat to natural values, aesthetics and public safety. 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). Such responses often require 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. Under this plan, the park and sanctuary are within the Port of Portland Region (section 8.3).

Pollutants may also enter the marine environment via estuaries, intermittent creeks or stormwater systems. Potential impacts 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
- entanglement in or ingestion of litter, particularly thin plastics, by marine fauna.

Wastewater

Parks Victoria has an Environment Protection Authority Waste Discharge Licence to discharge treated wastewater to secondary standard at the Twelve Apostles Centre. The licence requires sampling and reporting of wastewater quality.

Parks Victoria is required to comply with the requirements of the State Environment Protection Policy — Waters of Victoria, and the waste discharge licence issued by the Environment Protection Authority.

Litter

Littering is illegal within and outside the park and sanctuary. In recent years the incidence of whale entanglement in fishing debris has increased. Potential sources of litter include:

- nearby tourist destinations and the Great Ocean Road (litter dropped, blown or carried to the ocean by stormwater systems)
- vessels within or near the park or sanctuary
- flotsam, jetsam, and fishing equipment from vessels elsewhere (section 4.3).

Aims

- Minimise the impact of threatening processes derived from the catchment, estuaries and other watercourses.
- Maintain water quality in the park and sanctuary.
- Prevent and minimise the impact of pollution on park and sanctuary values.

Management strategies

- *Ensure that the Twelve Apostles waste management facility operates in accordance with the EPA Waste Discharge Licence for the site.*
- *Encourage research that increases knowledge of the Gellibrand River's estuarine values, processes and potential impacts on the marine environment, to improve the understanding of impacts on the planning area (section 8.3).*
- *Liaise with the Corangamite Catchment Management Authority, Deakin University and the community to quantify and minimise the impact of pollution from the Gellibrand River Estuary on Twelve Apostles Marine National Park.*
- *Encourage prevention and management of pollution in the marine environment through cooperation with the South West Regional Waste Management Group.*
- *As appropriate, continue to manually remove litter from beaches and other intertidal areas in Twelve Apostles Marine National Park to protect public health and natural values. Where appropriate,*

encourage participation of schools and community groups.

- *Integrate existing litter prevention messages into Parks Victoria's educational programs.*
- *In accordance with the Portland Region Marine Pollution Contingency Plan (section 8.3), report oil spills in and near the planning area, and respond accordingly.*

4.3 Hydrodynamics

Twelve Apostles Marine National Park and The Arches Marine Sanctuary are within the Otway marine bioregion. The mean surface water temperature varies seasonally between 14 °C and 18 °C (ANZECC TFMPA 1998). The coastline faces south towards the wild storms and south-westerly swells of the Southern Ocean. The West Wind Drift causes an easterly current which is important for natural processes but also moves discharged fresh water or pollutants through the park and sanctuary towards the east.

Local hydrodynamics through underwater canyons and arches and around islands are poorly understood but thought to be complex. They may change seasonally or after rockfalls in the park or sanctuary. High tides, storms and larger swells may also cause alterations in the movement of sand.

There are no artificial structures within the park and sanctuary, but several gas pipelines are located on the seafloor about 3 km to the west of The Arches Marine Sanctuary.

Because human-induced changes to local hydrodynamic processes could affect the values of Marine National Parks and Marine Sanctuaries, any proposals for new infrastructure in the park or sanctuary are considered inappropriate. Natural hydrodynamic events such as storm surges and regular sand erosion or deposition are considered to be ongoing natural processes.

Aim

- Minimise impacts on park and sanctuary values from human-induced changes to local hydrodynamic processes.

Management strategy

- *Provide advice on environmental effects statements for offshore developments that could affect park or sanctuary hydrodynamic processes, where appropriate.*

4.4 Habitats and communities

The natural values of the planning area, including the diversity and abundance of waterbirds and aquatic species which provide seasonal food sources, are of significant interest to local Indigenous people and other Indigenous peoples in accordance with Indigenous tradition. Key species such as the Southern Right Whale are totem species for the Kirrae Whurrong people and possess great spiritual significance.

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

Current research and ongoing monitoring is targeted at collecting 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. Where appropriate, research and monitoring compares areas outside the planning area boundaries with those inside the planning area. 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 planning area to be made.

All species recorded within the park listed as threatened or protected by international agreements or other legislation (e.g. JAMBA, CAMBA) are either birds or large marine mammals, for example the Southern Right Whale. This reflects the current vertebrate focus of threatened species management.

Management of marine ecological communities within the planning area, rather than threatened species, is more likely to lead to a higher level of success in protecting and enhancing threatened species populations. Whole-of-habitat management may also result in the protection of species not yet identified due to their rarity, cryptic nature, or lack of

search effort. While the marine environment remains largely unexplored, new species are found every year, even in intertidal areas.

The waters of the park and sanctuary are an important part of a broader pelagic environment. Pelagic habitats play an important role in the lifecycles of many organisms, such as rock lobsters, which rely on ocean currents for larval distribution. Other typical pelagic species include plankton, jellyfish, Bottlenose Dolphins, Australian Fur Seals, and Southern Right Whales. Seabirds also feed in the waters of the park and sanctuary. A variety of fish species, such as Magpie Morwong, sweep, and Blue-throated Wrasse can be observed in the park and sanctuary along with stingrays and bottom-dwelling sharks (pers. comm. M. O'Toole).

Threatened species that utilise the planning area or adjacent beaches include the Hooded Plover, Blue Petrel, Wandering Albatross, Australasian Gannet, Crested Tern, Southern Right Whale and Australian Fur Seal (Plummer et al. 2003).

Twelve Apostles Marine National Park

The park contains five distinct marine habitat classes: pelagic waters, subtidal rocky reef, subtidal soft sediment, sandy beach and intertidal reef.

Subtidal rocky reefs in the park consist of calcarenite, mudstone and sandstone rock. Reefs extend up to three kilometres offshore and have a variety of forms, providing a range of habitats. Some reefs consist of rock platforms with shallow fissures, gutters or small rounded boulders. Others have steeply sloping ridges with narrow crevasses or wide sand-filled gutters (ECC 2000). Shallow reefs are covered with a diverse range of red, brown and green algae, and deeper reefs with kelp, red algae and encrusting coralline algae (Roob & Currie 1996). Subtidal reefs are habitat for a diverse range of invertebrates, including sponges, bryozoans, gorgonians, hydroids and a variety of molluscs. A number of species of sea stars are also present.

Further out to sea, the park is composed mainly of subtidal soft sediments or sand. Although surveys have not been conducted on these soft sediments, invertebrates such as bivalves, polychaetes and amphipods are

typical in the upper layers of sediment in this area. Crabs, sea stars and fish are generally associated with the sediment surface.

Narrow intertidal reefs are found along the coastline of the park. Intertidal areas occur at the base of rock stacks and cliffs, where there is typically a mid-tide level base ledge up to two metres wide. Intertidal areas may also occur where rock stacks have been eroded by wave action. Invertebrate studies in the Twelve Apostles area found a variety of molluscs, echinoderms, crustaceans and polychaetes (Handreck & O'Hara 1994). Most intertidal areas in the park are not accessible and are well protected from most visitor impacts, but they are susceptible to pollution and would be extremely difficult to clean up should an incident occur (section 4.2).

No data is available about species associated with the park's sandy beaches, although the Twelve Apostles Beach has one of Victoria's largest breeding colonies of Little Penguins. Little Penguins are also thought to nest in inaccessible caves along this coastline. Hooded Plovers breed on beaches adjacent to the park at Clifton Beach, within Port Campbell National Park. Strategies for the protection of Hooded Plovers are included in the *Port Campbell National Park and Bay of Islands Coastal Park Management Plan* (Parks Victoria 1998). Sandy beach habitats in the park are generally protected from visitor activity but are susceptible to pollution impacts (section 4.2).

In addition to marine habitats, the park also contains cliffs, rock stacks and an offshore island known as Mutton Bird Island. Vegetation on Mutton Bird Island has not been surveyed but is probably similar to cliff top grassland / scrubland communities surveyed in Port Campbell National Park (Grant 1987). The island supports a breeding colony of Short-tailed Shearwaters. Rock stacks support little or no vegetation but are used by roosting birds such as Silver Gulls.

The Arches Marine Sanctuary

Environments within the sanctuary consist mainly of subtidal reef and pelagic habitats. The reef consists of spectacular limestone formations such as canyons, tunnels, arches, caverns, ledges and vertical sink holes. These formations create a range of microhabitats. The

reefs are covered by a large variety of algae, including Giant Kelp, red and green algae species (Plummer et al. 2003). The complex reef structure supports a diverse and extensive array of sea stars and sessile fauna, including sponges, gorgonians, hydroids, and especially bryozoans. These reef communities could be damaged by careless diving, pollution or anchoring (sections 6.3 and 6.4).

Aims

- Protect natural habitats, ecological communities and indigenous flora and fauna in the park and sanctuary.
- Improve knowledge of the park and sanctuary, including habitats, indigenous species and threatening processes.

Management strategies

- Establish and implement an appropriate long-term habitat monitoring program, as part of relevant statewide marine habitat monitoring programs.
- Map habitats at scales suitable for management purposes, in accordance with statewide habitat mapping programs.
- Encourage research into key threatening processes and major knowledge gaps.
- Undertake regular risk assessments to assess major threats to the park and sanctuary, and review management programs as appropriate.
- Encourage research to identify Indigenous cultural lore relating to flora and fauna of the planning area (sections 5.1 and 8.2).
- Reflect Indigenous knowledge of flora and fauna in management practices as appropriate, and ensure that their significance to the Traditional Owners is respected in all management and visitor activities.
- Manage visitor activities to minimise impacts on flora, fauna and communities, particularly in relation to scuba diving (section 6.4) and compliance with no-fishing provisions (section 8.3).
- Respond to cetacean incidents in accordance with the Victorian Cetacean

Contingency Plan (NRE 1999c) (section 8.3).

4.5 Landscape and seascape

The spectacular landscape and visual values of the Twelve Apostles Marine National Park make an important contribution to local lifestyles and Victoria's tourism industry.

Visitors enjoy landscapes and seascapes from the Great Ocean Road, Great Ocean Walk, boats, aircraft, or beaches and lookouts in Port Campbell National Park and Great Otway National Park. The waters of the park, rock stacks and untouched beaches are key elements of these landscapes and seascapes.

People appreciate the park from different perspectives. Many see it with an emotional or spiritual perspective, and find the landscape and seascape inspirational. Many local residents and boat users, particularly those involved in the fishing industry, have a strong affinity with the coast and seascapes. Divers and snorkellers see the park and sanctuary as part of an underwater wonderland with a beautiful array of marine life.

The Twelve Apostles Marine National Park seascapes is a central theme in the story of creation and is particularly significant for local Indigenous communities. For Indigenous people, the landscape is closely linked to spirituality and is a central element of culture.

The ocean, surf, beaches, cliffs and rock stacks create a unique and internationally significant landscape. Key visual experiences include:

- spectacular cliffs and rock stacks
- majestic swells rolling and breaking against sheer cliffs
- long beaches flanked by cliffs
- an array of underwater colour and diversity
- subtle patterns and colours on windswept beaches, rocks and coastal vegetation.

The appeal of many of these experiences is the absence of human development. Unmodified landscapes give a sense of remoteness and are an important experience and retreat for many visitors.

The Corangamite Planning Scheme applies to areas adjacent to the Marine National Park and

specifies a Landscape Protection Overlay on private land adjoining Port Campbell National Park.

The *Great Ocean Road Region Landscape Assessment Study* (DSE 2004b) was prepared as a component of the *Great Ocean Road Region – Land Use and Transport Strategy* (DSE 2004a). The assessment of seascapes associated with the park and sanctuary was not within the scope of the study. However, it does identify the protection and management of key views, including the Twelve Apostles and Loch Ard Gorge, as an important issue. The study also recommends the adoption of new significant landscape overlays at Princetown and Moonlight Head adjacent to Twelve Apostles Marine National Park.

Landscape setting types have been established to broadly characterise different landscapes and seascapes (VCC 1998a). Twelve Apostles Marine National Park is categorised as Landscape Setting Type 5: Coastal cliffs, and Landscape Setting Type 6: Moonlight Head. Special considerations for these landscape settings include the following:

- avoid any development at the cliff edge
- the area is of outstanding scenic quality and requires special landscape protection to ensure that development does not impact on landscape values.

The Victorian Coastal Council's *Siting and Design Guidelines for the Victorian Coast* (VCC 1998b), which aim to protect coastal landscape values, apply to the park and sanctuary and adjacent land, including the landscapes and seascapes associated with the park and sanctuary. Coastal or marine infrastructure, including the visual impact of signs and litter, could adversely affect those values.

Aims

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

Management strategies

- Provide input into any landscape character assessments to ensure

recognition of landscape and seascape values within, and associated with, the park and sanctuary.

- *Encourage and support the identification of landscape elements of special importance to Traditional Owners and involve them in protection and appropriate interpretation.*
- *Ensure that signs and boundary markers within Port Campbell National Park and Great Otway National Park have minimal impact on landscape values, key views and special visual experiences.*

4.6 Marine pests

Over 100 exotic marine species are known to have become established in Victorian waters (Hewitt et al. 1999). Some have become marine pests. However, none have been recorded in the park or sanctuary.

Marine pests could be transported to the park or sanctuary on recreational vessels, commercial vessels operating locally or freight vessels passing in waters adjacent to the park and sanctuary. There are increasing numbers of vessels operating in the area associated with the oil and gas industry. Often these vessels are specialised and travel internationally.

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 (FFG). Victoria's management priorities in relation to marine pests are set out in the relevant FFG Action Statement (NRE 1999a).

Prevention of marine pest invasions is the most effective management option. Prevention involves reducing the risk that a pest will be introduced to the park and sanctuary. In a very limited number of cases, with specific criteria, control measures may be attempted for established pest populations generally as part of 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 exacerbation of 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 1999b) 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.

Vessel cleaning and maintenance guidelines to help prevent the spread of marine pests (DSE 2004c) 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 *Cleaner Marinas: EPA Guidelines for Protecting Victoria's Marinas* (EPA 1998).

Parks Victoria Rangers, Fisheries Victoria Fisheries Officers, recreational anglers, the fishing industry, the gas industry, community-based organisations, and visitors play an important role in the monitoring and early detection of marine introduced pests in and around the planning area.

Aims

- Minimise the risk of introduction by human activity, and subsequent establishment, of marine pests in the park and sanctuary.
- Establish arrangements for the detection of new incursions within the park and sanctuary in support of Victorian marine pest management arrangements.
- Implement national or Victoria-wide control arrangements as they relate to the park and sanctuary.

Management strategies

- *Support DSE in educating Parks Victoria staff, Fisheries Victoria officers and the community to identify marine pests.*
- *Ensure that any new marine infrastructure within the park and sanctuary is treated to remove any marine pests.*
- *Encourage recreational and commercial fishers, community groups, researchers, licensed tour operators and contractors to integrate the identification of marine pests into their activities and to report any sightings.*
- *Avoid translocation or new introductions by promoting boat-cleaning protocols for all recreational boats and contractors (section 6.3) in accordance with the DSE brochure ‘Aquatic Pests: Treat ’em mean – keep your boat clean’.*
- *Ensure that management vessels operating in the park and sanctuary are maintained according to Victorian Government boat-cleaning protocols (DSE 2004c).*
- *Include boat-cleaning protocols in contracts, licences or permits of commercial fishing vessels, contracted vessels, research vessels and licensed tour operator vessels operating in the park and sanctuary.*
- *Manage all pest incursions in accordance with the Interim Victorian Protocol (NRE 199b) (section 8.3).*
- *Undertake authorised pest 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.*
- *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.*

5 STRATEGIES FOR CULTURAL VALUES CONSERVATION

5.1 Indigenous cultural heritage

Sea Country is an integral element of Indigenous cultural heritage in south-western Victoria. The loss or suppression of many aspects of cultural knowledge in the area is a legacy of European colonisation. Marine National Parks and Marine Sanctuaries provide a unique opportunity to maintain, reconstruct and advance these cultural connections.

Twelve Apostles Marine National Park is situated within two language group areas. To the west of the Gellibrand River (figure 2) is Kirrae Whurrong *Country*; to the east of the Gellibrand is Gadubanud *Country* (Clark 1998a).

Kirrae wurrung, meaning ‘Blood Lip’ (Dawson 1881) is thought to have consisted of at least 21 clans with two language sub-dialects, sharing many aspects of culture (Clark 1998a). The Ngaragurd gundidj clan is the closest recorded to the planning area (Clark 1998a).

Little is known about *gadubanud*, meaning ‘King Parrot Language’ (Dawson 1881). Early squatters thought the Otways were uninhabited; however, at least five clans are recorded, including Ngarowurd gundidj who were thought to be located to the north of Moonlight Head near the planning area (Clark 1998a). The Gadubanud were considered *mainmait* (wild) by the Kirrae Wurrong. Both language groups belong to the Maar Nation, a confederation of seven different language groups.

During the 1830s and 1840s organised groups of Kirrae Whurrong fought a guerrilla war against squatters. A documented massacre of some Gadubanud people took place at the Aire River to the east of the planning area (Clark 1995). Following the progressive displacement of clans from hunting grounds, survivors gravitated to local pastoral stations and many were eventually moved to Framlingham Aboriginal Station, Lake Condah and Lake Tyers in Gippsland.

In response to this history of violence, displacement and institutionalisation, many aspects of culture are now shared between

language and clan groups throughout south-western Victoria. Despite this tragic history, Indigenous people are committed to maintaining their cultural identity (Critchett 1980; Clark 1998b). Local Indigenous individuals and communities, including the Framlingham Aboriginal Trust, Kirrae Whurrong Native Title Group, Gunditjmara Aboriginal Co-operative, Southern Otways Indigenous Group and Worn Gundidj Aboriginal Co-operative, recognise the cultural significance of sea *Country*. The Maar (the people) in south-western Victoria have a long and close relationship with sea *Country* which they aspire to maintain and build in partnership with Parks Victoria.

The Maar creation story illustrates the spiritual connection of the Gunditjmara with the sea. This story explains how Punjil created ‘earth, trees, man and woman’. ‘Palian, brother of Punjil, made all seas, rivers, creeks and waters, also all the fish in the oceans, seas and rivers. He governs the waters, was always in the waters, walking, bathing, and going over the seas’. This story also demonstrates the connection with Deen Maar Island and the afterlife.

The Kirrae Whurrong used a range of *toolart* (food) from the *meerteyt* (sea) including *yarram* (crayfish), *tyaleek* (abalone), and *yeerrarr* (saltwater fish). Adjacent lakes, rivers and wetlands were also rich in perennial and seasonal foods such as *kooyang* (eel) and *moorrong* (yam daisy). Blowholes found in the planning area are thought to have some spiritual significance, and some marine species including *koontapool* (whales) hold totemic significance.

Historical records indicate that Kirrae Whurrong people originally constructed steps down cliffs adjacent to Twelve Apostles Marine National Park at sites including Gibson Steps to access marine resources. There are *woorn* (camp) sites in the adjacent Port Campbell National Park, although many sites are likely to have been destroyed as the coastline retreated. Cultural material could still be present beneath the waters of the park.

Extensive shell middens are located along the coast east of the Gellibrand River and adjacent

to Twelve Apostles Marine National Park (AAV 1998). A midden excavated at Moonlight Head to the east of the planning area indicated that shellfish including *Subninella* and *Brachidontes* were very important to local people (Zobel 1982).

Indigenous people are concerned about the state of *Country* and their role in its protection. The *Kooyang Sea Country Plan* highlights the aspirations of Framlingham Aboriginal Trust and Winda Mara Aboriginal Corporation members regarding *Country*, which includes the planning area, and identifies a framework for partnership with Government in sea *Country* management (Framlingham Aboriginal Trust and Winda Mara Aboriginal Corporation 2004).

Local Indigenous communities have been involved in the development of cultural interpretation and other projects at Port Campbell National Park and Great Otway National Park. They aspire to build and extend this partnership to sea *Country*, including involvement in an interpretive centre with a cultural focus in the region (section 6.1).

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 site, 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.

Within Kirrae Whurrong *Country* and the Kirrae Wurrung Native Title Group is the relevant group for Native Title and represent traditional owners. Issues relating to native title are dealt with according to the Native Title Act (section 2.5).

Other groups with an interest in the park and sanctuary include Gunditjmara Aboriginal Cooperative, the Southern Otways Indigenous Group and Worn Gundidj Aboriginal Co-operative.

Parks Victoria respects Indigenous people's cultural lore, interests and rights in the land, and aspirations for *Country* and seeks to reflect these in planning and management (Parks Victoria 2005).

Aims

- Protect Indigenous places and objects from interference or damage.
- Nurture Indigenous cultural lore and customs relating to the park and sanctuary.

Management strategies

- *Protect 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 Aboriginal and Torres Strait Islander Heritage Protection Act*
 - *Parks Victoria's Guidelines for Working with Aboriginal Communities and Protection of Cultural Sites (Parks Victoria 2002c).*
- *Assess annual park programs to minimise the potential impact of park management activities on Indigenous cultural heritage, in consultation with the Traditional Owners and the relevant Indigenous communities.*
- *Maintain confidentiality in respect of Indigenous cultural lore, places, objects and aspirations, in accordance with the views of the Traditional Owners (sections 6.1 and 8.2).*
- *Ensure that all management actions are in accordance with the Aboriginal and Torres Strait Islander Heritage Protection Act and the Native Title Act.*
- *Respect Indigenous culture and work in collaboration with the Traditional Owners, and in accordance with legislation and policies, to reflect the Traditional Owners' cultural lore, and interests and rights in all planning and management of the park and*

- sanctuary (sections 4.1, 4.4, 4.5, 6.1 and 8.2).
- Encourage research into the Indigenous cultural heritage relating to the planning area in collaboration with the Traditional Owners and relevant Indigenous communities and in liaison with AAV (section 8.2).
- Develop a memorandum of understanding for the park and sanctuary with the Traditional Owners and relevant Indigenous communities, in accordance with the Indigenous Partnership Strategy and Action Plan (Parks Victoria 2005), which addresses:
 - protocols for use of language and other culture by Parks Victoria
 - protocols and guidelines for communication and regular workshops
 - protocols and guidelines for cultural site management
 - opportunities for the involvement of Indigenous people in training and employment
 - creation of commercial opportunities for Indigenous people.
- Conduct a workshop with local Indigenous communities to discuss the role of the Kooyang Sea Country Plan and the Indigenous Partnership Strategy (Parks Victoria 2005) in the management of the park and sanctuary.
- Assess and identify Indigenous cultural heritage suitable for promotion and interpretation, in collaboration with the Traditional Owners and in liaison with AAV (sections 6.1 and 8.2).
- In conjunction with Indigenous communities, identify opportunities for appropriate cultural practices which may be undertaken in the park and sanctuary.

5.2 Maritime and other cultural heritage

Navigation by sailing ships through Bass Strait is an important aspect of immigration to Australia. Immigration by sailing ship into Melbourne commenced in 1839 and continued until 1880s and the development of steam

power. Sailing from the British Isles to Melbourne with limited navigational equipment and with strong south-westerly winds, sailors had to aim for, and traverse, a 55-mile (90 km) passage between Cape Otway and King Island. Such was the navigational challenge for ships that this notorious stretch of water became known as the ‘Eye of the Needle’. In more recent times, the adjacent Victorian coast has become known as the Shipwreck Coast.

The western entrance to Bass Strait contains the wrecks of 18 major sailing ships and the graves of hundreds who lost their lives travelling this infamous route. One of the best known of these is the wreck of the *Loch Ard* near Mutton Bird Island in Twelve Apostles Marine National Park. There are no other known wreck sites in the park or sanctuary.

In 1878 the *Loch Ard*, an iron sailing ship, departed London for Melbourne with 54 people on board. The ship struck Mutton Bird Island, resulting in the deaths of all but two on board. The wreck was rediscovered in 1969 in 30 m of water, partially blown up with explosives and looted indiscriminately (Loney 1992). Eventually Heritage Victoria retrieved many artefacts. Parts of the iron vessel and scattered artefacts are visible and make this a most interesting dive site.

The *Loch Ard* and many other wrecks form a valuable archaeological catalogue of ships and their cargoes and are also reminders of the personal tragedies and shattered dreams of many immigrants. The wrecks, lighthouses and associated sites now form part of a fascinating heritage theme which is incorporated into the Shipwreck Coast Historic Shipwrecks Trail.

The *Loch Ard* wreck site should be accessed only by experienced divers and diving access is possible only under ideal conditions. A shipwreck theme walk commencing at Loch Ard Gorge in Port Campbell National Park incorporates Loch Ard Gorge, the Shipwreck Walk and the Loch Ard Cemetery, interpreting the wreck and associated events. There are also relics from the wreck, and associated interpretation, at Port Campbell Visitor Information Centre, Glenample Homestead (figure 2) and Flagstaff Hill Maritime Museum in Warrnambool.

The wreck of the *Loch Ard* is listed as an indicative place on the register of the National Estate and is listed on the Victorian Heritage Register, and it is protected under the Historic Shipwrecks Act. It is an offence to remove relics or damage the wreck in any way.

Heritage Victoria has primary responsibility for the management of shipwrecks in the park and has prepared the *Victorian Heritage Strategy, Shipwrecks 2005* (Heritage Victoria 2000). Parks Victoria has established a memorandum of understanding with Heritage Victoria which identifies respective roles and responsibilities in relation to protection, compliance and interpretation of shipwrecks and shipwreck artefacts.

Parks Victoria manages a large number of places that reflect maritime heritage and will give priority to protecting and interpreting places reflecting the historic theme ‘Shipping Along the Coast’.

Aims

- Conserve places of cultural significance.
- Encourage learning and understanding about the historic heritage of the park and sanctuary.

Management strategies

- Manage the wreck of the *Loch Ard* in accordance with the Burra Charter of Australia ICOMOS, the provisions of the Heritage Act and the Historic Shipwrecks Act, and Parks Victoria’s Heritage Management Strategy (Parks Victoria 2003b).
- Liaise with Heritage Victoria to document historic heritage values and assess the risks to those values (section 8.3). Enter this information into Parks Victoria’s Asset Management System.
- Document the history of past use and activity in the park and adjoining coastal area, and protect any historic places and objects that may be discovered from damaging or inappropriate activities.
- Prepare a heritage action statement in close consultation with Heritage Victoria and community groups to guide the management of the wreck of the *Loch Ard*.
- Cooperate with and support Heritage Victoria’s maritime heritage research programs.
- Promote the ongoing interpretation of maritime heritage places which represent the key historic theme ‘Shipping Along the Coast’.

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 special natural and cultural values of the park and sanctuary, build understanding of management activities, and help visitors to experience the area in a safe and appropriate manner. Parks Victoria delivers information, interpretation and education to visitors by various means, including its website, ranger patrols, interpretation programs, Park Notes, signage, tourism brochures and other publications, displays and licensed tour operators. These services are often developed and provided in collaboration with other agencies.

Having a representative system of Marine National Parks and Marine Sanctuaries in Victoria presents a unique opportunity to educate visitors and the broader community about the features and benefits of a statewide system of protected areas. At the same time, a range of information, interpretation and education products that are specific to the key features of the planning area will be provided.

Parks Victoria has developed minimal impact guidelines (available on its website, listed below) in partnership with providers of education to help manage impacts on intertidal marine environments.

Orientation and Information

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

- at www.parkweb.vic.gov.au
- in Park Notes
- on signage throughout the adjacent Port Campbell and Great Otway National Parks, and at Port Campbell and other key access points (figure 2)
- via shore-based boundary markers for maritime navigation (section 7.2)

- via shore-based boundary markers for land-based navigation (figure 2).

Because of their large size and complex shape, and the high wave energy of this coastline, it is not practical to comprehensively mark the in-water boundaries of the park and sanctuary. There are no boundary markers at sea in Twelve Apostles Marine National Park or The Arches Marine Sanctuary; other methods are used to orientate mariners (section 7.2).

Interpretation

Interpretation is a means of communicating ideas, feelings and values to help enrich people's understanding of natural and cultural values, foster positive attitudes towards their conservation and increase awareness of the relationships 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. The difficulties accessing the park and sanctuary restrict opportunities for many visitors to participate in on-site interpretive activities. However, areas adjacent to Twelve Apostles Marine National Park, including the Twelve Apostles Centre, offer a stimulating marine setting for innovative off-site activities.

Marine National Parks and Marine Sanctuaries are a key focus for annual summer interpretive programs implemented in conjunction with the Coast Action / Coastcare program. A range of activities is offered in January each year, including boat tours, guided snorkels, beach activities, rock pool rambles and campfire nights. Formal interpretation is also provided by seasonal rangers at key visitor sites and informally by rangers on patrol. Important topics to be integrated into information, interpretation and education programs for the park and sanctuary include:

- the location of, and activities permitted in, the park and sanctuary
- their diverse natural values (section 4.4) and significant cultural values (sections 5.1 and 5.2)

- human impacts on the park and sanctuary and their management.

Promotion of the park and sanctuary and their special values is the first step in gaining community involvement in management. Research conducted by Parks Victoria (Market Solutions 2005) has highlighted a general lack of awareness about the creation and location of Marine National Parks and Marine Sanctuaries. Parks Victoria implements a range of promotional strategies throughout the State, complemented by local initiatives that increase awareness (section 8.1).

An interpretive centre which showcases the natural and heritage values of the Great Ocean Road Region is identified as a priority project in the Great Ocean Road Regional Tourism Development Plan (Tourism Victoria 2004b). There would be opportunities to integrate marine interpretive themes into this facility should it be developed near Twelve Apostles Marine National Park.

Education

Parks Victoria has developed a program with local schools, including Timboon P12 School, which incorporates park and sanctuary educational themes into a range of subjects. Many school groups visit the area each year and there are several school camps nearby in which Parks Victoria provides marine education through talks and activities. The development of specialised marine educational resources has the potential to attract additional school groups to learn about the park and sanctuary.

Aims

- Promote and encourage visitors to discover, enjoy and appreciate the natural and cultural values of the park and sanctuary in a safe and appropriate manner through information, interpretation and education.
- Encourage public support for parks and park management practices.

Management strategies

- *Provide and support high-quality opportunities for the range of user groups to discover, experience and understand the*

natural and cultural values of the park and sanctuary.

- *Target visitors across a range of user groups through a range of tourism, information, interpretation and education media.*
- *In conjunction with Shipwreck Coast Tourism and other tourism partners, integrate marine interpretive themes into any future tourist information displays developed in the area.*
- *Maintain visitor signage and interpretive and educational material appropriate for the park and sanctuary in accordance with table 2.*
- *Investigate opportunities for providing interpretive information about marine life beneath the Twelve Apostles into new visitor signage at the Twelve Apostles Centre, other appropriate locations in the precinct and park signage in general.*
- *Deliver messages to visitors about the following values and themes:*
 - *marine habitats associated with the Twelve Apostles, the park and sanctuary*
 - *how the sea has shaped the park and sanctuary*
 - *relationships between Twelve Apostles Marine National Park and sea Country*
 - *the importance of the maritime heritage of the coast to the heritage and development of Victoria*
 - *appropriate behaviours, including minimal impact techniques and adherence to codes of conduct appropriate to visitor activities, to protect park and sanctuary values and maximise visitor safety (section 6.9).*
- *Promote greater public understanding and appreciation of, and respect for, Indigenous culture by incorporating information about Indigenous cultural lore, places and objects in information, interpretation and education programs, in collaboration and accordance with the wishes of the Traditional Owners (sections 5.1 and 8.2).*

TABLE 2 CURRENT AND PLANNED SIGNAGE AT VISITOR ACCESS SITES

ACCESS SITE	MANAGER	ACTION
Port Campbell Jetty	Corangamite Shire	Upgrade signage to assist boat users to identify The Arches Marine Sanctuary boundaries.
Broken Head	Parks Victoria	Maintain existing boundary markers.
Twelve Apostles Centre	Parks Victoria	Investigate opportunities for an interpretive display about Twelve Apostles Marine National Park and The Arches Marine Sanctuary.
Gibson Steps	Parks Victoria	Upgrade signage to clarify areas outside Twelve Apostles Marine National Park where fishing is permitted.
		Install a land-based boundary marker for beach fishers to clarify areas where fishing is permitted outside Twelve Apostles Marine National Park.
Clifton Beach	Parks Victoria	Install a sign at the Clifton Beach Car Park which clarifies where fishing is permitted outside Twelve Apostles Marine National Park.
		Install a land-based boundary marker for beach fishers to clarify areas outside Twelve Apostles Marine National Park, where fishing is permitted.
Gellibrand River Picnic Area	Parks Victoria	Upgrade signage to clarify areas where fishing is permitted outside Twelve Apostles Marine National Park.
Rivernook	Parks Victoria	Install a land-based boundary marker for beach fishers to clarify areas outside of Twelve Apostles Marine National Park where fishing is permitted.
Pebble Point	Parks Victoria	Maintain boundary markers.

Note: Provision of safety signage indicated in section 6.9.

- *Provide appropriate opportunities and encourage and support the Traditional Owners and relevant Indigenous communities to participate in the interpretation of Indigenous cultural heritage relating to the planning area, with the agreement of the Traditional Owners (sections 5.1 and 8.2).*
- *Develop stimulating and innovative approaches to the presentation of the values of the park and sanctuary at a range of associated sites.*
- *Regularly evaluate information and interpretive programs related to the park and sanctuary.*
- *Promote the need for schools to notify Parks Victoria (on 13 1963) of any intended school group visits.*
- *Continue to allow sustainable educational use by school and community groups. Ensure that school and formal interpretive groups adopt minimal impact guidelines.*
- *In conjunction with Coast Action / Coastcare, develop and implement an annual interpretive program for the park and sanctuary. Continue to participate in Coast Action / Coastcare interpretive program and other educational initiatives such as 'Sea Week'.*
- *In partnership with schools, continue to develop and integrate marine conservation themes into a range of subjects.*
- *In conjunction with Shipwreck Coast Tourism and interested businesses, develop specialised marine educational packages focused on the park and sanctuary for visiting groups.*
- *Regularly update interested groups and individuals about research and management programs.*
- *Assist in feasibility investigations for a major interpretation and education facility in the area. In particular investigate opportunities for the facility to raise*

awareness of the park and sanctuary's natural and cultural values.

6.2 Access

Victoria's Shipwreck Coast, and the coastline adjoining Twelve Apostles Marine National Park in particular, has a history of maritime tragedy. Safety remains the primary consideration for any visitors to Twelve Apostles Marine National Park and The Arches Marine Sanctuary (section 6.9). Cold and windy weather, wild seas and vertical cliffs restrict opportunities to access the park and sanctuary.

Port Campbell Bay is a minor port for small boats, which are launched by crane off the jetty. This facility, managed by Corangamite Shire, is the only access point for boats in the vicinity of the park and sanctuary, but there are boat ramps at Boat Bay in Bay of Islands Coastal Park and Home Bay at Peterborough. Parks Victoria is responsible for signage specific to the park and sanctuary at the Port Campbell jetty.

Access to The Arches Marine Sanctuary is by boat only. This is a short trip from Port Campbell and is accessible to divers in calm conditions. Ideally, assistance from local divers is required to access the best dive sites. Under favourable conditions, boat access to Twelve Apostles Marine National Park gives visitors access to stunning scenery and some excellent dive sites.

The main points for pedestrian access to Twelve Apostles Marine National Park are at Loch Ard Gorge and Gibson Steps. Those travelling by four wheel drive can access the park at Rivernook via the Old Coach Road. Pedestrians can access beaches adjacent to the park at Gibson Steps, Clifton Beach, Princetown and Rivernook. Boat-based snorkelling groups occasionally utilise a small beach on Mutton Bird Island under calm conditions.

The Twelve Apostles Beach is inappropriate for visitor access because of potential disturbance to the Little Penguin colony (section 4.4). Prevention of public access to this beach is consistent with arrangements in place prior to the creation of the park and with management objectives for the Little Penguin Special Protection Area within the adjacent

Port Campbell National Park (Parks Victoria 1998). The landing and launching of boats on the Twelve Apostles Beach is not permitted except in an emergency (section 6.3).

There are many sites for viewing Twelve Apostles Marine National Park from facilities in Port Campbell National Park. These include the complex of tracks, boardwalks and lookouts at the Twelve Apostles and Loch Ard Gorge (figure 2). The Arches Marine Sanctuary can be viewed from Two Mile Bay and Sturgess Point (figure 2).

The physical constraints of this coastline mean that viewing points within Port Campbell and Great Otway National Parks will continue to be the main way that most visitors access the park and sanctuary. Parks Victoria has undertaken detailed studies of visitor trends and development needs for Port Campbell National Park which will ensure the appropriate provision of visitor facilities.

Aim

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

Management strategies

- *Maintain signage at Port Campbell jetty to ensure that boat users can obtain accurate information about access to the park and sanctuary in accordance with table 2.*
- *As part of Port Campbell National Park patrols, monitor visitor activity to ensure access in accordance with table 1.*
- *As part of patrols of Port Campbell and Great Otway National Parks, monitor the condition of all park access tracks and respond to any environmental or safety issues.*
- *Permit public access to all beaches within Twelve Apostles Marine National Park other than Twelve Apostles Beach.*

6.3 Recreational boating and surface water sports

The waters within and around the park and sanctuary are suitable for a range of recreational boating activities, but there are hazards associated with recreational boating and sea conditions can change quickly

(sections 6.9 and 8.3). Recreational boating in Twelve Apostles Marine National Park is focused mainly on sightseeing. Recreational vessels may also give visitors an opportunity to see a range of wildlife, including the whales that often pass through the park and sanctuary. Boats specifically visiting The Arches Marine Sanctuary are normally transporting dive groups. Personal watercraft (PWCs) are sometimes used in Twelve Apostles Marine National Park.

Recreational and commercial vessels traverse the park and sanctuary to reach fishing areas in adjacent waters. Vessels are permitted to pass through the park and sanctuary and normal boating regulations and safety guidelines apply in these waters (section 7.1). As in all Victorian coastal waters, a speed limit of 5 knots applies in specified circumstances in the park and sanctuary (MSV 2003).

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

There are several surf breaks within Twelve Apostles Marine National Park, but these are difficult to access and are suitable only for experienced surfers with a good knowledge of local conditions. The best-known surf break in the vicinity of park is at Gibson Steps.

People from Port Campbell and nearby towns enjoy boating in Twelve Apostles Marine National Park, The Arches Marine Sanctuary and surrounding waters, particularly during warmer months and weekends. Many boat users have extensive local maritime experience and a long association with and good knowledge of the waters within the park and sanctuary. Many people come to fish in areas outside the park and sanctuary, and share a strong interest in the marine environment and its protection.

Parks Victoria Rangers and Department of Primary Industries Fisheries Officers, work closely with recreational boat users, and regularly conduct land and sea patrols. These

patrols create opportunities for boat users to learn about the park and sanctuary.

Generally, recreational boating has a minimal impact on park and sanctuary values, but infrequent incidents such as oil spills, discharges of sewage or other pollutants, introduction of marine pests and disturbance to wildlife could be significant.

Anchoring in Twelve Apostles Marine National Park and The Arches Marine Sanctuary has the potential to impact on natural values. Currently the level of use does not warrant intervention, but further assessment of impacts may be required in the future in accordance with Parks Victoria's operational policies.

Aim

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

Management strategies

- *Permit a range of boating activities in the park and sanctuary in accordance with the 5 knot speed restriction within 200 m of the shore, 100 m of a vessel or buoy with a 'dive below' signal, or 50 m of a swimmer, and with table 1.*
- *Continue to permit anchoring in the park and sanctuary. In conjunction with divers, monitor use and take appropriate action to reduce any impacts on natural values in accordance with Parks Victoria's operational policies.*
- *Liaise with recreational boat users during patrols within or near the park and sanctuary to ensure compliance with relevant legislation and guidelines.*
- *Encourage boat users and personal water craft operators to abide by regulations and safe operating guidelines relevant to their activity.*
- *Liaise with fishers concerning awareness of the park and sanctuary and participation in its management.*
- *Liaise with Marine Safety Victoria to assist with recreational boating safety (section 8.3).*

- Encourage boat users and personal water craft operators to abide by regulations relevant to the observation of marine wildlife in the park and sanctuary.
- Permit the landing or launching of boats on all beaches within Twelve Apostles Marine National Park other than the Twelve Apostles Beach.

6.4 Diving and snorkelling

Snorkelling and scuba diving enable visitors to experience underwater habitats and view species and habitats that are difficult to observe from above the surface.

Northerly or light onshore winds generally ensure the calm conditions required for safe access at dive sites. When conditions are favourable the park and sanctuary have some outstanding dive sites. Both are generally unsuitable for shore dives.

The Arches Marine Sanctuary is well known locally for its excellent scuba diving sites. Divers can explore magnificent arches and canyons covered with a colourful array of kelp and encrusting invertebrates and surrounded by many fish.

Twelve Apostles Marine National Park also has some excellent dive sites. The best-known of these is the wreck of the *Loch Ard* near Mutton Bird Island. Snorkelling is also possible around the sheltered side of some of the islands and rock stacks which are accessible by boat under favourable conditions.

Snorkelling and scuba diving are part of the summer activity programs coordinated by Coast Action / Coastcare. Sea conditions permitting, these are great ways to introduce people to the underwater values of the park and sanctuary.

One commercial dive operator located in Port Campbell conducts diving activities in the park and sanctuary as required. The level of diving activities in the park and sanctuary is quite low and is unlikely to increase significantly, because of the unreliable weather conditions.

Educating divers and snorkellers about minimal impact practices, particularly those new to these activities, will help minimise impacts and assist with park and 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* (ORC 2004).

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

Aim

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

Management strategies

- Encourage the use of clean diving equipment to prevent the translocation of marine pests (section 4.6).
- 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 (section 6.1).
- Integrate the ‘diver below’ symbol into information, interpretation and educational material where appropriate (section 6.1).

6.5 Swimming and shore-based activities

There are very few accessible locations for swimming or shore-based activities in Twelve Apostles Marine National Park. At Loch Ard Gorge and Gibson Steps many visitors enjoy walking on the beach and seeing the spectacular coastal scenery. Visitors can also access beaches at more isolated locations including Rivernook and Bowkers Beach.

There are some small intertidal reefs in remote areas of Twelve Apostles Marine National Park and at the western end of Gibson Steps beach. Visitor impacts are thought to be minimal due to low visitation and infrequent exposure of the reefs at low tide.

No beaches in Twelve Apostles Marine National Park are patrolled by surf life savers. These beaches may be dangerous and swimming at unpatrolled beaches is discouraged (section 6.9). The closest patrolled beach is at Port Campbell.

Surfing is popular in the area, especially in the spectacular setting of Gibsons Steps. Although the beach is outside Twelve Apostles Marine National Park, surf breaks are often within the park. Surfing has a little or no impact on the park and many surfers are committed to the protection of the park (section 8.2).

Camping and lighting fires on beaches within Marine National Parks and Marine Sanctuaries are not permitted.

Aim

- Provide opportunities for appropriate shore-based recreation activities that are consistent with the protection of park and sanctuary values.

Management strategies

- *Permit recreational activities in accordance with table 1.*
- *Undertake regular patrols of Loch Ard Gorge, Gibson Steps and Princetown to encourage appropriate visitor use of intertidal areas.*
- *Encourage visitors to adopt safe and minimal impact practices, as identified in the brochure 'Living Between the Tides'.*

6.6 Dogs and horses

All beaches within Twelve Apostles Marine National Park were formerly within Port Campbell National Park or the former Otway National Park.

Dogs are not permitted in these national parks and this restriction will be continued in the park and sanctuary to ensure the protection of park values and visitor enjoyment.

The presence and scent of dogs may disturb some bird species such as the Hooded Plover and prevent them roosting and feeding at low tide. Dogs can also disturb seals that occasionally come ashore in the park. Some visitors to the area may be annoyed or intimidated by unrestrained dogs, particularly family groups with small children.

Prior to the creation of Twelve Apostles Marine National Park, horse riding under permit was permitted on specified beaches within the former Otway National Park. Opportunities for horse riding under permit will be maintained in Twelve Apostles Marine National Park between Rivernook and Pebble Point.

Aim

- Minimise the impact of dogs and horses on the park and sanctuary.

Management strategies

- *Do not permit dogs in the park or sanctuary, unless confined to a vessel.*
- *Allow horse riding under permit on beaches between Rivernook and Pebble Point.*

6.7 Aircraft

There are two helicopter and several fixed wing scenic flight businesses currently operating regularly over Twelve Apostles Marine National Park and The Arches Marine Sanctuary. These businesses also conduct flights over adjacent parks, including Port Campbell National Park, Great Otway National Park and Bay of Islands Coastal Park. Scenic flights are a popular way to enjoy the magnificent scenery in the park and sanctuary.

Noise from aircraft, and especially helicopters, is known to cause disturbance to whales and other cetaceans. Under the Marine Act and the Wildlife (Whale) Regulations, aircraft must not enter a restricted area of a circle of 300 metres radius around a whale and an area up to 300 metres above this circle.

Noise associated with increasing numbers of scenic flights is a major concern to local residents and visitors to the area. Parks Victoria acknowledges these concerns but has no regulatory control over the airspace above Marine National Parks and Marine

Sanctuaries. The Civil Aviation Safety Authority (CASA) is the primary regulatory body over Australian airspace and provides safety regulations for civil air operations. Parks Victoria is committed to working with the Corangamite Shire, Civil Aviation Safety Authority and local scenic flight businesses to develop and refine ‘Fly Neighbourly’ agreements, which are a voluntary code of practice.

Parks Victoria also supports further cooperative planning and investigation into noise management with Corangamite Shire and scenic flight businesses to find a long-term balance in the management of this issue.

There are currently no ‘Fly Neighbourly’ agreements for the park or sanctuary. An existing agreement for Port Campbell National Park sets a flight height restriction of 800 ft above sea level. Aircraft must not fly until one hour after sunrise and must cease operations one hour before sunset to minimise disturbance to penguin colonies. Aircraft also have designated flight paths.

Aim

- Minimise the impact of aircraft on wildlife and visitor experiences in the park and sanctuary.

Management strategies

- *Negotiate with scenic flight operators to incorporate Twelve Apostles Marine National Park and The Arches Marine Sanctuary into existing ‘Fly Neighbourly’ agreements and ensure that restrictions are consistent with those for Port Campbell National Park.*
- *Negotiate ‘Fly Neighbourly’ agreements with current and future scenic flight companies operating near Twelve Apostles Marine National Park and The Arches Marine Sanctuary.*
- *In conjunction with DSE, communicate and enforce Wildlife Act regulations regarding cetaceans to all scenic flight operators.*
- *Monitor the level of disturbance to cetaceans from aircraft, and liaise with DSE to develop a response if required.*

6.8 Tourism services

Licensed tour operators facilitate access for visitors who may not otherwise have the opportunity to visit the park or sanctuary. They also help to promote park and sanctuary values and appropriate use, and encourage appropriate tourism and recreation.

There is currently one business licensed in Twelve Apostles Marine National Park and The Arches Marine Sanctuary. This operator conducts scenic tours and scuba diving trips and operates out of Port Campbell. Current levels of usage by this business are relatively low but likely to increase. The park and sanctuary create opportunities for new tourism services focusing on potentially unique marine experiences (section 8.3).

The outstanding scenery of the Great Ocean Road and Twelve Apostles attracts large numbers of guided tours as well as helicopter and light aircraft charter flights. Although these groups do not usually enter the park or sanctuary, there is an opportunity for these businesses to enhance visitor experiences by promoting the park and sanctuary.

Licences for tour operators which are issued by Parks Victoria include conditions that detail access, permitted activities and site-specific conditions. Licensed tour operators must also adhere to industry-developed adventure activity standards.

Aim

- Encourage the provision by external providers of tourism services that accord with the provisions of the National Parks Act.

Management strategies

- *Encourage and assist licensed tour operators to provide a range of appropriate activities compatible with the protection of park and sanctuary values.*
- *Encourage and assist licensed tour operators to deliver information about the values of the park and sanctuary to their customers.*
- *Encourage licensed tour operators to assist in management by identifying potential visitor impacts and monitoring tourism activities.*

- Encourage and support Indigenous communities to provide licensed tour operator services.

6.9 Public safety

A survey of Victorian beaches in 1996 rated their safety as being in one of four hazard categories: safest, moderately safe, low safety and least safe. Beaches within the Twelve Apostles Marine National Park are given a ‘low’ safety rating and are described as being inaccessible, hazardous and not suitable for bathing (Short 1996). Some activities undertaken in the natural environment can pose inherent risks to visitors, particularly if they are not familiar with local conditions. Visitors are exposed to a number of natural hazards when they visit the park and sanctuary by boat. Cliffs and sea conditions make the rescue of people from the sea dangerous. Visitors are especially at risk if unaware of local conditions, or not proficient in the activity they are involved in.

The responsibilities for responding to emergency incidents in Victoria (including in Victorian waters) are outlined in the *Emergency Management Act 1986* (Vic). Parks Victoria is not the lead agency for most emergency response situations. Instead it supports other agencies, including the Department of Sustainability and Environment, Marine Safety Victoria, the Country Fire Authority, the State Emergency Service and Victoria Police, in emergency incidents, where required.

In an emergency, vessels carrying rock lobster or abalone may need to shelter in the park when there is no alternative (section 7.1).

DSE is the lead agency for cetacean strandings and oil spill response, but Parks Victoria will be involved where these incidents are in the vicinity of Marine National Parks and Marine Sanctuaries. Parks Victoria relies on the Victoria Police, the State Emergency Service, the Port Campbell Surf Life Saving Club and others for coordinated responses to emergencies, with Parks Victoria as a support agency where required. The Port Campbell Surf Life Saving Club provides a volunteer Coast Guard service and patrols the swimming beach at Port Campbell Bay on weekends and public holidays from December to Easter.

Visitors need to be aware of safety risks to ensure that they enjoy a safe visit. All powered recreational vessel operators and commercial masters operating in Victorian waters are required to have a current licence. Vessel operators need to be aware of swimmers, snorkellers and divers in the water. The Victorian Recreational Boating Safety Handbook (MSV 2003) contains most of the necessary information for recreational boating.

Marine Safety Victoria also conducts safety and awareness programs. Public information and education programs are one of the most effective ways to promote safety. Safety messages are also presented to visitors through signs, Park Notes and ranger patrols.

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

Aims

- Promote visitor safety and awareness of safety issues and risks in the sanctuary associated with access and use.
- Promote and observe safe practices, and cooperate with emergency response agencies.

Management strategies

- Increase visitors’ awareness of safety issues and potential hazards in the park and sanctuary through the use of Park Notes, Parks Victoria’s website and information signs (section 6.1).
- Provide and maintain safety signage at visitor access points including Port Campbell jetty, Loch Ard Gorge, Gibson Steps, Bowkers Beach and Rivernook.
- Encourage visitors to adopt safe operating guidelines appropriate to their activity.
- Develop an Emergency Management Plan for the park and sanctuary and review this plan annually. Ensure that licensed tour operators, relevant agencies and local boat users are aware of the plan.

- *Liaise with Corangamite Shire to ensure that Municipal Emergency Response Plans make adequate provision for likely incidents in the park and sanctuary, and that they identify Parks Victoria's roles.*
- *Cooperate with emergency services on relevant safety issues, including search and rescue activities, and ensure that park staff are adequately trained in emergency procedures.*

7 STRATEGIES FOR AUTHORISED AND ADJACENT USES

7.1 Authorised uses

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

There are no Inshore Traffic Zones, navigational beacons, safe anchorages, public utilities or occupancies in the park or sanctuary.

Vessels of all types are permitted to travel through the park and sanctuary. A major shipping route passes the park and sanctuary to the south. Some freight vessels pass through Twelve Apostles Marine National Park. Rock Lobster fishing vessels from Port Campbell also pass through the park and sanctuary while travelling between fishing grounds to the east.

Vessels carrying rock lobster or abalone are not permitted in the park or sanctuary unless travelling by the shortest practicable route from a point outside the park to another point outside the park. In the event of an emergency such vessels may need to shelter in Twelve Apostles Marine National Park when there is no other alternative.

Petroleum extraction, exploratory drilling, mineral exploration and mining, and invasive searching for, or extraction of, stone and other materials, are prohibited in the park under the National Parks Act. 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 park, may be allowed with the consent of the Minister.

The petroleum exploration permit VIC/P38(v) covers an area including Twelve Apostles Marine National Park and The Arches Marine Sanctuary. In 2003, the Minister refused consent for a seismic survey to be carried out in the park. The government subsequently announced that it will not release any further areas in Victoria that contain Marine National Parks or Marine Sanctuaries for petroleum exploration. Transit through a park or sanctuary while conducting a seismic survey program in an adjacent area will be allowed, provided there is no discharge of airguns in the park.

Construction of pipelines or seafloor cables may be permitted in some circumstances, in accordance with the relevant legislation.

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

All research and monitoring in a Marine National Park or Marine Sanctuary by external organisations or individuals requires a research permit under the National Parks Act. Permits are issued by the Department of Sustainability and Environment (DSE), application forms can be obtained from the DSE website or by telephoning 13 6186.

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 park/sanctuary values of authorised uses.
- Manage authorised uses consistent with legislation.

Management strategies

- *Manage authorised uses with appropriate conditions in accordance with the requirements of legislation and Parks Victoria's operational policies.*
- *Liaise with authorised users to ensure that conditions have been met and uses have minimal impact on park and sanctuary values.*
- *Promote the requirement for vessel operators carrying priority species on*

board their vessel, who enter or shelter within the park in an emergency to notify Fisheries Victoria, where possible.

- *Permit Defence Force adventure training and field navigation exercises in the park/sanctuary in accordance with Parks Victoria's operational guidelines and relevant permit conditions.*

7.2 Boundaries and adjacent uses

Shore-based boundary markers define where the boundaries of Twelve Apostles Marine National Park intersect the coastline at Broken Head and Pebble Point. Two shore-based triangular yellow signs, aligned on the bearing of the boundary, are used to mark these boundaries. These markers allow boat operators and land-based visitors to orientate their location in relation to the park boundaries.

The installation of in-water boundary markers around the park and sanctuary is impractical. Parks Victoria relies on alternative methods to communicate these offshore boundaries to mariners. To date, commercial and recreational fishers have demonstrated a willingness to navigate carefully prior to fishing near the park and sanctuary.

The landward boundary of Twelve Apostles Marine National Park is the average high water mark between Broken Head and Pebble Point except on two beaches which are not included in the park (figure 2):

- Gibson Steps (from approximately 200 m west of staircase) to Clifton Beach
- Point Ronald to Rivernook.

At these locations the park boundary is 100 m out to sea from the high water mark. These areas have been excluded from the park to allow for beach fishing within Port Campbell and Great Otway National Parks. Land-based signs and geographical features allow fishers to ensure that they are fishing outside the marine national park.

Twelve Apostles Marine National Park and The Arches Marine Sanctuary adjoin State waters, which are the responsibility of the Department of Sustainability and Environment.

Twelve Apostles Marine National Park also adjoins:

- Port Campbell National Park
- Great Otway National Park
- Commonwealth waters to the south-west of the park, which are the responsibility of the Commonwealth Government.

State waters and the underlying sea bed adjoining the park and sanctuary are currently unreserved Crown land. The Government accepted the ECC's recommendation that a Coastal Waters Reserve be established under the *Crown Land (Reserves) Act 1975* (Vic.) for the 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).

Abutting the seaward boundary of Twelve Apostles Marine National Park is the Apollo 'Broad Area of Interest' within which a federal marine protected area has been proposed. This site has been identified as part of the National Oceans Office's South East Regional Marine Planning process. Coordinated planning and management of the Marine National Park and any adjacent federal Marine Protected Area is desirable.

Cooperation with all adjacent managers and coordination with the management of Port Campbell National Park and Great Otway National Park is essential to ensure a consistent and coordinated approach to management.

Many potential threats to the park and sanctuary, such as pollution, come from outside the planning area. Local residents are concerned about these broader conservation issues and their potential impact on the sustainability of the park and sanctuary and on local lifestyles and industries. Although these issues are largely outside the scope of this plan, cooperation with the local community and other agencies is essential to ensure an integrated approach to marine conservation in the Otway bioregion.

The creation of Twelve Apostles Marine National Park has resulted in a reduction in commercial and recreational rock lobster fishing grounds. Waters adjacent to the park and sanctuary are a part of the Western Zone commercial fishery and include the important fishing ground known as the 'Apollo Bay Paddock'. The local Rock Lobster fishing

industry is optimistic that the park and sanctuary will ultimately bring benefits for fishing, and seeks to cooperate with Parks Victoria to increase knowledge of the relationships between the fishery and the park and sanctuary.

The Rock Lobster Fishery Management Plan (DPI 2003) guides the management of this fishery and seeks to maintain the integrity of the marine ecosystem. Research priorities for the fishery are guided by the rock lobster Fishery Assessment Group.

The State Planning Policy Framework (DSE 2003b), in conjunction with the Corangamite Planning Scheme (Corangamite Shire 2004), provides a framework for development proposals on land near the park and sanctuary. The planning scheme is administered by the Corangamite Shire. Under the scheme, the park and sanctuary are zoned ‘Public Conservation and Resource Zone’. General and particular provisions, as well as overlays, identify particular provisions that must be met by a development application.

A ‘significant landscape’ overlay and an ‘environmental significance’ overlay apply to private land adjoining Port Campbell National Park and Great Otway National Park.

Aims

- Effectively communicate the location of park and sanctuary boundaries.
- Minimise impacts on park values from adjacent developments.
- Increase knowledge of the relationships between the park and sanctuary and industry.

Management strategies

- *Maintain boundary markers and signs that identify and effectively communicate boundaries in accordance with figure 1 and table 2.*
- *Design and install a new visitor orientation sign to assist boat users with identification of The Arches Marine Sanctuary and Twelve Apostles Marine National Park boundaries, to be located at the Port Campbell jetty.*
- *Design and install new visitor orientation signs to assist with Twelve Apostles Marine National Park boundary identification, to be located at Gibson Steps, Clifton Beach, Gellibrand River and Rivernook.*
- *In conjunction with the local community, encourage and support research which leads to a better understanding of the potential impacts associated with the oil and gas industry on marine ecosystems.*
- *In conjunction with the local community, encourage and support research which improves understanding of the relationships between the park, sanctuary and the local rock lobster fishery, including:*
 - *investigation and modelling of the role of the park and sanctuary in rock lobster recruitment to adjacent areas*
 - *assessment of the impact of the park and sanctuary on fishery sustainability.*

8 STRATEGIES FOR COMMUNITY AWARENESS AND INVOLVEMENT

8.1 Community awareness

Raising the community's awareness of the values of the park and sanctuary is an essential step in developing people's sense of custodianship for them, and their engagement in the management of these areas. People are more likely to develop a sense of custodianship for the park and sanctuary if their views and values are respected, and social networks are encouraged and supported. A strong connection with the park and sanctuary among visitors and the local and broader community assists in broader public education, raising awareness and reaching others in the community.

Education and interpretation programs (section 6.1) play an important role in raising the awareness of the park and sanctuary in the wider community. Already, community awareness has increased through local media, ranger patrols and signage. Coast Action/Coastcare, local individuals and local marine scientists have also been actively involved in raising awareness of Marine National Parks and Marine Sanctuaries in the local community. Port Campbell residents have a reasonable level of awareness of the park and sanctuary, but public awareness in other south-western communities remains poor.

Large numbers of people visit Port Campbell National Park each year to enjoy the stunning views of Twelve Apostles Marine National Park. This offers a unique opportunity to increase awareness of the park and sanctuary among visitors to the region.

Marine research projects involving Deakin University have the potential for further opportunities to increase community awareness of the planning area's special values and threats.

Due to physical constraints, sites adjacent to the park and sanctuary are likely to be the primary location for increasing public awareness of them. The Twelve Apostles Centre, Glenample Homestead and any future visitor information centre would be good locations to help increase community

awareness. Several locations in Port Campbell National Park, such as Thunder Cave, could be used to communicate marine interpretive themes to visitors (section 6.1).

Aims

- Increase the community's awareness and understanding of the park's and sanctuary's values, and management activities in them.
- Build a sense of shared ownership and custodianship for the park and sanctuary among community groups and individuals.

Management strategies

- *Investigate opportunities to develop off-site interpretive facilities to increase awareness of the park and sanctuary.*
- *Encourage the development of audio-visual resources for promotion of the park and sanctuary, and encourage projects such as the development of videos, websites or multimedia showing the underwater environment.*
- *Develop broader community awareness of the opportunities to make a difference to the management of the park and sanctuary through taking shared responsibility and becoming directly involved in it.*
- *Increase public awareness and understanding of significant park and sanctuary values and park management activities through local media, schools and community groups.*

8.2 Community participation

Participation of community groups and individuals in the management of the park and sanctuary is pivotal to the effective long-term planning, use and care of their values.

Volunteers and community groups make valuable contributions to park management projects. They bring diverse and valuable information, knowledge, skills and experience to the park and sanctuary that may otherwise not be available to managers. Volunteers also

bring great enthusiasm and add valuable resources to assist with the care of parks.

The interests of community groups in the park and sanctuary often overlap and may not be complementary. There can be considerable mutual benefits where such groups work together and with Parks Victoria to achieve common goals.

The Traditional Owners and relevant Indigenous communities have considerable interest in and aspirations for the planning area. The communities are also an important potential source of traditional knowledge about the area that has yet to be documented. A strong working relationship with the communities will be essential to the reflection and integration of their cultural lore in the planning area's planning and management and reconciliation of their interests and aspirations with other members of the community.

Volunteers are currently involved in supporting Coast Action / Coastcare programs in the park and sanctuary. The implementation of new projects identified in this plan will present more opportunities for participation. With encouragement and support, it is envisaged that members of existing community groups will include park and sanctuary projects in their activities. A Friends group dedicated to protection of the park and sanctuary would be an invaluable catalyst for the development of custodianship within the community.

Members of the community are particularly interested in monitoring and assisting with the implementation of management strategies outlined in this plan.

Groups with a strong interest in the park and sanctuary include:

- Port Campbell National Park Friends Group
- Port Campbell Environment Group
- Port Campbell National Park Consultative Group
- Port Campbell Professional Fishermen's Association
- Port Campbell Dive Club
- Relevant Indigenous communities
- Port Campbell Board Riders Association

- Port Campbell Recreational Boat Users Group.

Aims

- Support and encourage community groups and volunteers to actively assist in the park and sanctuary management by participating and contributing their knowledge and skills.
- Inform, enrich and strengthen the park and sanctuary management with the community's cultural aspirations and customs, especially relevant Indigenous cultural lore.

Management strategies

- *Establish an implementation group to monitor and support implementation with interested community members, community groups, relevant Indigenous communities and relevant agencies. Provide opportunities for open participation from all interested individuals and organisations.*
- *Seek to establish, maintain and strengthen relationships with Friends and volunteers and other community groups that use or have a particular interest in the park and sanctuary. Encourage and support such groups to work together with each other and Parks Victoria to achieve shared goals.*
- *Continue to build a strong relationship with the Traditional Owners and relevant Indigenous communities, and explore means to involve and work with the communities in reflecting the Traditional Owners' cultural lore, interests, rights and aspirations in the management of the park and sanctuary.*
- *Liaise and cooperate as appropriate with the Traditional Owners and the relevant Indigenous communities in dealing with Indigenous cultural issues that relate to the planning area.*
- *Ensure that Friends and community groups participating in the park's management have sustainable and rewarding volunteer experiences, and promote opportunities for community*

- groups to assist Parks Victoria in management.*
- *Encourage the development of a Friends group for the park and sanctuary.*
- *Encourage visitors to assist with compliance management by:*
 - *reporting illegal fishing to the Fisheries Victoria offence reporting hotline*
 - *reporting unusual activity or other offences against the National Parks Act to the Port Campbell Parks Victoria Office.*
- *Encourage and support Coast Action / Coastcare programs in the park and sanctuary, particularly focusing on community interpretation and education.*
- *Encourage community involvement in Reef Watch monitoring and recording programs and other programs using standard methods.*
- *Encourage and support Deakin University and other universities to use the park and sanctuary as study sites and for research projects.*
- *Promote opportunities among interested community groups and Parks Victoria's staff for sharing knowledge and increasing understanding and appreciation of each other's aspirations and goals for the park.*
- *Support capacity-building initiatives through appropriate training, tools and supports which facilitate volunteer participation in the planning, use and care of parks.*
- *Encourage and support Friends and other interest groups and volunteers to develop an understanding and appreciation of the values of the park and sanctuary and the rich and diverse cultural lore, and aspirations of the Indigenous people who have a traditional association with the area within the park and sanctuary.*
- *Encourage and support groups that use or have an interest in the park and sanctuary to work together to pursue sources of funding, including Parks Victoria grants, for projects in them. Encourage joint grants with other groups as appropriate.*

- *Provide opportunities for, and encourage and support, tertiary students to undertake volunteer work experience and research activities that assist park management and are consistent with this management plan.*

8.3 Agency partnerships

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

All activities relating to the park 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 that this occurs park staff need to maintain close liaison with staff of relevant agencies and collaborate in implementing activities where appropriate.

DSE establishes parks, and provides strategic direction and policy advice for the management of the planning area, 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, Department of Primary Industries – Fisheries Victoria has primary responsibility for enforcement to ensure compliance with the fishing prohibitions under the National Parks Act. Parks Victoria will continue to collaborate with Fisheries Victoria in accordance with the Statewide Compliance Strategy and the Regional Compliance Plan. The Regional Compliance Plan outlines priorities and principles for cooperation between Parks Victoria and Fisheries Victoria (Parks Victoria 2004b).

The Western Coastal Board provides direction and policy advice to facilitate sustainable development of the western coast of Victoria through the implementation of the Victorian Coastal Strategy (VCC 2002) and the South West Regional Coastal Action Plan (Western Coastal Board 2002b) (section 4.2). 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 to address the impact of land use and management on the catchment (section 4.2).

The Victorian Environment Protection Authority (EPA) has the primary responsibility for environmental 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 water to the environment (section 4.2). EPA also develops State Environment Protection Policies (SEPPs) for State waters.

Parks Victoria 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 Portland is the local authority responsible for administering the *Marine Act 1988* (Vic.), including planning and implementation of pollution response and marine safety initiatives (sections 4.2 and 6.9).

Through Aboriginal Affairs Victoria (AAV), the Department for Victorian Communities (DVC) has responsibility for administering the legislation protecting cultural heritage (sections 2.5 and 5.1). AAV and the South West and Wimmera Cultural Heritage Program advise Parks Victoria on Indigenous matters.

Corangamite Shire has a key role in administering the planning scheme for land adjacent to the park and sanctuary, including assessing developments that could have an impact on park and sanctuary values. Parks Victoria provides input into planning applications to ensure that park and sanctuary values are protected.

Heritage Victoria (DSE) is the central government agency which informs and advises 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.

The Minerals and Petroleum Division (Department of Primary Industries) is responsible for the sustainable development of the extractive, oil and gas, pipelines,

geothermal energy, minerals exploration and mining industries in Victoria, through the provision of policy advice, regulation and promotion.

Tourism Victoria is the State Government authority responsible for developing and marketing Victoria to Australian and international travellers. Shipwreck Coast Tourism and Great Ocean Road Marketing are actively involved in promotion of the park and sanctuary as part of the Great Ocean Road marketing. Parks Victoria works closely with Tourism Victoria in planning for major tourism sites, including the Twelve Apostles.

Victorian agencies work cooperatively with the Commonwealth Department of the Environment and Heritage on the management of regional ecosystem conservation issues.

Aim

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

Management strategies

- *Work collaboratively with all agencies to implement the plan vision and directions. In particular, work with:*
 - *DSE regarding future planning and management, including assessment of oil and gas industry projects and protection of marine flora and fauna from potentially threatening processes*
 - *Fisheries Victoria to implement the fishing prohibition and the Regional Compliance Plan*
 - *Western Coastal Board on any future plans and strategies that relate to the park or sanctuary*
 - *Corangamite CMA to reduce the impacts of land use and management of the catchment on the park and sanctuary and development of appropriate actions in the Regional Catchment Strategy*

- *Heritage Victoria on heritage management, and compliance with the Heritage Act*
- *Regional tourism authorities, particularly the Shipwreck Coast Tourism and Great Ocean Road Marketing, to promote the park and sanctuary appropriately in regional visitor information centres and in regional tourism strategies*
- *Tourism Victoria on planning for the Twelve Apostles Centre and any future major tourism developments associated with Twelve Apostles Marine National Park*
- *Port of Portland on planning and implementation of marine safety initiatives within the park and sanctuary and adjacent waters*
- *Marine Safety Victoria to help maximise visitor safety and compliance with boating zone and other regulations*
- *Corangamite Shire regarding the administration of the planning scheme, including input into adjacent or nearby developments that may impact on the park or sanctuary (section 7.2)*
- *Coast Action / Coastcare and DPI – Fisheries Victoria to increase public awareness of the park and sanctuary*
- *EPA to minimise impacts associated with the discharge of waste to the environment particularly those from shipping activities*
- *AAV and South West and Wimmera Cultural Heritage Unit on compliance with relevant cultural heritage legislation and issues relating to Indigenous affairs*
- *Commonwealth Department of Environment and Heritage on the management of regional ecosystem conservation issues.*
- *Update contingency plans for marine pollution incidents, such as oil and chemical spills and cetacean/wildlife incidents as required, and communicate arrangements to staff, relevant agencies and interested parties.*
- *Maintain communications with Minerals and Petroleum (DPI), the petroleum industry and other agencies with respect to petroleum activities near the park and sanctuary.*

9 PLAN IMPLEMENTATION

9.1 Delivery and reporting

A range of approaches will be used to implement strategies in this plan. Some will be undertaken as part of routine management activities such as ranger visits; others will be addressed as part of 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 government 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.

During implementation of the plan, Parks Victoria will work in partnership with the Traditional Owners and the scheduled Aboriginal community. Ongoing collaborative activities with the relevant Indigenous communities, interested members of the community, scientists and agencies in realising the vision and management directions for the park and 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 treatments of threats are guided by the precautionary principle. Management options are evaluated on the basis of least impact on the environment. Treatment of threats with a potential for serious damage that is not addressed in the plan will not be postponed for lack of information.

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 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 the Parks Victoria’s website, will also include information on management performance in the park and 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
- significant changes in visitation or use
- a change in policy that calls into question plan objectives
- new legislation (such as significant boundary changes).

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

9.3 Evaluation and review

Periodically through the life of the plan, Parks Victoria will assess overall progress towards implementing the strategies in the plan and also assess 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 benefit to biodiversity.
- Compliance with no-fishing provisions and park regulations.
- Timely management intervention to minimise threats.

- Minimal impact of permitted uses.

Protecting cultural values

- Timely management intervention to avoid damaging activities and threats.

Managing recreation and visitor use

- Managing impact from visitors, including individuals and school and tour groups.
- Meeting community expectations in relation to Parks Victoria's management of the park and sanctuary.
- Improving community and visitor awareness.

Providing for research and promoting understanding

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

Methods for evaluating the benefits of the plan are likely to be refined over time. Parks Victoria partners with external research agencies to establish benchmarks and indicators for major communities and habitats. By using 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.

Bivalve – a type of mollusc with a pair of hinged shells (e.g. scallop, mussel).

Bryozoan (lace coral) – common small colonial marine animal, flat or upright, occurring in many colours.

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 (3 nautical miles or 5.5 kilometres offshore) and the land and inland waters within the coastal catchment.

Coastal action plan – 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.

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. See also *sea Country*.

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*.

Cultural lore – tradition about stories, songs, rituals, ceremonies, dances, art, customs and spiritual beliefs.

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

Flotsam – In maritime law, applies to wreckage or cargo left floating on the sea after a shipwreck. The

common phrase *flotsam and jetsam* is now used loosely to describe any objects found floating or washed (respectively) ashore. See also *jetsam*.

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

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

Exotic marine organism / species – a non-endemic / non-native species existing outside its natural distribution.

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.

Gorgonian – soft, often colourful coral fan, generally found in high-flow areas.

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 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).

Hydroid – small tentacled animal related to corals and sea-jellies. Common but often overlooked.

Indigenous cultural heritage – cultural lore, customs, places and objects of significance to people in accordance with tradition.

Indigenous people – people who are descendants of Aboriginal Australians.

Indigenous species – species that occur naturally in a region. See also *endemic*.

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

Intertidal – 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).

Jetsam – In maritime law, applies to cargo or equipment thrown overboard from a ship in distress and either sunk or washed ashore. The common phrase *flotsam and jetsam* is now used loosely to

describe any objects found floating or washed (respectively) ashore. See also *Flotsam*.

Marine National Park – in Victoria, highly protected areas reserved and managed under Schedule 7 of 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 – a marine area that has some form of protection and is managed for conservation objectives.

Marine Sanctuary – in Victoria, a small, highly protected area reserved and managed under Schedule 8 of the National Parks Act to protect special values, and in which no fishing, extractive or damaging activities are allowed. These areas complement Marine National Parks.

Matters of National Environmental Significance – defined by the Environment Protection and Biodiversity Conservation Act to include: World Heritage Properties; Ramsar wetlands; nationally threatened species and communities; migratory species protected under international agreements; the Commonwealth marine environment; and, nuclear actions.

Midden – a mound or deposit containing the remains of shellfish eaten by Indigenous people. Coastal shell middens can consist of the shells and other remains from a single meal or many different meals eaten in the same location over many years. Middens can also contain other cultural items such as stone and bone artefacts

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

Neap tides – tides occurring twice every month between spring tides, but slightly lower.

Outfall – discharge point for various types of wastewater into discharged to the ocean.

Pelagic – relating to the surface waters of the marine environment.

Pest – exotic organisms (plants, animals or pathogens) when, 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).

Public land – unalienated land of the Crown (see Crown land) or land vested in a public authority.

Relevant Indigenous communities – includes the scheduled Aboriginal community for areas included in the park and other interested groups including the Kirrea Whorrong Native Title Group, Gunditjmara Aboriginal Co-operative, Southern Otways Indigenous Group and Worn Gundidj Aboriginal Co-operative.

Remnant vegetation – remaining natural vegetation.

Scheduled Aboriginal community – body scheduled as the Local Aboriginal Community under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth) relating to the planning area. For this plan, the scheduled Aboriginal community is Framlingham Aboriginal Trust.

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

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.

Sedimentation – the deposition of sediment on a surface.

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

Sewage – household and commercial waste water including human and industrial wastes.

Sponge – multicellular, filter-feeding animals with a variety of forms. Sponges are the simplest form of invertebrate life.

Spring tides – occur twice every month at 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, belief and customs that is passed from generation to generation.

Traditional Owners – communities of people, including the Kirrae Wurrung, that reasonably assert an association with the park area that is based on direct descent from the original Indigenous

custodians of *Country*, in accordance with Indigenous tradition.

Translocation – the 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.

Wetland – land where saturation by water is the dominant factor for soil type and plant and animal communities (e.g. tidal areas, salt marshes and mangrove).

Abbreviations

AAV – Aboriginal Affairs Victoria.

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

CRIMP – Centre for Research on Introduced Marine Pests.

CSIRO – Commonwealth Scientific and Industrial Research Organisation.

DPI – Department of Primary Industries.

DSE – Department of Sustainability and Environment.

ECC – former Environment Conservation Council (see VEAC).

EPA – Environment Protection Authority (Victoria).

NRSMPA – National Representative System of Marine Protected Areas.

VEAC – Victorian Environmental Assessment Council.

APPENDIX 1 MANAGEMENT OBJECTIVES FOR MARINE NATIONAL PARKS AND MARINE SANCTUARIES

Management objectives for marine national parks and marine sanctuaries included on Schedule 7 or 8 of the National Parks Act are in Sections 4 and 17D 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.

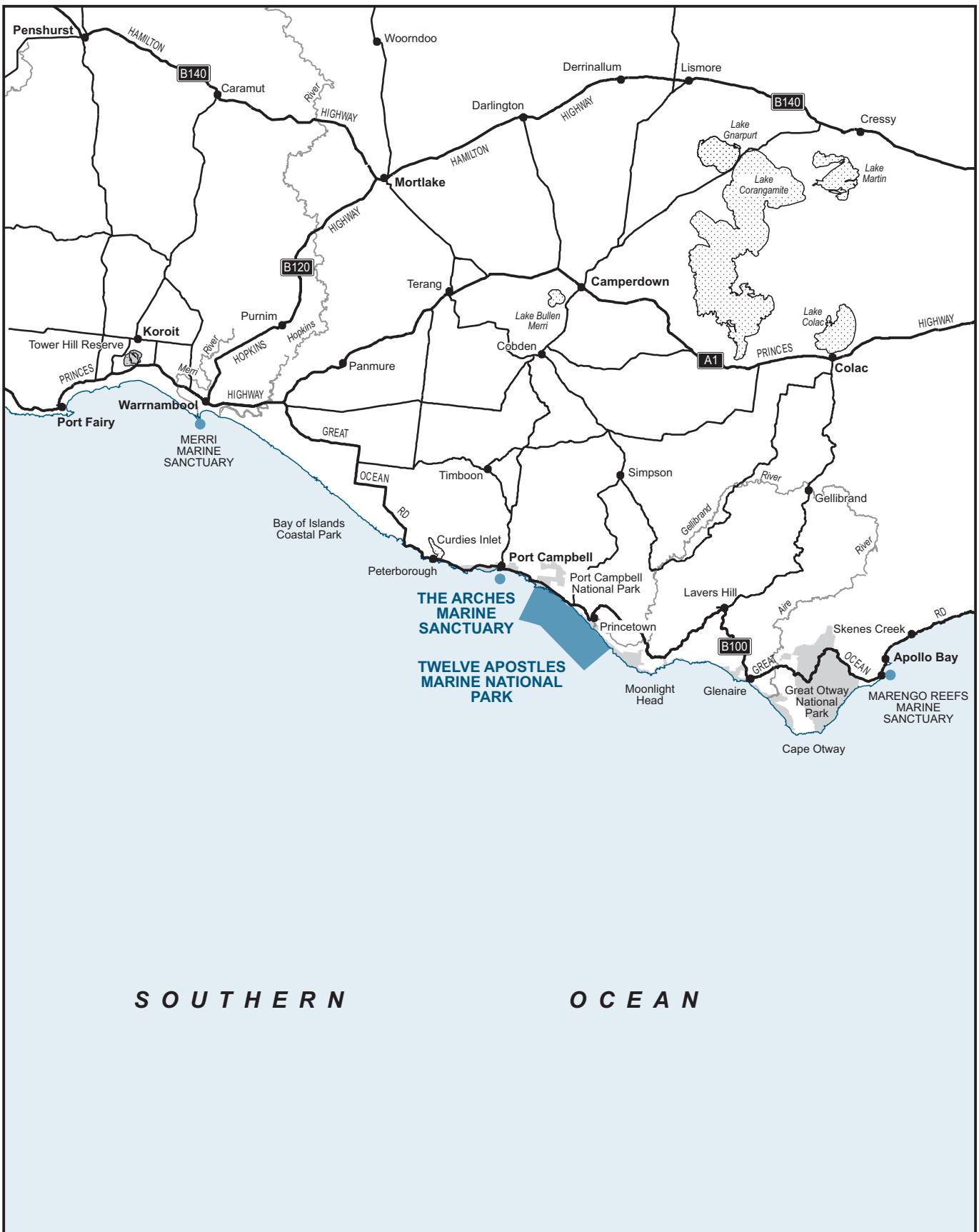
17D Marine national parks and marine sanctuaries

- (a) The Secretary, subject to this Act will 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 and 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 10 submissions were received on the Twelve Apostles Marine National Park and The Arches Marine Sanctuary Draft Management Plan (November 2005 – January 2006), from the following organisations and individual.

ORGANISATION	SUBMISSION No.	INDIVIDUAL	SUBMISSION No.
Submissions from organisations	Total: 9		
Corangamite Catchment Management Authority	5	Robyn Blair	1
Corangamite Shire	2		
Department of Defence	10		
Heritage Victoria	8		
Fisheries Victoria	3		
Scuba Divers Federation of Victoria	4		
Tourism Victoria	6		
Victorian Wader Study Group	9		
Western Coastal Board	7		



**Figure 1 LOCATION
TWELVE APOSTLES
MARINE NATIONAL PARK
& THE ARCHES MARINE SANCTUARY**

- Highway
- Major sealed road
- Marine National Park & Marine Sanctuary
- Other Parks
- Waterbody

