

Robberg Marine Protected Area Management Plan



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31 January 2006

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Photograph on cover

Robberg Nature Reserve surrounded by Robberg MPA taken by Marty Reddering 1997

1.0 INTRODUCTION

The management of marine living resources in South Africa is a national responsibility, and marine protected areas (MPAs) are declared under the *Marine Living Resources Act (No. 18 of 1998)* (MLRA) (see Appendix 1). The Robberg Marine Protected Area Management Plan describes how CapeNature and Marine and Coastal Management (MCM) intend to manage the Robberg Marine Protected Area. The intent of this Plan is, in conjunction with other management mechanisms (see Appendix 2 and Appendix 3), to protect and conserve the values of the MPA while allowing for reasonable opportunities to access and use the MPA. It is recognised that CapeNature, as management authority for both the Robberg MPA and the adjacent terrestrial Robberg Nature Reserve, manages these protected areas essentially as one unit.

This management plan serves a very important function: it communicates to a variety of stakeholders (including the management agencies) the purpose and operational framework for the Robberg MPA. It is a living, public document subject to periodic review. The management plan will also serve as the basis of a business plan for CapeNature, which manages the marine resources in the Western Cape Province on behalf of MCM. The “user-pays” principle will be applied, with the aim of covering part of the management costs. The financial sustainability of the MPA underlies the sustainability of the resource.

The involvement of the community will occur through the Robberg Nature Reserve and Marine Protected Area Working Committee.

Robberg MPA was proclaimed in 2000 under *Government Notice 21948* Robberg MPA is situated along Western Cape coast (the Garden Route) of the Western Cape Province of South Africa, approximately 97 km East of George. The MPA has a coastline of approximately 11.05km around Robberg Peninsula extending 1.85km along Robberg Beach and is one nautical mile (1.85km) out into the Indian Ocean (Figure 1). The MPA is adjacent to the Robberg Nature Reserve and has a total area 2270 ha². The MPA contains rocky platforms, sandy beaches, subtidal rocky reefs and subtidal sandy benthos. Robberg MPA supports a rich mixture of warm temperature species, including many species that are endemic to the south coast of Africa.

1.1 DEVELOPMENT OF THE MANAGEMENT PLAN

The management plan was developed by Stephanie Lemm (stephanielemm@aol.com), consultant to CapeNature, in collaboration with CapeNature and MCM. Funding to develop the management plan was provided by WWF-SA.

The current plan draws on international experience of marine protected area management and relevant guidelines published by the International Union for the Conservation of Nature and incorporates legal and institutional requirements.

An annual review of the management plan and regulations must be undertaken for the first three years. Thereafter the management plan will be reviewed every five years.

1.2 STRUCTURE OF THE PLAN

The goals of Robberg MPA are outlined in Chapter 1 and have been separated into three categories: Biophysical, Socio-economic and Governance. To fulfil these goals, a Strategic Plan has been determined in Chapter 5 which outlines overarching strategies that are required to fulfil these goals and many will need to be conducted in collaboration with Marine and Coastal Management. Key Performance Areas have been determined in Chapter 6 which are day-to-day requirements that managers must address to fulfil the goals. In many instances, the actions needed to achieve the goals require significant review of legislation and/or policy (governance issues). Therefore, Chapter 10 has been devoted to governance issues, i.e. the specific requirements needed in legislation/policy to fulfil the goals. There are also chapters devoted to Compliance, Education/Awareness and Research/Monitoring as it is considered these require specific information to ensure the goals are fulfilled. Appendix 4 outlines definitions of terms used in this management plan.

1.3 GOALS OF THE ROBBERG MARINE PROTECTED AREA

1.3a Biophysical

1. To protect marine ecosystems that are representative of the warm temperate south coast zone and to maintain biodiversity and ecological functioning in these ecosystems.
2. To protect depleted, endangered and endemic species and populations and to protect habitats which are important for the survival and revival of these species and populations.
3. To contribute towards the long-term viability of marine fisheries.

1.3b Socio-economic

4. To promote non-consumptive, ecotourism opportunities.
5. To provide opportunities for marine ecological research and monitoring of environmental effects of human activities on marine ecosystems.
6. To facilitate the interpretation of marine ecosystems for the promotion of conservation among scholars and tourists.

1.3c Governance

7. To reduce conflicts between competing users in the MPA and surrounding areas.
8. To ensure that appropriate and effective legal structures are developed for protecting the biodiversity of the MPA and the activities that benefit from it.
9. To fulfil South Africa's international commitment to marine protection in terms of international protocols and conventions.

2.0 DESCRIPTION OF THE AREA

2.1 GEOGRAPHY AND HABITAT

South Africa has three major bio-geographic zones: (a) The cool temperate West Coast; (b) The warm temperate South Coast; and (c) The sub-tropical East Coast. Robberg Marine Protected Area falls within the warm temperate South Coast zone which covers the area from Cape Point to East London.

The MPA contains rocky coastline and boulders with two sandy beaches near 'The Gap' and 'The Island'. The coastline is approximately 9.5 km long. South Africa has various marine ecotypes including: (a) *Rocky and sandy shores* - Robberg MPA consists of approximately 1 km of sandy shores and 8.5 km of rocky shore (b) *Offshore reefs* - Robberg MPA has offshore reefs. These reefs provide especially important habitat for commercially fished sparids (Sea Breams), from the genus *Chrysoblephus*, and endemic sparids such as red steenbras (*Petrus rupestris*) and black musselcracker (*Cymatoceps nasutus*), (c) *Offshore soft sediment* - Robberg MPA has offshore soft sediment areas close inshore between the offshore reefs. Although these areas are low in species diversity they are important areas for east coast sole (*Austroglossus pectoralis*), silver kob (*Argyrosomus spp.*) and hake (*Merluccius spp.*) and (d) *Estuaries* – There is no estuary within Robberg MPA.

Robberg Peninsula falls within the Cfb climatic zone, according to the Koppen classification. This indicates a warm temperate climate with sufficient precipitation during all months of the year with no dry season. Rainfall distribution is typically Mediterranean, with the highest rainfall during the winter months, changing to non-seasonal, where substantial rainfall also occurs during summer, mainly in the form of thunderstorms. From Cape Agulhas eastwards to Cape St. Francis rain falls more or less equally throughout the year with a slight increase during autumn and spring. The narrow coastal plain in the Knysna area has a particularly equable climate and high rainfall. Rainfall varies from barely 400 mm on the plains near Riversdale, to over 1100 mm in the Knysna area. Summers are characterised by hot and sunny conditions with occasional thunderstorms. Temperatures are mild on the coastal forelands (16 to 20°C), where frost is seldom recorded. The heat of summer is tempered in the southern

coastal areas by cool sea breezes. In spring particularly, strong winds blow along the coast.

Maximum and minimum temperatures were collected from 1997 to 2001. Warmest temperatures are normally felt between the months of November and March and ranges between the high twenties and low thirties, the hottest month being January. Coldest months are normally experienced between the months of April and September, with the coldest temperatures recorded during July. The mean difference between minimum and maximum temperatures is 18.9 °C.

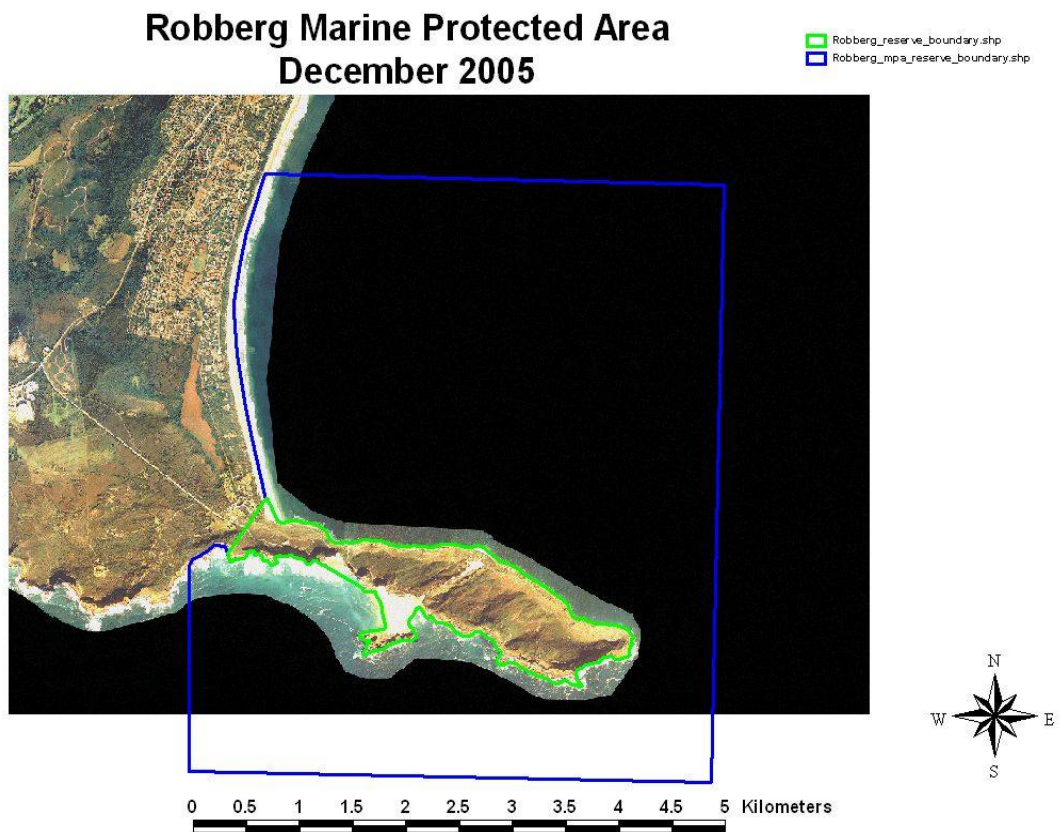


Figure 1 – The Robberg Marine Protected Area – MCM TO PROVIDE A MORE SUITABLE MAP THAT PROVIDES INFORMATION ON THE LOCALITY OF ROBBERG MPA

2.2 MARINE FLORA AND FAUNA

Marine mammals, reptiles, fish, birds (bird breeding/roosting sites), invertebrates (including corals), plants and habitats could potentially be impacted in the MPA. These potential impacts need to be managed.

The Robberg MPA is a breeding area for the rare African black oystercatcher (*Haematopus moquini*). Many other seabirds are known to frequent the area, including a cormorant breeding colony. Globally threatened and CITES listed sea turtles are present in the area, including loggerhead (*Caretta caretta*), green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*) turtles. There have also been many species of marine mammals sighted and also stranded in the Robberg MPA including various species of whales, dolphins and seals. There is a Cape fur seal (*Arctocephalus pusillus pusillus*) colony within the MPA, this colony is mainly a “haulout”, however some breeding does occur but these pups have a low survival rate. There is also a resident population of the CITES listed humpback dolphin (*Sousa chinensis*).

There are three species of fish known to be present in the MPA which are listed as “vulnerable” under the *Draft List of Threatened and Protected Species* issued in terms of *NEMA: Biodiversity Act*. These species are the great white shark (*Carcharodon carcharius*), white steenbras (*Lithognathus lithognathus*) and red steenbras (*Petrus rupestris*). “Vulnerable” is defined under NEMA as indigenous species facing a high risk of extinction in the wild in the medium-term future, although they are not a critically endangered species or an endangered species.

The alien Mediterranean mussel (*Mytilus galloprovincialis*) occurs on the intertidal zone of the rocky shoreline.

2.3 HUMAN SETTLEMENTS

Robberg MPA is situated 5km south-east of Plettenberg Bay. George, a major industrial and commercial town, is about 97 km away. The Southern Cape Coast or Garden Route, as it is known, is a major tourist and retirement area. The population of the

small towns in this area triple in size during the Summer and Easter holidays due to influx of South African tourists, but steady tourism is recorded throughout the year with a slight drop off during August. George, which is a largest town in the Garden Route has a fast-growing human population.

The major land-uses are:

- (a) Forestry (pine plantations) with associated saw-mills.
- (b) Farming consisting of dairy farms, vegetables and citrus, recently game farms are also appearing on the Garden Route.
- (c) Urban development has spread along the coast at a rapid rate over the last thirty years. Uneconomical agricultural land has been rezoned and urban settlements have spread in the form of holiday houses, bed & breakfast enterprises, hotels and golf courses and also polo fields.

Activities within the towns are based on tourism, where hotels and accommodation enterprises are predominant. Adventure companies specialising in outdoor sports are also active and there is an established commercial whale watching industry. Forestry and farming are major activities outside of the urban areas. Heavy and light engineering and commercial business are the main industries in the George area.

Water sports, fishing, & walking trails are popular recreational activities in the area. Fishing along the coast and the rivers and estuaries is very popular due to easy accessibility.

2.4 HISTORY

There is archaeological evidence of human habitation at Robberg Peninsula dating back to 120,000 years ago. Khoe-Khoe people lived in this area intermittently. Artefacts, bone fragments and Stone-age tools from the 1970 excavations can be viewed at the Information Centre at Robberg Nature Reserve. One of the nineteen archaeological sites in Robberg Nature Reserve, the Nelson Bay Cave, is open to the public.

The first European residents were shipwrecked in the Portuguese vessel Sao Goncalo in 1630. During the following year while they were stranded they exchanged produce with the local Khoe-Khoe.

According to the South African Heritage Resource Agency (SAHRA), there are no known significant shipwrecks within the boundary of the MPA apart from the Athena (a Greek tuna fishing vessel) which sunk on 3 August 1967.

Plettenberg Bay was a base for commercial whaling from 1797 but it was in 1806 that Plettenberg Bay became one of the six places where the whaling industry established footholds and whaling continued until the commercial whaling station was closed in 1916.

3.0 BOUNDARIES AND ZONING

Boundaries

The boundary of Robberg MPA is gazetted under Section 5 of *Government Notice 1429 (20 December 2000)* as follows:

The Robberg Marine Protected Area in the Western Cape Province includes the marine area around the Robberg Peninsula, near Plettenberg Bay, bounded by the latitudes 34°04'9.16S and 34°07'.633S and longitudes 023°22'.300E and 023°25'.967E.

Zoning

The Robberg MPA is currently one zone where fishing is not permitted except for recreational line fishing from the shore (Figure 2).

Figure 2 – Current Zoning of Robberg MPA – MCM TO PROVIDE THIS MAP

4.0 REGULATIONS

The only specific regulations under the MLRA relating to Robberg MPA are as taken from Regulation Gazette No. R 1429 (6978) (20 December 2000):

“the provisions of Section 43(2)(a) of the MLRA shall not apply to the catching of linefish by recreational shore angling in the Robberg MPA”.

This is the Regulation which allows fishing to occur from the shore in Robberg MPA.

5.0 STRATEGIC PLAN

5.1 BIOPHYSICAL

OBJECTIVES

- To protect typical marine systems within the warm temperate south coast zone and to maintain biodiversity and ecological functioning.
- To protect depleted, endangered and endemic species and populations and to protect habitats which are important for the survival of these species and populations.
- To contribute towards the long-term viability of marine fisheries.

| Action | Lead Agency (and partners) |
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| 5.1.1 Assess and monitor ecosystem health and integrity in the MPA | |
| 5.1.1(a) Develop a set of fundamental indicators of MPA health at national and local level. | MCM |
| 5.1.1(b) Facilitate effective coordination for the collection and analysis of MPA health indicators | MCM CapeNature |
| 5.1.2 Assess the impacts of resource use on the MPA (including cumulative impacts) to identify priority areas and/or species in the MPA and determine management measures to mitigate impacts | |
| 5.1.2(a) Develop and apply methods of multiple-use risk assessment for threats to the MPA. | MCM CapeNature |
| 5.1.2(b) Use ecological risk assessment of fishing activities to determine priority issues and areas for research and management. | MCM CapeNature |
| 5.1.2 (c) Develop refined zoning maps to protect species and habitats. | MCM CapeNature |
| 5.1.3 Develop approaches to ecosystem-based management in the area | |
| 5.1.3(a) Facilitate the development of approaches and tools to achieve integrated and ecosystem-based management (i.e. manage all the key links in the ecosystem as well as manage human activities and their impacts). | MCM CapeNature |
| 5.1.4 Implement strategic control programmes for the effective mitigation and, where possible, elimination, of marine pests in the MPA. | |
| 5.1.4(a) Develop agreed protocols for the development and implementation of National Control Plans at regional level. | MCM (CapeNature) |
| 5.1.4(b) Conduct baseline surveys within the MPA in line with agreed national protocols and priorities. | MCM CapeNature |

5.1.5 Manage marine pollution from land-based activities so that it is within acceptable limits

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| <p>5.1.5(a) Ensure that management planning protects coastal and marine receiving waters from land-based pollution through:</p> <ul style="list-style-type: none"> • Identification of the environmental values of marine waters; • Water quality targets to enhance or maintain those environmental values; • Monitoring attainment of water quality targets. | <p>MCM (CapeNature)</p> |
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5.1.6 Build capacity to enable effective integration of conservation measures across sectors and with stakeholders.

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| <p>5.1.6(a) Provide industry with clear information on conservation management arrangements in the area (particularly for listed marine species), including compliance requirements.</p> | <p>CapeNature</p> |
| <p>5.1.6(b) Enhance coordination between key groups and agencies involved in conservation and resource management, through information sharing, communication and informal reporting.</p> | <p>CapeNature</p> |

5.2 SOCIO-ECONOMIC

OBJECTIVES

- To optimise the benefits of MPAs for communities and resource users.
- To provide opportunities for research, training of marine scientists and monitoring of environmental effects of human activities on marine ecosystems.
- To facilitate the interpretation of marine systems for the purpose of conservation and tourism.

| Action | Lead Agency (and partners) |
|---|----------------------------|
| 5.2.1 Increase knowledge and awareness of MPA management in the area | |
| 5.2.1(a) Identify needs and advise on priorities for education and training in MPA management/issues through a coordinated approach. | MCM (CapeNature) |
| 5.2.2 Enhance community and industry capacity for, and participation in, marine protected area management in the area | |
| 5.2.2(a) Support initiatives that raise community and industry awareness of the importance of, and build capacity for their participation in marine ecosystem monitoring in the MPA. | MCM (CapeNature) |
| 5.2.2(b) Review existing stakeholder consultation mechanisms regarding the MPA to ensure effective and efficient ongoing participation in marine planning and management. | CapeNature (MCM) |
| 5.2.2(c) Build community capacity to contribute to management of priority issues and promote the development and use of best practice community-based management, particularly through codes of conduct and other non-regulatory approaches such as guidelines. | CapeNature |
| 5.2.2(d) Develop volunteer programmes. | CapeNature |
| 5.2.3 Support the development of partnership approaches to marine research and monitoring | |
| 5.2.3(a) Build on existing research partnerships and support the development of new partnerships in the area between researchers and members of the community and industry. | MCM (CapeNature) |
| 5.2.3(b) Communicate the contribution that marine industries and the community make to marine research in the area | MCM |
| 5.2.4 Improve access to research, data and expert ecological advice for the management of the MPA | |
| 5.2.4(a) Develop a web-based tool that identifies what marine data is available for the area, and encourage relevant agencies to make data available and accessible through this tool. | MCM (CapeNature) |

5.2.5 Involve historically disadvantaged communities in management of the MPA in a manner that recognises and respects their rights, custodial responsibilities, contributions and knowledge

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| 5.2.5(a) Identify management and capacity building mechanisms to enable such communities to participate in the management and use of the MPA. | MCM (CapeNature) |
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5.3 GOVERNANCE

OBJECTIVES

- To reduce conflict between competing users in the MPA and surrounding areas.
- To ensure appropriate and effective legal structures are developed and maintained.
- To fulfil South Africa’s international commitment to marine protection in terms of international protocols and conventions.

| Action | Lead Agency (and partners) |
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5.3.1 Increase efficiencies in enforcement and compliance activities in the MPA

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| 5.3.1(a) Investigate the enforcement and compliance challenges and opportunities associated with the increasing use of spatial management of marine resources in the MPA. | CapeNature |
| 5.3.1(b) Implement appropriate MPA Permit processes, including database development. | MCM (CapeNature) |

5.3.2 Review legislation

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| 5.3.2(a) Investigate the development of MPA-specific regulations, including revenue generation ability. | MCM (CapeNature) |
| 5.3.2(b) Manage impacts of all users in the MPA through zoning and permit requirements/conditions. | MCM (CapeNature) |

5.3.3 Promote co-operative governance

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| 5.3.3(a) Nurture co-operative relationships with local, provincial and national authorities and stakeholders | CapeNature |
| 5.3.3(b) Manage transboundary impacts between the MPA and adjacent coastline | MCM (CapeNature) |

6.0 KEY PERFORMANCE AREAS

6.1 OVERVIEW

Robberg MPA lies within the Garden Route, one of the primary tourist destinations in South Africa. This ready source of income, coupled to the natural resources should be utilised. The basic management approach for Robberg MPA has been protection, with a small amount of recreational fishing but no commercial fishing taking place within the MPA. This is still the basic management approach but the management of all potential activities that could occur in the MPA are considered in this management plan. To provide a rewarding experience for recreational users in the MPA it may be necessary to separate certain activities through zoning. The Key Performance Areas in this chapter are considered the critical areas where management actions are required to ensure that Robberg MPA meets the objectives.

Many recreational and tourist programmes are currently occurring in the MPA. The present situation is uncontrolled and not all boating sectors are managed. With the growing number of user groups and activities, it is advisable to implement management strategies prior to the development of conflict and undesirable environmental impacts. Current MPA legislation is not designed for managing such impacts on the natural resources effectively. Therefore a proactive approach needs to be taken to revise legislation to enable effective management of these activities to ensure that they do not have undesirable and unsustainable impacts on the MPA.

Various issues have been identified that need to be resolved to protect the values in the MPA. Considerations include minimising the decline in reef associated fish species, the impacts on rocky reef habitat, the disturbance to marine mammals, shark species and birds, particularly when birds are nesting or roosting.

Table 1 summarises activities that can currently occur in the MPA either with a permit or without a permit and activities that are not permitted. Activities not included in Table 1 will be considered on application to MCM.

6.2 FISHING

1. At present, the whole MPA is open to recreational linefishing from shore but no fishing from vessels is permitted.
2. At present, spearfishing is not permitted in the MPA.
3. At present, no flora or fauna (including bait) may be removed from the MPA.
4. Further restrictions on fishing may be considered (e.g. restrictions on night fishing, restrictions on carrying fishing gear on vessels in the MPA) to reduce impacts on the values of the MPA (see Action 5.3.2(a)).
5. If necessary, additional zones will be created for resource protection or to separate user groups to ensure that the natural resources are protected, user-conflicts are reduced, and to ensure safety for all user groups (see Action 5.3.2(b)).
6. The management of fishing competitions will be considered as this activity may impact on the values of the MPA (see Action 5.3.2(a)).
7. The only exception for extractive use outside of the shoreline area would be under a Section 81 Exemption for Scientific Research. However, these applications will be subject to stringent assessment and only issued when appropriate.
8. MCM is currently developing regulations for the management of Fishing Charter operations for all South African waters.
9. Voluntary compliance with regulations will be encouraged through education and awareness programmes.
10. The “Robberg MPA Fishers Code of Conduct” will be promoted (see Appendix 5 and Action 5.2.2(c)).
11. See Actions 5.1.2, 5.1.3(a) and 5.1.6(a).

6.3 SCUBA DIVING

1. At present, the whole MPA is open to SCUBA diving and this activity may occur without a permit.
2. The “Robberg MPA Diver Code of Conduct” will be promoted (see Appendix 6). This Code of Conduct has been developed based on discussions with the dive community and is designed to ensure that safe and low impact diving occurs. Specialised guidelines for diving with sharks and seals have been developed (see Action 5.2.2(c)).

3. Restrictions on activities associated with diving that may have an impact on the values of the MPA will be considered including the use of cages for the purposes of cage diving, the use of electro/acoustic-discharging devices, the use of Diver Propulsion Vehicles and the removal of historical artefacts from shipwrecks (artefacts from shipwrecks are defined as “archaeological” under the *National Heritage Resources Act 1999* once they are 60 years old) (see Actions 5.3.2(a) and 5.3.2(b)).
4. Further restrictions regarding recreational SCUBA diving and SCUBA Dive Business Operators may be considered (see Actions 5.3.1(b) and 5.3.2).
5. If necessary, additional zones will be created for resource protection or to separate user groups to ensure that the natural resources are protected, user-conflicts are reduced, and to ensure safety for all user groups (see Action 5.3.2(b)).
6. If necessary, further restrictions on times, days, and locations may be considered to reduce impacts on the values of the MPA (see Action 5.3.2(b)).
7. The involvement of previously disadvantaged communities in the SCUBA diving sector will be encouraged. This measure is part of the national commitment to transformation (see Action 5.2.5(a)).
8. See Actions 5.1.2, 5.1.3(a), 5.1.6(a) and 5.2.2(c).

6.4 USE OF VESSELS

1. At present, the whole MPA is open to all types of vessels.
2. The management of certain vessels will be considered (e.g. hovercraft, personal watercraft) as some vessels may impact on the values of the MPA (see Action 5.3.2(a)).
3. There will be consideration of areas to be designated for certain non-motorised watersports (e.g. kite surfing) to reduce potential user-conflict and the impacts on the values of the MPA (see Action 5.3.2(b)).
4. The management of motorised watersports will be considered as this activity may impact on the values of the MPA (see Action 5.3.2(a)).
5. The management of vessel interactions with seals will be considered as inappropriate vessel activity may impact on the seal colony (see Actions 5.1.2(c) and 5.3.2).

6. To ensure the safety of divers, all vessel operators will be urged to abide by the “Robberg MPA Diver Code of Conduct” (see Appendix 6) (see Action 5.2.2(c)).
7. At present, all users may anchor in the MPA. The management of this activity will be considered as this may impact on the values of the MPA.
8. At present, under the MLRA, users may install a private mooring with a permit in the MPA. This activity is also managed under the *Seashore Act No. 21 of 1935* which prescribes that a lease is required to let any portion of the sea to install a private mooring. CapeNature is generally not supportive of allowing private moorings within the boundaries of an MPA (see Action 5.3.2(a)).
9. At present, the lighting of fires and camping may occur in the MPA. The management of these activities will be considered as they may impact on the values of the MPA (see Action 5.3.2(a)).

6.5 TOURIST PROGRAMMES

1. At present, the whole MPA is open to all types of tourist programmes (excluding commercial whale watching) and tourist programmes may occur without a permit. The following tourist programmes are known to currently occur in the MPA:
 - (i) two permitted commercial boat-based whale watching operators (these operators hold permits under the MLRA and pay fees to the MLR Fund) who work the area adjacent to the MPA but these operators also provide tours to watch seals and dolphins within the MPA;
 - (ii) two tourist operators providing boat-based marine animal watching (seals, dolphins);
 - (iii) two tourist operators providing SCUBA diving charter;
 - (iv) two tourist operators providing sea kayaking tours;
 - (v) tourist operators providing scenic flights over the MPA (3 gliders, one small plane).
2. The management of tourist programmes will be considered to address the potential impacts on the values of Robberg MPA and to avoid user-conflict. There will be consideration of all potential types of tourist programmes such as:
 - (i) operators who have their own vessel(s);
 - (ii) craftless operators (i.e. operate from beach, or charter a vessel);
 - (iii) scenic tours;

- (iv) marine animal watching;
 - (v) motorised watersports;
 - (vi) non-motorised watersports;
 - (vii) aircraft (e.g. sea planes);
 - (viii) cruise ship operations;
 - (ix) hire operations; and
 - (x) fishing charter (as noted in Section 6.2, there will be national regulations developed by MCM to manage fishing charter operations) (See Actions 5.3.2(a) and 5.3.2(b)).
3. The carrying capacity of the MPA for tourist programmes will be considered, and, if necessary, there will be consideration of limiting tourist operator numbers, as well as times, days and locations of activities. This measure may be needed because of increasing tourist activities and their associated impacts. If necessary, additional zones will be created for resource protection or to separate user groups. This strategy is essential to ensure that the natural resources are protected, user conflicts are reduced, and ensure safety for all user groups. Carrying capacity will be determined through appropriate research (see Action 5.3.2(b)).
 4. The involvement of previously disadvantaged communities in the tourist programme sector will be encouraged. This measure is necessary because of the national commitment to transformation (see Action 5.2.5(a)).

6.6 OTHER ACTIVITIES

1. The *National Environmental Management Act 107/1998* (NEMA) and specifically Government Notice Number 1399 (21 December 2001) prohibits the general use of off-road vehicles along the entire shoreline of the MPA.
2. At present, aircraft have no height restrictions above the MPA and seaplanes may land in the MPA. However, under Section 58(2) of the *Marine Living Resources Regulations*, a person must not approach closer than 300 metres to any whale by means of an aircraft. The management of aircraft will be considered as aircraft may impact on the values of the MPA, particularly whales, breeding birds and amenity issues (see Action 5.3.2(a)).
3. Littering is not permitted in the MPA.

4. At present, commercial and recreational photography may occur in the MPA without a permit. There will be consideration to managing this activity (See Actions 5.3.2(a) and 5.3.2(b)).
5. At present, organised events may occur in the MPA without a permit. There will be consideration regarding managing such activities (See Actions 5.3.2(a) and 5.3.2(b)).

6.7 SCIENTIFIC RESEARCH AND MONITORING

Researchers wishing to conduct scientific research in the Goukamma MPA are issued *Exemptions* under Section 81 of the MLRA. CapeNature also requires a Research Agreement (MOU) with the researcher (See Actions 5.1.1, 5.1.2, 5.1.3, 5.1.4 and 5.1.5).

Applications to undertake scientific research are assessed according to a set of criteria (Appendix 7). A database on research programmes is maintained by the CapeNature Ecological Coordinator.

The following must be considered when research applications are assessed:

- The requirements outlined in Appendix 7.
- The criteria in Appendix 11.
- All permits will have standard conditions applicable to all researchers (see Section 9.7) whilst there will be very specific conditions determined on a case by case basis.

Table 1

Summary of Current Statutory Provisions for the Robberg Marine Protected Area

| Activity | Rest of MPA | Shoreline |
|--|---------------------|---------------------|
| Fishing | | |
| Recreational line fishing from shore all hours | No | P ¹³ |
| Recreational line fishing from a vessel | No | No |
| Spearfishing from shore or vessel all hours | No | No |
| Bait Collection | No | No |
| Recreational/Tourist Activities | | |
| Tourist Programmes (including marine animal watching, excluding motorised watersports) | Yes | Yes |
| Tourist Programmes involving motorised watersports and aircraft use | Yes(a) | Yes(a) |
| Recreational vessel use (excluding motorised watersports) | Yes | Yes |
| Recreational Motorised watersports (excluding Personal watercraft) | Yes | Yes |
| Recreational aircraft | Yes(a) | Yes(a) |
| Commercial Boat-based whale watching | No | No |
| Use of Personal Watercraft | Yes | Yes |
| Use of Hovercraft | Yes | Yes |
| Camping | N/A | Yes |
| Light a fire | N/A | Yes |
| SCUBA diving | | |
| Recreational diving | Yes | Yes |
| SCUBA diving business | Yes | Yes |
| Anchoring/Mooring | | |
| Anchoring | Yes | Yes |
| Installation of private moorings | P ⁴³ (b) | P ⁴³ (b) |
| Competitions | | |
| Fishing Competitions | No | P ¹³ |
| Organised Events | Yes | Yes |
| Photography | | |
| Recreational | Yes | Yes |
| Commercial photography | Yes | Yes |
| Scientific Research | P ⁸¹ | P ⁸¹ |
| Vehicles | N/A | No(b) |

Yes Allowed without a Permit

No Prohibited

P¹³ Permit required under Section 13 of the MLRA (**Fishing Permit**), which must have specific endorsements to allow access to Robberg Marine Protected Area

P⁴³ Permit required under Section 43 of the MLRA

P⁸¹ Exemption issued under Section 81 of the MLRA to conduct scientific research

(a) Under Section 58(2) of the MLR Regulations, a person must not approach closer than 300 metres to any whale by means of an aircraft.

(b) Note that there are also requirements under the *Seashore Act (Act 21 of 1935)* regarding installation of moorings

(c) Unless issued with an Exemption under NEMA

7.0 COMPLIANCE PLAN

7.1 OBJECTIVES

The compliance objective for the Robberg Marine Protected Area is to achieve resource protection through compliance with the declaration as a MPA and the related Regulations, and other applicable laws. The Compliance Plan is intended to contribute to resource protection, facilitate fishery management, and reduce user conflict arising from competing uses in the MPA. It is intended to complement other elements of the Management Plan and lead to an increased level of success. High-profile, visible enforcement will require proper funding, supervision, staffing, and equipment.

The Robberg MPA is situated in close proximity to highly developed residential areas. Large towns within utilisation distance of the MPA are Plettenberg Bay, George, Wilderness, Sedgefield, and Knysna. Due to the allowance of rock and surf fishing within the Robberg MPA, the area is well utilised because of the ideal fishing spots and the excellent catches made along this coast.

Robberg Nature Reserve, which is adjacent to Robberg MPA, was proclaimed in 1980 but the reserve was only actively managed as a Nature Reserve from 1986. Between 1980 and 1986, spearfishing and fishing was occurring in the MPA. Robberg MPA was declared in 1990 and law enforcement shore patrols along the Robberg MPA coastline have taken place since this declaration. Vessel patrols were initiated during 1992 and continued for four years until the vessels were not serviceable and no funding was provided to purchase new vessels. Between 1996 and 1998 no vessel patrols were conducted. During 1998 another vessel was obtained and patrols were conducted until 2002. From 2002 until present, no vessel is currently seaworthy to conduct patrols.

Between 1986 and 2000, there were CapeNature gate guards employed in Robberg Nature Reserve and these guards assisted with MPA compliance. For example, visitors wishing to access the MPA for fishing had their fishing permits checked at the gate and people leaving had their catches checked. In 2000, the gate guards were outsourced and the current gate guards are not certified Peace Officers so cannot legally conduct vehicle inspections etc.. However, the gate guards still ask visitors to show their fishing licence and then provide visitors with an ORI catch card to complete.

The Compliance Plan recognises that compliance can be achieved partly through community involvement and education, in addition to traditional enforcement operations, including patrols, apprehension of offenders, confiscation of equipment and convictions for offences. Signage is used to advise the community of the MPA and what activity may or may not occur in the area. If Field Rangers encounter a member of the public, they will advise him/her of the regulations pertaining to the MPA before an offence is committed. The DEAT brochure “Recreational Fishing Information Brochure December 2004” is distributed. Unfortunately planned poaching syndicates and commercial enterprises knowingly commit offences for financial gain. In these situations, admission of guilt fines and appearance in court charges are laid. In serious cases, confiscation of equipment and marine organisms takes place and even arrest. Confiscated organisms are all returned to the intertidal zone after being registered and counted at the relevant South African Police Services station.

Due the isolated beaches and fishing spots along the coast, fishers illegally remove bait and exceed bag limits and also take undersize fish. They also light fires, camp overnight and litter. Night fishing exaggerates the stated problems. In the past there were problems with commercial fishing operations entering the MPA, however, vessel patrols have reduced this occurrence, the presence of a patrol boat proved to be a major deterrent. The closest Marine and Coastal Management compliance officers are at Knysna and their patrol boats either have no crew available or the boats are unserviceable. The SAPS Border Control Unit (referred to in previous years as the police waterwing) have offered their services, but it is a long way for their small boat from Mossel Bay to Robberg MPA. Serious transgressions currently are abalone poaching by syndicates from the Eastern Cape. There have also been problems with Commercial fishers who have been granted experimental octopus fisheries rights placing their lines within the MPA (See Action 5.3.1(a)).

Quarterly meetings are conducted which involve the police, traffic department, security companies, provincial and municipal authorities, defence department and SANParks. These meetings enable the planning of joint compliance operations.

7.2 ZONE DEMARCATION

Markers and signage will be installed on shore to facilitate zone and boundary demarcation. All signage will comply with CapeNature policy guidelines.

Land beacons that will be visible from vessels must be installed on shore boundaries (beacons are required at the northern boundary on Robberg Beach and on the most western boundary of the MPA). These beacons are for the benefit of vessels and shore-based fishers. The preferred beacons would be white poles. Ideally, all landward entries to the MPA will be signposted advising in English, Afrikaans and isi-Xhosa that the area is a Marine Protected Area. All launching areas within reasonable distance of the MPA (Central Beach, Keurbooms River Nature Reserve Slipway) will have signage indicating MPA requirements and a zoning map.

7.3 COMMUNITY INVOLVEMENT

CapeNature will encourage user groups and all members of the community to report offences of MPA regulations. There is a community committee - the Plettenberg Bay Conservation Working Group, which has members from various NGO's, bird clubs, the Botanical Society, angling clubs and is also open to the public. The purpose of this Committee is to inform the community of management activities on the terrestrial nature reserves and in the MPA (See Action 5.3.3(a)).

7.4 VOLUNTARY COMPLIANCE THROUGH EDUCATION

The Awareness Plan (Section 8.0) includes elements designed to help the public understand the conservation significance of marine protected areas and why it is important to comply with the MPA regulations. This promotes voluntary compliance by the public through education and awareness programmes.

7.5 ENFORCEMENT OPERATIONS

7.5.1 Patrol Schedules

Weekly staff meetings are conducted to determine enforcement/compliance priorities for that week. Compliance requires vessel patrols, diver patrols and shore patrols. The intention is to conduct patrols daily with night patrols taking place as needed. Patrols are conducted on foot along the beaches, vehicle patrols are conducted on management roads to cover larger areas quickly. Regular vessel patrols will be conducted. There are MCM vessels, “Victoria Mxenge”, “Ruth First” and “Lilian Ngoya” that conduct roving patrols along the coastline and can be accessed for compliance in certain situations. Weekends, public holidays and school holidays are heavy utilisation periods and extra patrols are implemented. During patrols, all aspects of the MLRA are enforced. Roadblocks are also conducted as required. On occasion, it may be necessary to carry out “high impact operations” within the MPA. These operations require additional staff input in the form of assistance of five Field Rangers from the Goukamma Marine Protected Area. High impact operations are aimed at creating a sense of high law enforcement visibility or presence and will be conducted approximately six times per year. The public slipway at Keurbooms River Bridge is utilised by both recreational and commercial fishers. This facility will be monitored, especially during peak seasons. Inspections will be conducted of vessels to check for compliance with the Marine Living Resources Act (18/1998).

An electronic crime database will be maintained by CapeNature to ensure easy access to compliance information (e.g. repeat offenders).

7.5.2 Staffing & Equipment Requirements

A total of four (4) Field Rangers are required to do foot patrols along the beach, vehicle patrols along the management roads along the coast and to operate a patrol boat at sea. This complement will allow for staff to take leave, sick leave and attend courses.

A MPA Manager with at least a Diploma in Nature Conservation or Oceanography would be required to manage the MPA and staff. Field Rangers would run environmental education programmes in quiet periods.

The staff required to patrol/manage the MPA and conduct monitoring programmes are Field Rangers who have passed at least a recognised Field Ranger course. Currently available is the THETA approved National Certificate in Natural Resource Guardianship which is not marine oriented. However, a THETA approved course is being developed which is marine management specific – all staff involved in MPA management should attend this course. Some staff have attended the WIOMSA (Western Indian Ocean Marine Science Association) Marine Protected Area Management Course.

Staff must be qualified in further specialist courses such as Ski-boat Skippers Ticket (Commercial), Commercial Diving Ticket, Peace Officer Certificate, First Aid Certificate, and Personnel Management Course. Staff must attend various workshops and short courses as required for the station. MPA Field Rangers should have at least a matric pass with a Code 08 vehicle licence or a Code 02 motorbike licence. It would be desirable for as many staff as possible to be qualified to skipper patrol vessels (posses Commercial Ski-boat Ticket) and hold Commercial Diving qualifications.

The equipment needed to manage the MPA is outlined in Appendix 12.

8.0 AWARENESS PLAN

8.1 OVERVIEW

CapeNature and Marine and Coastal Management recognise that their proficiency as managers of South Africa's marine resources depends on their ability to inspire public support and participation through awareness. The focus of this awareness plan is to promote an understanding of the importance of healthy ocean ecosystems, the importance of MPAs and the role that the community may play in their care (see Actions 5.2.1, 5.2.2 and 5.2.3). This plan also recognises the need to align the marine conservation awareness programme with the corporate Youth Development Programme of CapeNature where appropriate.

Marine protected area management has developed because of the growing recognition of the importance of marine ecosystems to our communities, economy and environment. Marine protected area management is emerging as a national priority due to undesirable and unsustainable impacts on the marine ecosystem. An important management tool to protect marine resources will be to implement an awareness programme that improves understanding of the Robberg MPA.

8.2 PRESENT STATE OF MPA AWARENESS

The awareness programme in place is not specific to the Robberg MPA in isolation, as awareness-raising initiatives address both the marine and terrestrial environment. Field Rangers are utilised for formal awareness programmes throughout the year, with the exception of the December-January school holidays. The Garden Route Business Unit Community Conservation Officer should also be actively involved in the awareness programme, in order to bolster capacity. On-going environmental awareness is conducted in conjunction with patrols.

8.3 AWARENESS OBJECTIVES AND STRATEGIES:

8.3.1 Protection of marine biodiversity of Robberg MPA and the surrounding areas.

- Achieve market and public awareness of the Robberg MPA and the values, services and products offered.
- Provide information on the benefits/importance of Robberg MPA.
 - Currently provide information through interpretative talks/walks at Robberg Peninsula;
 - Local schools from Plettenberg Bay, The Craggs and Kranshoek visit the MPA and are exposed to environmental awareness/education programmes that highlight issues surrounding conservation of the marine environment. The MPA plans to target historically disadvantaged individuals (HDIs) in this programme through subsidizing their transport to and from their home schools.
 - Currently organise regular cleanups in the MPA with school groups.
 - Children from 5-10 years will be catered for by means of poster competitions and “touch pools or tanks”. These can be carried out on the coast, at schools or in the visitor centre if the weather is bad. The Visitor Centre needs to be updated and include more specific MPA information.
 - Children of 10 years and older can also use touch pools, poster manufacture as well as snorkelling in tidal pools. The use of video material can be utilised as well as beach clean-ups.
 - For SCUBA divers, marine awareness SCUBA diving certificates can be introduced as well as under-water clean-ups and fishing line removal. Video presentations and pamphlets will be used to promote awareness.
 - Snorkelling education would consist of environmentally friendly ways of snorkelling using underwater trails and information cards.
 - For both skiboat and rock & surf fishers, waterproof packages of information brochures and pamphlets with bag limits/size limits etc. will be compiled and distributed to the fishermen by Field Rangers while on patrol.
 - Interpretative boards for tourists, e.g. “ MTN Whale boards ” etc pamphlets, booklets, flyers. Visitor Centre to include MPA interpretation material.
- Promote marine conservation through local, national and international media (Internet, newspapers, magazines, TV, etc.).
 - Always notify media whenever anything is happening.
 - Popular articles are placed in local newspapers such as “What’s New in Plett” and the Knysna/Plett Herald in order to promote marine conservation. The content of these articles can range from basic marine biology, through to highlighting the need and importance of marine protected areas, exciting sightings within the MPA, and newsworthy snippets on latest prosecutions.
 - Radio talks on oystercatchers and compliance issues.
- Interpret and disseminate Robberg MPA research for use by the non-research community.

- Ensure that staff, permanent and voluntary, are suitably trained to be competent and capable of executing their functions and have a complete knowledge of the Robberg MPA environment and management issues.
 - There is a two-week certificate course “Introductory Field Ranger Course” through the Nature College near Riversdale which is accredited through THETA. However, this course is terrestrial oriented but still has significant value for any protected area manager.

8.3.2 Provision of opportunities for the multiple use of the area that are consistent with the long term protection of natural resources.

- In consultation with user groups, develop user group guidelines, codes of conduct, and environmental briefing standards that allow for use in a manner that protects the environment. Periodic evaluations to monitor their effectiveness should be undertaken to recommend changes when necessary.
- Promote alternative non-consumptive activities in the Robberg MPA.

8.3.3 Addressing conflict between user groups over access to, and use of, the MPA.

- In partnership with user groups, develop appropriate signage, information on zoning and resource information to reduce user conflicts and ensure protection of the marine environment.
- Facilitate communication between user groups to address user issues.

8.3.4 Promotion of voluntary compliance with Regulations and awareness of the marine ecosystem through education of interested and affected parties.

- Provide information on the Robberg MPA for inclusion in awareness at the community level, and provide support to educators to implement these materials.
- Conduct a public information campaign on the Robberg MPA rules and regulations.
- Meet with other education stakeholders and interested and affected parties to coordinate and plan education programmes and messages.
- Disseminate information and encourage individual and community participation in the Robberg MPA through the Robberg Nature Reserve and MPA Working Committee.

8.3.5 Encourage opportunities for the involvement and upliftment of historically disadvantaged communities in the vicinity of the Marine Protected Area.

- Promote the understanding of the benefits of the MPA to the local community.
- Encourage local representation in Robberg Nature Reserve and MPA Working Committee.
- Provide existing and future educational materials in a manner consistent with community educational backgrounds.

8.3.6 Enhance marine protected area management through partnerships at the local, provincial, national, and international levels.

- Consider development of a local MPA interpretative centre using the current Robberg Nature Reserve Visitor Centre as a partnership opportunity.

8.3.7 Encourage public participation and voluntary compliance with Regulations through use of volunteers.

- Develop/enhance the volunteer training programme for the Robberg MPA.
- Prioritise working with previously disadvantaged communities to encourage and support volunteer opportunities.
- Develop formal and informal education-based volunteer programmes.
- Introduce community-based volunteer research and monitoring programmes such as REEF (Reef Environmental Education Foundation).
- Develop recognition and benefits for volunteers (letter of reference, community recognition through media, hats, t-shirts, etc).

9.0 SCIENTIFIC RESEARCH AND MONITORING

9.1 OVERVIEW

Scientific research and monitoring are key components of MPA management. Scientific research is commissioned into specific fields to inform managers of biological or socio-economic processes that are important for the running of the MPA. Monitoring forms part of important feedback mechanisms that indicate the effectiveness of the MPA in achieving its defined goals. In addition, MPAs are used to support research projects of academic or commercial interest. All scientific research and monitoring should be compatible with MPA objectives. Existing research and monitoring projects are listed in Appendix 8. Appendix 9 outlines a list of references that are relevant to the MPA (See Actions 5.1.1, 5.1.2, 5.1.3, 5.1.3, 5.1.4, 5.1.5, 5.1.6, 5.2.4 and 5.3.1(b)).

Two issues involving scientific research and monitoring in the Robberg MPA need to be considered:

- 1) the research and monitoring requirements of the Manager (see 9.3); and
- 2) the management of other research and monitoring within the MPA (see 6.7).

9.2 OBJECTIVES

1. To provide information for management decisions and strategies.
2. To maintain a current understanding of the state of the values of the MPA, and to identify threats at an early stage.
3. To facilitate scientific research and understanding of the physical, biological and socio-economic systems of the Robberg MPA.

9.3 BASELINE COLLECTION, SCIENTIFIC RESEARCH AND MONITORING PRIORITIES

The baseline collection, scientific research and monitoring requirements of the Manager may either be conducted by (a) the Managing Agency, (b) a contractor or (c) the Manager may encourage separately-funded research institutions to conduct this work.

The baseline, scientific research and monitoring requirements are separated into three categories:

1. Biodiversity and ecological processes;
2. Fisheries; and
3. Non-consumptive activities.

9.3.1 Biodiversity and Ecological Processes

- Analyse and compile existing data to facilitate management of the MPA and to identify critical gaps in our information.
- Map the physical environment (bathymetry) to determine the distribution of ecosystems (e.g. reef vs sand).
- Survey the ecosystems of the MPA to determine habitat diversity and community structure (e.g. fish, corals, sponges).
- Identify and investigate ecological processes to gain an understanding of the MPAs ecosystem functioning.
- Conduct monitoring of episodic events (e.g. red tides, bleaching events).
- Identify biodiversity targets (e.g. rare and threatened species).
- Identify threats to biodiversity targets.
- Measure trends in the state of biodiversity and the magnitude of threats.
- Identify and establish benchmark areas for monitoring and scientific research and investigate the possibility of zoning to provide protection for research and monitoring sites.
- Measure impacts/change as a result of activities occurring in the MPA.
- Develop a spatial database that includes biodiversity information, threats and trends in their status (locally maintained GIS).
- Develop, implement and maintain databases of information relevant to the management of Robberg MPA and develop a meta-database that will provide an interface capable of accessing information from all these databases (in conjunction with MCM).
- Interpret and feed research and monitoring data to management (compliance and educators) and the community.

- Establish protocols and methods to determine threshold limits of acceptable change on a site specific basis (related to zoning). In particular, determine acceptable levels of use by tourism, recreation and fishing.
- Develop collaborative research and monitoring arrangements with tertiary institutions and other research groups.
- Ensure information from stranded marine animals is collected, collated and interpreted.

9.3.2 Fisheries Management Actions

- Analyse and compile existing data to facilitate management of fisheries in the MPA and to identify critical gaps in our information.
- Quantify and describe marine resource use and measure trends.
- Develop a specific MPA fisheries database incorporating the NMLS and invertebrate catch statistics (incorporate into meta-database).
- Assess impacts of fisheries on biodiversity and ecosystem functioning.
- Assess impacts of the subsistence fishery.
- Collect data on impacts of line fishing on non-target species.

9.3.3 Non-consumptive user (socioeconomic) activities

- Analyse and compile existing data to facilitate management of the MPA and to identify critical gaps in our information.
- Identify and document activities occurring in the MPA.
- Quantify user activities and measure trends.
- Determine socio-economic profiles (e.g. questionnaires, value of the MPA, financial gain to the surrounding community), to target education and understand issues leading to the displacement of users.
- Develop a spatial database that collates user information (GIS system).

9.4 EVALUATING MANAGEMENT EFFECTIVENESS

Research and monitoring projects will be designed to determine whether the objectives of the MPA are being met. Monitoring will be designed to accurately reflect the changes that require a management response and must be integral to the biophysical

management and management effectiveness process. The choice of indicators/monitoring must be scientifically credible, easy to understand, easy to regularly monitor, be cost effective, have relevance to policy and management needs and purposely contribute to monitoring of the management plan towards its improvement. Appendix 9 includes some references of research/monitoring that has already been conducted in Robberg MPA.

The following Guidebook offers managers a process and methods to evaluate the effectiveness of their MPA for the purposes of adaptive management:

Pomeroy, Robert S., Parks, John E. and Watson, Lani M. (2004) How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating MPA Management Effectiveness, IUCN, Gland, Switzerland & Cambridge, U. K.

MCM has developed a generic list of monitoring that should be conducted at MPAs (Appendix 10). This monitoring is focused on a national level rather than at a local level. That is, it is envisaged that this monitoring should occur at all South African MPAs to get an overall view of the state of the marine environment in South Africa.

10.0 ADDITIONAL STATUTORY PROVISIONS/POLICY REQUIREMENTS

These requirements are based on the Key Performance Areas described in Chapter 6 and are considered necessary to adequately manage Robberg MPA in addition to the MLRA. Many of these additional requirements need to be included in legislation to enable their enforcement (See Action 5.3.3). It has been indicated in each case how this activity should be managed as follows:

- via “Permit conditions”; or
- via “Marine Protected Area Regulations” under Section 43 of the MLRA; or
- Regulations under the MLRA.

Table 2 summarises the extra statutory provisions required to ensure the proper management of the MPA.

10.1 MPA Boundary and Zoning

- (a) There must be two types of zones named within the MPA as follows (Figure 3):
Controlled Zone (recreational line fishing from shore); and
Restricted Zone (no fishing). [Regulations under the MLRA].
- (b) The Controlled Zone boundary (i.e. the recreational line fishing from shore area) must be reduced. The revised boundary coordinates as follows:
 - (i) The Controlled Zone runs from the northwestern MPA boundary from the high water mark (approx. 34°04’916S, 23°22’300E) to the northeastern MPA boundary (34°04’916S, 23°25’967E) and then from the high water mark at “The Point” (approx. 34°06’33S, 23°24’9E) and extends to one nautical mile offshore (approx. 34°06’500E, 23°25’000S).
 - (ii) The Restricted Zone boundary will be increased and includes the rest of the MPA. The Restricted Zone runs from the high water mark at “The Point” (approx. 34°06’33S, 23°24’9E) and extends to one nautical mile offshore (approx. 34°07’633S, 23°25’967E) and then to the southeastern MPA boundary (approx. 34°07’633S, 23°25’967E) and then to the southwestern MPA boundary (approx. 34°07’633S, 23°22’300E) and then to the high water mark (approx. 34°07’633S 23°22’300E).

*Justification - The naming of zones is important for enforcement purposes and for clarification to the public. The more complex that MPA requirements become (i.e. multiple use concepts) in the future will necessitate clarification of zones. To reduce pressure on the inside reef areas and enable the MPA to be more effective for reef fish dispersal, there must be an area provided where fishing cannot occur from the shore. This will assist in the protection of slow recruitment species (e.g. red roman (*Chrysoblephus laticeps*), black musselcracker (*Cymatoceps nasutus*), red stumpnose (*Chrysoblephus gibbiceps*) to allow for greater recruitment of these species.*

- (c) The MPA boundary coordinates must be reviewed to include airspace as part of the MPA and the MPA should be registered as a “restricted airspace” with the Civil Aviation Authority through a legal process, the suggested height restriction is 1000 feet.

The revised boundary coordinates as follows: The MPA shall include the airspace to 1000ft above sea level.

Justification – There needs to be an ability to manage airspace, i.e. low flying aircraft that may impact on the natural values of the MPA (e.g. breeding shorebirds, whales) and to manage amenity issues. There is an airport approximately 5km west of Robberg MPA and currently there are no height restrictions above the MPA because of the close proximity of the airport.

10.2 Fishing

- (a) No person may fish or attempt to fish from shore before sunrise and after sunset.
[Marine Protected Area Regulation].

Justification - Many illegal activities occur in MPAs during the night hours so to ensure greater compliance with the MLRA, fishing must be excluded during night hours.

- (b) Fishing gear must not be on board vessels that enter the Marine Protected Area
[Marine Protected Area Regulation].

Justification - Fishing from a vessel is not permitted in the MPA. Due to the size and location of the MPA, there is no reason why a vessel carrying fishing gear would need to traverse the MPA to reach another location, unless they intended to access the shoreline within the MPA. Currently it is possible for people to land vessels on the shoreline within the MPA and then fish from more remote locations, however, this activity is difficult to manage. The above regulation would assist in the management of this activity.

- (c) No person may be in possession of a speargun in the Marine Protected Area [Marine Protected Area Regulation].

Justification – Spearfishing is not permitted in the MPA, therefore people should not be carrying spearguns.

- (d) No person may organise or conduct, or attempt to organise or conduct a fishing competition in the Marine Protected Area [Marine Protected Area Regulation].

Justification – Fishing competitions are considered to have a significant impact on the natural values of the MPA and are not compatible with the objectives of Robberg MPA.

10.3 SCUBA diving

- (a) No person may SCUBA dive or attempt to SCUBA dive in the Marine Protected Area except on the authority of a Recreational SCUBA diving permit [Marine Protected Area Regulation].

Justification - SCUBA diving has the potential to impact on the natural resources of the MPA. Specific management is required to ensure dive sites are protected.

- (b) Recreational SCUBA diving is prohibited in Robberg MPA unless carried out with a permitted SCUBA diving business operator [Permit Condition].

Justification – Codes of Conduct have been developed to ensure that only low impact diving occurs and in many instances the presence of an experienced dive master is necessary, this would be difficult to manage unless with a dive business operator. The available dive sites in Robberg MPA are difficult dives requiring good local knowledge and skills.

- (c) No person may operate or attempt to operate a SCUBA diving business in the Marine Protected Area except on the authority of a SCUBA diving business permit [Marine Protected Area Regulation].

Justification – SCUBA diving businesses have the potential to impact on the natural resources of the MPA, especially large groups that regularly access particular sites. Specific management is required to ensure dive sites are protected.

Policy – There are two dive sites within the MPA, including “The Island” and “Whale Rock”. It is considered that these two sites could support no more than two permitted SCUBA diving business operators. It is also considered that no more than ten clients per vessel should be diving at one time.

- (d) No person may SCUBA dive or attempt to SCUBA dive in the Marine Protected Area before sunrise and after sunset [Marine Protected Area Regulation].

Justification – Many illegal activities occur in MPAs during the night hours so to ensure greater compliance with the MLRA, diving will be restricted to daylight hours. Codes of Conduct have been developed to ensure that only low impact diving occurs, this would be difficult to manage during the night hours.

- (e) The following should be included as standard conditions on SCUBA Diving Business Operators permits:
- The permittee must submit to MCM the previous month’s data on the “Monthly Data Return Sheet” by the 7th day of the subsequent month.
 - The permittee must radio the manned access gate at Robberg Nature Reserve of their arrival into the MPA and advise how many clients are on board and where in the MPA they will be accessing.

Justification - It is essential that CapeNature collects data on the number of divers accessing various locations to manage cumulative impacts.

- (f) The following must be included as standard conditions on all SCUBA Diving Permits (Recreational and SCUBA Diving Business Operators):
- The permittee must not conduct fish feeding, chumming or dump any material, or discharge any attractants in the MPA.
 - The permittee must not use cages for the purposes of cage diving in the MPA.
 - The permittee must not use or possess any electro/acoustic-discharging devices in the MPA.
 - The permittee must not use or possess a Diver Propulsion Vehicle in the Restricted Zones of the MPA.
 - The permittee must not remove or attempt to remove any historical artefact.
 - The permittee must operate in accordance with the “Robberg Diver Code of Conduct”.

Justification – These conditions are considered necessary to ensure that only low impact diving occurs reducing impacts on the values of the MPA.

10.4 Use of Vessels

- (a) The following activities are prohibited:
- Removal, moving, possessing, damaging or interfering with a demarcation buoy or sign in the MPA
 - Placing any buoy or sign in the MPA except under a Section 81 Exemption. [Marine Protected Area Regulation]

Justification – Indiscriminate placing of buoys or signs in the MPA can create amenity issues and become navigation hazards.

- (b) The installation of private moorings is prohibited [Marine Protected Area Regulation].

Justification – The installation of private moorings technically creates private ownership of a portion of the MPA. Private moorings have the potential to create amenity and navigation problems in the MPA, especially if these moorings are not well maintained.

- (c) No person may conduct or attempt to conduct any motorised watersports within the marine protected area [Marine Protected Area Regulation].

Justification – Motorised watersports are considered to have an undesirable impact on the natural values of the MPA and are in most instances not compatible with the objectives of Robberg MPA. They have potential to disturb shorebirds and impact the amenity values of the MPA.

- (d) Non-motorised watersports may only occur in the designated areas [Marine Protected Area Regulation].

Justification – Non-motorised watersports can range from very low impact (e.g. kayaking) to fast moving higher impact activities (e.g. kite surfing). There needs to be an ability to designate areas within the MPA to ensure there is no conflict between users and to reduce impact on the MPA.

- (e) No person may attempt to use any type of personal watercraft or hovercraft within the Marine Protected Area [Marine Protected Area Regulation].

Justification – Personal watercraft and hovercraft are considered to have an impact on the values of the MPA and are in most instances not compatible with the objectives of Robberg MPA. They have potential to disturb shorebirds and impact on the amenity values of the MPA.

- (f) No person may moor or anchor any vessel within the Marine Protected Area (except under a Section 81 Exemption for Research) [Marine Protected Area Regulation].

Justification – The installation of moorings is not permitted in the MPA (as noted in 9.4(b)) and anchoring may cause damage to habitat, especially impact on Echinodiscus bisperforatus (Pansy shells). This species has very limited habitat and have been severely impacted by collectors.

- (g) All vessels that deploy divers must display an alpha flag [Marine Protected Area Regulation].

Justification – To reduce user conflict and ensure diver safety.

- (h) No person may attempt to move a vessel closer than 50 metres to a seal that is out of the water [consider as a regulation under the review of *Sea Birds and Seals Protection Act No. 46 of 1973*].

Justification – Vessels accessing too closely to a seal colony can panic seals causing injury and death to animals. The research in Australia has found that vessel approach closer than 30 metres causes significant disturbance (Boren, Gemmel and Barton 2002). Current permit conditions for vessel approach in Tasmania, for example, are 10m to seal in water, 50m for haulouts and 100m for breeding colonies. It is also recommended that land approaches should never occur at breeding colonies.

The current commercial whale watching operators have a condition allowing them to approach a seal colony up to a distance of 20 metres at a no wake speed and can approach up to a distance 50m travelling any speed. CapeNature will liaise with MCM to determine whether there should be consideration of a change in commercial whale watching permit conditions.

10.5 Tourist Programmes

- (a) No person may operate or attempt to operate a Tourist Programme in the Marine Protected Area except on the authority of a Tourist Programme permit. [Marine Protected Area Regulation]

Justification – There is the potential for many tourist programmes to occur in the MPA apart from the SCUBA Dive Business Operations. This regulation is required to adequately manage all activities and to ensure equity among commercial user groups.

10.6 Other activities

(a) No person may conduct commercial photography or attempt to conduct commercial photography in the Marine Protected Area except on the authority of a commercial photography permit [Marine Protected Area Regulation].

Justification – This regulation is required to ensure equity among commercial user groups and to adequately manage this activity.

The following should be included as standard conditions on MPA Permits issued for Commercial Photography:

- Commercial photography will be levied at a daily charge for:
 - (a) Documentary;
 - (b) Feature or advertising; or
 - (c) Filming with assistance of CapeNature staff or facilities.
- The holder of the MPA Permit for Commercial Photography must ensure CapeNature has free access to any footage/photographs collected in the MPA for non-commercial purposes.
- No object or equipment may be fixed to or rest upon any part of the substrata during filming activities in the Restricted Zones.

(b) No person may use aircraft or attempt to use aircraft in the Marine Protected Area except on the authority of a permit to use aircraft in the Marine Protected Area [Marine Protected Area Regulation].

Justification – There is the potential for user conflict regarding low flying aircraft, including amenity issues and impacts on natural values, including breeding birds.

(c) No person may feed or attempt to feed a seal. Consider as a Regulation under the *Sea Birds and Seals Protection Act No. 46 of 1973 or possibly as a MPA Regulation*].

Justification – There have many cases globally where the feeding of marine mammals has resulted in detrimental impacts to the animals and creates safety issues for people.

- (c) No person may camp or attempt to camp in the Marine Protected Area [Marine Protected Area Regulation].

Justification – This activity is not compatible with the natural values of the MPA and to ensure consistency with the adjacent Robberg Nature Reserve where camping is only permitted at designated sites.

- (d) No person may light or attempt to light a fire in the Marine Protected Area [Marine Protected Area Regulation].

Justification – The MPA is adjacent to Robberg Peninsula Nature Reserve which contains high fire danger habitat - fynbos.

- (e) No person may conduct an organised event or attempt to conduct an organised event in the Marine Protected Area except on the authority of a permit [Marine Protected Area Regulation].

Justification – Events involving concentrated groups of people can have undesirable impacts on the MPA which must be managed.

10.7 Scientific Research

The following must be included as standard conditions on Exemptions under Section 81 of the MLRA for Scientific Research:

- The permittee must submit annual reports and final reports to CapeNature and MCM at the completion of their scientific research programmes.
- The permittee must ensure that all equipment deployed in the MPA is marked with the permit holder's name and their permit number.
- The permittee must ensure that all equipment is removed at the end of the study and prior to the expiry of the Scientific Research Permit.

- The permittee must inform the Conservation Manager of their arrival one week in advance.
- The permittee must not use rotenone, poisons, or chemicals to catch fish in the MPA.
- The permittee must ensure that where footage/photographs are collected, CapeNature has free access to these footage/photographs.

Justification – These conditions are necessary to adequately manage Scientific Research. Section 44 of the MLRA states that no person may use, permit to be used, or attempt to use any poison or other noxious substance for the purpose of killing, stunning, disabling or catching fish, or of in any way rendering fish to be caught more easily. However, holders of Section 81 Exemptions under the MLRA may be excluded from this requirement, therefore wording from Section 44 should be included as a standard condition. The use of these chemicals is indiscriminate and not compatible with the goals of the MPA.

10.8 Permit Types

Three types of permits will be issued for activities in Robberg Marine Protected Area:

(a) Fishing Permits

Fishing Permits issued under Section 13 of the *Marine Living Resources Act (No. 18 of 1998)* are necessary for any form of marine fishing in South African waters, including recreational, subsistence, fishing charters and commercial fishing. Where appropriate, Fishing Permits will be endorsed for access to the Robberg Marine Protected Area.

(b) Marine Protected Area Permits

Marine Protected Area Permits are issued under Section 43 of the *Marine Living Resources Act (No. 18 of 1998)*. Until specific permit requirements are promulgated, these permits will authorise activities not covered under Section 13 or Section 81.

(c) Section 81 Exemptions for Scientific Research

Research Permits are issued under Section 81 of the MLRA which states “*If in the opinion of the Minister there are sound reasons for doing so, he or she may, subject to conditions that he or she may determine, in writing exempt any person or group of persons or organ of state from a provision of this Act*”.

All permits will be subject to a fee under Section 25 of the *Marine Living Resources Act (No. 18 of 1998)*.

Table 2
Summary of Additional Statutory Provisions Required for the Robberg MPA (see Action 5.3.2)

| Activity | Restricted Zones | Controlled Zones (shoreline) |
|--|-------------------------|------------------------------|
| Fishing | | |
| Recreational line fishing from shore between during daylight hours | No | P ¹³ |
| Recreational line fishing from shore before sunrise and after sunset | No | No |
| Recreational line fishing from a vessel | No(a) | No(a) |
| Spearfishing | No (a) (b) | No(a) (b) |
| Bait collection | No | No |
| Recreational/Tourist Activities | | |
| Tourist Programmes (including marine animal watching, excluding motorised watersports) | P ⁴³ | P ⁴³ |
| Tourist Programmes involving motorised watersports and aircraft use | No | No |
| Recreational vessel use (excluding motorised watersports) | Yes(c) | Yes(c) |
| Recreational Motorised watersports (excluding Personal watercraft) | No | No |
| Recreational aircraft use below 1000ft | P ⁴³ | No |
| Commercial Boat-based whale watching | No | No |
| Use of Personal Watercraft | No | No |
| Use of Hovercraft | No | No |
| Camping | N/A | No |
| Light a fire | N/A | No |
| SCUBA diving | | |
| Recreational diving | P ⁴³ (d) (e) | P ⁴³ (d) (e) |
| SCUBA diving businesss | P ⁴³ (d) | P ⁴³ (d) |
| Anchoring/Mooring | | |
| All users | No | No |
| Installation of private moorings | No(f) | No(f) |
| Competitions | | |
| Fishing competitions | No | No |
| Organised events | P ⁴³ | P ⁴³ |
| Photography | | |
| Recreational | Yes | Yes |
| Commercial photography | P ⁴³ | P ⁴³ |
| Scientific Research | P ⁸¹ | P ⁸¹ |
| Vehicles | N/A | No(g) |

P¹³ Permit required under Section 13 of the MLRA (**Fishing Permit**), which must have specific endorsements to allow access to Robberg Marine Protected Area

P⁴³ Permit required under Section 43 of the MLRA (**Marine Protected Area Permit**)

P⁸¹ Exemption under Section 81 of the MLRA

Yes Allowed without a Permit

No Prohibited

(a) No fishing gear allowed in vessels in the MPA.

(b) No person may be in possession of a speargun in the MPA

(c) Areas will be designated for non-motorised watersports

(d) The Plan states that all SCUBA diving will be restricted to daylight hours. Recreational and SCUBA Diving Business Operators may not dive before sunrise and after sunset. A permit condition will also be included requiring the vessel operators to log all trips with CapeNature.

(e) Recreational SCUBA divers may only access the MPA as a client of a permitted SCUBA diving business operator

(f) Note that there are also requirements under the *Seashore Act (Act 21 of 1935)* regarding installation of moorings

(g) Unless issued with an Exemption under NEMA

11.0 ROBBERG NATURE RESERVE AND MARINE PROTECTED AREA WORKING COMMITTEE

11.1 OVERVIEW

A Robberg MPA Working Committee will be amalgamated with the Robberg Nature Reserve Working Committee to discuss management activities, monitoring and research in the MPA. This committee will become known as the Robberg Nature Reserve and Marine Protected Area Working Committee.

There is no statutory requirement to convene a Working Committee, however, to ensure community involvement in managing the MPA, it is recommended that a Working Committee be established. The Committee will aim to involve all stakeholders associated with the Robberg MPA (See Actions 5.2.1, 5.2.2, 5.2.3, 5.2.4 and 5.2.5).

11.2 IMPLEMENTATION PROCESS FOR A WORKING COMMITTEE

CapeNature recognises the importance of co-management of our marine resources. The Committee will be representative of the current stakeholders (see Actions 5.1.6, 5.2.1 to 5.2.5).

- **Composition of the Committee**

The Committee will be formalised as soon as possible. A formal letter of invitation and advertisements placed in local newspapers calling for nominations to participate will be forwarded to appropriate groups. Each group will nominate in writing a representative and also an alternative representative, who will represent their constituency only when the nominee is unavailable, and forward this name to CapeNature. Representatives will include:

- CapeNature (MPA manager, management representative);
- Marine and Coastal Management (MCM);
- Recreational diving community;
- SCUBA Dive Business Operators;
- Recreational fishers;
- Fishing charter operators;

- Commerce;
- Tourism industry;
- Rate Payers Association of Plettenberg Bay;
- SAMSA;
- SAPS Coast Patrol;
- Municipality of Greater Bitou; and
- NGOs.

The current Robberg Nature Reserve Working Committee has the following representatives:

- Chair – Capenature;
- Secretary – CapeNature;
- Plettenberg Bay Environmental Forum;
- Plettenberg Bay Angling Club;
- Friends of Robberg;
- Botanical Society;
- Wildlife Society;
- Plettenberg Bay Aesthetic Committee;
- Plettenberg Bay Ratepayers Association;
- Plettenberg Bay Bird Club; and
- Any member of public may attend.

Chair’s role: The Chair will be a CapeNature staff member. The Chair schedules and sets agendas for the Committee meetings and presides over all meetings of the Committee, and ensures that meetings are run according to accepted meeting practices, signs all correspondence and documents authorised by the Committee, and generally represents the Committee’s interests and concerns to the public.

Vice-Chair: The Vice-Chair will be a CapeNature staff member, which will serve as Chair in the absence of the Chair and assists as necessary in performing executive duties of the Committee.

Secretary: Prepares and convenes meetings, circulates notices and takes minutes. The secretariat (secretary plus resources will be supplied by CapeNature).

Roles of the Working Committee

1. Provide input to CapeNature on Robberg MPA plans and proposals.

2. Help identify and resolve issues and conflicts, including emerging issues.
3. Serve as a liaison between the Committee and the community, disseminates information about Robberg MPA to the various stakeholders and brings the concerns of stakeholders and the public to the CapeNature staff.
4. Assist in identifying potential partners and stakeholders with which the Robberg MPA should be working.
5. Assist in identifying and securing priority partnerships, with special reference to previously disadvantaged communities.
6. Provide technical and background information on issues facing the Robberg MPA.

- **Committee meetings**

It is anticipated that the Working Committee may meet every sixth month. The Chair will develop meeting agendas and make those available to Committee members in advance. Meeting notes will be taken by a CapeNature staff member, and be available to the public upon request.

- **Financing of the Working Committee**

The cost of the secretary, the hiring of venues, paper postage, and miscellaneous items required for meetings will be covered by CapeNature, provided MCM is forthcoming with their annual budget commitment.

APPENDIX 1

LEGISLATION

Authority for the establishment of MPAs is provided by Section 43 of the *Marine Living Resources Act 18 of 1998*, (hereinafter described as the Act), as follows:

- (1) The Minister may, by notice published in the Gazette, declare an area to be a marine protected area--
 - (a) for the protection of fauna and flora or a particular species of fauna or flora and the physical features on which they depend;
 - (b) to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or
 - (c) to diminish any conflict that may arise from competing uses in that area.

- (2) No person shall in any marine protected area, without permission in terms of subsection (3)
 - (a) fish or attempt to fish;
 - (b) take or destroy any fauna or flora other than fish;
 - (c) dredge, extract sand or gravel, discharge or deposit waste or any other polluting matter, or in any way disturb, alter or destroy the natural environment;
 - (d) construct or erect any building or other structure on or over any land or water within such a marine protected area; or
 - (e) carry on any activity which may adversely impact on the ecosystems of that area.

- (3) The Minister may, after consultation with the Committee, give permission in writing that any activity prohibited in terms of this section may be undertaken, where such activity is required for proper management of the Marine Protected Area.

APPENDIX 2

OTHER RELEVANT LEGISLATION/POLICY

- *National Environmental Management: Protected Areas Act (No. 57 of 2003)* – Section 38(4) states “*Marine and terrestrial areas with common boundaries must be managed as an integrated area by a single management authority*”
- *National Environmental Management: Biodiversity Act (No. 10 of 2004)*
- *Maritime Zones Act (No. 15 of 1994)*
- *Sea Birds and Seals Protection Act (No. 46 of 1973)*
- *Sea Shore Act (No. 21 of 1935)*
- *Nature and Environmental Conservation Ordinance, (Ordinance 19 of 1974)*
- *National Heritage Resources Act 1999*
- Coastal Management Policy Programme 1998: Coastal Policy Green Paper: Towards Sustainable Coastal Development in South Africa, Cape Town: The Department of Environmental Affairs and Tourism
- Coastal Management Policy Programme 2000: White Paper for Sustainable Coastal Development in South Africa, Cape Town: The Department of Environmental Affairs and Tourism

APPENDIX 3

RELEVANT CONTINGENCY PLANS

MCM to provide more information on contingency plans that are currently available

DEAT (2002) Coastal Oilspill Contingency Plan, No. 8 Knysna Zone

SANCCOB (2005) SANCCOB Contingency Plan for the Capture, Transport, Rehabilitation and Release of Oiled Seabirds Following a Major Oil Spill off the South African Coast

APPENDIX 4

DEFINITIONS OF TERMS USED IN THE MANAGEMENT PLAN

AIRCRAFT – Any craft capable of self-sustained movement through the atmosphere, excluding hovercraft.

ALPHA FLAG - means the ‘diver down flag’ used to indicate that diving operations are in progress and other vessels must keep clear (as taken from *MLRA Regulations*)

BIOPROSPECTING – In relation to indigenous resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes:

- (a) the systematic search, collection or gathering of such resources or making extractions from such resources for purposes or such research, development or application;
- (b) the utilisation for purposes of such research or development of any information regarding any traditional uses of indigenous biological resources by indigenous communities; or
- (c) research on, or the application, development or modification of, any such traditional uses, for commercial or industrial exploitation (as taken from *National Environmental Management: Biodiversity Act 2004*).

CAGE – Equipment that has been submerged in the water for the purpose of protection from marine animals.

CAGE DIVING – Diving in a cage for the purpose of viewing marine animals.

CHUMMING – Depositing organic material or products into the environment for the purpose of attract marine animals, but not including the baiting of hooks for linefishing.

COASTCARE – An educational programme developed by Marine and Coastal Management to promote voluntary compliance and public awareness.

COMMERCIAL ACTIVITY – An activity conducted for financial gain.

COMMERCIAL BOAT BASED WHALE WATCHING – May only occur with a permit issued under Section 58 of the Regulations in terms of the *Marine Living Resources Act 1998*.

COMMERCIAL FISHING – Fishing for any of the species that have been determined by the Minister in terms of section 14 to be subject to the allowable commercial catch or total applied effort or parts of both. (as taken from the MLRA, 1998).

COMMERCIAL LINE FISHING – Fishing conducted in terms of a linefishing right granted by the Department of Environmental Affairs and Tourism (under Section 21 of the MLRA).

COMMERCIAL PHOTOGRAPHY – The use of still, video or cine camera equipment for the recording of images and these images are used for financial gain.

CONTROLLED ZONE – the zone where only linefishing from shore is permitted (no bait collection).

DEMARCATIION BUOY - means a buoy installed to mark the boundaries of the Marine Protected Area and its zones (as taken from *MLRA Regulations*).

DESIGNATED AREA – means an area within a zone or zones set aside for the purposes for special management.

DIVER PROPULSION VEHICLE – A motorised unit that is used to assist or propel divers.

EDUCATION PROGRAMME – An activity that is:

- (i) a component of a course conducted by a school or tertiary institution that is recognised by a provincial or national department responsible for education; or
- (ii) conducted by an overseas institution that is accredited by the national body responsible for education in the country in which the institution is established and is recognised in South Africa by a provincial or national department responsible for education.

ELECTRO-ACOUSTIC DISCHARGING DEVICE - means any device that emits electrical or sonic pulses intended to stun, paralyse, disorientate, repel or kill any form of marine life (as taken from *MLRA Regulations*).

FISH – The marine living resources of the sea and the seashore, including any aquatic plant or animal whether piscine or not, and any mollusc, crustacean, coral, sponge, holothurian or other echinoderm, reptile and marine mammal and includes their eggs, larvae and all juvenile stages, but does not include sea birds and seals. (MLRA, 1998)

FISH FEEDING – Intentionally providing food to attract fish.

FISHING CHARTER - A commercial operation that provides transport, leads or guides fishers for financial gain.

FISHING COMPETITION – A fishing competition that is open to the public for a fee and/or one in which prizes are offered.

HOVERCRAFT – means a vehicle that travels on a cushion of air (as taken from *MLRA Regulations*).

the Manager – CapeNature (CapeNature).

MARINE LIFE – includes any aquatic plant or animal whether piscine or not, and any mollusc, crustacean, coral, sponge, holothurian, echinoderm, reptile and marine mammal and includes their eggs, larvae and all juvenile stages, and includes sea birds and seals.

the MINISTER - means the Minister of Environmental Affairs and Tourism

MOTORISED WATERSPORTS – The operation of motorised vessels to tow recreational equipment (e.g. paraflaying, water skiing).

NETS – Includes beach-seine net, bottom trawl-net, cast-net, drag-net, hoop-net, purse-seine-net, shove-net and set-net.

NON-MOTORISED WATERSPORTS – The operation of vessels that are not motorised (e.g. sea kayaks, surf kites)

ORGANISED EVENT - An organised event, including competitions but excluding fishing competitions.

PERSONAL WATERCRAFT - means a power driven vessel that has a fully enclosed hull and that is designed to be operated by a person standing, crouching or kneeling on it or sitting astride it (as taken from *MLRA Regulations*).

POWERHEAD – means a device by means of which a fish may be taken and may be attached to a spear or speargun and that consists of or contains an explosive charge (as taken from *Government Notice 26433 of MLRA Regulations*).

RECREATIONAL DIVING - An individual or group who undertake scuba diving activities without financial gain.

RECREATIONAL FISHING – means any fishing done for leisure or sport and not for sale, barter, earnings, or gain. (MLRA, 1998).

RECREATIONAL LINE FISHING – Fishing in terms of a recreational fishing permit using a line with less than ten fishing hooks.

RECREATIONAL PHOTOGRAPHY - The use of still, video or cine camera equipment for the recording of images and these images are not used for financial gain.

RESTRICTED ZONES – the Zone where fishing is prohibited.

RISK ASSESSMENT – A process that involves identifying the valued attributes of the marine protected area that are considered to be at risk and determining when an impact is deemed to be significant on these values.

SCIENTIFIC RESEARCH - means research carried out by a recognised institute established for the purposes of research, or research carried on by a recognised institute of higher learning, provided that to undertake such scientific research the recognised institute requires its staff, students or contractors to enter the Marine Protected Area (as taken from *MLRA Regulations*).

SCUBA DIVING - means swimming below the surface of the sea with the aid of compressed or pumped air or other gases (as taken from *MLRA Regulations*).

SCUBA DIVING BUSINESS - means a commercial enterprise which involves transporting, guiding or providing SCUBA gear to SCUBA divers (as taken from *MLRA Regulations*).

SPEARFISHER – means a person who undertakes fishing with the use of a speargun (as taken from *MLRA Regulations*).

SPEARFISHING – Fishing by means of a speargun.

SPEARGUN - means a device by which a spear is projected by mechanical or pneumatic means (as taken from *MLRA Regulations*).

STOWED – secured in such a way that it is not available for immediate use.

SUBSISTENCE FISHER - A natural person who regularly catches fish for personal consumption or for the consumption of his/her dependents, including one who engages from time to time in the local sale or barter of excess catch, but does not include a person who engages on a substantial scale in the sale of fish on a commercial basis (MLRA, 1998).

TOP MAN – A person who remains on a vessel from which divers have alighted. A top man must hold a commercial skipper's licence when operating a SCUBA diving business and must hold at least a sport and recreational Skipper's Licence when conducting recreational diving.

TOURIST - A person who is in the marine protected area for recreation, including, for example, recreational fishing or sight seeing.

TOURIST PROGRAMME – An activity conducted for financial gain that includes the provision of transport, accommodation or services for tourists, advertising or promoting the use of a marine protected area as part of the programme, advertising or promoting the use of a marine protected area as a feature associated with a resort or tourist facility on land adjoining the area and includes traversing the Robberg Marine Protected Area to conduct tourist programmes outside of the MPA.

TRAVERSING – a vessel entering the MPA for the purpose of accessing another area outside of the MPA.

APPENDIX 5

ROBBERG MPA FISHERS CODE OF CONDUCT

1. No fishing line may be discarded. Fishers must make an active attempt at low tide to remove fishing line broken off on reefs.
2. No “trash” fish may be destroyed, for example, Sand sharks and evil eye blaasop etc. Each species plays an important role in the ecosystem. Release these fish carefully.
3. Do not damage substrate by trampling on sensitive habitat.
4. Promote catch and release. The use of barbless hooks will ensure that fish can be released without too much damage to reduce fish mortalities.
5. Promote the use of circle hooks and corrodible varieties that rust in time.
6. ORI Linefish Catch Cards should be completed for all trips, even if no fish were caught.

APPENDIX 6

ROBBERG MPA DIVER CODE OF CONDUCT

This Divers Code of Conduct was based on the Ezemvelo KwaZulu-Natal Wildlife brochure entitled “Sodwana Bay Diver’s Guide” prepared by Jone Porter in 1999 and was further refined with CapeNature through the development of the Robberg MPA Management Plan. Modifications have also been made to be in accordance with current legislation.

Vessels

1. Skippers should familiarise themselves with the local conditions and rules before launching.
2. A top man must be present at all times on the dive vessel. The top man must be a registered skipper.
3. Vessels must fly an Alpha flag if there are divers in the water.
4. Each dive vessel must remain within 50 metres of its surface marker.
5. A person in control of a vessel must not bring a boat closer than 30 metres to a dive vessel displaying an alpha flag.
6. No anchoring may take place within the Marine Protected Area, except in cases of emergency (Recommended as a Regulation).

Diving

7. Divers must adhere to training standards and guidelines developed by recognised national certifying organisations and under no circumstances are they to dive beyond their qualification.
8. All SCUBA diving business groups must tow a visible surface buoy.
9. Do not touch the reef areas - this causes breakages and infection of damaged areas due to the transmission of toxins and disease from one coral to another.
10. Divers are discouraged from wearing gloves - this prevents holding onto the reef. Holding onto the reef in a current or surge is particularly damaging and gloves can be a major vector of toxins and diseases between species.
11. Reef damage by diver’s fins is frequently caused by either kicking the reef or kicking up sand that can “choke” filter feeders. If you haven’t dived in a while your skills may need sharpening. Before heading to the reefs, spend some bottom time familiarising yourself with buoyancy and other techniques again.
12. Underwater photographers should exercise extreme caution when taking close-ups - no hanging on to marine life and no placement of equipment on the substrate.
13. Do not collect souvenirs (dead or alive). Everybody must have the opportunity to see an untouched environment.
14. Report environmental disturbances or destruction of your dive sites to CapeNature.
15. Never surround an animal/s. There should always be an area for the animal/s to move away from you.
16. Never touch marine animals. Don’t hold onto turtles or seals as they can drown easily.
17. Standard permit condition for SCUBA Dive Business Operators will state that “*The permittee must not conduct fish feeding, chumming or dump any material, or discharge attractants in the MPA*”.

18. Do not interfere with scientific equipment or markers.

Diving with Seals

19. Do not attempt to touch, chase, feed or lure seals.

20. Seals have right of way.

21. Do not shine bright lights in the seal's eyes.

22. The seals are often inquisitive. Should a seal approach, keep still and maintain buoyancy.

APPENDIX 7

INFORMATION REQUIRED FOR SCIENTIFIC RESEARCH APPLICATIONS

Applicants must:

1. Submit qualifications and experience.
2. Submit information on which research/educational institute they are affiliated with.
3. If the scientific research involves the use of vertebrates, provide contact details of appropriate ethics committee. When the scientific research has ethical approval, forward any supporting documents that demonstrate that you have clearance for the proposed scientific research from the Ethics Officer (MPA Permits for Scientific research will not be issued unless ethics approval, where required, has been received).

General Requirements

1. A description of the proposed scientific research including:
 - the purpose of the proposed research (including a justification and need for the research);
 - details of the proposed procedure/methodology. Include details of the number and types of species to be targeted as part of the research (ie. number and types of species/sampling period and total number and types of species to be collected);
 - details of any related activities proposed, particularly within or adjacent to terrestrial areas declared under the MLRA (ie. national parks or nature reserves);
 - the proposed date of commencement of the scientific research including any timetable, the frequency and any seasonal variations;
 - details of any transport associated with the proposed activities including vessel capacity, size (length and draft), name, registration number and holding tank facilities.
2. A description of the location of the proposed scientific research including:

- the exact location in relation to the Marine Protected Area using accurate charts/maps;
 - the existing use of the site and its location with relation to navigation channels;
 - the existing use of areas adjacent to the location of the proposed research.
3. Information on the likely and/or potential effects on natural resources of the proposed activity, any environmental management arrangements proposed (eg. rehabilitation of substrate, rubbish collection and disposal) and any water quality or other monitoring proposed to check the effects of the activity.
 4. The number of research assistants involved in the research.
 5. Methods proposed for reducing conflict with other users of the Marine Protected Area.
 6. Details of safety issues and how these will be addressed.
 7. Details of any public consultation which may have been conducted in relation to the proposal and the response of community groups, conservation groups and other interested parties (eg. has there been any support or objections for the current proposal?).
 8. Details of any biological samples that are to be sent overseas.
 9. Details of any commercial benefits that may result from the proposed scientific research.

Restricted Zones & Coral/Anemone Collection Requirements

In recognition of the conservation significance of the Restricted Zones and corals/anemones, before any consideration is given to destructive scientific research or scientific research, the proponent will be required to demonstrate that:

- a) there is a need for the proposed scientific research
- b) the scientific research cannot reasonably be obtained outside the MPA; and
- c) the proposed scientific research will not threaten the survival of species occurring within the Robberg MPA.

Please note that the following approvals may also be required to conduct scientific research within the Robberg MPA.

- Ethics approval.
- Export Licence.

Scientific Research Permits will not be issued until copies of the above two approvals have been received.

APPENDIX 8

ONGOING SCIENTIFIC RESEARCH AND MONITORING PROJECTS

1. Fish

Project: To monitor the Recreational Shore angling on the shoreline.

Objective:

To monitor the species, size and Catch per Unit Effort of fish species caught by recreational anglers along the shoreline.

Explanation/Justification:

Shore-angling is the only harvesting being carried out in the MPA and the Oceanographic Research Institute (ORI) data-capturing system is the most accurate form of monitoring line-fish species and size trends. This is a useful tool to guide legislation on fish catch regulations.

Implementation:

- Field rangers approach anglers during their patrols to capture data.
- Catch cards are made available at strategic points.
- Catch cards are collected and sent off to ORI.

2. Marine Mammals

Project: The compilation of a list of marine mammals occurring in the Robberg Marine Protected Area.

Objective:

To compile a comprehensive species list of mammals occurring in the Robberg Marine Protected Area.

Explanation/Justification:

At present no comprehensive species list is available for the Robberg Marine Protected Area. Each species has its own unique ecological and physiological needs and, as a result, different responses to environmental changes will be exhibited by each species. Consequently, species-specific studies are needed to help us understand the ecology, behaviour, evolution, and physiology of as many species as possible, particularly those that could be viewed as keystones in various communities. Studies are also needed on a local scale to help us understand interactions of species within communities, and on a regional scale to allow investigation of entire ecosystems. Species lists are critically important in directing effective and focused flora management.

Implementation:

- Capture all data into the reserve database and GIS.
- Active collecting will be done by reserve staff to confirm and update the provisional species list on a regular basis.
- Acquire the correct baseline collecting equipment such as binoculars and recording sheets.
- All new data and specimens must be sent to Scientific Services.

3. Marine Mammals (Cetaceans)**Project: Humpback Whale migration monitoring.****Objective:**

Past studies have shown the migratory routes of the Humpback Whale to be along the southern coast of South Africa. This project will determine if the Whales do indeed migrate along this route and will also reveal if there is an exact route which is followed. It will establish if there is a pattern between the frequency and position of whale sightings, and the sightings of gannets, weather conditions, season and other cetacean species.

Explanation/Justification:

The annual migration of Humpback Whales from areas of high latitudes to the tropics can be observed from the coast of Plettenberg Bay. As they move from feeding grounds to their breeding location, they can be sighted, recorded, and identified to gather data for further research. The migratory routes of Southern Right and Brydes Whales can also be seen from the coast of Plettenberg alongside the Common Dolphin, Humpback Dolphin, Inshore Bottlenose Dolphin and Killer Whale. This project focuses on the migratory route of the Humpback Whale, but includes observation of common species of cetacean to look for inter-specific relationships and seasonal changes to behaviour and migratory routes.

Implementation:

Using broad spectrum and powerful binoculars, and a 16x optical zoom video-recorder, cetaceans can be spotted and recorded off Robberg Peninsula. The data collection of the survey includes behaviour, cue, species, direction etc. and will be analysed at the end of the survey year. Data will be recorded for a random 6 hours a day for 23 days of each month from October 2004 until September 2005. The times will be within the daylight hours, currently being between 6am and 6pm for two three hour blocks which will be chosen randomly.

The continuing research project sees a selective survey being carried out on a specific 30° angle section of the ocean. This will record sightings for every twenty minute block until 5 minutes has passed where there are no sightings, and then the survey starts again in the next twenty minute period. Video footage will be recorded wherever possible to confirm identity, behaviour etc. and photographs taken for the same reasons.

The observational study will be conducted by volunteers for a random amount of time in the year. This survey will be conducted on the same days at the same times as the selective survey, and will consist of observing the 180° span of the ocean, with similar data to the selective survey being recorded. There will be one or two people conducting this survey working together to record as many sightings as possible.

The third survey, which will be carried out at the same site records Gannet movements, behaviour and direction. Again the times of this will be the same as the selective survey, and this will be one person. There will be a maximum of 4 people surveying at any one time.

4. Invertebrates

Project: Mediterranean Mussel invasion dynamics

Objective:

To monitor the settlement, recruitment, larvae movement and genetic structure of Mediterranean Mussel (*Mytilus galloprovincialis*) in relation to Black mussel (*Perna perna*) species.

Explanation/Justification:

Three different levels of the invasion are being studied:

- 1) Studying mussel settlement and recruitment, which means checking the amount of mussel larvae (*Perna p.* and *Mytilus g.*) reaching, attaching (settlement), and growing (recruitment, becoming part of the adult population) on rocky shores.
- 2) Studying the actual invasion; identify invasive larvae in open water in and out the bay. This is a very important aspect to consider to understand future development of the invasion.
- 3) Looking at the genetics structure of the two mussel species populations.

Implementation:

- This project is currently being initiated by 3 PhD students from Grahamstown University. Staff from Robberg and Robberg will assist in the monitoring of these aspects.

5. Birds

Project: Oystercatcher Breeding success

Objective:

To monitor the breeding success of African Black Oystercatcher along the Robberg MPA, and to ring all fledgelings.

Explanation/Justification:

The African Black Oystercatcher breeds only on the coasts of Namibia and South Africa and is classified in the International Red Data Book as Near-Threatened. Due to a perceived growing threat to the species, the Oystercatcher Conservation Programme (OCP) was launched in January 1998. It was established that movement of surplus birds from protected to unprotected areas is too infrequent to buffer ailing populations.

Implementation:

- Obtain rings from Avian Demography Unit (UCT) by end September.
- Continue with nest monitoring for the duration of the breeding season (Oct to March).
- Colour ring and SAFRING ring fledglings.
- Collect prey remains from feeding piles around nests and send to UCT.
- Compile report on breeding success and send to ADU, MCM and CapeNature.
- Send ringing data to SAFRING.

6. Marine Mammals (Seals)

Project: Population status and diet of the re-established Cape Fur Seal (*Arctocephalus pusillus*) colony on Robberg Peninsula, Plettenberg Bay

Objective:

- A. To establish the diet of seals feeding around Robberg Peninsula.
- B. To establish the population status of the Robberg Peninsula seal colony.

Explanation/Justification:

The management of Robberg Nature Reserve experiences continued and increasing pressure from the local fishers to introduce culling of the resident seal colony, as they claim that the increase of the seal population on Robberg has caused a marked decrease in fish caught in the area. On the other hand it is suggested that the commercial fishing industry is responsible for artificially high seal numbers.

Counts of the seals utilising the shelf, and scats will be collected on a weekly basis. The stomach contents of any available dead seals will be collected and analysed for diet composition. ORI fish catch statistics for the area will be gathered to compare with seal migrations. Local anglers will be interviewed and observations on seal interactions made.

Implementation:

- Bi-weekly counts are being carried out on the colony.
- 10 scat samples are collected at the same time.
- Data will be analysed and reports produced.

APPENDIX 9

REFERENCES

MCM TO PROVIDE A LIST OF REFERENCES OF RELEVANT RESEARCH THAT HAS BEEN CONDUCTED AT ROBBERG MPA

Boren, L. J, Gemmel, N. J. & Barton, K. J. (2002) Tourist disturbance on New Zealand fur seals, *Arctocephalus forsteri*. *Australian Mammalogy* **24**: 85-95

Lemm, S and Attwood, C (2003) State of Marine Protected Area Management in South Africa, WWF-SA

APPENDIX 10

MCM GENERIC LIST OF MONITORING PROJECTS

1. PHYSICAL OCEANOGRAPHY

- (a) sea temperature
- (b) beach profile
- (c) currents (optional)
- (d) turbidity (optional)

2. SPECIES

- (a) intertidal species (age and abundance)
- (b) fish (age and abundance)
- (c) sensitive species (including rare and endangered, CITES listed and RED data listed species)
- (d) alien species

3. POLLUTION

- (a) oil
- (b) heavy metals
- (c) *E. coli*
- (d) litter (e.g. plastic)

4. HUMAN ACTIVITY

- (a) Visitor numbers (gate numbers, vessel numbers and type)
- (b) visitor activities
- (c) transgressions

APPENDIX 11

PERMIT APPLICATION PROCEDURE

Applications need to be made in writing to the Deputy Director General, marked clearly application for a MPA Permit and forwarded to:

Marine and Coastal Management
Private Bag X2
Roggebaai 8012

The application should clearly state the nature and purpose of the activity, where and when the activity will take place.

The fee will be communicated to the applicant upon application.

The applicant will be contacted as necessary regarding specific details of their application.

APPENDIX 12

EQUIPMENT REQUIRED

Equipment required to successfully manage Robberg MPA would consist of:

| EQUIPMENT | REQUIRED | CURRENTLY AVAILABLE |
|-----------------------------|-----------------|----------------------------|
| Hand-held radios (IRC) | 4 | 2 |
| 29 Mgh (Marine)Base Station | 3 | 3 |
| 29 Mgh Mobile (hand-held) | 2 | 0 |
| 29 Mgh Boat radio | 3 | 1 |
| 5 m Semi-rigid vessel | 1 | 0 |
| 40hp Motors | 2 | 0 |
| 5 m Boat trailer | 1 | 0 |
| Compass (boat) | 1 | 0 |
| Safety equipment | 4 | 0 |
| GPS plotter | 1 | 0 |
| 4x4 Vehicle | 1 | 1 |
| Binoculars | 6 | 6 |
| Cellphones | 1 | 1 |
| Stainless steel knives | 2 | 0 |
| First aid kits | 6 | 6 |
| TV monitor & video machine | | |
| Masks & snorkels | 6 | 2 |
| Underwater digital camera | 1 | 0 |
| Diving suits | 7 | 2 |
| Dive tanks | 4 | 2 |