



ROBBERG NATURE RESERVE COMPLEX MANAGEMENT PLAN 2013-2018



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The Robberg Nature Reserve Complex (RNRC) comprises the following:

Robberg Provincial Nature Reserve, established as a Provincial Nature Reserve in terms of Section 6 the Nature and Environmental Conservation Ordinance, 1974, on 25 July 1980 and proclaimed in the Provincial Gazette by Proclamation No. 172/1980.

Robberg Marine Protected Area, established as a Marine Protected Area in terms of Marine Living Resources Act 1998, on 2 September 1998 and proclaimed in the Government Notice by Proclamation No. 18/1998.

Robberg Marine Protected Area, amendment of the boundaries by the extension of the area of jurisdiction in terms of Section 5 of the Marine Living Resources Act 1998, on 29 December 2000 and proclaimed in the Government Notice by Proclamation No. 1429/2000.



Robberg Nature Reserve and adjacent Marine Protected Area as viewed from the east.

[Cover page photo: **Humpback whale (*Megaptera novaeangliae*) in the Marine Protected Area with Robberg Nature Reserve in the background.**]

AUTHORIZATION PAGE

This Integrated Management Plan for the Robberg Nature Reserve Complex (RNRC) was drafted and recommended by the Reserve Management Committee (RMC), a multi-disciplinary team consisting of:

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- *Conservation Manager*
- *Ecological Coordinator*
- *Regional Ecologist*
- *Community Conservation Manager*
- *Tourism Officer*

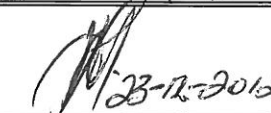
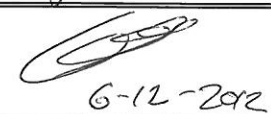
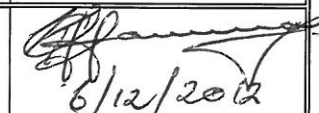
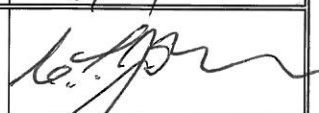
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Name and Title	Signature and Date
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PREAMBLE

The Robberg Nature Reserve Complex (RNRC), which includes the Robberg Nature Reserve and Marine Protected Area falls within the Cape Floristic Region (CFR). The CFR is one of the world's most biologically interesting ecosystems and is an epicentre of diversity and endemism. It is the smallest and richest of the six floral kingdoms in the world, and it is the only one to be found entirely within one country. At least 70% of the plant species and nearly 20% of the genera that make up this region are found nowhere else on earth. This rich biodiversity is, however, under serious threat for a variety of reasons, including conversion of natural habitat to permanent agriculture, inappropriate fire management, rapid and insensitive development, overexploitation of water resources, marine resources, and infestation by alien species. The region has thus been identified as one of the worlds "hottest" hotspots of biodiversity.

In response to this, a process of extensive consultation involving various interested parties, including local government and non-governmental organisations resulted in the establishment of a strategic plan referred to as the Cape Action Plan for the Environment (CAPE) (Cowling *et al.* 1999). It identified the key threats and root causes of biodiversity losses that need to be addressed in order to conserve the floral kingdom. This resulted in a spatial plan identifying areas which need to be conserved and a series of broad programme activities which need to be undertaken over a 20 year period. Based on the situation assessment and analysis of threats, a strategic programme was developed, which is known as Cape Action for People and the Environment (C.A.P.E.). Three overarching themes that complement and reinforce each other were developed:

- establish an effective reserve network, enhance off-reserve conservation, and support bioregional planning;
- strengthen and enhance institutions, policies, laws, co-operative governance, and community participation; and
- develop methods to ensure sustainable yields, promote compliance with laws, integrate biodiversity concerns into catchment management, and promote sustainable eco-tourism.

The RNRC also falls within the Garden Route area, which has been identified as an important area requiring focussed conservation action. This resulted in the establishment of the Garden Route Initiative (GRI), a project aimed at using the above-mentioned three broad strategies (themes) at a regional level to conserve the biodiversity of the area. An important long-term goal is to create a network of corridors for plants and animals to move/migrate in response to climatic change over time, as well as to ensure the conservation and sustainable utilisation of the extremely important ecosystems, habitats and vegetation types in the area. This initiative is dependent upon the participation and collaboration of private landowners, municipalities, government institutions, conservation organisations, NGOs and CBOs, *etc.*

CapeNature is therefore a key role player in achieving the goals of the GRI. Furthermore, the RNRC has been included in the application for Extension Nomination for the Cape Floral

Region Protected Areas World Heritage Site which will be submitted to UNESCO (N.G. Palmer, personal communication).

THE PROCESS

The planning session, facilitated by the Regional Ecologist and guided by the Conservation Manager, defined the vision and purpose of all the nature reserves and marine protected areas in the Garden Route Area (which includes the RNRC) as an umbrella statement, indicating the direction of the management intent for the RNRC to guide the formulation of the management objectives. The management objectives were evaluated against the definitions in “A Procedure for Defining Conservation Management Objectives and Goals” (Coombes and Mentis 1992) and sorted into three categories: Objectives, Action Plans and Tasks.

The final objectives were prioritised through a pairwise comparison and the results were used to populate the section in the management plan referred to as the Strategic Implementation Framework. Actions Plans were associated with Objectives, and Tasks (Activities) were identified within each Action Plan.

Guiding Principles for defining Vision, Purpose, Objectives, Action Plans and Tasks:

VISION: Indicates the direction of management aspiration, describes the unit, reflects uniqueness of the unit and justifies the existence of the unit.

PURPOSE: The foundation on which all future actions are based and is in line with the overall management philosophy of the organisation.

OBJECTIVES: Derived from the vision and purpose, representing key areas in which achievement must be obtained to give direction to the management intention; not measurable or testable; aimed at Key Performance Areas; and prioritised with Action Plans developed.

ACTION PLANS (Operational Goals): Functional Performance Areas which describe expected results which will contribute to the realisation of the objectives. Achievable within capability, Measurable and Attainable. Performance indicators developed in description of outputs: Tasks, responsibilities, indicators, timeframes and references to existing procedures.

Approval Process

The Reserve Management Committee (RMC) compiled the draft Management Plan for review. The RNRC Management Plan was internally reviewed and recommended for stakeholder participation by all Executive Directors, Programme Managers, Catchment Managers, Senior Managers within each Support Service including Financial and Administration Services, Human Resource Management, Occupational Health and Safety, Risk Management and Marketing and Eco-tourism. A review was undertaken by Scientific Services on the ecological content of the Management Plan. Furthermore, an internal review on the scientific and technical content was undertaken respectively, using the CapeNature Scientific and Technical Protected Area Management Plan (PAMP) review template (Waller 2011). The Management Plan was then recommended for stakeholder participation to the

Executive Director: Conservation Management. Stakeholder comments were considered and incorporated. The RNRC Management Plan was reviewed by an independent external reviewer, who commented and concluded that the Management Plan met the criteria as determined in the CapeNature Scientific and Technical PAMP review template. The Executive Directors reviewed the Management Plan and the Executive Director: Conservation Management recommended the plan to the CEO. The Western Cape Nature Conservation Board (WCNCB) Conservation Committee recommended to the WCNCB that the management plan be adopted. The WCNCB adopted the RNRC management plan and submitted to the Department of Environmental Affairs and Development Planning (DEA&DP) for submission to the Provincial Minister for approval.

ACKNOWLEDGEMENTS

The authors would like to express their gratitude to all those who contributed to this Management Plan, including members of the public, community forums, as well as the following individuals:

Messrs N.G. Palmer, P. Meyer, A. Mitchell, and Mss C. Birss, L. Saul and Dr A. Veldtman from CapeNature for providing assistance and input; Dr A. Turner and Ms M. Mdala of CapeNature for doing the scientific and technical review respectively; Messrs N. Hanekom, J. Baard and G. Durrheim, and Mss T. Kraaij and M. Alant from SANParks for commenting on the plan in detail; Mr P. Chadwick of WWF for doing the external review of the document; and Mr E. Matthews from Londoloza Environmental and Conservation Management Solutions cc. for facilitating the public participation process.

EXECUTIVE SUMMARY

In compliance with the National Environmental Management: Protected Areas Act No. 57 of 2003, CapeNature is required to develop management plans for each of its nature reserve clusters. In developing the management plan for the Robberg Nature Reserve Complex (RNRC), CapeNature strives to establish biodiversity conservation as a foundation of a sustainable economy providing ecosystem services, access and opportunities for all.

Robberg Nature Reserve (proclaimed in 1980) and the associated Marine Protected Area (proclaimed in 1998, amended in 2000) are situated on the southern outskirts of Plettenberg Bay and fall within the Bitou Municipal Area. The nature reserve is located on a peninsula which is abutted by upmarket coastal and urban development on the north western boundary and large, rural properties on the south western boundary.

The Bitou Municipal area is home to three of South Africa's seven biomes, those present within the municipality are fynbos, subtropical thicket and forest. The RNRC forms part of the Garden Route Area, an area which is under serious pressure as a result of dense alien plant infestations, afforestation, agricultural developments and urban and coastal developments. It also falls within the Cape Floristic Region (CFR), a global biodiversity hotspot, and under the strategic Cape Action for People and the Environment (C.A.P.E.) programme, which is focused on minimising key threats and root causes to biodiversity loss.

The RNRC also falls within the Garden Route Initiative (GRI) area, part of the C.A.P.E. programme, which is attempting to soften the boundaries between formal protected area conservation, and initiatives on private and communal land, to establish a sustainable conservation economy.

The Management Plan is divided into four parts. The first part outlines the management objective framework of CapeNature and the RNRC. The vision and purpose for the NRC was developed to guide reserve management in its daily operations and longer term planning. The objectives for the RNRC were developed in line with CapeNature's strategic goals, objectives and key measurable objectives.

Part one also highlights the legal framework under which CapeNature and the RNRC operates and details the history and legal status of the NRC, and presents details on abiotic and biotic information, cultural heritage, tourism, and youth development and awareness programmes.

The second part of the management plan outlines the strengths, weaknesses, opportunities and threats (SWOT) of the NRC. A conservation development framework is set out for the NRC, which includes a sensitivity analysis and zonation. In addition to the NRC's zonation plan, an all-inclusive conservation development framework (CDF) and expansion strategy for the NRC is presented. These are in line with local Integrated Development Plans (IDPs) to align and facilitate integrated conservation and development.

Part 3 summarises the RNRC's Strategic Implementation Framework that the NRC plans to implement to ensure that it achieves its management objectives.

Part 4 comprises the references, acronyms and abbreviations.

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PART 1

SECTION 1: MANAGEMENT OBJECTIVES FRAMEWORK

1.1 Vision and Mission of CapeNature

VISION:

A quality driven public entity conserving the unique natural heritage resources of the Western Cape for the benefit of all.

MISSION:

The establishment of Biodiversity conservation as a foundation of a sustainable economy creating access, benefits and opportunities for all.

1.2 CapeNature Strategic Goals, Objectives and Key Measurable Objectives

CapeNature has four strategic goals, underpinned by nine strategic objectives. Each strategic objective is further divided into key measurable objectives, as shown in Table 1.1.

Table 1.1: Summary of CapeNature Strategic Results and Programme Allocations.

STRATEGIC GOAL STATEMENT	STRATEGIC OBJECTIVE STATEMENT	KEY MEASURABLE OBJECTIVES	CURRENT PROGRAMME
1. Securing priority biodiversity and ecosystem services through integrated biodiversity planning and management enabling appropriate climate change response.	1.1 Effective knowledge informs development and conservation priorities.	1.1.1 To provide biodiversity input into Western Cape Provincial land use planning and decision making. 1.1.2 To manage biodiversity knowledge to ensure effective conservation management.	2: Biodiversity Support
	1.2 Implementation of the Western Cape Biodiversity Plan and Protected Area Expansion Strategy secure priority biodiversity.	1.2.1 To ensure rigorous conservation planning in the Western Cape within the national legislative framework. 1.2.2 To implement measures to ensure resilience and persistence of biodiversity of the Province in the light of anticipated climate changes. 1.2.3 A network of Protected Areas with appropriate status and effectively managed by CapeNature (incorporating terrestrial, freshwater and marine).	2: Biodiversity Support 3: Conservation Management
	1.3 Sustained conservation management in priority catchments maintains ecosystem services.	1.3.1 To ensure the implementation of effective conservation management interventions in the Western Cape.	3: Conservation Management
	1.4 Legal and wildlife support services and biodiversity crime prevention result in the protection and sustainable use of biodiversity.	1.4.1 To enhance biodiversity protection and conservation in areas outside the formal CapeNature Protected Area Network.	3: Conservation Management
2. Contributing to the reconstruction and development of social	2.1 Facilitate youth and community development through environmental awareness and	2.1.1 To provide learners with access to a quality	3: Conservation Management

STRATEGIC GOAL STATEMENT	STRATEGIC OBJECTIVE STATEMENT	KEY MEASURABLE OBJECTIVES	CURRENT PROGRAMME
capital.	assist in developing the knowledge, skills, values and commitment necessary to achieve sustainable development.	environmental education Programme. 2.1.2 To provide experiential service learning opportunities in the conservation sector.	
3. Sustaining and growing the conservation economy.	3.1 Develop and implement strategies to facilitate equitable access to and participation in the conservation economy through a People and Parks Programme.	3.1.1 To provide access to work opportunities through implementation of conservation and tourism management services. 3.1.2 To improve access to protected areas for sustainable traditional, cultural and spiritual uses. 3.1.3 To enhance opportunities for stakeholder participation in protected area management. 3.1.4 To grow and effectively deploy volunteer capacity.	3: Conservation Management
4. Ensuring an efficient and effective institution through cutting edge leadership.	4.1 Increased sustainable revenue is attained through enhanced tourism product development and the development of a system for payment of ecosystem services.	4.1.1 Create awareness/market the tourism products within our portfolio to domestic and international visitors, and contributing positively towards sustainable tourism. 4.1.2 To establish partnerships that will improve corporate and social investment into our reserves and by so doing positively impacting on visitor expectations and the livelihoods of local communities. 4.1.3 Develop sustainable tourism products while providing access to both the domestic and international market. 4.1.4 To establish a system for payment for ecosystem services management as a sustainable basis for income in the MTEF allocation.	4: Marketing and Eco-tourism
			2: Biodiversity Support
	4.2. Develop policies, systems and processes to support effective service delivery.	4.2.1 Support strategic decision making to ensure good corporate governance. 4.2.2 Ensure all CapeNature's activities are executed within a framework of sound controls and the highest standards of corporate governance. 4.2.3 To develop and implement an effective and efficient communication strategy for all internal and external stakeholders and role-players. 4.2.4 To implement Information Technology and Systems that are compliant and support the core business of the organisation.	1: Administration / Corporate
		4.3.1 To provide a professional human resource management support service.	3: Marketing and Eco-tourism
	4.3. Institution building enables a supportive working environment.		1: Administration / Corporate

1.3 Values of CapeNature

CapeNature strives to create a work environment that nurtures people and motivates a high level of performance in putting people first through implementing the *Batho Pele* principles. The following are our core values:

Honesty:	We conduct our business with honesty, accuracy and without error.
Excellence:	We espouse a deep sense of responsibility to our work and endeavour to constantly improve it, so that we may give our stakeholders the highest quality of service. We believe that work done excellently gives us dignity, fulfilment, and self-worth.
Fitness of purpose:	We strive to ensure that our mission remains relevant to the local, provincial, national and international context of transformation and modernisation of the biodiversity conservation sector.
Fitness for purpose:	We strive to ensure that our strategic responses and resource allocations, including staff appointments, add optimal value in implementing our mandate.
Accountability:	We ensure financial, performance and political accountability in the implementation of our mandate.
Equity and access:	We strive to ensure that benefits and opportunities accruing from the conservation of biodiversity are equitably shared and that our resources and services are accessible to all; ensuring redress for historically disadvantaged individuals with specific emphasis on women, youth and the disabled; and enabling cultural, traditional and spiritual uses of natural resources on a sustainable basis.
Personal responsibility:	We, as the custodians of the natural resources essential for human health and well-being; and growth and development in the Western Cape, undertake this responsibility with the highest possible level of personal responsibility. We are committed to measurable targets for individual performance which we pursue through strong professional work ethics, political neutrality and selfless service.

1.4 Reserve Vision, Purpose, Values and Objectives

VISION

To conserve a system of sustainable living land- and seascapes in the Garden Route that are representative of the region's biodiversity and ecosystem services through integrated management, for the benefit of all.

PURPOSE

The purpose of RNRC is to conserve terrestrial and marine ecosystems that are representative of the warm temperate South coast zone, to maintain biodiversity and ecological functioning in these ecosystems, and to protect archaeological heritage sites. RNRC also provides ideal interpretation and education opportunities to scholars and tourists.

PURPOSE FOR DECLARATION OF RNRC IN TERMS OF NEM: PAA (SECTION 17):

- (a) to protect ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes in a system of protected areas;
- (b) to preserve the ecological integrity of those areas;
- (c) to conserve biodiversity in those areas;
- (e) to protect South Africa's threatened or rare species;
- (f) to protect an area which is vulnerable or ecologically sensitive;
- (g) to assist in ensuring the sustained supply of environmental goods and services;
- (h) to provide for the sustainable use of natural and biological resources;
- (i) to create or augment destinations for nature-based tourism;
- (j) to manage the interrelationship between natural environmental biodiversity, human settlement and economic development;
- (k) generally, to contribute to human, social, cultural, spiritual and economic development;
or
- (l) to rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species.

VALUES

The values of the RNRC are:

- the high terrestrial and marine biodiversity;
- the rare and endangered species (plants and reef fish);
- the scenic beauty;
- being a prime tourism and recreation destination;
- the seascapes;
- the temperate climate;
- the environmentally conscious and proactive community;
- the cultural heritage value;
- the environmental education facilities;
- the high local economic value;
- good infrastructure and accessibility; and
- it's location within Garden Route Initiative area.

PRIORITISED OBJECTIVES

From the vision a number of key objectives have been identified for the Garden Route area (including all the protected areas in the area) that further articulate the purpose of the reserve. The objectives are:

Objective 1: To conserve and manage biodiversity and natural processes representative of the southern Cape terrestrial and marine ecological systems.

Objective 2: To improve the reach and quality of biodiversity management.

Objective 3: To provide appropriate opportunities and facilities for recreation.

Objective 4: To expand and secure the conservation estate.

Objective 5: To create environmental awareness.

Objective 6: To promote social and economic opportunities and sustainable utilisation.

Objective 7: To effectively conserve our cultural heritage attributes.

1.5 Guiding Principles

The following guiding principles underpin the Management Plan for the RNRC. It is important to note that while these principles are intended to guide reserve management in its work, the reserve is also subject to the principles and provisions of relevant international treaties and conventions, national and provincial legislation and policy, and any local contractual agreements.

Custodianship - Reserve management will seek to respect, protect and promote the RNRC, and its environmental and heritage resources, as a common heritage and a national asset for all South Africans

Common Heritage - The management of the RNRC must serve the public interest by safeguarding the ecological, cultural and scenic resources as a common heritage, and national asset for all South Africans.

Duty of Care - The RNRC must ensure that all individuals, institutions and organisations act with due care and share the responsibility to conserve, and avoid degradation of, the ecological, cultural and scenic resources, and to use the resources of the RNRC sustainably, equitably and efficiently.

Sustainability – Reserve management will seek to achieve a balance between ecological sustainability, social equity and economic efficiency without compromising the ecological integrity of the reserve.

Holism - The reserve and its surrounds form an indivisible system. The management of the reserve must adopt an integrated approach and recognise the interconnectedness and interdependence of social, ecological and economic components.

Intrinsic Value - All life forms and ecological systems have intrinsic value.

Cooperation and Partnerships - Reserve management will seek to work co-operatively and in partnership with public institutions, the private sector, non-governmental organisations (NGO) and local communities.

Equitable Access: Reserve management shall seek to ensure that stakeholders shall have equitable, sustainable, and managed access to the reserves and the benefits that are derived from the reserves.

Precaution - Where there may be a threat of significant negative impact but inadequate or inconclusive scientific evidence exists to prove this, action shall be taken to avoid, prevent or minimise the potential impact.

Empowerment and Transformation - The RNRC shall strive to empower stakeholders involved in the reserve through capacity building and access to economic opportunities.

Co-operative Governance - All spheres and organs of government that are involved in management of the reserve, or in making decisions affecting the reserve, shall work together co-operatively to ensure the conservation of the reserve.

Excellence in Management and Service - The RNRC shall strive to attain excellence in managing the reserve and servicing the visitors that use it through accountable and informed decision-making and co-ordination, co-operation and integration with relevant government agencies and stakeholders. The RNRC shall strive for continual improvement through a creative and collaborative approach to problem solving and learning.

Capacity – Reserve management will seek to ensure that the management of the RNRC is adequately resourced to meet its mandated and ethical responsibilities in the effective management of the respective reserves.

Alignment and Integration - Reserve management will seek to align and integrate the reserve's management activities and priorities into, and with, the relevant local and regional conservation, institutional, socio-economic and developmental context.

Culture of learning – Reserve management will aim for continual improvement through both a scientific based approach that provides the basis for informed decision making, and a creative and collaborative approach to problem solving and learning.

Accountability and transparency - Reserve management will seek to ensure that management tasks in the RNRC are carried out efficiently and within stipulated time frames, productivity is increased, costs are controlled and impacts are managed, with integrity and in compliance with applicable laws.

In practical terms, the Management Plan needs to ensure that the following requirements for the effective management of the RNRC are adequately addressed, namely:

- The necessary mandate, human capacity and financial resources to implement and achieve the objectives and activities described in the management plan;
- The delivery of socio-economic benefits to local communities where possible;
- Flexibility of service delivery that encourages innovation and a wide range of government, community and non-government sector involvement; and
- Performance indicators and accountability measures that provides for regular review of outcomes.

2.1 Legal and Policy Framework

2.1.1 Legal Framework

The legal framework that directs planning and operational management activities in the reserve are addressed in detail within the Strategic Implementation Framework.

Constitutional and Legislative mandates

The Constitution of the Republic of South Africa Act, (Act No. 108 of 1996, Section 24) states that: *‘Everyone has the right to an environment that is not detrimental to their health or well-being’*. The Constitution further states that: *‘The environment must be protected for present and future generations through reasonable legislation and other measures that will prevent pollution and environmental degradation, promote conservation and will ensure ecologically sustainable development and sustainable use of natural resources while striving for justifiable economic and social development.’*

CapeNature is a public entity established in terms of and governed by the Western Cape Nature Conservation Board Act, (Act No. 15 of 1998) as the Western Cape Nature Conservation Laws Act, (Act No. 3 of 2000). This is a public institution with the statutory responsibility for biodiversity conservation in the Western Cape. It is mandated to: promote and ensure nature conservation; render services and provide facilities for research and training; and generate income.

- Constitution of the Republic of South Africa Act, (Act No. 108 of 1996)
- Western Cape Nature Conservation Board Act, (Act No. 15 of 1998)
- Western Cape Nature Conservation Laws Act, (Act No. 3 of 2000)

The following are the key national and provincial statutes *relevant to the implementation of the mandate of nature conservation* and include all amendments to these acts and ordinances and any regulations and norms and standards promulgated there under. Note that the list below excludes all other relevant legislation that applies to public entities as employers, implementers of government mandate and managers of public finance.

International Conventions, Protocols and Policies

- Bonn Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- Convention on Biological Diversity (The) (CBD)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (The) (CITES)
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (The) (RAMSAR)
- United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol
- United Nations Convention on the Law of the Sea (UNCLOS)
- International Union for Conservation of Nature (The) (IUCN)

- Convention concerning the Protection of the World Cultural and Natural Heritage (WHC)
- World Tourism Organisation (WTO)
- Intergovernmental Oceanographic Commission
- International Whaling Commission (The) (IWC)
- United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and Biosphere (MAB) Programme

National Legislation

All national legislation applies to activities in the RNRC, but the following have direct reference to the reserve's management activities:

- Constitution of the Republic of South Africa, (Act No. 108 of 1996)
- National Environmental Management Act, (Act No. 107 of 1998)
- National Environmental Management Biodiversity Act, (Act No. 10 of 2004)
- National Environmental Management: Protected Areas Act, (Act No. 57 of 2003)
- Conservation of Agricultural Resources Act, (Act No. 43 of 1983)
- World Heritage Convention Act, (Act No. 49 of 1999)
- Marine Living Resources Act, (Act No. 18 of 1998)
- Environment Conservation Act, (Act No. 73 of 1989)
- National Water Act, (Act No. 36 of 1998)
- Sea-shore Act, (Act No. 21 of 1935)
- National Veld and Forest Fire Act, (Act No. 101 of 1998)
- National Heritage Resources Act, (Act No. 25 of 1999)
- Sea Birds and Seals Protection Act, (Act No. 46 of 1973)
- Disaster Management Act, (Act No. 57 of 2002)
- Occupational Health and Safety Act, (Act No. 85 of 1993)
- Labour Relations Act, (Act No. 66 of 1995)
- Public Finance Management Act, (Act No. 1 of 1999)
- Consumer Protection Act, (Act No. 68 of 2008)

This Management Plan is further guided by the principles outlined in Section 2 of the National Environmental Management Act, (Act No. 107 of 1998) and Section 17 of the National Environmental Management: Protected Areas Act, (Act No. 57 of 2003). Within Section 17 the purposes of the declaration of areas as protected areas are described. These are:

- To protect ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes in a system of protected areas;
- To preserve the ecological integrity of those areas;
- To conserve biodiversity in those areas;
- To protect areas representative of all ecosystems, habitats and species naturally occurring in South Africa;
- To protect South Africa's threatened or rare species;
- To protect an area, which is vulnerable or ecologically sensitive;

- To assist in ensuring the sustained supply of environmental goods and services;
- To provide for the sustainable use of natural and biological resources;
- To create or augment destinations for nature-based tourism;
- To manage the interrelationship between natural environmental biodiversity, human settlement and economic development;
- Generally, to contribute to human, social, cultural, spiritual and economic development; and
- To rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species.

Provincial Legislation

Although all provincial legislation applies to activities in the RNRC, the following have direct reference to the reserve's management activities:

- Constitution of the Western Cape Act, (Act No. 1 of 1998)
- Western Cape Nature Conservation Board Act, (Act No. 15 of 1998)
- Western Cape Nature Conservation Laws Act, (Act No. 3 of 2000)
- Western Cape Planning and Development Act, (Act No. 7 of 1999)
- Land Use Planning Ordinance, (Ordinance No. 15 of 1985)
- Nature and Environmental Conservation Ordinance, (Ordinance No. 19 of 1974)
- Provincial Notice 955 of 1975

New legislation

The following legislation is either new or pending and it is envisaged that this legalisation will impact on CapeNature.

- CITES Regulations, 2009
- Threatened or Protected Species (ToPS) Regulations, 2007
- Draft Alien and Invasive Species (AIS) Regulations, 2009
- National Environmental Management: Integrated Coastal Management Act, (Act No. 24 of 2008)
- National Environmental Management: Protected Areas Act, 2003; Regulations for the Proper administration of Nature Reserves, 2012
- Draft Norms and Standards for the management of protected areas in South Africa, 2011
- Norms and Standards for Biodiversity Management Plans for Species, 2009, (Gazette No 214 March 2009)

2.1.2 Coordinated Policy Framework

The RNRC management is guided by a number of internal CapeNature policies, procedures and guidelines. The policies, procedures and guidelines applicable to this management plan are referenced in the Strategic Implementation Framework.

2.2 Management Agreements

Currently there is a formal agreement between CapeNature and the Department of Environmental Affairs (DEA): Oceans and Coast on the management and funding of Robberg Marine Protected Area.

2.3 Regional and Provincial Planning

In terms of the Municipal Systems Act, (Act No. 32 of 2000), local municipalities in South Africa are required to use integrated development planning to plan and map future development in their area. An Integrated Development Plan (IDP) is a 5-year strategic plan in which the municipal strategic and budget priorities are set.

An IDP is intended to be the principal strategic instrument to inform planning and development within a municipality. It should co-ordinate the work of local and other spheres of government and must take into account the existing conditions, constraints and resources available. Among other things, the IDP should address how the environment will be managed and protected. Among the key components of an IDP are disaster management plans and a Spatial Development Framework (SDF). SDFs are essentially the spatial reflection of a municipality's IDP.

A SDF is updated every five years and must indicate the desired patterns of land-use for the municipality and provide strategic guidance regarding the location and form of development, as well as conservation, within the municipality. A SDF must include basic guidelines for a land-use management system for the municipality and should be used to guide changes in land-use rights and public investment in infrastructure.

The local municipalities are responsible for producing and co-coordinating IDP and SDFs, but they must consult other stakeholders in the area who can impact on and/or be impacted on by development and other changes in the area. All government departments working in the area should refer to the IDP to ensure their work is aligned.

In essence SDFs and IDPs are tools for integrating social, economic and environmental issues and development within a municipality. As biodiversity is a fundamental component of sustainable development, SDFs and IDPs offer an opportunity to ensure that biodiversity priorities are incorporated into planning processes. In turn, the identification of biodiversity-related projects for the IDP can support local economic development and poverty alleviation.

2.4 Institutional Framework

The Western Cape Nature Conservation Board is trading as CapeNature and the organisational structure is shown in Figure 1:

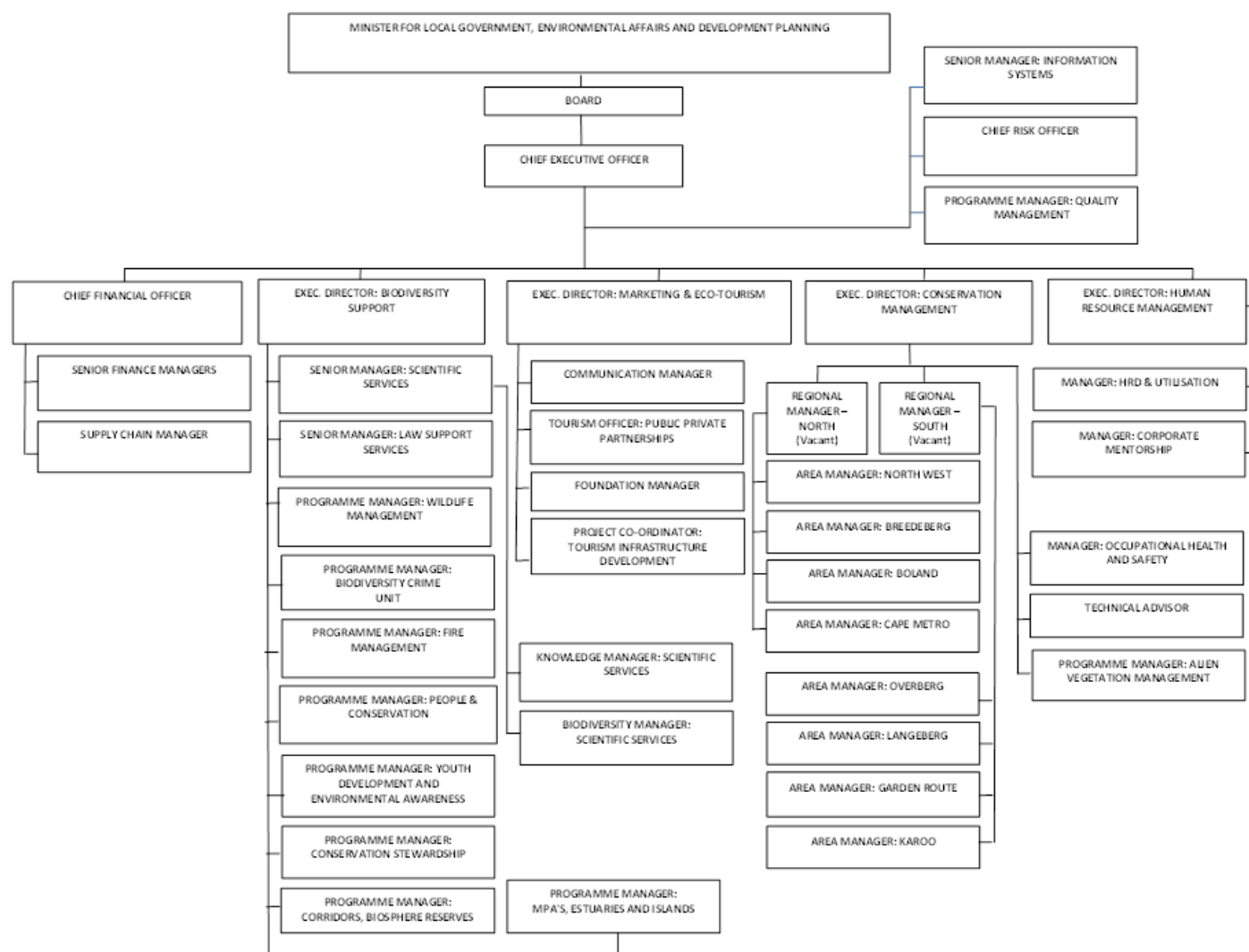


Figure 1: CapeNature Organogram (dated 18 October 2012).

2.5 Strategic Management Plan

2.5.1 Purpose of this Management Plan

The major elements of the reserve planning process for the RNRC are: (i) the CapeNature corporate Strategic Plan and Annual Performance Plans (APP); (ii) detailed subsidiary plans (as required) and; iii) an Annual Plan of Operations (APO). The management plan for the RNRC is also informed by a number of strategic plans and operational guidelines to ensure on-going implementation and review of the reserve management activities (see Figure 2).

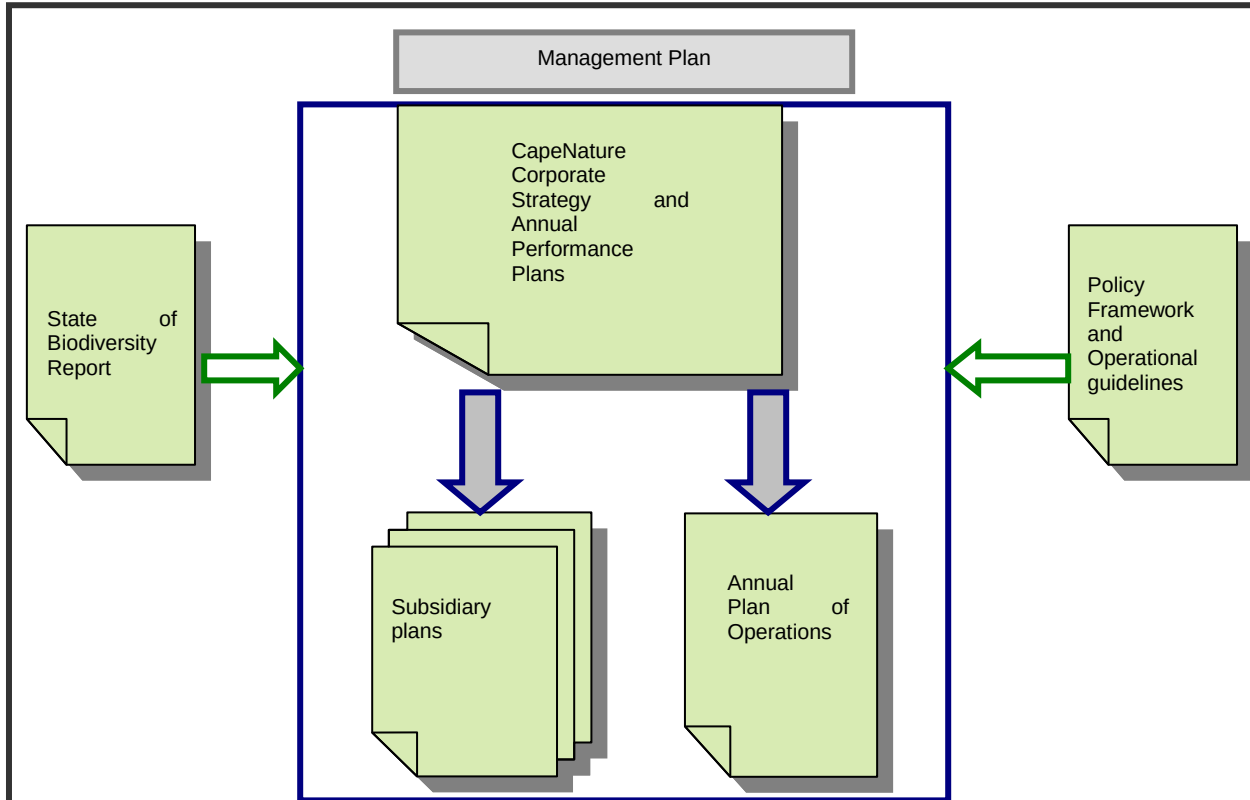


Figure 2: The elements of CapeNature management plans.

The management plan for the RNRC is determined based on policies, legislation and related planning documents at the sectorial, institutional, agency and local levels. The organisation adopts the adaptive management cycle, see Figure 3, whereby the management plan is developed and implemented and after annual evaluation the management plan can be adapted, to ensure key objectives are being achieved.

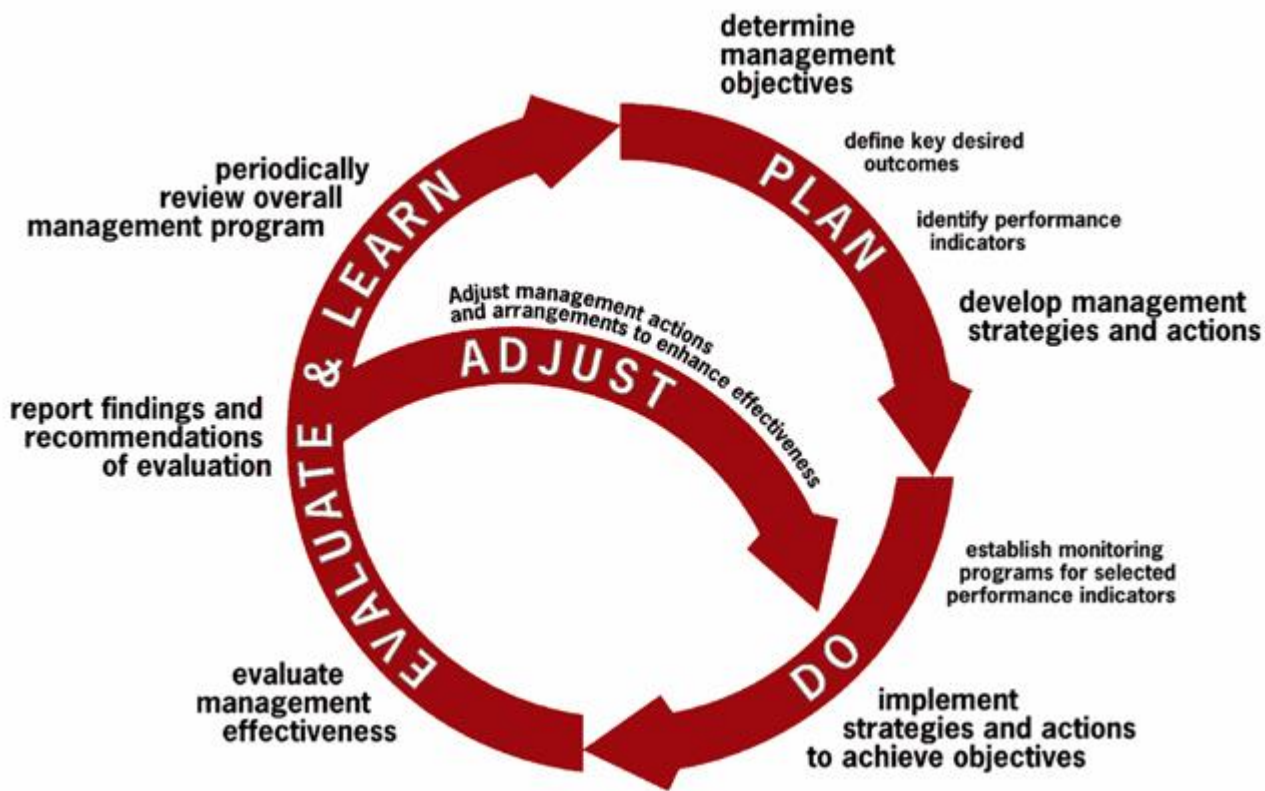


Figure 3: Adaptive management cycle (CSIRO 2012).

The approach to, and format of, this management plan is directed by the Guidelines for the development of a management plan for a protected area in terms of the National Environmental Management: Protected Area Act (Cowan & Mpongoma 2010). The drafting of this management plan has been guided by a small interdisciplinary Reserve Management Committee (RMC) comprising the Area Manager, Conservation Manager, Ecological Coordinator, Regional Ecologist, Community Conservation Manager, Conservation Services Manager and Tourism Officer. Iterative drafts of the management plan were presented to, and discussed by, the RMC before broader circulation for inputs from the public.

The purpose of this management plan is to ensure that the RNRC has clearly defined objectives and activities to direct the protection and sustainable use of its natural, scenic and heritage resources over a five year period. The management plan indicates where reserve management intends to focus its efforts in the next five years (2013-2018). The management plan thus provides the medium-term operational framework for the prioritised allocation of resources and capacity in the management, use and development of the reserve.

It must be noted that this management plan focuses on strategic priorities rather than detailing all operational and potential reactive courses of action in the next five years. The timeframe referenced in the Strategic Implementation Framework follows financial years (1 April to 31 March), with Year 1 commencing with the signing of the management plan by the Provincial Minister: Environmental Affairs and Development Planning. While planning for some emergencies is part of the management plan, it remains possible that unforeseen circumstances could disrupt the prioritisation established in this management plan. These

should be addressed in the annual review and update of the management plan. The scope of the management plan for the RNRC is constrained by the reserve's actual or potential performance capability - given available personnel, funding, and any other external factors - to ensure that the plan is achievable and sustainable.

The RNRC management plan has been compiled on the basis of current available resources (funding and human capital). Legislation listed in the Strategic Implementation Framework is not exhaustive.

2.5.2 Stakeholder Participation Process

CapeNature has adapted the South African National Parks (SANParks), Stakeholder Participation in Developing Park Management Plans protocol (Spies & Symonds 2011) for the stakeholder participation process.

Section 39(3) of the National Environmental Management: Protected Areas Act, (Act No. 57 of 2003) states that *when preparing a management plan for a protected area, the management authority concerned must consult municipalities, other organs of state, local communities and other affected parties which have an interest in the area. Section 41(2) (e) requires that the Management Plan contains procedures for public participation, including participation by the owner (if applicable), any local community or other interested party.*

All stakeholders were registered and a stakeholder register, as well as attendance registers for workshops and meetings, were kept. Additional individuals, wishing to participate in the process, registered as stakeholders and were accommodated to ensure that the process is inclusive. Figure 4 shows the stakeholder participation strategy for CapeNature management plans. Any persons having direct or indirect interests or rights in a nature reserve may be considered to be a stakeholder.

The stakeholder process will facilitate the establishment of a comprehensive Protected Area Advisory Committee. In CapeNature's efforts to comply with the deadlines for this process, certain of these steps had to be combined for this management plan. Stakeholder meeting 1 and 2 shown in Figure 4, will be combined with stakeholder meeting 3. At this meeting opportunity will be provided to stakeholders to comment on the desired state and objectives for the RNRC.

STAKEHOLDER PARTICIPATION STRATEGY FOR CAPENATURE NATURE RESERVE MANAGEMENT PLANS

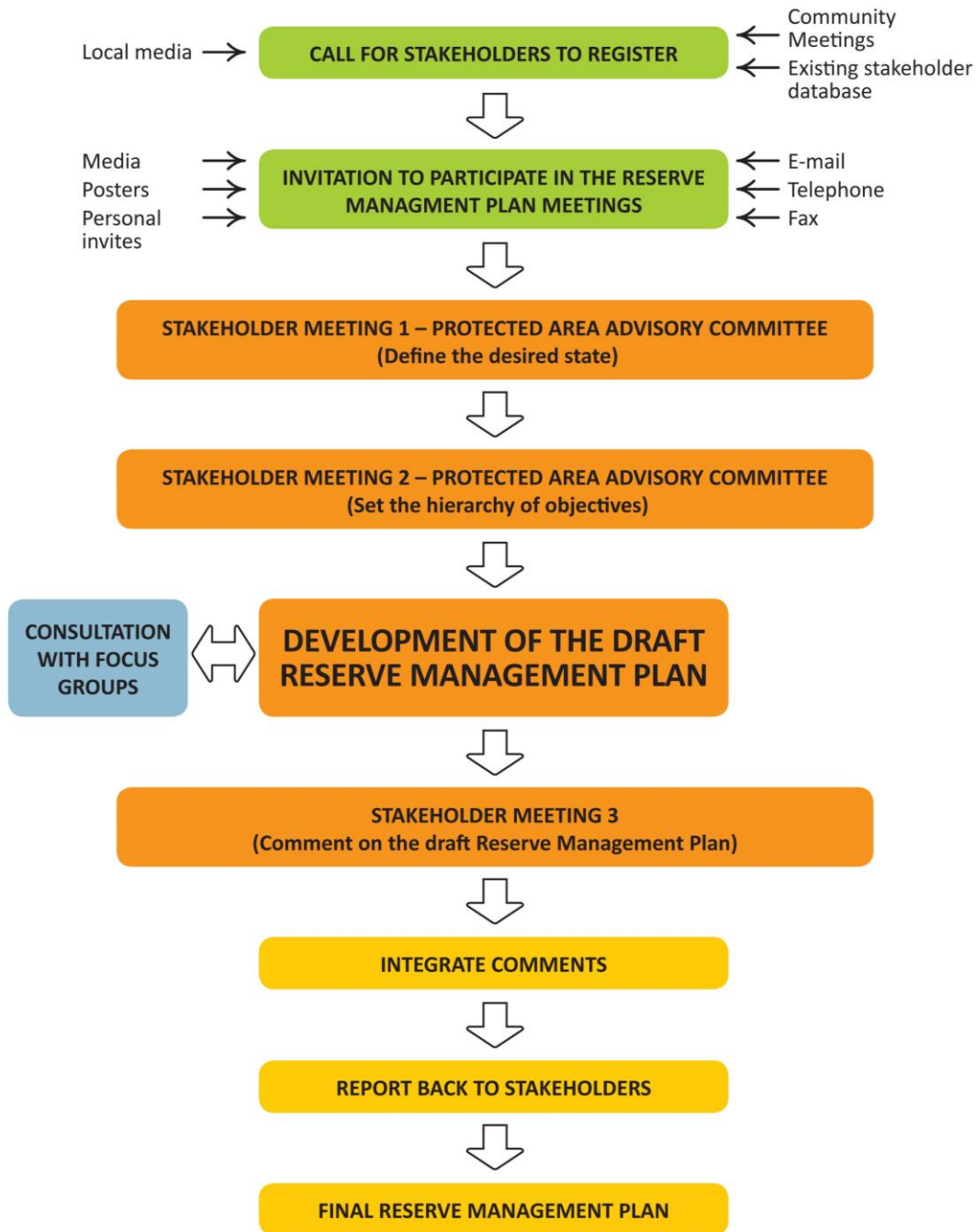


Figure 4: Stakeholder Participation Strategy for CapeNature Nature Reserve Management Plans.

2.5.3 Establishment of a CapeNature Protected Area Advisory Committee

In terms of the NEM:PAA, (Act No. 57 of 2003) Regulation 99: Proper administration of nature reserves (Government Gazette No. 35021 February 2012), a management authority may establish one or more advisory committees in respect of a nature reserve. These advisory committees will be called Protected Area Advisory Committees.

Procedure

CapeNature will invite community organisations, NGOs, residents of and neighbouring community, through direct invitation or through advertisements in at least two local newspapers and any other agreed upon manner by the reserve planning committee in order to reach the greatest number of residents of and, neighbouring communities to the nature reserve. The invitation will specify the method of submission and a date by which the nominations contemplated must reach CapeNature. Interested and affected parties will be required to complete the CapeNature PAAC application forms.

Minimum requirements and other criteria

Any member of the PAAC must be based on a real interest demonstrated by the member in respect of the relevant nature reserve. The member must be the nominated delegate from the organisation the member is representing and is expected to provide feedback to his/her organisation in terms of meetings progress.

Composition

CapeNature, after considering any nominations submitted will appoint members in writing to the PAAC. At least one employee of CapeNature, nominated by CapeNature will be an ex-officio member of the PAAC.

The advisory committee should reflect the interest of the following groups:

- Municipalities;
- Local communities;
- Organs of state (National and Provincial);
- Neighbours;
- Owner/s;
- Other affected/interested parties such as:
 - NGOs and Community Based Organisations (CBOs);
 - Tourism;
 - Cultural/Natural heritage e.g. Rastafarian, Traditional leaders and traditional healers;
 - Botanical and/or zoological;
 - Water quality/aquatic environment;
 - Nature-based recreation;
 - Educational institutions;
 - Research institutions; and
 - And any other interested and affected party.

Term of office

- Each member is expected to serve for a fixed two year period as determined by CapeNature management but the respective organisation's rights and procedures with respect to member representation will be allowed as long as it is in the interest of conservation and good governance.
- Nominees representing organisations and formally constituted groups must be nominated by their organisation/group on official letter heads, signed by an executive authority, and be duly appointed to act in the interest of their organisation. Organisations must also nominate a second member to attend and represent the organisation when the primary nominee is not available. The nomination letters from the organisations must be accompanied by the application forms.
- Membership is voluntary and no remuneration will be provided to PAAC members.
- As part of good governance, all PAAC members will be required to adhere to the PAAC code of conduct and any member who does not adhere to the code of conduct stipulations, the organisation that the member is representing will be expected to deal with their member accordingly.

Terms of Reference for PAACs

The committee will be expected to:

1. Provide input into management decisions relating to protected area management;
2. Act as a forum to provide advice on reserve issues;
3. Play a role in educating the community and various interest groups about the importance of preservation, protection and management of natural resources and the objectives of the reserve management plan that are intended to pursue these goals;
4. Monitor and evaluate progress on implementation of programmes in the reserve management plan;
5. Make recommendations on how CapeNature can improve programmes and policies;
6. Promote involvement in decision-making around the management of natural and cultural heritage resources within the scope of the reserve management plan;
7. Promote the integration of conservation activities within the nature reserve with those of surrounding areas;
8. Identify opportunities and constraints pertaining to the Bio-prospecting Access and Benefit Sharing, where applicable; and
9. Establish and maintain links between CapeNature and other stakeholders.

Functioning of the Advisory Committee

The committee will meet a minimum of once a year. At the first meeting a Chairperson and a secretary who will be required to take minutes of all matters discussed, will be elected. The committee will be expected to submit a copy of the minutes for each meeting and a full report, to the management authority (the Area Manager for submission to the Executive Director: Conservation Management), highlighting issues and making recommendations on matters arising from the implementation of the RNRC Management Plan. The Chairperson may at

his/her discretion form working groups when required. Minutes of all working groups meetings must be kept and submitted through the Chairperson to reserve management.

Decision Making

The reserve management committee's acceptance and rejection of advice offered will follow the process as outline below (Figure 5):

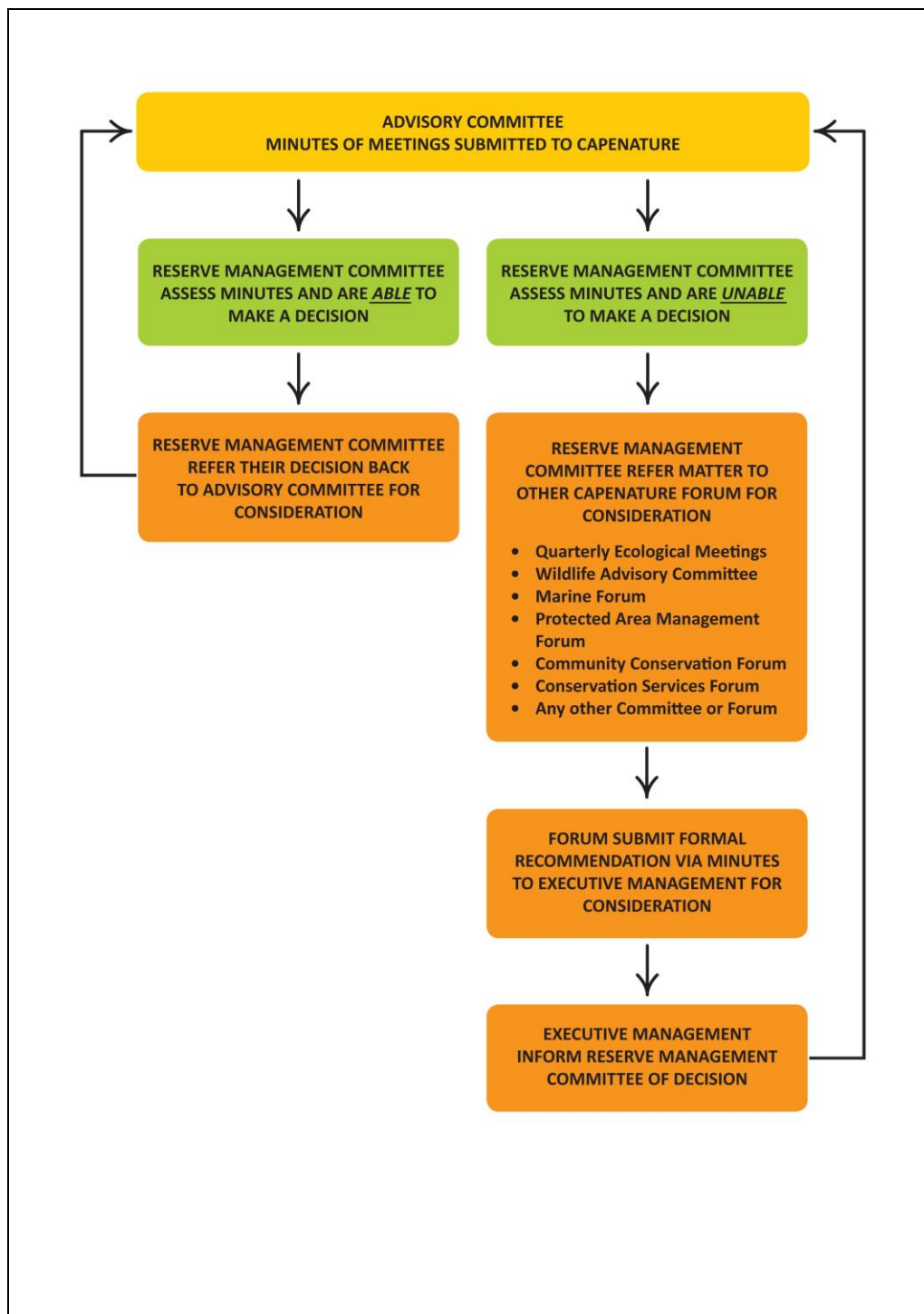


Figure 5: Decision Tree for the acceptance and rejection of advice from the PAAC.

SECTION 3: OVERVIEW AND BACKGROUND OF THE NATURE RESERVE COMPLEX

3.1 Location and Extent

Robberg Nature Reserve and Marine Protected Area are situated approximately 7 km south of Plettenberg Bay (see Figure 6). The reserve is a peninsula, and therefore almost entirely surrounded by the sea, except for the western section, where it abuts the mainland. The coastline forming part of the reserve is approximately 9.5 km long, of which 8.5 km is rocky shoreline, and the remaining is beach sand.

The total size of Robberg Nature Reserve is 185.3 ha and the adjacent Marine Protected Area is 2 241 ha in extent.

RNRC is situated between the following coordinates:

Northernmost limit of reserve: 34° 04' 54.6" S
Southernmost limit of reserve: 34° 07' 38.5" S
Westernmost limit of reserve: 23° 22' 17.2" E
Easternmost limit of reserve: 23° 25' 58.2" E.

The RNRC falls within the 3423 AB Plettenberg Bay quarter degree.

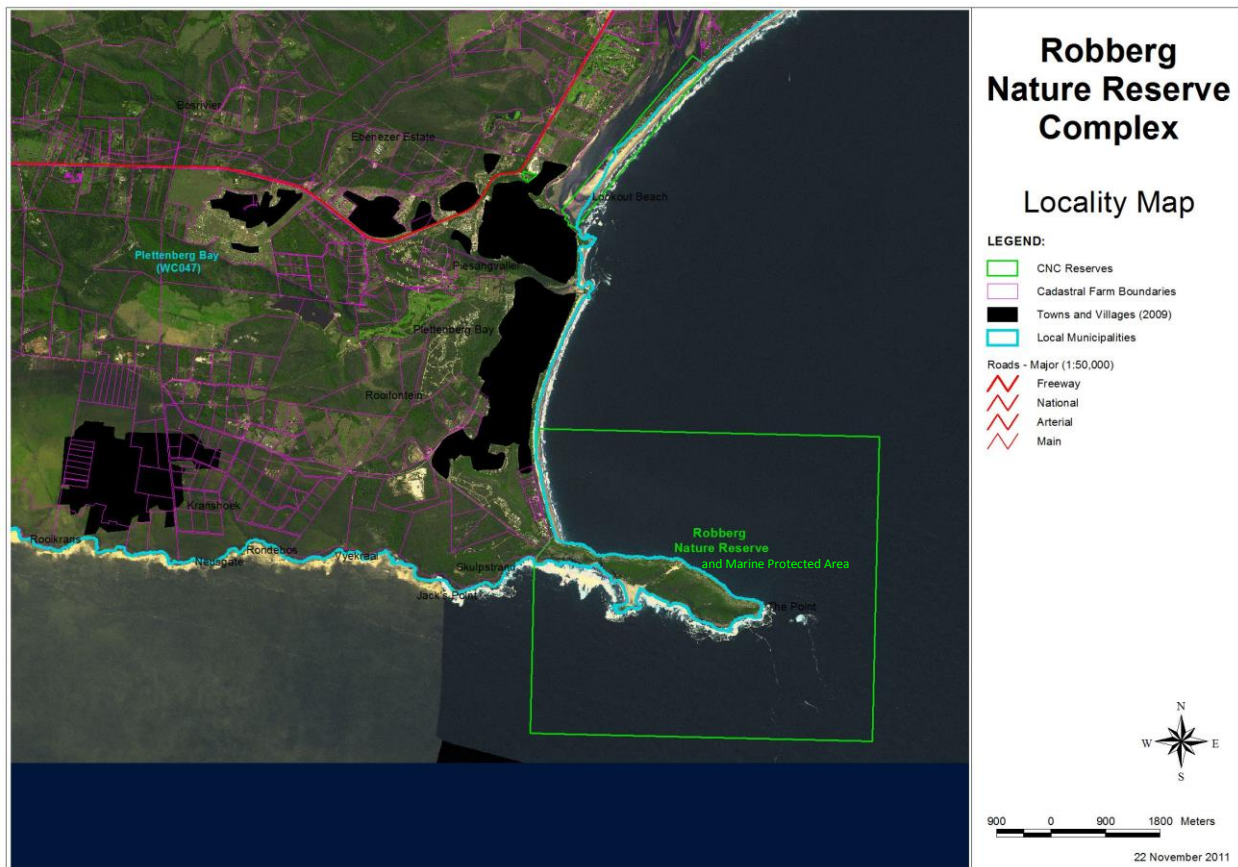


Figure 6: Location and extent of the Robberg Nature Reserve Complex.

3.2 Legal Status

Robberg Provincial Nature Reserve was established as a Provincial Nature Reserve in terms of Section 6 the Nature and Environmental Ordinance, 1974, on 25 July 1980 and proclaimed in the Provincial Gazette by Proclamation No. 172/1980.

Robberg Marine Protected Area was established as a Marine Protected Area in terms of Marine Living Resources Act 2000, on 2 September 1998 and proclaimed in the Government Notice by Proclamation No. 18/1998.

Robberg Marine Protected Area, amendment of the boundaries by the extension of the area of jurisdiction in terms of Section 5 of the Marine Living Resources Act 2000, and proclaimed in the Government Notice by Proclamation No. 1429/2000.

3.3 History

Prior to 1980, Robberg Nature Reserve was managed as a Regional Services Council Nature Reserve. Except for an occasional clean-up of the car parking area, no other management activities took place on the reserve. As a result a network of trails was trampled all over the peninsula with the inevitable erosion visible on various sites.

Two families were also allowed to build stone huts on Robberg as part of a 99 year lease agreement. This agreement with the van Rooyen and Thesen families came to an end with the transfer of the land to the then Provincial Administration of the Western Cape. The van Rooyen family contested this decision in the Supreme Court, but lost the case. The Plettenberg Bay Angling Club also had a lease agreement for the lease of the Point and Fountain Shacks, but willingly transferred these huts to CapeNature as it was not financially feasible to retain them. In 2005 the Robberg Shack Conservation Group managed to secure funding to upgrade these facilities to ensure that CapeNature retains them in their original state. In 2007 the Point Shack was demolished by a storm surge. Today the Fountain Shack is managed as the only overnight accommodation facility on Robberg Nature Reserve.

Acacia cyclops (Rooikrans) an alien invasive plant species was planted on the rising-falling dune in the area known as Witsand to stabilize the moving dune to improve access to the Point. During the 1990's this exotic invader was removed, but due to the deposition of leaf litter over a period of nearly 40 years, the soil composition changed and the exotic plants were basically replaced by indigenous plants.

Robberg was proclaimed as a Provincial Nature Reserve in 1980. In 1999 Robberg Nature Reserve was also proclaimed a National Monument due to the 19 registered archaeological sites scattered over the length of Robberg. All these sites, with the exception of Nelson Bay Cave, are closed to the public.

In 1998 the Robberg Marine Protected Area (MPA) was proclaimed under the Marine Living Resources Act. Marine and Coastal Management (now DEA: Oceans and Coast) proclaimed Marine Protected Areas all along the coast where terrestrial reserves and National Parks were in existence. Robberg MPA has a rich variety of coastal habitats, including rocky shores

and reefs as well as sandy beaches. In 2000 the boundaries were amended to improve compliance management. This 2270 ha MPA surrounds Robberg Nature Reserve (Figure 6).

3.4 Climate

Maximum and minimum temperatures were collected from 1998 to 2010. Figure 7 shows a graph depicting the data collected from the RNRC. Warmest temperatures are normally between the months of November and March and range between the high twenties and low thirties, the hottest month being February. Coldest months are normally between the months of April and September, with the coldest temperatures recorded during July. The mean difference between minimum and maximum temperatures is 19.3 °C

Rainfall is also measured on the reserve, as from 1995. Figure 7 indicates that rainfall in this region is spread throughout the year, with a peak from July to November. The mean total rainfall per year over the time that it was measured was 555 mm per year.

The dominant winds throughout the year are south-westerly, as a result of an anticyclonic low-pressure system, which originates from the circumpolar westerlies. These interact with two subtropical high-pressure anticyclones, which fluctuate over the South Atlantic and South Indian Oceans (Hellström 1990).

During summer the winds are predominantly south-westerly alternating with lesser south-easterlies. During autumn and winter the alternation is most frequent between south-westerlies and north-westerlies. This is a result of the anticyclonic low-pressure system with its associated coastal low being displaced by inland cyclonic high-pressure systems. This allows for a moderate to strong katabatic land breeze component from the north-west, and influenced by the Outeniqua Mountain ranges. These are the typical berg wind conditions experienced in May and August, which result in hot dry conditions with high evapotranspirative conditions (Hellström 1990).

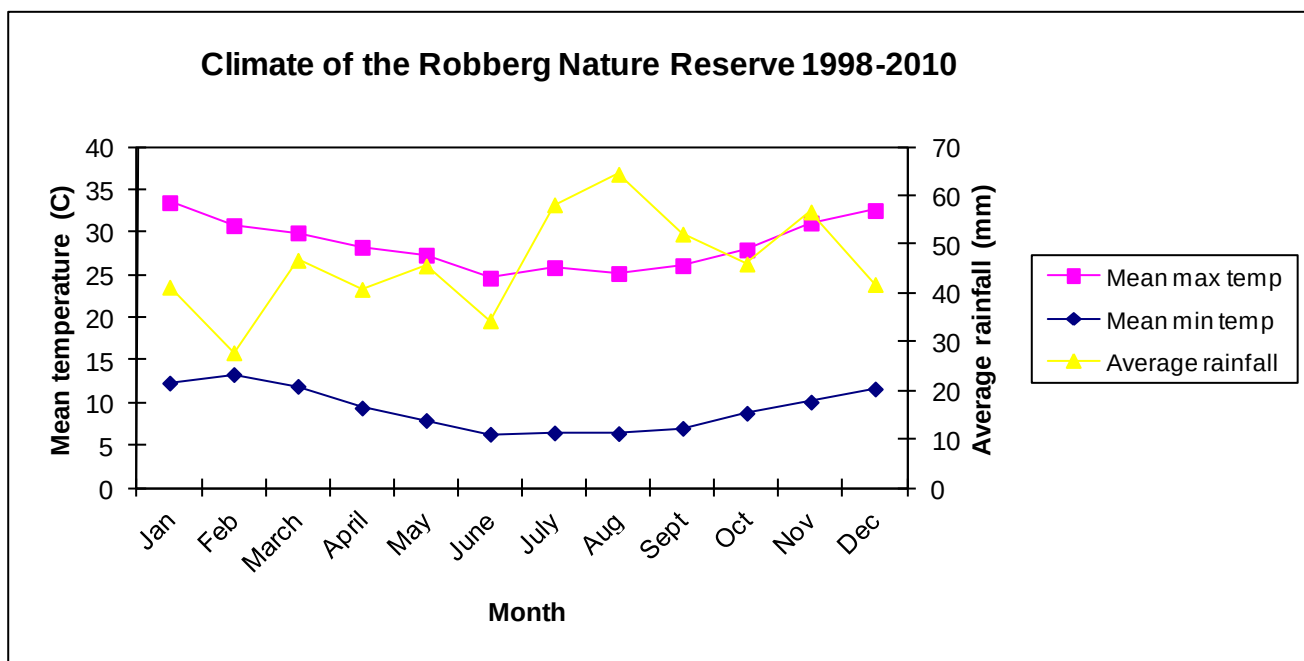


Figure 7: Climate for the Robberg Nature Reserve Complex.

3.5 Topography

The reserve is in the form of an elevated peninsula, with a plateau area and in parts, cliff faces, with highest point of 148.5 m above mean sea level (amsl). The reserve further contains an excellent example of a tombolo (a sandy hour-glass shaped spit connecting the island to the main peninsula). This is cut off from the mainland during spring highs.

3.6 Geology

Robberg Nature Reserve has a classic sequence of late Jurassic age that includes deposits from a variety of terrestrial, beach and near shore environments that were deposited in the intertidal and subtidal environment. These beds are tilted 10 to 20 degrees. Exposed palaeosurfaces occur along the outcrops facing the Indian Ocean (Reddering & Rust 1997).

The dominant lithological classes that are indicated on a 1:250 000 scale geological series map are Conglomerate, sandstone, siltstone and clay (also see Figure 8). Another lithological series that is identified on the reserve is that of whitish-weathering quartz sandstone, which is medium to coarsely grained, quartzitic and massive (Reddering 1993).

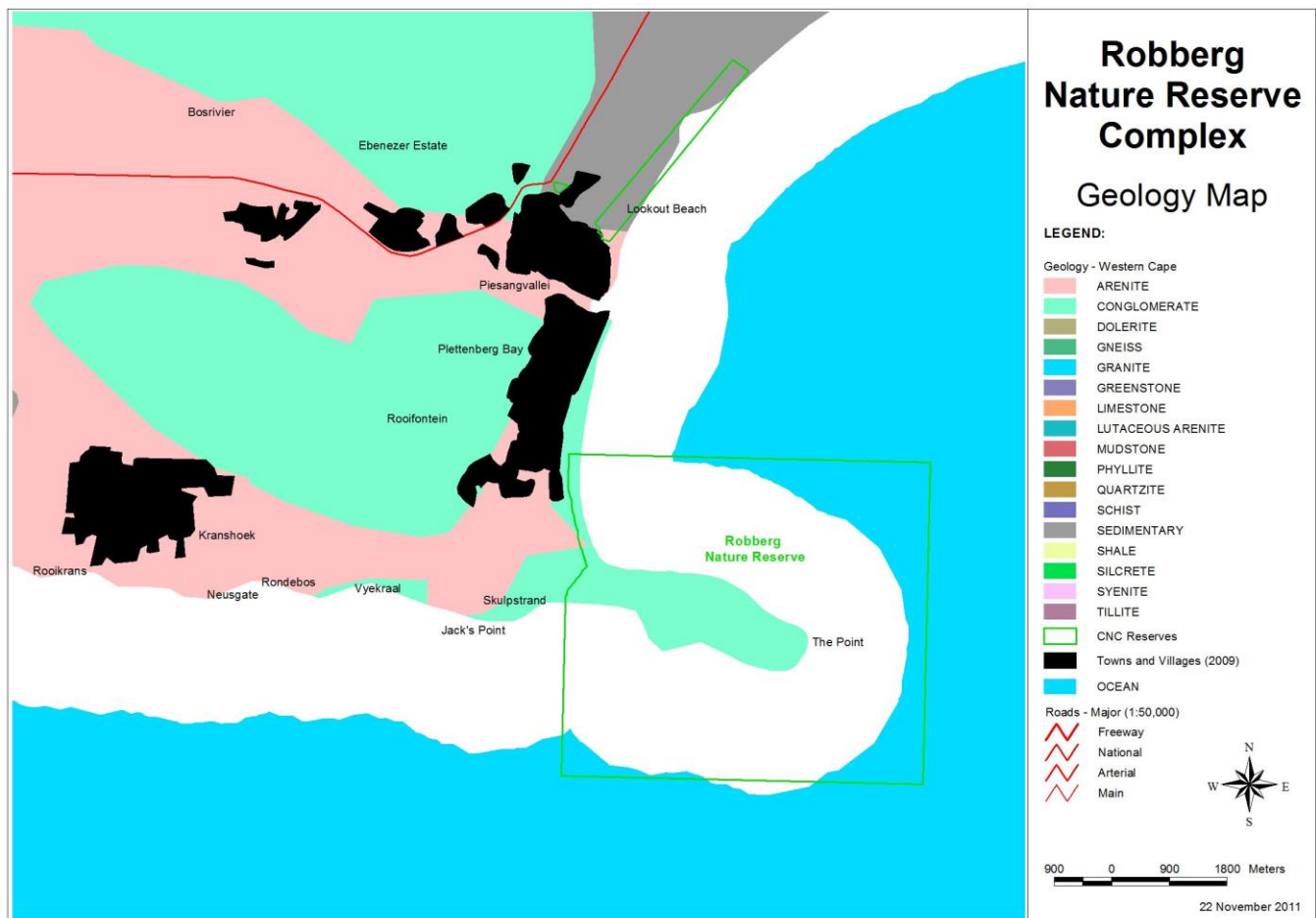


Figure 8: Geology of Robberg Nature Reserve Complex (Council for Geoscience 2001).

3.7 Hydrology

3.7.1 Freshwater aquatic systems

There are no rivers or any open fresh water system on the reserve, except for a few perennial springs located on the southern side of Robberg due to the geological formation. The spring to the west of the Fountain Shack (coordinates 34° 06' 20.5" S; 23° 23' 29.5" E) is particularly well-known as "Die Fontein", where visitors historically collected fresh water.

3.7.2 Marine system

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 (MPA) falls within the warm temperate South Coast zone which covers the area from Cape Point to East London. Robberg 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.

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 with 1 km of sandy shores and 8.5

km of rocky shore. Robberg MPA has offshore reefs, which provide especially important habitat for commercially fished sparids from the genus *Chrysoblephus*, and endemic sparids such as Red steenbras (*Petrus rupestris*) and Black musselcracker (*Cymatoceps nasutus*). The 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.).

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 Whitebreasted Cormorant breeding colony of ca. 20 – 30 pairs. Globally threatened and CITES listed sea turtles have been observed in the area, including Loggerhead (*Caretta caretta*), Green (*Chelonia mydas*) and Hawksbill (*Eretmochelys imbricata*) turtles which are seen annually, and Leatherback turtles (*Dermochelys coriacea*) which are rare visitors. 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*).

3.8 Flora

3.8.1 Terrestrial vegetation

Robberg Nature Reserve has an altitudinal range from sea level to 148.5 m above sea level; this has a significant influence on its vegetation. The effect of regular strong winds on the vegetation structure is clearly visible. Particularly along the crest and on the southern slope of the peninsula the plants have a stunted growth form. This is most prominent in the dwarflike growth form of the Keurboom (*Virgilia divaricata*), a common tree species usually associated with the Afromontane Forests.

The vegetation consists of a mosaic of fynbos and subtropical thicket. The subtropical thicket occurs as small patches in sites that are protected against fires where the soils are loamy, whilst the fynbos is limited to the nutrient poor soils and open areas (Vlok & Euston-Brown 2002).

The vegetation of Robberg Nature Reserve, based on the South African Vegetation Map of Mucina & Rutherford (2006), is shown in Figure 9.

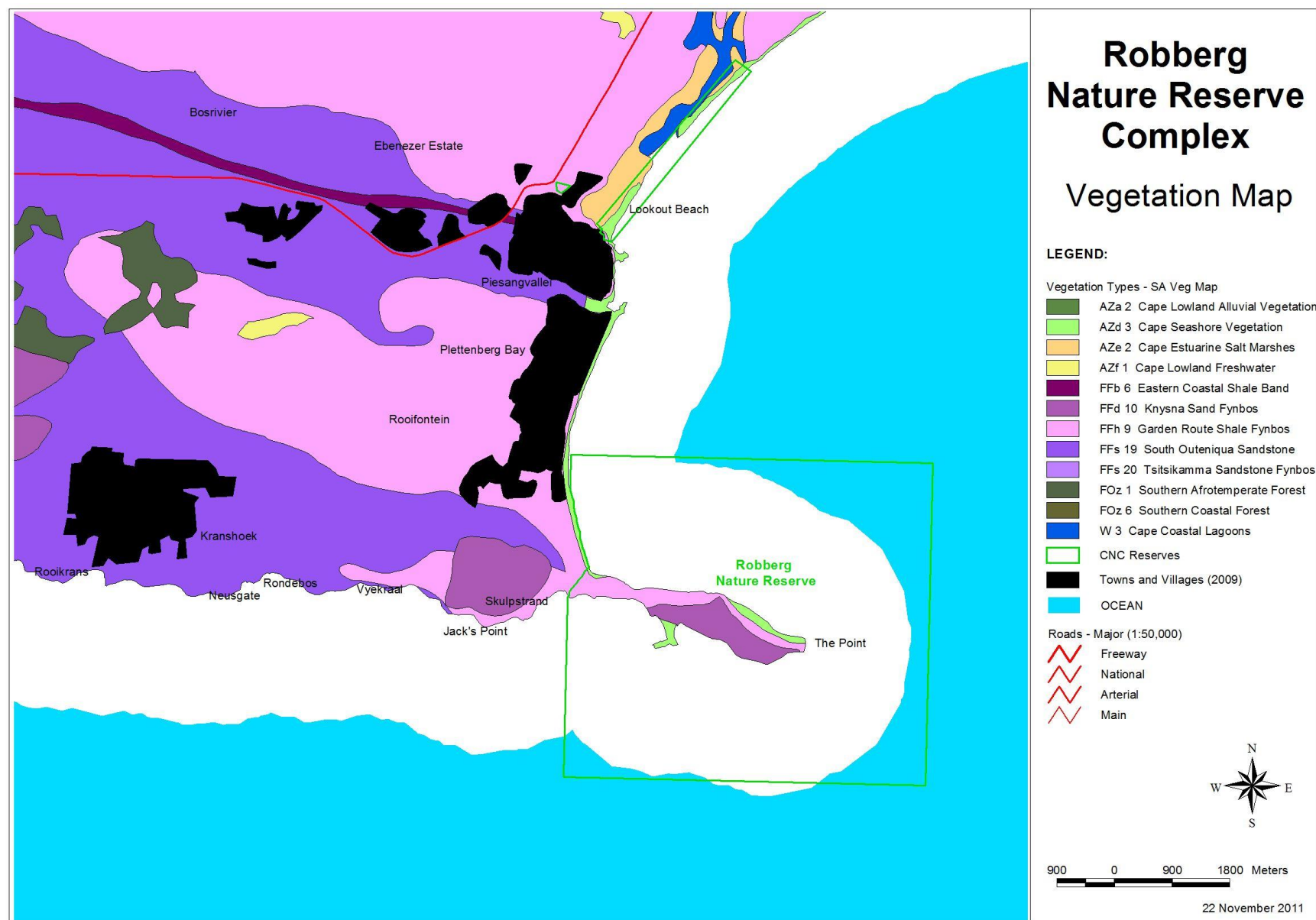


Figure 9: Vegetation of Robberg Nature Reserve Complex based on the SA vegetation map of Mucina and Rutherford (2006).

Three vegetation types occur on the reserve according to this map. The conservation status of each vegetation type is given in brackets:

- Cape Seashore Vegetation (LT)
- Garden Route Shale Fynbos (EN)
- Knysna Sand Fynbos (EN)

Detailed descriptions of these vegetation types are given in Mucina and Rutherford (2006).

According to the fine-scale vegetation map compiled for the Garden Route Initiative by Vlok *et al.* (2008) the reserve contains five vegetation units representing three biomes (Figure 10). A brief description of each (based on Vlok *et al.* (2008)) is given below as well as the conservation status according to Holness *et al.* (2010) and Vromans *et al.* (2010):

Marine biome:

- Hartenbos Primary Dune (EN) – This unit occurs in patches as a very narrow coastal strip all the way from Witsand eastwards to Nature’s Valley. It has few species present. *Ammophila arenaria* (alien), *Arctotheca populifolia*, *Gazania rigens*, *Hebenstretia cordata*, *Ipomoea pes-caprae*, *Senecio elegans*, *Scaevola plumieri*, *Tetragonia decumbens* and *Thinopyrum distichum* are most prevalent. The plants tend to be sparse, but just inland (secondary dunes) the vegetation becomes rapidly denser and taller, with shrubs such as *Metalasia muricata*, *Morella cordifolia*, *Passerina rigida*, *Searsia crenata* and often somewhat stunted *Sideroxylon inerme* present. The latter constitutes the transition to Dune Thicket vegetation and the cut-off point between these two units is often difficult to determine. The absence of species such as *Scaevola plumieri*, *Tetragonia decumbens* and *Thinopyrum distichum* indicates the transition from Primary Dune to Dune Thicket units. The Primary Dune units act as a precursor to the Dune Thicket units. Wherever they are absent, often due to stabilization of the supporting Drift Sands habitat, wave action starts eating into the secondary dunes, undermining the sands of the Dune Thicket. *Gladiolus gueinzii* is the only uncommon plant species known from this unit – it has not yet been recorded from the RNRC.

Subtropical Thicket biome:

- Herolds Bay Littoral-Thicket (CR) – This unit is restricted to the granite and shale outcrops from Glentana eastwards to Stormsrivier. It has a higher succulent component present. *Silene vlokii* is endemic to this unit, but it is now regarded by some as only an ecotype of *Silene primuliflora*.
- Wilderness Forest-Thicket (VU) - This habitat is restricted to the secondary dune systems, just inland of the mobile dune systems between Wilderness and Brenton-on-Sea. The matrix vegetation consists of Dune Thicket with typical species such *Azima tetracantha*, *Carissa bispinosa*, *Cassine peragua*, *Euclea racemosa*, *Lycium cinereum*, *Searsia crenata*, *Searsia pterota*, *Mystroxydon aethiopicum*, *Muraltia spinosa*, *Putterlickia pyracantha* often forming impenetrable stands as these shrubs are usually woven together with creepers such as *Asparagus aethiopicus*, *Cynanchum ellipticum*, *Rhoicissus digitata*, *Sarcostemma viminale* and *Solanum africanum*. A forest-like community of trees such as *Olinia ventosa*, *Pterocelastrus tricuspidatus*, *Sideroxylon inerme* and *Tarchonanthus littoralis* occur in the protected dune slack areas. Where these dune slack areas are deep these trees form a dense closed canopy that is well lifted above ground level, thus qualifying to be called a “Milkwood forest”. These forests are never very wide, although they can be quite long.

Fynbos biome:

- Noetzie Proteoid Fynbos (LT) – This unit is limited to the area between Knysna and Plettenberg Bay. Subtropical thicket patches are absent as most of the habitat is exposed to periodic fire, but when physically disturbed the vegetation can be quite grassy. Another differentiating feature is the periodic occurrence of seasonally wet sites in which robust sedges such as *Tetraria bromoides* are locally dominant. Unlike the upland Montane Fynbos water loving species such as *Berzelia intermedia* and *Grubbia rosmarinifolia* are absent from these sites. Overstorey proteoid shrubs such as *Leucadendron eucalyptifolium*, *Leucadendron salignum* and *Protea neriifolia* are often locally abundant, along with ericoid shrubs such as *Erica formosa*, *Erica sparsa* and *Erica versicolor*. This habitat is not very rich in geophytic species, but some orchids such as *Disa hians*, are often locally abundant. Some of these geophytes, such as *Pterygodium newdigateae*, are threatened species.
- Noetzie Thicket-Fynbos (VU) – This unit occurs in a narrow strip along the coast in the higher rainfall zone from Brenton-on-Sea to Plettenberg Bay. Thicket and Forest patches are more abundant and it has water-demanding species such as *Erica glandulosa* subsp. *fourcadei* present.

The current plant species list for the reserve stands on 175 species, based on specimens collected on the reserve. This list is by no means complete and is constantly being updated through baseline data collection. Species lists are available on request from Scientific Services, Assegaaibosch Nature Reserve, Jonkershoek Road, Stellenbosch.

At least five of the plant species on the reserve are threatened or of conservation concern (Raimondo *et al.* 2009):

- *Agathosma acutissima* (VU)
- *Disa hallackii* (CR)
- *Erica glumiflora* (VU)
- *Selago villicaulis* (VU)
- *Wahlenbergia* sp. nov. – a species that is restricted to the Plettenberg Bay area according to Goldblatt and Manning (2000).

All these species are restricted to the fynbos vegetation units.

3.8.2 Invasive Alien Plants

The major alien invasive threats to the reserve are due to infestation from neighbouring properties, which include *Acacia cyclops* and *Acacia saligna*. The dense stands of *Acacia cyclops* that used to occur in the area known as Witsand have been removed with only a small section that remains on the northern cliff face, which is inaccessible. Biological control agents are used to limit new seed production in these areas. Annual maintenance is conducted to eradicate new plants from establishing on the reserve.

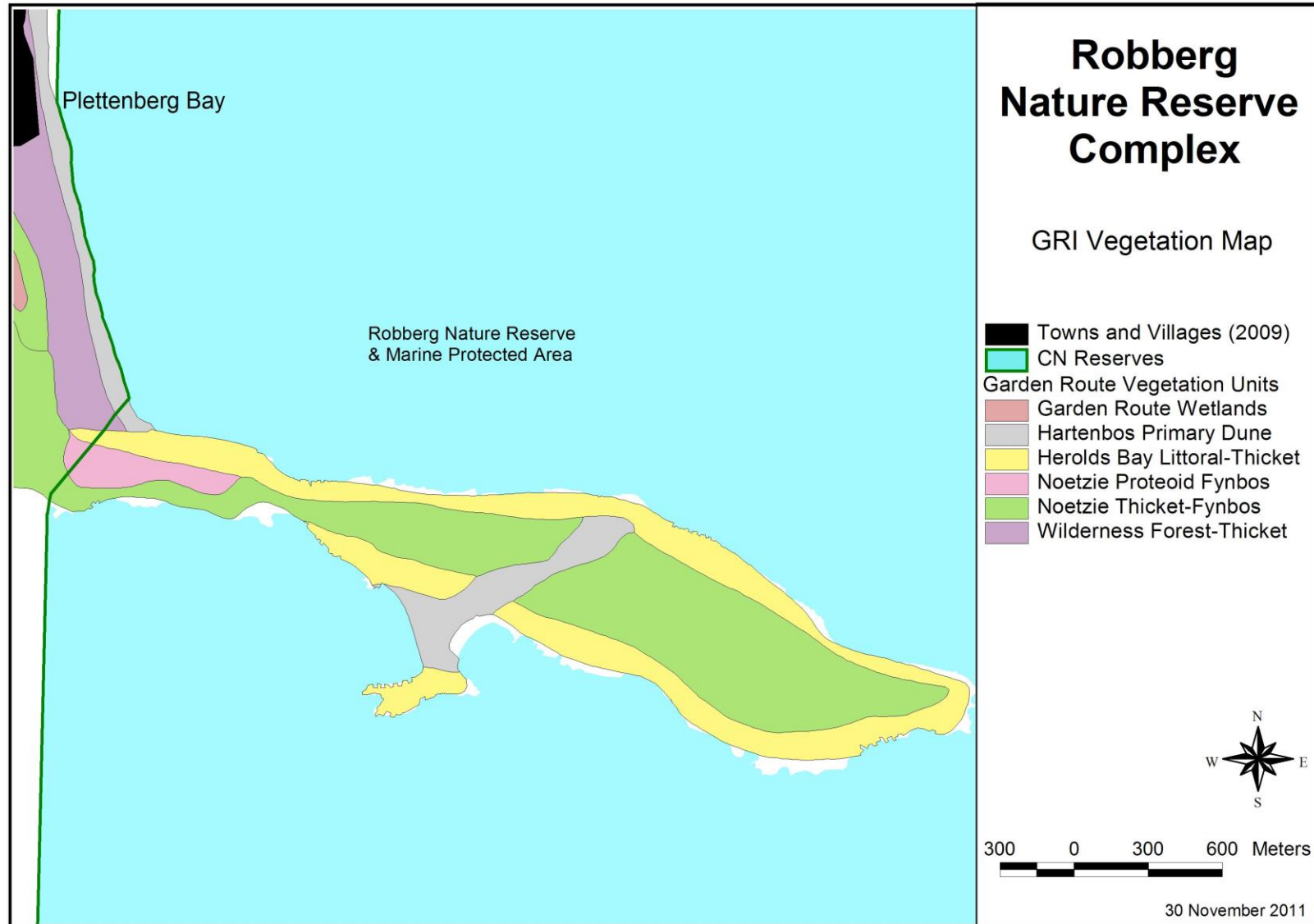


Figure 10: Vegetation of Robberg Nature Reserve Complex based on the fine-scale vegetation map compiled by Vlok *et al.* (2008) for the Garden Route Initiative (GRI).

3.9 Fauna

Faunal species lists are available on request from Scientific Services, Assegaaibosch Nature Reserve, Jonkershoek Road, Stellenbosch.

3.9.1 Mammals

Thirty-one species have been recorded in the reserve complex. Threatened marine species include the Humpback whale (*Megaptera novaeangliae*; VU), Humpback dolphin (*Sousa chinensis*; VU), Indian Ocean bottle-nosed dolphin (*Tursiops aduncus*; VU) and the Southern elephant seal (*Mirounga leonina*; EN), which is a vagrant to the reserve.

There is a Cape fur seal (*Arctocephalus pusillus pusillus*) colony within the RNRC.

3.9.2 Avifauna

One hundred and twenty four bird species have been recorded on the reserve and the surrounding MPA (BIRP 2011). The marine portion of the reserve contributes some species to the reserve that would not normally be recorded on a terrestrial coastal reserve, e.g. Parasitic Jaeger (*Stercorarius parasiticus*) and Northern Giant Petrel (*Macronectes halli*). Threatened species recorded for the reserve are listed in Table 2 below.

Table 3.1: Threatened bird species recorded on the Robberg Nature Reserve Complex.

Species	IUCN Category (IUCN 2011)	South African Red Data Book Category (Barnes 2000)
African Penguin <i>Spheniscus demersus</i>	EN	VU
Cape Cormorant <i>Phalacrocorax capensis</i>	NT	NT
Cape Gannet <i>Morus capensis</i>	VU	VU
African Crowned Eagle <i>Stephanoaetus coronatus</i>		NT
African Black Oystercatcher <i>Haematopus moquini</i>	NT	NT
Caspian Tern <i>Sterna caspia</i>		NT
Northern Giant Petrel <i>Macronectes halli</i>		NT

In terms of population sizes, approximately 170 Cape Cormorants (*Phalacrocorax capensis*) are roosting and ca. 20 – 30 pairs of Whitebreasted Cormorants (*Phalacrocorax carbo*) are breeding in the RNRC.

3.9.3 Reptiles

Sixteen species of reptiles have been recorded in RNRC, according to the CapeNature State of Biodiversity (SOB) database. One of these, the Loggerhead turtle (*Caretta caretta*) is listed as EN. This species does not use the terrestrial part of the reserve for breeding but may utilise the marine protected area for foraging.

3.9.4 Amphibians

Five species of frogs have been recorded from the RNRC. None of these are listed as Threatened.

3.9.5 Fish

Only five marine fish species have been officially recorded in the RNRC (according to the SOB database). None of these are listed as Threatened. It is known that there are many more species present in the MPA, but these need to be properly documented.

3.9.6 Invertebrates

Twelve invertebrate species (butterflies, spiders and scorpions) have been recorded from the reserve, none of which are listed as Threatened. The invertebrate list for the reserve is very incomplete and needs focussed attention.

3.9.7 Invasive/alien fauna

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

3.10 Cultural Heritage Resources

There is archaeological evidence of human habitation at Robberg Peninsula dating back to 120,000 years ago (Rudner and Rudner 1974). 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 SãoGonçalo 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.

3.11 People and Conservation

The total land area of Robberg Nature Reserve covers only 185.3 ha. Therefore any utilisation of natural resources needs to be carefully considered. These activities will be guided by the protocol to gain access to CapeNature's nature reserves for consumptive and non-consumptive utilisation activities and purposes.

Shore-angling is currently allowed as a form of resource use, provided individuals are in possession of a valid angling license.

Local economic development

Management strives to implement projects through which local people can benefit. These projects include employing local residents to do alien vegetation clearing, maintaining fire breaks and as contractors when normal day to day work needs to be done.

Work opportunities will be created through different conservation management initiatives. These initiatives include gate guards, gardening services, guiding, as well as cleaning services.

Further work opportunities are also created through externally funded projects managed by CapeNature. These include alien vegetation removal, as well as fire break maintenance projects through Integrated Catchment Management (ICM). Although these projects only provide temporary work opportunities with CapeNature, they also contribute to contractor and skills development. A Coast Care team works under supervision of CapeNature staff once a week.

Another contributor to creating work opportunities on CapeNature land is to allow private concessionaires to operate on the reserves. This does not only create additional work opportunities, but also generates additional income to CapeNature.

Non-commercial access

Access to the RNRC for spiritual, traditional and cultural groups will be carefully considered due to the small size and sensitive nature of the reserve.

Protected Areas Advisory Committees

The objectives of the PAACs are to increase the community participation in the management and enjoyment of the nature reserves.

The CapeNature PAACs are intended as partnerships between the communities that live adjacent to the nature reserves and the reserve management staff. As envisaged in section 2(e) and (f) of the National Environmental Management: Protected Areas Act, 2003 (Act No.

57 of 2003), the PAAC will play a crucial role in facilitating a participatory form of monitoring and management planning that reflects the needs and concerns of the communities. They will participate voluntarily, to encourage “a sense of ownership of the natural and cultural heritage”.

The Protected areas advisory committees present an innovative approach to community participation in reserve management and will require monitoring and evaluation to ensure that its objectives as well as the strategic objectives of the organization are being met. The monitoring indicators will include:

- 1) The public impression of the role and effectiveness of the committee. This will rely heavily on the committee’s efforts to educate the public about CapeNature and to monitor the effectiveness of our community interventions;
- 2) Frequency of meetings and percentage of membership present at meetings; and
- 3) Improvements resulting from recommendations made by the committee.

3.12 Youth Development, Awareness and Volunteers

Educational groups visit the nature reserve and marine protected area for various reasons, e.g. to learn about the intertidal zones, the importance of MPAs, geology, archaeology, coastal fynbos, coastal thicket, marine mammals, as well as marine birds. These educational groups are accommodated by either providing field rangers as guides and/or reduced entrance fees. The info centre as well as the interpretation boards on the reserve make the reserve a popular education location used by schools and universities not only from the Garden Route region, but also from elsewhere in South Africa.

Currently the only volunteers assisting on RNRC from time to time are those from Oceans Research Conservation Africa (ORCA). These volunteers are mainly from Europe and the Americas, but all their activities are managed by ORCA coordinators, who themselves are South African conservation students. These coordinators use the reserve monthly plan to see where they can be of any assistance to CapeNature.

3.13 Infrastructure

Virtually all the infrastructure on Robberg Nature Reserve has been developed for tourism purposes (Figure 11). This includes the gate kiosk, the paved access road, parking area, information centre, ablution facility, decks, foot paths and one accommodation unit.

The only building on Robberg that is currently not used by CapeNature is the Cape Seal Lighthouse, located near the Point. This solar powered navigational aid is managed by Port-Net from Mossel Bay.

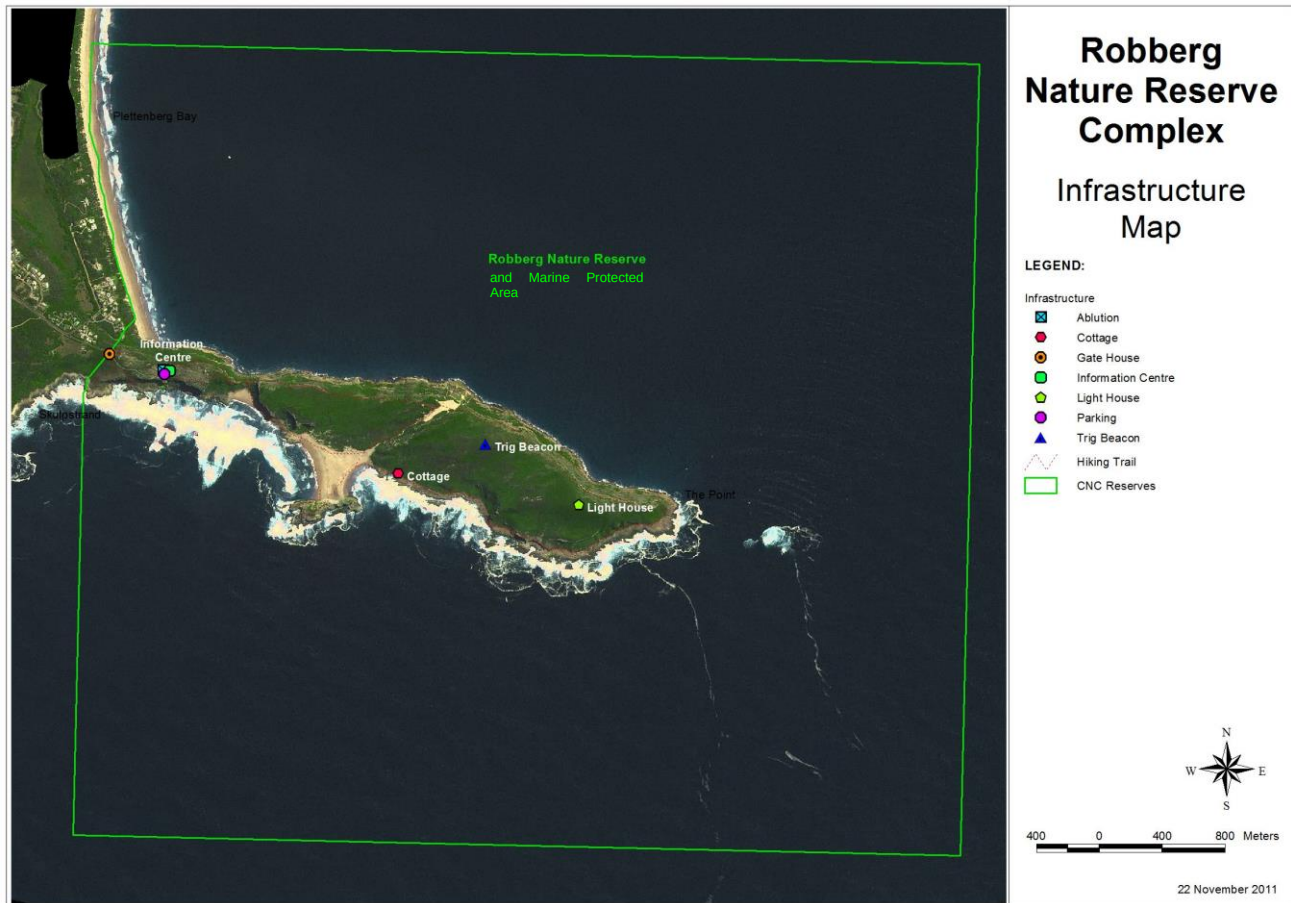


Figure 11: Map showing the infrastructure on Robberg Nature Reserve Complex.

3.14 Recreational and tourism services

Viewing decks with braai facilities have been constructed near the parking area where the toilets and info centre is centrally located to concentrate most of the visitors' activities. From there hikers and anglers will depart to their different activities. The abseiling site is also located at the car park and run by a concessionaire.

The "Fountain Shack", a revamped fishing hut, is the only accommodation on Robberg Nature Reserve. This hut is located on the southern side of the reserve near the Island Beach, half way towards the Point.

PART 2

SECTION 4: SWOT ANALYSIS

4.1 SWOT Analysis

A SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved. It involves specifying the objectives and identifying the internal and external factors that are favourable and unfavourable to achieving that objective.

4.1.1 Strengths, Weaknesses, Opportunities and Threats

Table 4.1 identifies the Strengths, Weaknesses, Opportunities and Threats of the Robberg Nature Reserve Complex.

Table 4.1: SWOT analysis.

<u>Strengths</u> • Dedicated staff • Close proximity of reserves to communities (low operating costs) • Strong support systems • Experienced staff • Integrated management style • Good infrastructure • Good communication • Rehabilitation of disturbed sites • MPA adjacent to terrestrial reserves • Variety of ecosystems • Accessibility • Expanded knowledge base (diversity of archaeological, ecological, biological) • Altitudinal gradients • National Monument tourism routes • Tourism development opportunities	<u>Weaknesses</u> • No specific budget for Robberg • Unfunded mandates • Waste management • Quality of contractors • Procurement procedures • Damage causing wildlife • Availability of affordable facilities for staff • Recruitment procedures. • Partnerships (ability to manage partnership for mutual benefit)
<u>Opportunities</u> • Research opportunities • Expansion opportunity • Concessionaire opportunities • Close proximity of reserve to communities (environmental awareness, community support) • Invasive alien plant control projects • External funding • Youth development • Job opportunities	<u>Threats</u> • Large numbers of seasonal users (infrastructure cannot cope) • Habitat destruction and fragmentation • Buffer areas are vulnerable to land use changes • High potential for hazardous spills (e.g. oil spills) • Alien invasive organisms (plants, pets) • Limited options for expansion of nature reserve • Marine pollution from e.g. boats

	• Close proximity of reserve to communities (edge effect, security, uncontrolled access) • Climate change • Unsustainable harvesting of e.g. fish
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SECTION 5: CONSERVATION DEVELOPMENT FRAMEWORK

5.1 Sensitivity-Value Mapping

Sensitivity-value mapping of reserve biodiversity, heritage and physical environment provides a consistent approach, intended to be the main decision support tool guiding spatial planning in protected areas:

- for all planned and ad-hoc infrastructure development e.g. location of management and tourism buildings and precincts, roads, trails, firebreaks;
- for whole-reserve planning and formalisation of use and access as a Reserve Zonation Scheme;
- to support conservation management decisions and prioritisation.

Outputs allow direct comparison of sites both within and between reserves to support CapeNature planning at local and regional scales. The process maps:

- sites with highest regional conservation value;
- areas where human access or disturbance will have a negative impact on biodiversity or heritage, and specific environmental protection is required
- areas where physical disturbance or infrastructure development will cause higher environmental impacts, and/or higher construction and on-going maintenance costs;
- areas where there is significant environmental risk to infrastructure.

The method ensures that the location, nature and required mitigation for access, activities, and infrastructure development within protected areas can be guided by the best possible landscape-level biodiversity informants.

The process accommodates both expert-derived information and more objective scientific data. Decisions are defensible and based on a transparent process.

Biodiversity, heritage and physical features are rated on a standard scale of 1 to 5, where 1 represents no or minimal sensitivity and 5 indicates maximum sensitivity (See Figure 12). Additional features such as visual sensitivity, fire risk and transport costs can also be included. Higher scores represent areas that should be avoided for conventional access and infrastructure, or where specific mitigation would be required in order to address identified environmental sensitivity. A score of 5 typically represents areas where mitigation for conventional access or infrastructure development would be extensive, costly or impractical enough to be avoided at all costs, or features so sensitive that they represent a 'no go' area. For biodiversity features highest scores represent high priority sites where conservation management cannot be compromised.

Sensitivity maps cannot replace all site-scale investigation, but they are ideal for rapidly reviewing known environmental risks, and guiding whole-reserve planning to minimise overall negative environmental impact.

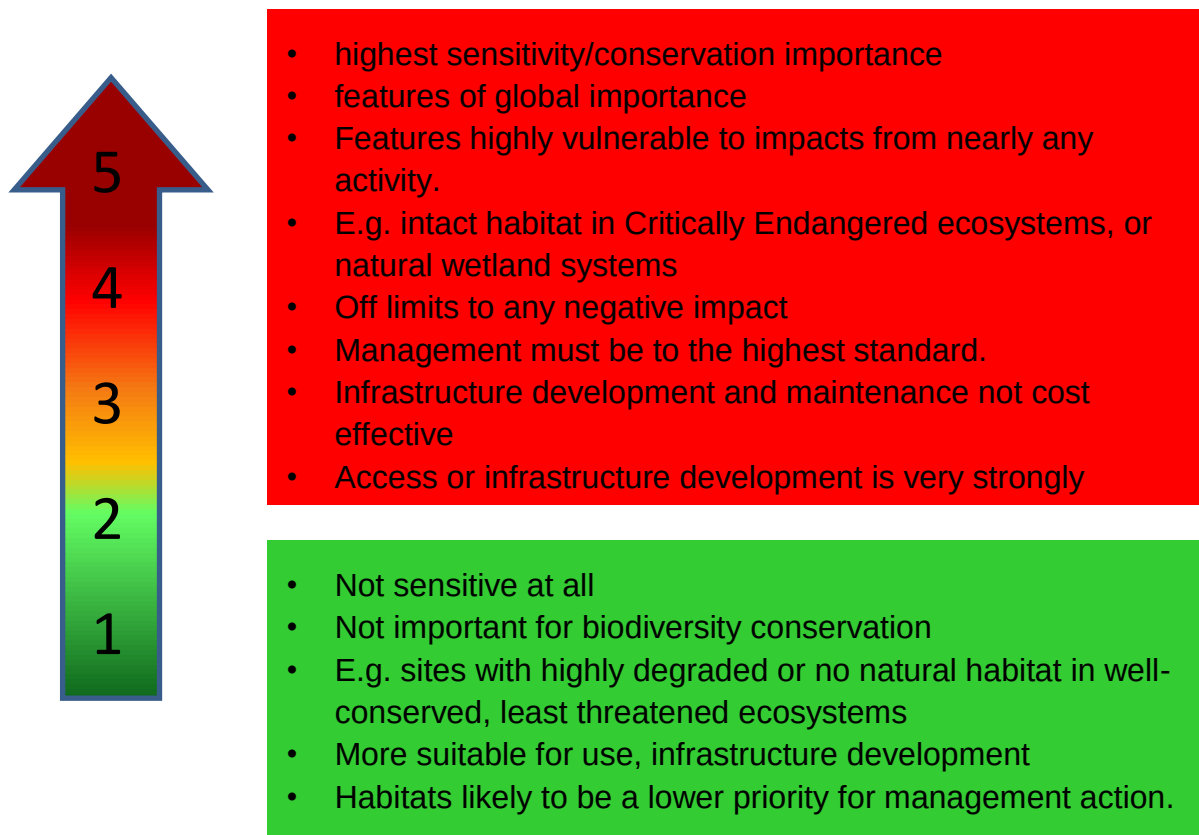


Figure 12: Sensitivity-Value Mapping.

Robberg Nature Reserve Sensitivity Analysis

The Robberg Peninsula, with rugged relief, an extensive coastline, and regionally important habitat, species and archaeological features, must be characterised as an exceptionally sensitive reserve overall. Any proposed infrastructure or activity must take relevant sensitivity features into account (Table 1; Figures 13-15).

Table 5.1: Sensitivity of Robberg Nature Reserve Complex in terms of biodiversity, heritage and physical features.

	Class	Sensitivity layer	Description
Biophysical sensitivity: ANY infrastructure or access	Biodiversity (Figure 13)	Ecosystem representivity	No site-scale, spatially accurate vegetation map was available. Habitat map created by 1:1000 scale mapping of critical habitats to be differentiated: beach sand; wave-cut rock platform; primary dune/mobile sand; and unique fynbos habitat on shallow decomposed conglomerates. Remaining thicket/fynbos/littoral habitats were amalgamated as single mosaic unit. Ecosystem threat and conservation status derived from equivalent units in 2010 Garden Route Initiative assessment (Holness <i>et al.</i> 2010), with mosaic fynbos/thicket/littoral unit conservation status derived from the most sensitive 2012 Garden Route vegetation component of that mosaic (variant: Noetzie Thicket-Fynbos, within habitat: Asteraceous Mosaic Thicket and Forest)
		Special Habitat	The asteraceous fynbos habitat on shallow decomposed conglomerates around the parking lot is indicated as non-threatened and well conserved Noetzie Proteoid Fynbos in the regional scale Garden Route Vegetation map and conservation status (Vlok <i>et al.</i> 2008; Holness <i>et al.</i> 2010) but the geology (2001 Council for Geoscience GIS data) suggests that this is a regionally unique substrate, and comparison with very local vegetation mapping (Hellström 1990) confirm that this should be treated as a regionally unique habitat with possibly unique biodiversity and ecology.
		Species	Critically Endangered <i>Disa halackii</i> (Raimondo <i>et al.</i> 2009) occurs on a significant proportion of the mapped asteraceous fynbos on shallow conglomerates and the area of occupancy for this species for this analysis was extended to the full extent of the corresponding habitat to allow for natural population dynamics on the site. Furthermore, <i>Selago villicaulis</i> (VU), <i>Agathosma acutissima</i> (VU), <i>Erica glumiflora</i> (VU) and an undescribed species of <i>Wahlenbergia</i> (only known from the Plettenberg Bay area) have also been recorded in this habitat type.

	Heritage (Figure 14)	Heritage	A number of globally important stone age human cave deposits occur on the reserve. All features mapped by Rudner and Rudner (1974) were included with suitable buffers, with spatial correction by reserve staff and use of visible aerial photography features correlated with their hand-drawn map.
	Physical (Figure 15)	Slope	Cliff features were manually mapped at approx. 10m accuracy. Slope analysis highlighting areas vulnerable to erosion and less suitable for infrastructure development was done using the Western Cape Digital Elevation Model (Anonymous 2001) with slope classes converted to generalised polygons, and manually edited to rationalise modelled outputs to known features, especially mapped cliffs, beaches, and wave-cut platforms.
		Substrate	Mobile sand, beaches and cliffs were mapped as easily visible unstable or highly erodible features that pose a risk to infrastructure, or where infrastructure will cause environmental degradation. There was no differentiation within the fynbos/thicket/littoral habitat mosaic unit, and this may include other localised sensitive soils.
		Hydrological	Wave-cut platforms on the reserve are known to be affected by storm-surge seas, and historical infrastructure located in this zone has been destroyed during storms (the old shack on The Point). All wave-cut platforms were mapped as highest hydrological sensitivity. Local wetland features and seeps could not be mapped within the timeframe of this analysis. As the interior of the reserve is considered mostly highly sensitive anyway, and no new infrastructure, hiking or walking routes are planned, this is considered acceptable but these features should be mapped in future.

No analysis of viewsheds or visual sensitivity could be performed due to time constraints, but it should be noted that the entire eastern side of the reserve is visible from the town of Plettenberg Bay and this viewshed likely forms a critical part of the tourism value of the area which underpins the local economy. The visual sensitivity of the reserve should be considered highest sensitivity throughout unless specifically demonstrated otherwise by proper analysis.

For further information, please see the Robberg 2012 Conservation Development Framework Report (Kirkwood in prep.), which includes a detailed description of the Sensitivity Analysis components and analysis.

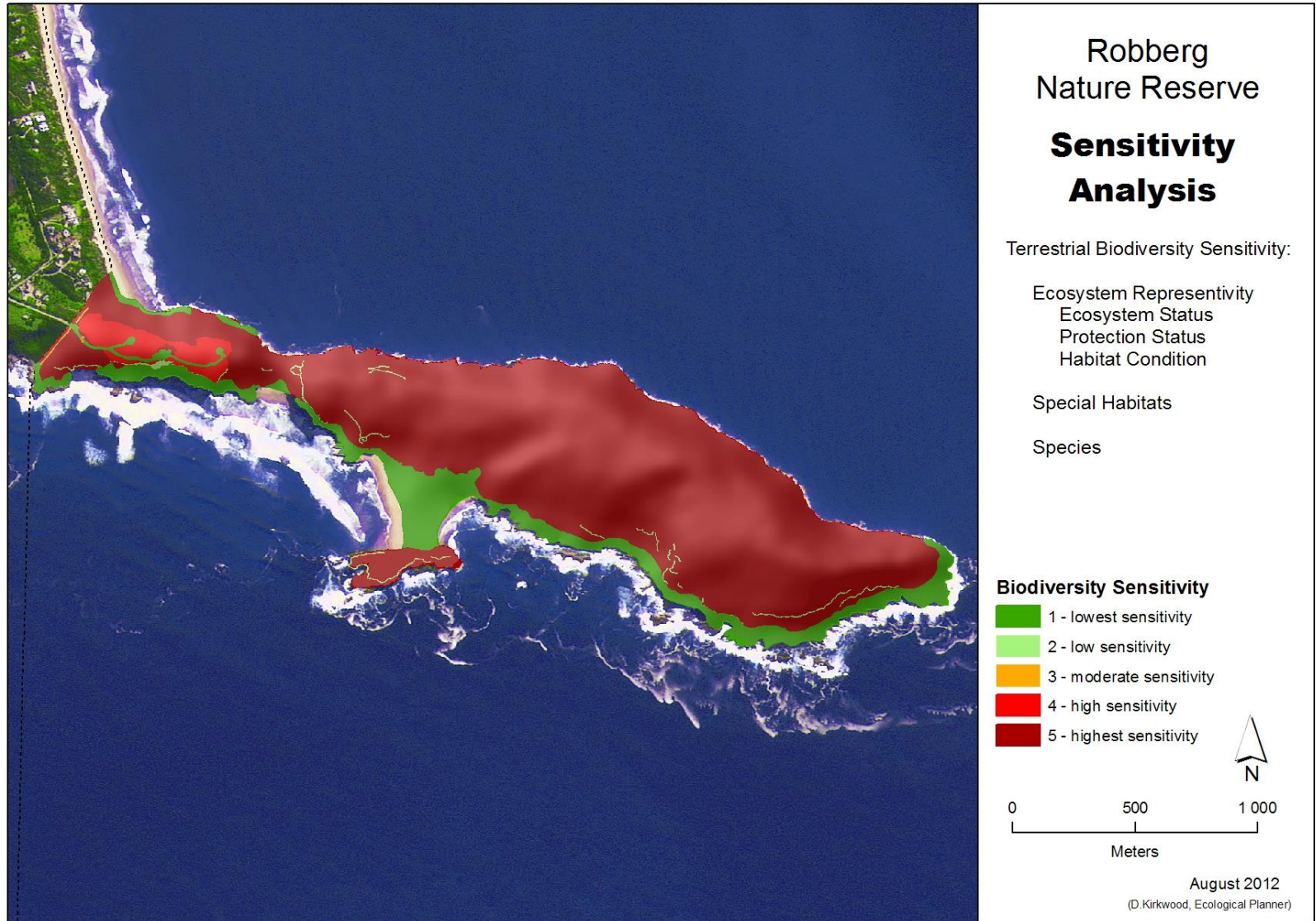


Figure 13: The terrestrial biodiversity sensitivity of Robberg Nature Reserve based on ecosystem representivity, special habitats and species of conservation concern.

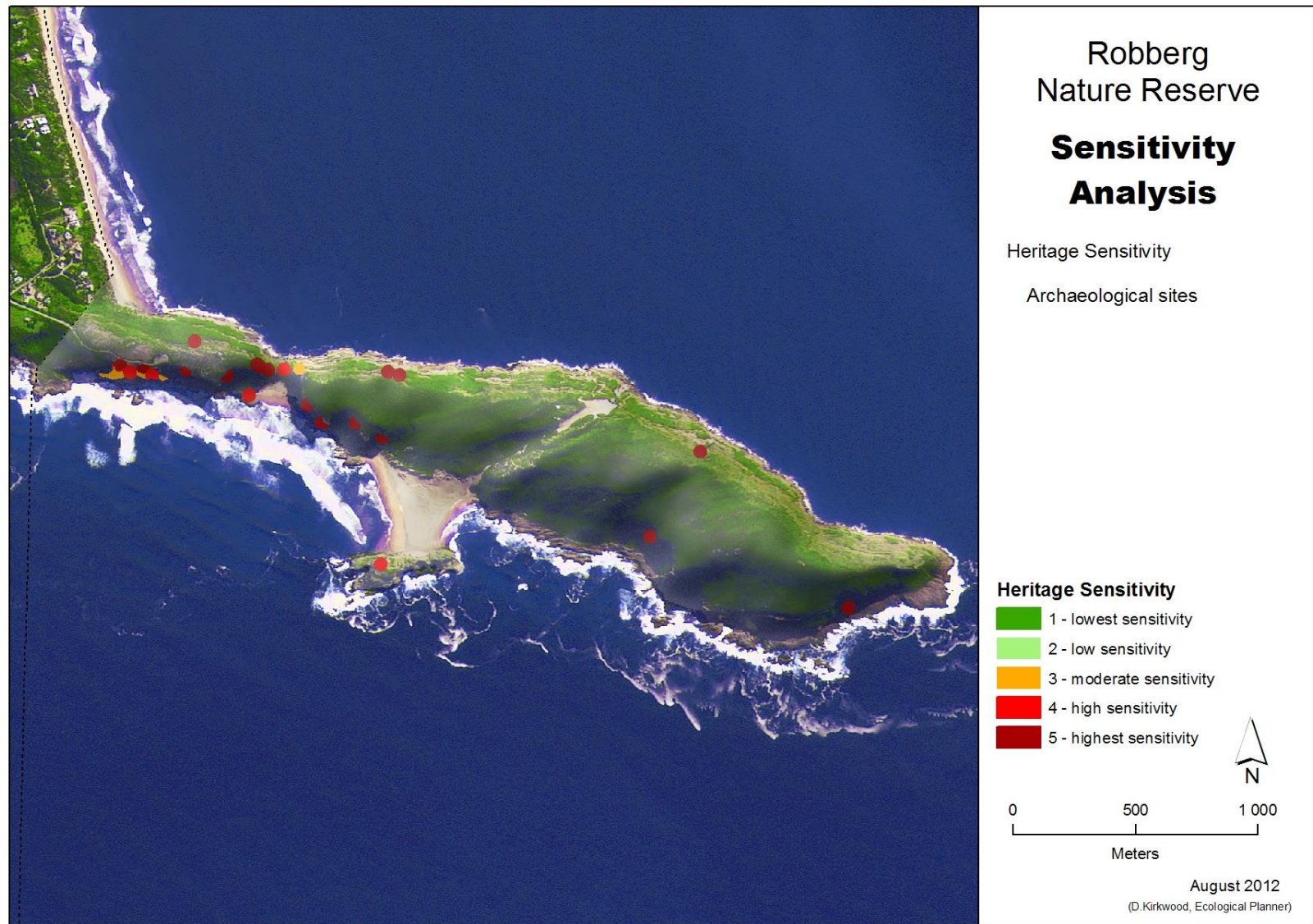


Figure 14: The heritage sensitivity of Robberg Nature Reserve based on the location of archaeological sites.

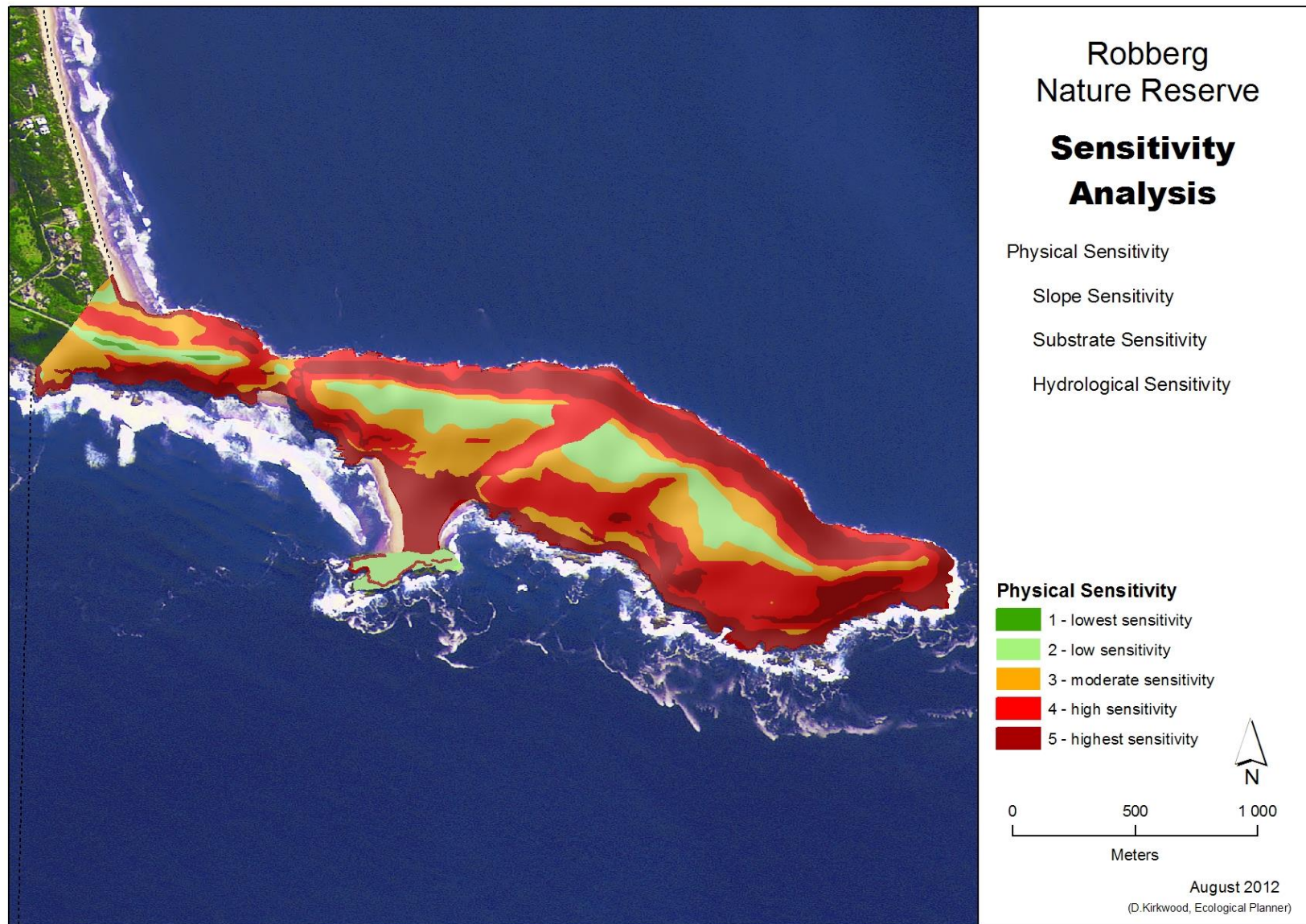


Figure 15: The physical sensitivity of Robberg Nature Reserve based on slope, substrate and hydrological sensitivity.

5.2 Protected Area Zonation

Protected Area Zonation provides a standard framework of formal guidelines for conservation, access and use for particular areas.

Zonation goes beyond natural resource protection and must also provide for:

- appropriate visitor experience;
- access and access control;
- environmental education;
- commercial activities.

Ideally Zonation development should be done at the same time as Infrastructure Development Planning. Good planning must aim to reduce cumulative environmental impacts and the long term operating costs of all activities. Zonation and Infrastructure Development Planning must be guided by:

- existing infrastructure and use;
- potential future infrastructure and access requirements;

careful evaluation of overall impact, construction costs and operating costs vs. likely benefits; for alternatives for every component.

Zonation requires input from all appropriate internal CapeNature stakeholders, and is a key component to be evaluated during Public Participation evaluation of Management Plans.

5.3 Zonation Categories

CapeNature Zonation Categories were developed by an internal workshop process completed in September 2010. Existing protected area zoning schemes worldwide were examined to develop a simple and powerful scheme that provides for the required range of visitor experience, access and conservation management. Particular effort was made to maintain consistency with the best developed South African zonation schemes, in particular those of SANParks and Ezemvelo KwaZulu Natal Wildlife (EKZNW). CapeNature Zonation Categories have fewer tourism-access categories, but provide more detailed and explicit guidelines with regard to zone objectives and characteristics. Further, CapeNature Zonation includes additional new zones specifically required in the context of highly sensitive biodiversity sites and zoning of privately owned Contract Nature Reserves For a guide to the zones as used by CapeNature, see Table 5.2.

Table 5.2: Guide to CapeNature Zones.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Wilderness / Wilderness (declared)	Users: To provide an experience of solitude in pristine landscapes with minimal evidence of human presence or use. Conservation: To limit visitor numbers and use to minimise impact. Minimal management intervention for visitor or biodiversity management. Include sensitive or threatened habitats & species in this low use zone when contiguous sites meet the criteria for wilderness.	Completely wild and rugged landscapes (or being restored to this). Areas where users have little chance of encountering any other human presence or group. Sight or sound of human activities outside zone barely discernible and at far distance; Preferably no human impact or infrastructure inside the zone other than trails. Natural burning regimes, with no active fire management and road/firebreak infrastructure. Areas with minimal Invasive Alien Plant infestations, where IAP control can be done without vehicle access. Area must meet the definition and requirements of the National Environmental Management: Protected Areas Act 57 of 2003. If formally declared in terms of the act, zone = "Wilderness (declared)"; if not = "Wilderness".	"Leave-no-trace" activities: Overnight hiking, without any sleeping facilities, formal campsites, or with only basic, un-serviced shelters. "Carry in, Carry out" principle for all food and waste. Guided or unguided nature observation. No fires	No infrastructure of any type if possible. No roads or vehicle tracks. No structures except small existing buildings of cultural, historic or aesthetic value. These can be used as un-serviced sleeping shelters for hikers & provided with composting toilets. Narrow permanent walking trails. No signage except small, unobtrusive markers for closed routes, or at trail junctions. NB – in the mountainous, slow-growing fynbos of the Western Cape, the traditional wilderness concept of access without defined trails is unsafe and rapidly results in undesirable user-created trails and erosion.	Unguided visitor access only on foot. Visitors have freedom to use various trails. Use of donkeys, horses or other animals with an official guide only on designated historical routes and trails, or existing roads, and only where this will not cause trampling, erosion or any degradation. Limits on visitor numbers and/or control of routes and access so that zone objectives are met. Use of non-motorised canoe or flotation device on rivers can be acceptable where entry is by foot or by river from outside the zone. No fires No vehicle access No access without zone permit	Visitor Management: Manage to conserve natural and cultural resources, ecological processes and wilderness integrity. Leave no trace ethic. Restrict numbers of visitors and allow for no-use rest periods if required. Limited management interventions. Management measures may be carried out in extreme conditions, but tread lightly principles must apply. Since visitor use cannot be intensively managed, re-route trails away from any areas with sensitive local habitats or plant and animal species. Trail layout, design and construction must reduce maintenance requirements. Conservation Management: Habitats with minimal management requirements, typically natural burning zones. Prevent or restore visible trampling or any other impact. Rehabilitate non-essential roads to natural vegetation. Re-zone essential roads out of Wilderness Zoning. Consumptive Use: Not compatible

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Primitive	Users: To provide an experience of solitude in natural landscapes with little nearby evidence of human presence. Can provide access to and buffer Wilderness Zones. Conservation: To limit visitor use, numbers and infrastructure to minimise impact in sensitive environments. To reduce need for management of users and visitor impacts. Allows for minimal or more intensive biodiversity management intervention. <i>Include extensive areas of sensitive or threatened habitats & species in this low use zone when sites do not meet the criteria for wilderness.</i>	Intrinsically wild appearance & character. Areas where users will seldom encounter other human groups or presence. Any visible human impact or infrastructure inside the zone is unobtrusive. Human activities outside zone may be audible or visible in places. Areas remote from management centres, or otherwise difficult or expensive to access for management. Areas that might not meet the criteria for Wilderness but can serve as undeveloped visual buffers for Wilderness. Areas that may have natural burning regimes, with no active fire management and road/firebreak infrastructure OR areas that require active fire management to stay within thresholds of concern.	Guided or unguided nature observation Primarily intended for hiking or walking access. Only allows for 4x4 routes or vehicle access if specifically considered and noted. Only allows for non-hiking accommodation node if specifically considered and noted.	Deviation from natural state to be minimised. Infrastructure should not be visible from Wilderness Zones. May provide isolated, small, unobtrusive accommodation facilities for up to 16 guests on restricted footprints, particularly for overnight hiking trails. May have defined or beaconed hiking routes, management access roads, tracks and firebreaks. All roads, tracks or trails to be located and constructed to reduce maintenance, visibility and erosion. Where unsurfaced tracks will result in erosion, use concrete strip or interlocking pavers to stabilise. Re-route unstable or erosion-prone road sections if this will lower long-term visual and environmental impact. New roads for visitor access only justified if also required for management access. Avoid wide surfaced roads or roads and tracks wider than required for a single vehicle.	Visitor access only by permit. Control of visitor numbers, frequency and group sizes to meet zone objectives. Only users of facilities/activities will access to this zone. Defined or non-defined hiking and day trail routes. On foot always. Bicycle, 2x4 or 4x4 vehicle, or horseback on designated routes only. No access without zone permit	Visitor Management: Manage to conserve natural and cultural resources, ecological processes and wild appearance & character. Restrict numbers of visitors and allow for no-use rest periods if required. All facilities will be small, very basic, self-catering and distributed to avoid contact between users. There should be limited if any interaction between groups. Since visitor use usually cannot be intensively managed, re-route trails away from any areas with sensitive local habitats or plant and animal species. Trail layout, design and construction must reduce maintenance requirements. Visible & audible human impacts from adjacent zones should be mitigated. Conservation Management: Habitats with lower or higher management requirements. May be natural burning zones. Usually remote areas so roads and trails should be planned and constructed assuming infrequent maintenance. Prevent or restore visible trampling or any other visitor impact. Rehabilitate non-useful roads to natural vegetation. Consumptive Use: Sustainable use can be appropriate under controlled circumstances subject to a formal assessment and application in accordance with CapeNature policies.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Nature Access	Users: To provide easy access to natural landscapes with low expectation of solitude at all times. Can buffer between development and wilderness or Primitive Zones. Conservation: To manage and direct visitor use, and plan infrastructure to minimise impact on sensitive environments. To actively manage users and visitor impacts. Allows for minimal or more intensive biodiversity management intervention. <i>Provide additional protection to localised sensitive or threatened habitats, species or other features by Special Management Overlays</i>	Areas with extensive lower sensitivity habitats: Areas able to accommodate higher numbers of visitors regularly, with no identified sensitive or regionally rare biodiversity. Popular view or access sites. Extensive areas able to accommodate roads, trails and tracks without high risk of erosion and degradation. Areas accessible for regular management of roads and trails. Areas where roads and trail infrastructure can be located with low visibility from the surrounding landscape, particularly from adjacent Primitive or Wilderness Zones. Usually areas that require active fire management with firebreaks to stay within thresholds of concern, but may also include natural burning regimes.	Guided or unguided nature observation. Day hiking trails and/or short trails. Bird hides, canoeing, mountain biking & rock-climbing where appropriate. Other activities if specifically considered and approved as part of specific reserve zoning scheme. Motorised 2x4 self-drive access on designated routes. No accommodation or camping. Frequent interaction with other users.	Some deviation from natural/pristine state allowed particularly on less sensitive or already disturbed/transformed sites. No accommodation; but ablution facilities may be provided. May have defined or beaconed hiking routes, tourism and management access roads, and management tracks and firebreaks. Infrastructure should be designed to reduce impacts of higher visitor numbers. Roads open to the public should be accessible by 2x4 sedan. Full width tarred or surfaced roads or roads and tracks to accommodate two vehicles are appropriate. Un-surfaced roads may be surfaced if a road planning exercise has confirmed that the location is suitable.	No special access control or permits required for this zone. Will cater for larger number of visitors than primitive zone. Vehicle access on dedicated routes, with pedestrian access from parking areas or adjacent Development Zones. On water – only non-motorised crafts allowed unless specifically noted.	Visitor Management: More frequent monitoring of these areas is necessary to prevent damage or degradation. More frequent footpath maintenance must be scheduled for busy routes, with particular attention paid to use of railings or other access control to prevent damage to sensitive areas. Unless visitor access can definitely be intensively guided and managed, re-route trails away from any sensitive local habitats or plant and animal species. Trail layout, design and construction must be specified to reduce maintenance requirements under higher use. Visible & audible human impacts to adjacent Primitive or Wilderness Zones should be mitigated. Conservation Management: Habitats with lower or higher management requirements. May be natural burning zones. Prevent or restore visible trampling or any other visitor impact. Rehabilitate non-useful roads to natural vegetation. Consumptive Use: Sustainable use may be appropriate subject to a formal assessment and application in accordance with CapeNature policies.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Development – Low Intensity	Users: To provide access to adjacent natural landscapes with no expectation of solitude. To provide primarily self-catering accommodation or camping. Can provide for Environmental Education accommodation and access into surrounding landscapes. Conservation: To locate the zone and infrastructure to minimise impact on sensitive environments. To actively manage users and visitor impacts on adjacent sensitive areas. Provide additional protection to sensitive or threatened habitats, species or other features by Special Management Overlays	Areas with existing degraded or transformed footprints. Natural or semi-natural habitats only where essential to minimise impacts over whole reserve. Areas able to accommodate high numbers of visitors regularly, with no identified sensitive or regionally rare biodiversity. Areas able to accommodate roads, trails and accommodation infrastructure without risk of erosion or degradation. Areas easily accessible from reserve management centre. Areas where risk of fire damage to infrastructure is low or can be mitigated without unacceptable impacts on surrounding environment. Areas where new infrastructure can be located with low visibility from the surrounding landscape. Areas not visible from Primitive or Wilderness Zones. Areas with available potable water, and not sensitive to disposal of treated wastewater via soak away.	Picnicking. Walking or bicycle access into adjacent areas. Self-catering accommodation and camping. Meeting, workshops or mini-conference activities for no more than the number of people that can be accommodated overnight in the zone. Can provide for Environmental Education accommodation and access into surrounding landscapes, but this must be carefully planned not to conflict with visitor use.	Reception offices. Self-catering accommodation and camping for up to 100 guests in total at any time¹ Single small lodges for up to 30 guests are permissible if all facilities are contained in a compact footprint, this represents the total accommodation for the zone, and any restaurant or catering facilities are for overnight guests only. If possible roads should be narrow with separate incoming and outgoing routes; otherwise double vehicle width roads are strongly advisable for safety and usability. Roads in this zone should be surfaced to reduce management cost and environmental impacts. Development and infrastructure may take up a significant proportion of the zone, but planning should ensure that area still provides relatively natural outdoor experience.	Motorised self-drive 2x4 sedan car access. Tour bus access. Parking areas. This zone should be used to provide parking and walk-in access for day visitors to adjacent Nature Access zone if possible.	Visitor Management: Use infrastructure solutions such as railings, hard surfacing and boardwalks to manage undesirable visitor impacts. Accept negative impacts on natural habitats in this zone unless these are specifically addressed in a Special Management Overlay. Frequent footpath and road maintenance must be scheduled for high impact routes. Visible impacts to adjacent Zones should be considered and mitigated. Conservation Management: Provide access and generate revenue. Management should aim to mitigate the impacts of the high number of visitors. Largely transformed habitats with lower management requirements. Usually fire exclusion areas. Prevent or rehabilitate visible trampling or any other visitor impact. Plan for a compact overall development footprint, avoiding dispersed infrastructure that will increase fire risk and/or environmental footprint. This is most critical in fire-prone environments. Consumptive Use: Sustainable use may be appropriate subject to a formal assessment and application in accordance with CapeNature policies.

¹ Although 100 guests seems high this is in line with CapeNature sites that would fall within this zone definition, e.g. configured as 10 x 4-sleeper self-catering units and 15 campsites.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Development – High Intensity	Users: To provide access to adjacent natural landscapes with no expectation of solitude. To provide low and/or higher density accommodation. May provide some conveniences such as restaurants and shops. Conservation: To locate the zone and infrastructure to minimise impact on sensitive environments. To actively manage users and visitor impacts on adjacent sensitive areas. <i>Provide additional protection to sensitive or threatened habitats, species or other features by Special Management Overlays</i>	Areas with extensive degraded or transformed footprints. Natural or semi-natural habitats only where benefits outweigh impacts. Areas able to accommodate very high numbers of visitors regularly, with no identified sensitive biodiversity. Areas able to accommodate roads, trails and accommodation infrastructure without risk. Areas easily accessible from reserve management centre. Areas where risk of fire damage to infrastructure is low or can be mitigated without unacceptable impacts on surrounding environment. Areas where new infrastructure can be located with low visibility from the surrounding landscape. Areas not visible from Primitive or Wilderness Zones. Areas with available potable water, and not sensitive to disposal of larger amounts of treated wastewater.	Restaurants and small shops. Picnicking. Walking or bicycle access into adjacent areas. Accommodation in small hotels, lodges and higher density self-catering accommodation and/or camping. Meetings, workshop or mini-conference activities for no more than the number of people that can be accommodated overnight in the zone.	High density tourism development nodes'. Modern amenities including restaurants & shops. Self-catering accommodation and camping for over 100 guests in total at any time. Lodges or small hotels. Roads in this zone must be surfaced to reduce management cost and environmental impacts. Development and infrastructure may take up a significant proportion of the zone, but planning should ensure that area still provides relatively natural outdoor experience.	Tour bus access. Motorised self-drive sedan car access. Parking areas. Air access only permitted if considered and approved as part of zoning scheme and there is no possibility of faunal disturbance.	Visitor Management: Management action will focus mostly on maintenance of facilities & providing high quality experiences. Use infrastructure solutions such as railings, hard surfacing and boardwalks to manage undesirable visitor impacts. Accept substantial impact on natural habitats in this zone unless these are specifically addressed in a Special Management Overlay. Frequent landscape, footpath and road maintenance must be scheduled for high impact areas. Visible impacts to adjacent Zones should be mitigated. Conservation Management: Provide access and generate maximum revenue. Management should aim to mitigate the biodiversity impacts of the high number of visitors only in sensitive areas (if any) identified by Special Management Overlay. These are highly transformed habitats with lower management requirements. Natural fire exclusion areas. Prevent or rehabilitate visible trampling or any other visitor impact. Plan for a compact overall development footprint, avoiding dispersed infrastructure that will increase fire risk and/or environmental footprint. This is most critical in fire-prone environments. Consumptive Use: Sustainable use unlikely to be compatible.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Development - Management	Location of infrastructure and facilities for Reserve Administration & especially conservation management facilities Not compatible with tourism and tourism access.	Areas with extensive degraded or transformed footprints. Natural or semi-natural habitats only where benefits at reserve scale outweigh local impacts. Areas able to accommodate high disturbance, with no identified sensitive biodiversity. Areas providing easy access to reserve and infrastructure. Areas very close to zones requiring highest management intervention, especially Low/High Intensity Zones. Areas where risk of fire damage to infrastructure is low or can be mitigated without unacceptable impacts on surrounding environment. Areas where new infrastructure can be located with low visibility from the surrounding landscape. Areas not visible from Primitive or Wilderness Zones. Areas with available potable water, and not sensitive to disposal of treated wastewater.	n/a	Any reserve management infrastructure including offices, sheds, garages, stores, etc. Roads required to access these should be surfaced to reduce long-term maintenance costs and environmental impact. NOTE Reserve administrative offices may also be located within visitor reception facilities in Development - Low/High Intensity Zones	none	Visitor Management: n/a Conservation Management: Frequent footpath and road maintenance must be scheduled for high impact routes. Accept some impact on natural habitats in this zone unless these are specifically addressed in a Special Management Overlay. Visible impacts to adjacent Zones should be mitigated. Management should aim to contain all activities within the smallest possible footprint. Largely transformed habitats with lower management requirements. Usually fire exclusion areas. Prevent or restore trampling or any other management impact. Plan for a compact overall development footprint, avoiding dispersed infrastructure that will increase fire risk and/or environmental footprint. This is most critical in fire-prone environments. Consumptive Use: Sustainable use unlikely to be possible in small zone.

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Development - Production	Commercial or subsistence farming. (only applicable to privately owned & managed Contract Nature Reserves)	Areas identified for production farming. Areas with extensive degraded or transformed footprints. Natural or semi-natural habitats only when use of these areas is supported by a bioregional plan and specialist site assessment.	May allow agri-tourism	Any agricultural infrastructure.	May allow agri-tourism	Agricultural best practise to support surrounding natural areas, particularly with regard to river and wetland buffer areas.
Development - Private Areas	Private dwelling and surrounds. (only applicable to privately owned & managed Contract Nature Reserves)	Private homestead. Areas with existing degraded or transformed footprints. Natural or semi-natural habitats only when use of these areas is supported by a bioregional plan and specialist site assessment.	n/a	Dwellings and private accommodation areas. Roads to access these.	No access by the public without permission from landowner.	Should have no negative impacts on the surrounding conservation area.

Protection Zones

Zone	Zone Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Species / Habitat / Cultural Protection	Users: This zone's primary purpose is conservation and research. Limited tourism use only if compatible with conservation objective. Conservation: Protection of species or habitats of special conservation concern. Restrict access to prevent disturbance and/or damage.	Larger areas where uncontrolled public access is undesirable due to presence of regionally critically rare and endangered fauna, flora, habitat. Typical example would be a seabird breeding colony, particularly for threatened species.	Research. Nature observation under strictly controlled conditions only if specifically noted.	Usually none, but footpaths and tracks to allow management access may be permitted. Where visitor access is permitted, strict access control infrastructure is required to delimit access routes, and if necessary screen visitors. I.e. hides, boardwalks, screened routes, and paths with railings may be appropriate.	Public / Tourism access normally not allowed. May be permitted under very tightly controlled conditions, to be determined per site.	Visitor Management: Prevent visitor access or restrict numbers of visitors and allow for no-use rest periods if required. Infrastructure layout, design and construction must be designed and maintained to highest environmental standards. Conservation Management: Feature specific – as required. Prevent any negative impacts on identified feature/s. Consider removal and/or rehabilitation of non-essential infrastructure. Consumptive Use: Not compatible.

Special Management Overlays

Special management overlays provide an indication of areas requiring special management intervention within the above zones. Overlays would typically only be applied where zoning does allow visitor or management access, but special measures are required, particularly to ensure protection of important and sensitive features or sites. Overlays should include specific indication of permitted activities, access, facilities/infrastructure and management guidelines that differ from the rest of that zone. Overlay requirements can be flexible, adapted to the requirements of the feature/s they protect.

Overlay	Overlay Objective	Characteristics	Visitor Activities	Facilities / Infrastructure	Visitor Access	Management Guidelines
Cultural	Protection of localised identified important Cultural Feature.	Can overlap any zone. Permanent, temporary or temporal zone to manage important cultural or heritage features.	Specific activities dependent on ability to manage activity and feature in question.	Usually none, but specific infrastructure dependent on feature in question.	Specific access dependent on ability to manage access and feature in question.	Feature specific – as required.
Species / Habitat	Protection of localised identified important Biodiversity Feature	Can overlap any zone. Permanent, temporary or temporal zone to manage important and sensitive species and/or habitats. Typically only applied where visitor impacts are expected.	Specific activities dependent on ability to manage activity and feature in question.	Usually none, but specific infrastructure dependent on feature in question.	Specific access dependent on ability to manage access and feature in question.	Feature specific – as required.
Visual	Protection of sensitive view sheds and particularly for Wilderness Zone view sheds.	Can overlap any zone. Sensitive view sheds and particularly for areas within Wilderness Zone view sheds.	Specific activities dependent on ability to manage activity and feature in question.	No roads, firebreaks or buildings. No visible infrastructure. Trails may be appropriate.	Walking access likely to be appropriate.	Feature specific – as required.
Natural Resource Access	Access to identified sustainable consumptive use resources as per a resource management plan.	Can overlap any zone except Wilderness and Protection zones. Areas with identified natural resources formally assessed as not sensitive to harvesting and where an approved sustainable harvesting plan is in place.	Harvesting of identified resources.	None	Specific access dependent on feature in question.	Feature specific – as required.

Research is usually permissible in all zones, except Species/Habitat protection or Cultural Protection where it may be restricted. Research that requires destructive harvesting or manipulation of more than a few square metres of habitat should not be considered in any of the Protection overlays, except where research outputs are considered essential for management of that ecosystem, research cannot be done at an equivalent site elsewhere, and research results are certain to contribute substantially to management objective.

Zonation – Description

For a detailed description of process and outputs, including the underlying reserve Sensitivity Analysis, please refer to the report *Robberg 2012 Conservation Development Framework: Robberg Nature Reserve* (Kirkwood in prep.) which includes full descriptions of the Sensitivity and Opportunity Analysis, Zonation and Infrastructure Development Plan process and outputs.

Key Drivers

- Robberg is a small 185.3 hectare coastal peninsula nature reserve that provides an important recreational resource for the nearby town of Plettenberg Bay. The area is an extremely popular holiday destination and receives high visitor numbers, particularly in peak summer season. Within CapeNature's regional portfolio, Robberg represents an important opportunity for revenue generation, primarily from day visitors.
- The reserve conserves significant areas of habitat that should be considered both Critically Endangered and very poorly conserved at a regional level (Mucina and Rutherford 2006). It also protects a key population of the Critically Endangered *Disa hallackii* (Raimondo *et al.* 2009) as well as populations of three other Vulnerable species (*Selago villicaulis*, *Erica glumiflora*, *Agathosma acutissima*) and an undescribed species of *Wahlenbergia*.
- The habitat surrounding the existing entrance and parking area, as well as the fynbos east of The Gap requires periodic natural fires.
- The reserve is a peninsula, and although almost entirely surrounded by sea, has viewsheds that include high density urban development and transformed landscapes and cannot be considered wilderness.

These factors require that the zonation for the reserve allows for high day visitor numbers, with little expectation of solitude, and with a high requirement for intensive visitor and infrastructure management to prevent environmental degradation. Zones adhere to CapeNature's standard zonation scheme – please refer to this for full zone descriptions.

Development – High Intensity Zone: The entrance, parking area, ablution facility and viewing decks have been Zoned as Development – High Intensity Zone to reflect the requirement for all facilities and paths able to cope with high traffic, and to allow for potential retail opportunities, such as vending machines and a retail/curio outlet. The existing layout, with road access and a large paved Parking Area including multiple view sites is ideal to absorb high numbers of drive-in visitors and provide a scenic experience without significant environmental impact. This zone has been tightly mapped to existing footprints to prevent sprawl (Figure 16).

Nature Access Zone: Walking access to the reserve for high day visitor numbers has been provided for by means of Nature Access Zone routes radiating from the parking area, and restricted primarily to the coastal rocky platforms and beaches that are both the most desirable visitor areas, and less sensitive to trampling (Figure 16).

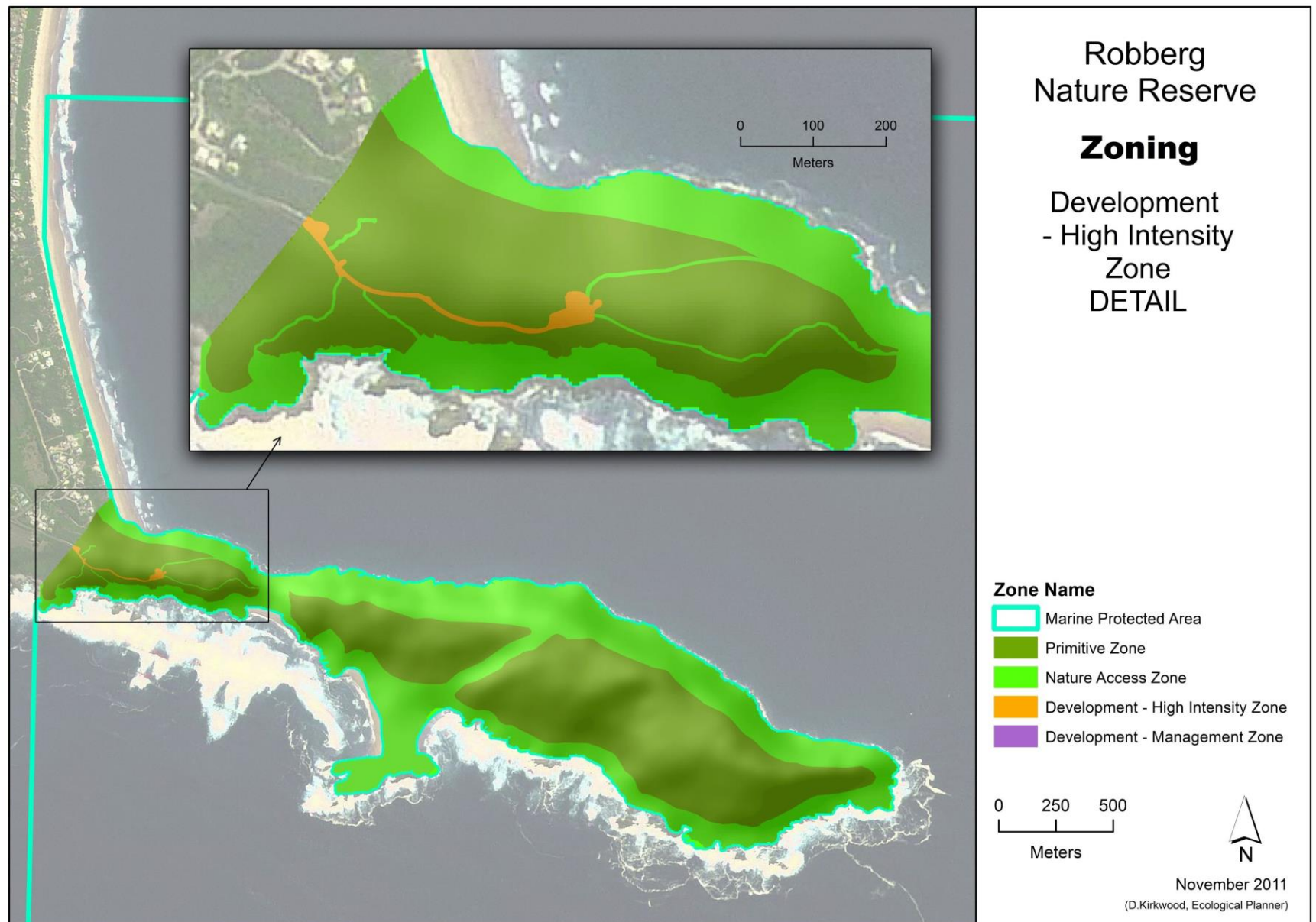


Figure 16: Zonation of the Robberg Nature Reserve Complex.

Primitive Zone: Primitive Zones buffer the Development – High Intensity Zone and Nature Access Zones to provide natural viewsheds and a sense of place, and to protect sensitive and important habitat and species. Primitive Zones would typically allow for limited access such as for overnight hiking in small groups, but the small size of Robberg Nature Reserve means that Primitive Zones cannot allow for public access. The only exception to this is the inclusion of the existing Fountain Shack (Figure 17) overnight accommodation within the periphery of the Primitive Zone (see figure below) as per the requirements of the CapeNature zoning scheme to allow some measure of privacy at the overnight accommodation. In terms of the scheme accommodation is not permitted within the Nature Access Zone itself.

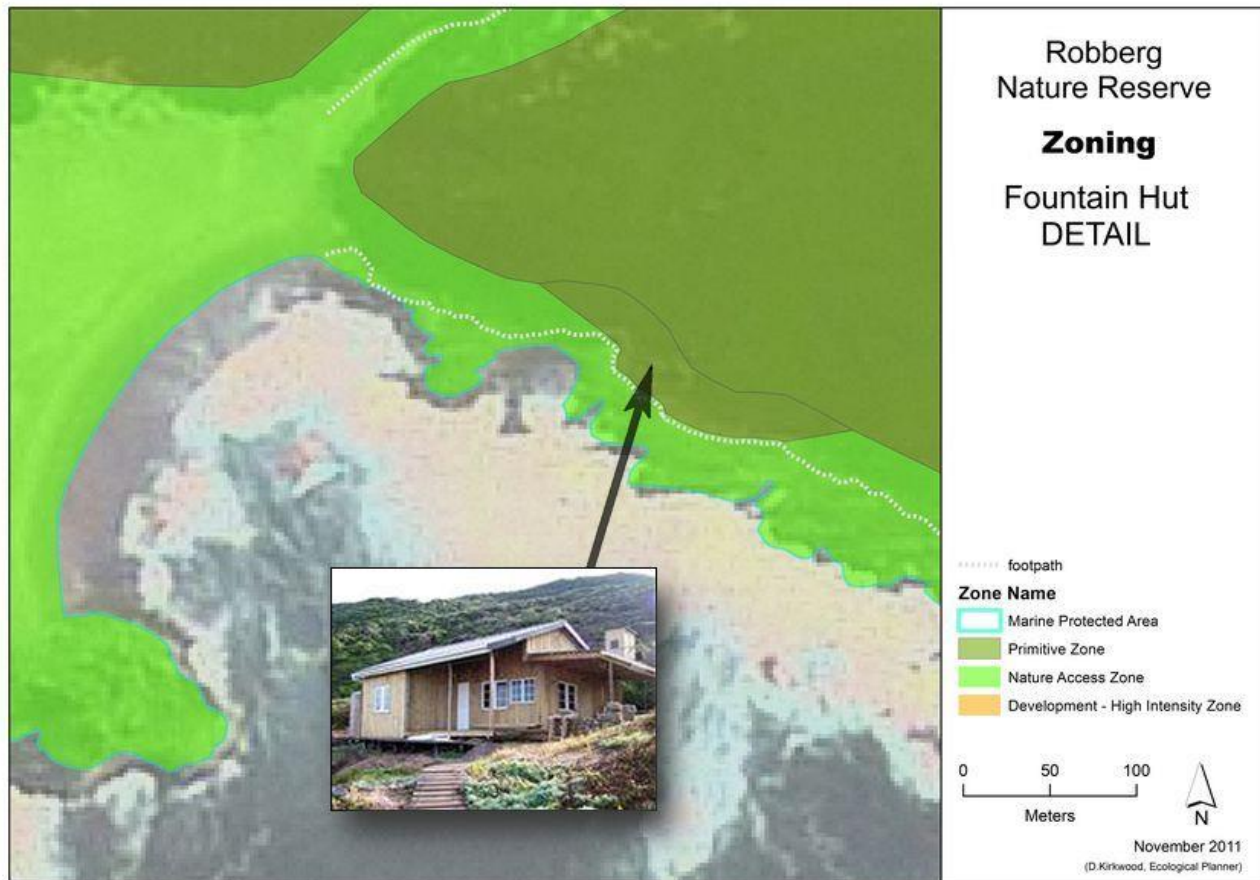


Figure 17: Zoning of the section of Robberg Nature Reserve where the Fountain Hut (photo insert) is situated.

Marine Protected Area: Robberg is surrounded by a proclaimed Marine Protected Area as per the demarcated boundary, and all applicable regulations must be adhered to in the area.

Species / Habitat Protection - Special Management Overlay: restricts all public access and requires that habitat management of the highest standard is maintained to protect a key population of the Critically Endangered *Disa hallackii* (Raimondo *et al.* 2009). This species and its associated habitat depend on natural fire cycles and this zone also ensures that any infrastructure development takes account of this (Figure 18). Visitor control and appropriate barriers, signage or demarcation is required where other zones are adjacent to this zone to prevent access and trampling.

Heritage Protection - Special Management Overlay: This overlay requires that access is managed or restricted as required to prevent damage to important paleontological deposits at Nelson Bay Cave (Figure 18).

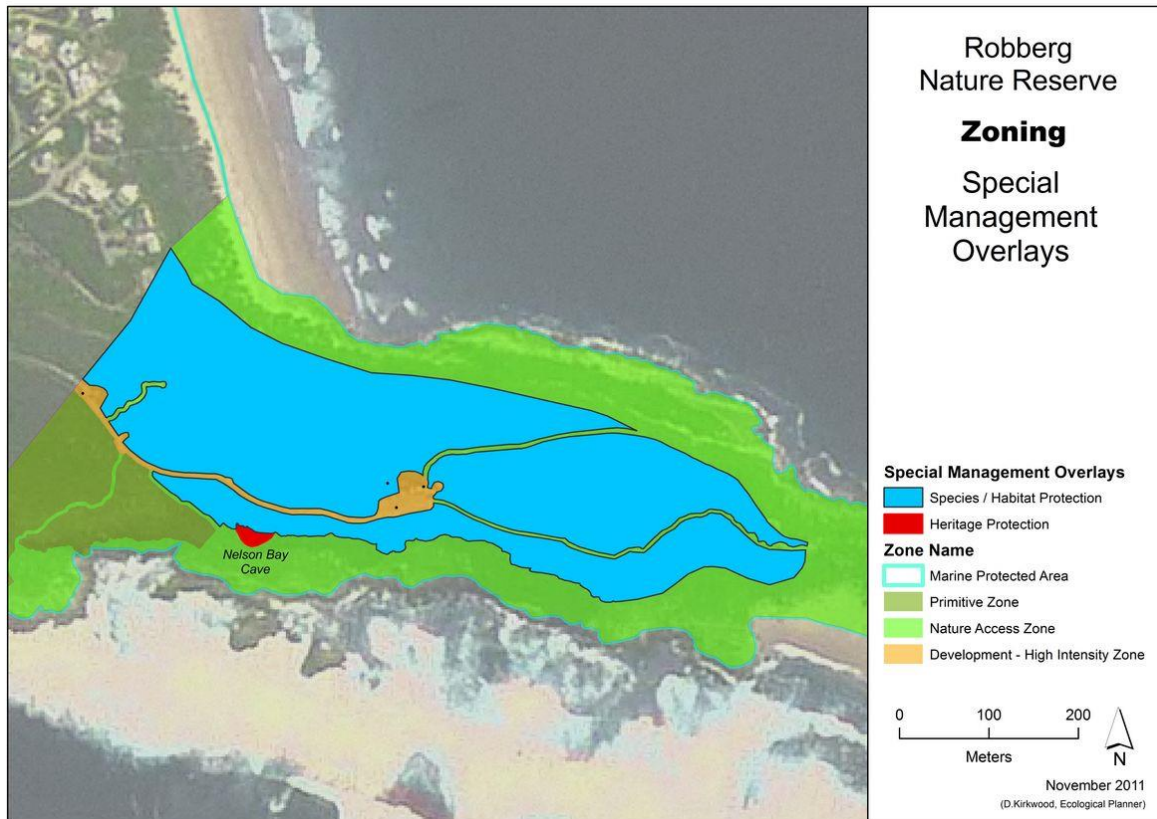


Figure 18: Areas on Robberg Nature Reserve that require special management in terms of species, habitat and heritage protection.

Other Zones: The reserve has no areas with true Wilderness character, therefore no area is zoned *Wilderness Zone* (Figure 18). *Development – Management Zone* is not required as the CapeNature Offices and Management centre for Robberg and Keurbooms Nature Reserves is located within Plettenberg Bay town.

The Cape Fur Seal Colony at Robberg – implications for future zonation and management

Robberg derives its name from a historic colony of Cape fur seals estimated at 3000 animals in the late 1800's but harvested to extirpation between the 17th and early 20th centuries. Seals returned to the Robberg Peninsula in small numbers during the early 1990s and their numbers subsequently increased to over 4000 (Huisamen *et al.* in press). The colony at Robberg is the first new colony to develop on the coast east of Agulhas since the 1970s. The colony is currently still in a transition phase with low numbers of pups born on the colony (still < 100 per year). In order to aid the re-colonisation of the easternmost tip of the Robberg Peninsula ('Seal Point') by seals and further growth of the colony, rezoning of the current Nature Access Zone to restrict access, and re-routing the hiking trail along the periphery of the Peninsula may be required. Secondly, the marine area at Seal Point may be declared a no-take zone for boat and shore-based fishing. This would be appropriate in terms of the zoning policy for MPAs.

Infrastructure Development Plan

○ Tourism Infrastructure - accommodation

Due to the small size of the reserve, the lack of appropriate low sensitivity sites accessible by road, and the focus on day visitor access, **no further development of tourism accommodation** for Robberg is anticipated at present. The Fountain Shack is a financially viable and popular product and will be retained.

○ Tourism Infrastructure – viewing decks, toilets, retail and info centre

CapeNature **does not intend to expand tourism facilities**, and development will focus on maintaining and upgrading current infrastructure, especially within the Development – High Intensity Zone at the parking area. Beverage vending machines and a small retail/curio area may be added within or attached to the existing interpretation centre within the existing transformed footprint.

○ Tourism Infrastructure – access, roads and trails

Due to the nature of the site, no expansion of vehicle roads or the existing parking area is contemplated.

High day visitor numbers require active footpath maintenance and upgrade to prevent erosion and trampling of surrounding areas. Extensive trampling and development of braided trails is already apparent in the reserve and must be actively addressed by **signage** and construction of **trail barriers** at key areas to encourage visitors to stay on formal trails and visitor sites. Similarly upgrading of trails by means of **boardwalks** in areas with soft and erodible substrates should be sensitively implemented.

No entirely new trails will be established, although rerouting of sections of footpaths may be undertaken to reduce long-term environmental impacts where appropriate.

○ Management Infrastructure

Robberg Nature Reserve is adequately serviced from the CapeNature management centre in Plettenberg Bay and there is currently **no requirement for development of offices or management** buildings on the reserve.

The existing tourism footpath and trail network provides adequate access for required management and monitoring activities.

○ **Decommissioning of obsolete infrastructure and site rehabilitation**

Previous infrastructure footprints (old Fourie's and Thesen's huts) due east and west of the existing parking will be rehabilitated and will not be considered for any access or development due to the location within the Species/Habitat Protection Special Management Overlay.

It is noted that any infrastructure development may require environmental authorisation in terms of NEMA EIA regulations and other legislation, and no activity may proceed without written evaluation of the requirements, and if necessary, any necessary authorisations.

5.4 Access

The only available access point is the main road to the reserve. There are no launching sites, jetties or mooring facilities, and no helipads.

Facilities for tourists include the entrance gate, which is operated by security guards who disseminate information to tourists, the information centre near the parking lot with brochures and an information display. There are no flight restrictions currently in place.

At present there are no commercial or community activities taking place in the reserve, but an abseiling concession is being finalised at present.

There is one lighthouse on the reserve, but a formal servitude agreement with Port-Net could not be traced on the reserve. This issue is being taken up with Port-Net.

5.5 Long term development plan

There are no developments planned for Robberg Nature Reserve Complex.

The main focus will be on maintaining the existing infrastructure, buildings and foot paths and improving the safety on the trails and infrastructure according to Health and Safety requirements.

Upgrades planned for the future include the following:

- Replacing the asbestos roof of the Fountain Shack with a Chromo deck roof for health and maintenance reasons and installing a hybrid solar/wind generator system at the site. These alterations are planned to take place during the first two years.
- Linking the sewage conservancy system of the ablution facility at the car park to the municipal system during year three to five.

These planned activities are in line with the zonation of the reserve as shown in Figure 16.

SECTION 6: RESERVE EXPANSION STRATEGY

6.1 Protected Area Expansion

6.1.1 Introduction

The establishment and management of a provincial protected area system which is aligned with the National Protected Area Expansion Policy (South African National Biodiversity Institute and Department of Environmental Affairs 2010), is a key strategic approach to the conservation of the globally significant biodiversity of the Western Cape. Several conservation planning initiatives, have been, and will in future be used to inform a consolidated Provincial Protected Area Expansion Strategy.

The strategy aims to guide expansion priorities which:

- i. Contribute towards meeting national and provincial biodiversity targets ²
- ii. National and provincial protected area targets³.

Several mechanisms are available for the expansion of protected areas in order to meet both biodiversity and protected area targets. A further requirement in order to adequately manage these protected areas is the establishment and management, co-management or management guidance of buffer areas. Protected area expansion and buffer areas, although closely linked, will be dealt with as two distinct activities.

6.1.2 Spatial Focus

The National and Provincial Protected Area network was assessed at a broad scale by the National Spatial Biodiversity Assessment (NBA) and the National Biodiversity Framework (NBF). The NBA (A. Driver, personal communication) identified crucial freshwater, estuarine and marine conservation priorities to inform the Protected Area Expansion Strategy for the Western Cape.

CapeNature employs several conservation planning products which may inform the CapeNature Protected Area Expansion Strategy and Implementation Plan 2010-2015 (Purnell *et al.* 2010) in order to meet national and provincial biodiversity targets as well as protected area targets. These include the Conservation Action Priority (CAP) map, Important Biodiversity Layers (IBL) and the various regional Fine Scale Plans (e.g. Matzikama, Saldanha Peninsula).

6.1.3 Protected Area Expansion Mechanisms

Several mechanisms are available for the expansion of protected areas in order to meet both biodiversity and protected area targets and are linked to land ownership and tenure.

² Biodiversity targets refer to how much of a biodiversity feature should be protected in order for it to persist.

³ Protected Area targets refer to the area of land which should be represented in Protected Areas by a certain date

The Table 6.1 is an extract from the National Protected Area Expansion Policy (South African National Biodiversity Institute and Department of Environmental Affairs 2010) and is relevant to CapeNature:

Table 6.1: Mechanism for protected area expansion.

Mechanism	Implementation options	Land ownership and tenure
1. Declaration of public land available for conservation	i) Allocate unvested / unallocated national state land to the conservation agency	State (national)
	ii) Re-allocate national state land from a responsible national organ of state to the conservation agency	State (national)
	iii) Lease national state land under communal tenure to the conservation agency	State (national) Communal tenure
	iv) Dispose of provincial state land to the conservation agency	State (provincial)
	v) Allocate, sell, lease or contract non-state, public land to the conservation agency	Non-state public land (local authorities, public entities, government enterprises)
2. Acquisition of land	i) Land donation	Private
	ii) Land purchase	Non-state public land Private land
	iii) Property lease	State (provincial) Private land State (national) under communal tenure
	iv) S23 Contract nature reserve / protected environment with title deed restrictions	Private land
3. Negotiation of contractual arrangements with landowners	i) Contract nature reserve / protected environment	Private land State (national) under communal tenure Non-state public land
4. Regularizing the protected area status of existing conservation areas within the informal conservation area system.	i) Statutory informal conservation areas	Private land State (national) State (provincial) Non-state public land
	ii) Non-statutory informal conservation areas	Non-state public land Private land

6.1.4 CapeNature's Strategic Approach to Protected Area Expansion in the Western Cape

6.1.4.1 Spatial Focus

The Conservation Action Priority (CAP) map is the primary informant to the expansion priorities for CapeNature. This product is supported by IBL and the Fine-Scale Plans. These plans are all biodiversity driven and CapeNature will unreservedly pursue priorities based on biodiversity net gain. Marine priorities which are adjacent to existing terrestrial areas or protected islands will be prioritised accordingly. Other marine / terrestrial interfaces e.g. estuaries will be considered in the priority evaluation process as informed by relevant biodiversity conservation plans not listed above.

Properties which have cultural, archaeological and paleontological features will also be evaluated in the context of biodiversity first.

6.1.4.2 Primary Mechanisms for CapeNature

The following mechanisms which address the various landownership scenarios for properties which are identified will be used by CapeNature for the immediate future:

- i. Declaration of Provincial Nature Reserves on state owned land / sea or island.
 - a. CapeNature as management authority
 - b. Co-management agreement with another organ of state
 - c. Another organ of state delegated as management authority
- ii. Declaration of S23 Nature Reserves on private land as per the stewardship protocol.
- iii. Biodiversity Agreements (including those with "in perpetuity" title deed restrictions usually also zoned Open Space III Nature Reserve).
- iv. Declared Protected Environments (preferably with title deed restrictions in perpetuity or at least 30 years).
- v. Donation of land which contributes significantly to both biodiversity and protected area targets.
- vi. Purchase of land of biodiversity significance either with state or donor funds.

6.1.4.3 Implementation Phases

- a. Annual Expansion plan spatially depicted per Area or conservation region;
- b. Five Year Plan (revised at end of MTEF three year cycle); and
- c. 20 Year Plan.

6.1.4.4 Planning and Implementation Review Protocol

Annual and 5-year Protected Area Expansion plans at Area level will be reviewed by an appropriately constituted panel. This is in order to verify biodiversity and other strategic gains and to consolidate a provincial plan for CapeNature for executive approval. All sites identified for protected area expansion will be assessed using the appropriate site review process these site assessments will be evaluated by the Protected Area Expansion Review Panel (appropriate management and scientific representation being a pre-requisite). A site assessment protocol will be provided (using refinements from the draft land acquisition policy

and the stewardship site assessment template as well as protected areas and their expansion by other agencies e.g. SANParks and DEA: Oceans and Coast and DAFF).

6.1.5 Financial Plan for Protected Area and Buffer zone expansion

Should CapeNature be the management authority of a stewardship site as per agreement with the private landowner then the details of this budget should be reflected in the respective management plan whether it is an extension of one of CapeNature's own reserves or a nature reserve in its own right which will require a management plan approved by the Provincial Minister.

6.2 Buffer zones

The term "buffer zone" is widely used in the context of the conservation of biodiversity, and is usually used to denote some sort of spatial protection mechanism. The configuration and extent of, and "restrictions" applied to a particular buffer zone may vary considerably depending on the attributes that require protection, and the nature of the "threat/s".

World Heritage Sites (WHS) are designed to recognise and protect areas of "Outstanding Universal Value" (OUV) to humanity, both cultural and natural. Biosphere Reserves are designed to conserve for use by mankind, the diversity and integrity of biotic communities within natural and semi-natural ecosystems and to maintain genetic diversity; to provide areas for research and facilities for research and training. Thus the difference is that WHS have to have OUV and Biosphere Reserves may not. Both however have "buffer zones".

WHS "buffer zones" are clearly delineated area(s) outside a World Heritage property but adjacent to its boundaries which contribute to the protection, management, integrity, authenticity and sustainability of the OUV of the property. Although World Heritage "buffer zones" are not regarded as part of the inscribed World Heritage property, their boundaries and relevant management approaches are evaluated, approved and formally recorded at the time they are proposed by a State Party. Where "buffer zones" are defined, they should be seen as an integral component of the State Party's commitment to the protection and management of the World Heritage property. The functions of the buffer zone should reflect the different types and levels of protection needed to protect the outstanding universal value of the World Heritage property. Biosphere Reserve "buffer zones" are typically arranged concentrically around the core areas to which they provide protection by restricting potentially detrimental activities and promoting wise utilisation.

Due to the importance and distribution across the landscape of the biodiversity of the CFR several "buffering mechanisms" have been developed to ensure the long term persistence of both pattern and process, as well to provide mitigation for Global Climate Change. These "buffering mechanisms" are often overlapping, always mutually supportive and continuously evolving and expanding. These buffering mechanisms include but are not restricted to, declared private mountain catchments areas, biosphere reserves, corridor initiatives, stewardship agreements and critical biodiversity areas (both terrestrial and aquatic). It is from these "buffer zones" that most, but not all, stewardship sites are likely to come. It is also important to bear in mind that local development plans need to take into account the buffering requirements of protected areas.

6.3 Expansion Opportunities

The CapeNature Protected Area Expansion Strategy document describes an implementation plan and explicit spatial targets for the next 5 year period for the Biodiversity Stewardship Programme. It also describes the current approach to land acquisition, and how explicit spatial targets and a funding and implementation strategy will be developed for this mechanism. The CapeNature Protected Area Expansion Strategy and Implementation Plan therefore provide a provincial framework for an integrated and coordinated approach to:

- the expansion of Protected Areas to allow for the protection of biodiversity and persistence of ecological services; and
- the securing of landscape corridors to facilitate climate change adaptation.

No priority properties were identified in the Garden Route area in the Cape Nature Protected Area Expansion Strategy (Purnell *et al.* 2010). However, in the conservation plan framework study compiled for the Plettenberg Bay (Bitou) Municipality by Lombard *et al.* (2004), a number of potential corridors for the expansion of the existing protected area system within the Municipal area were identified (Figure 19).

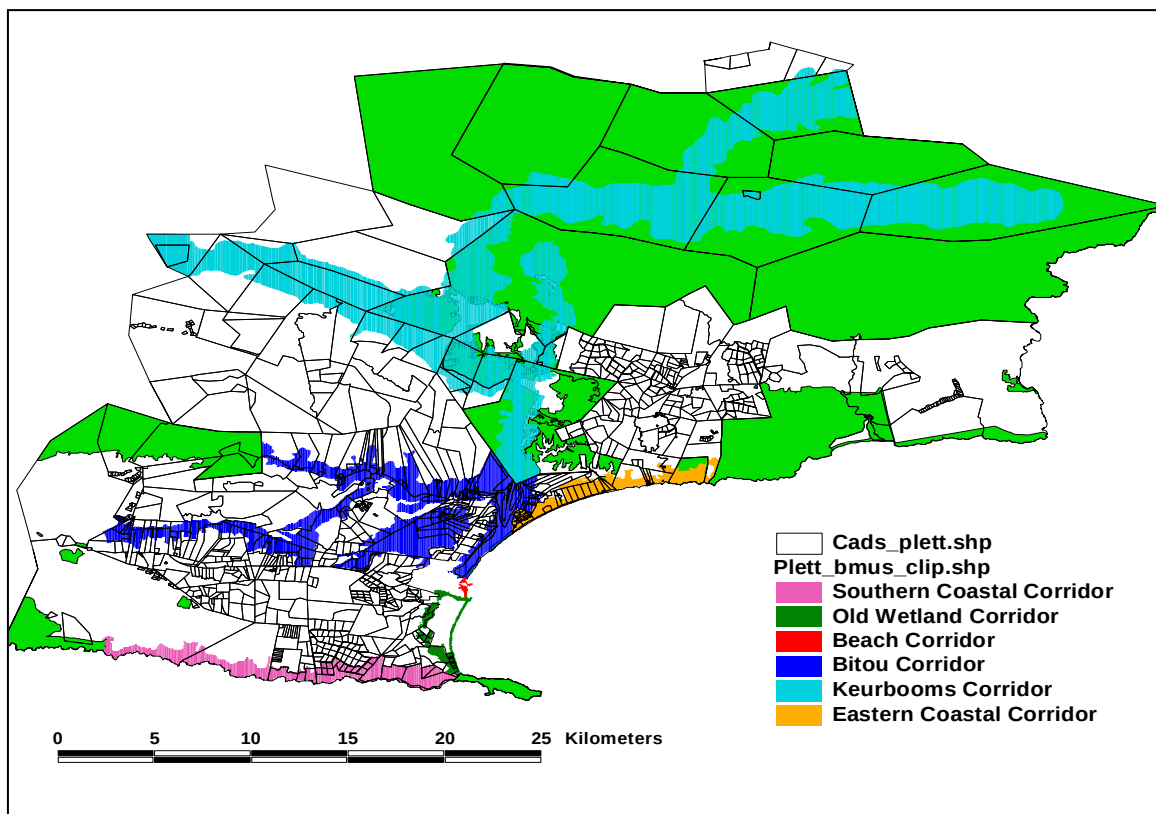


Figure 19: Map indicating the priority conservation corridors in the Plettenberg Bay area (Lombard *et al.* 2004). Bright green colour illustrates existing protected areas.

Two potential expansion corridors were identified adjacent to Robberg Nature Reserve (Figure 19):

- Southern Coastal Corridor - This corridor is required to link Robberg Nature Reserve (WCNCB) and Sinclair Nature Reserve (Garden Route National Park). It will provide an East-West gradient to capture the changes in vegetation along this gradient and to provide opportunities for the vegetation and associated faunal communities to track future changes in climate. It will provide a faunal corridor for e.g. dispersal processes (Orange-breasted sunbirds, Lesser Double-collared sunbirds, Cape sugarbirds etc.). Furthermore, plant endemism along this coastal corridor strip is high and is unconserved elsewhere, e.g. *Acmadenia alternifolia* (EN). To the west of Kranshoek (at Sinclair Nature Reserve which is part of the Garden Route National Park), the vegetation patterns are very different from those inland. Here there is a mosaic of forest and fynbos patches that exhibit unique processes, such as the effects of bushpigs on the vegetation, as they move in and out of the forests. Bushpigs are seed dispersal agents for several large fruit and seeds. They also control the growth of bracken fern, by eating the roots. This is the last remaining patch of coastal vegetation that functions in this manner, and previously much of the coast may have functioned similarly. This is a MUST for conservation (Lombard *et al.* 2004).
- Old Wetland Corridor - This is the old course of the Piesang River, and includes the “vlei” behind the dunes at the base of Robberg (the former Piesang River estuary). Although this corridor runs through high density development at its northern end, as wide a strip as possible of natural vegetation should be maintained both along the beach, and in the interior, to allow the movement of plants and animals (especially birds), to link the northern corridors with the southern coastal one (Lombard *et al.* 2004).

In the Biodiversity Sector Plan for the Garden Route Initiative area, these basic corridors were also identified as important for conservation in the Critical Biodiversity Area maps (Holness *et al.* 2010; Vromans *et al.* 2010; see Figure 20).

A study on marine expansion opportunities was done by Blue Pebble Independent Environmental Agency in association with Dr. Robbie Robinson during 2009. WWF-SA requested this study which identified an opportunity to link the Tsitsikamma Marine Protected Area and Robberg Marine Protected Area towards the Keurbooms River Estuary for incorporation into the proposed Plettenberg Bay Marine Park (Bay Management Proposal - WWF-SA, ZA 1477.B - 31 January 2009). With this proposal current MPAs will be linked with each other as well as to terrestrial nature reserves and national parks. It will also contribute towards a continuous conservation area from the mountain catchment area at Soetkraal, via the Keurbooms River and estuary to (and including) the sea.

It has been identified by DEA: Oceans and Coast that a No-Take zoned section should be considered within the Robberg MPA. The re-zonation has been listed as a priority to initiate in the current 2012/2013 financial year.

For Robberg Nature Reserve the highest priority is to secure the sections closest to the reserve. Some progress has already been made to this effect. A group of landowners near Kranshoek are in the process of having their properties proclaimed as a Protected Environment in terms of NEM:PAA.

The other corridors need to be developed in conjunction with other stakeholders, viz.: SANParks as the managing authority of the Garden Route National Park, MTO (managing authority of the plantations towards the east), Bitou Municipality, landowners, developers, NGOs (e.g. Eden-2-Addo, WESSA) and CBOs (e.g. Plettenberg Bay Community Environmental Forum). Building these corridors has already proven to be challenging and is likely to remain so due to the immense development pressure in the Plettenberg Bay area.

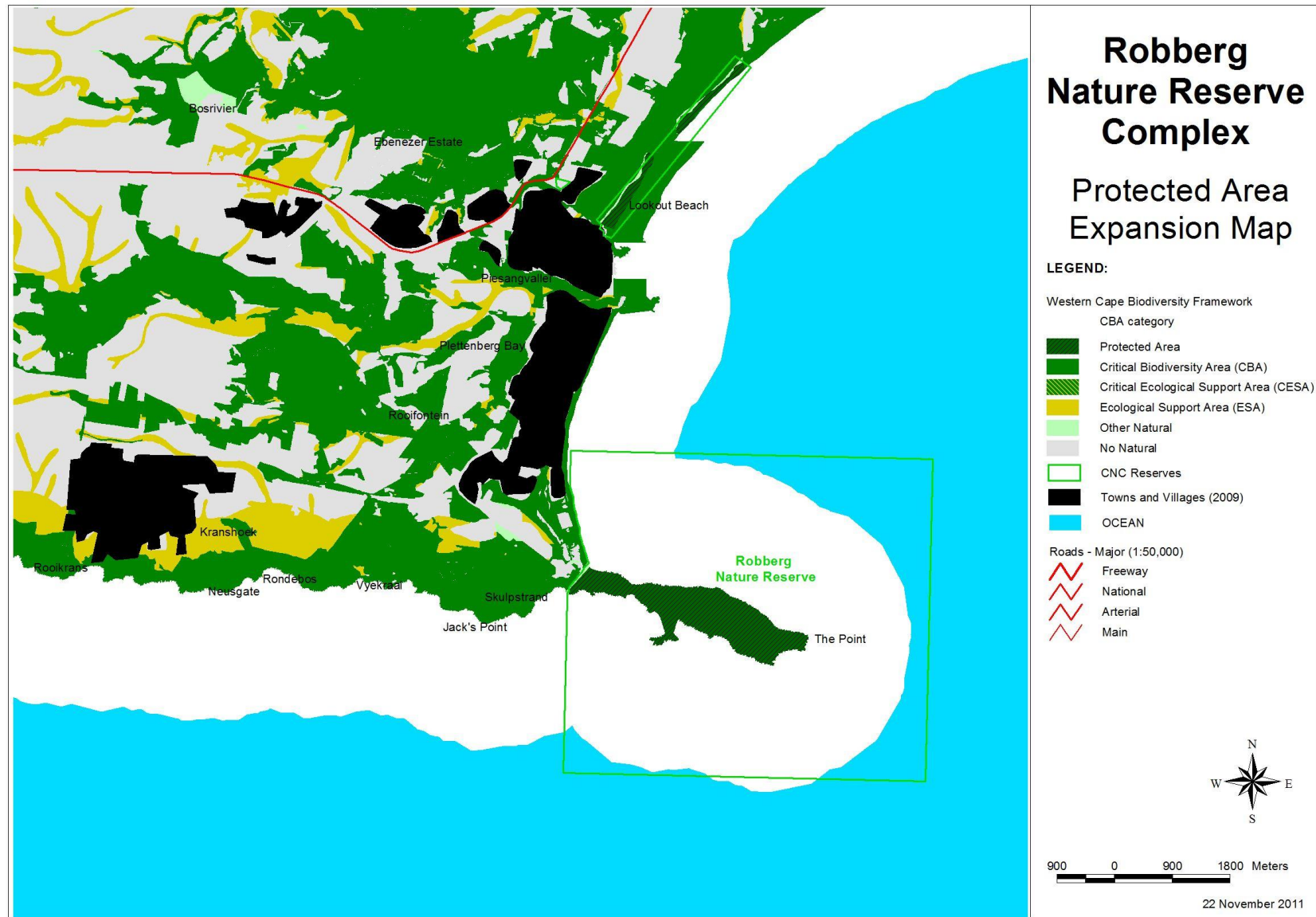


Figure 20: Critical Biodiversity Areas around Robberg Nature Reserve Complex.

PART 3

SECTION 7: STRATEGIC IMPLEMENTATION FRAMEWORK

7.1 Management Programmes

7.1.1 Legal Status and Reserve expansion

The Robberg Nature Reserve is declared a Provincial Nature Reserve in terms of Section 6 of the Nature and Environmental Conservation Ordinance, 19 of 1974, on 25 July 1980 and proclaimed in the Provincial Gazette by Proclamation No. 172 of 1980.

Robberg Marine Protected Area, established as a Marine Protected Area in terms of Marine Living Resources Act 2000, on 2 September 1998 and proclaimed in the Government Notice by Proclamation No. 18/1998.

Robberg Marine Protected Area, amendment of the boundaries by the extension of the area of jurisdiction in terms of Section 5 of the Marine Living Resources Act 2000, and proclaimed in the Government Notice by Proclamation No. 1429/2000.

7.1.2 Legislation

- National Environmental Management: Protected Areas Act, (Act No. 57 of 2003) (NEM: PAA)
- Marine Living Resources Act, (Act No. 18 of 1998)
- Nature and Environmental Conservation Ordinance, (Ordinance No. 19 of 1974)

All parcels of land of the RNRC need to be consolidated and awarded secure conservation status in terms of the NEM: PAA.

Section 9 of the NEM: PAA recognises the following kinds of protected areas:

- Special Nature Reserves, National Parks, Nature Reserves (including Wilderness Areas) and Protected Environments
- World Heritage Sites

Section 12 of the NEM: PAA, recognises a protected area which immediately before this section took effect was reserved or protected in terms of provincial legislation for any purpose for which an area could in terms of this Act be declared as a nature reserve or protected environment, must be regarded to be a nature reserve or protected environment for the purpose of this Act, including:

- Provincial Nature Reserves (including islands) established in terms of the Nature and Environmental Ordinance, 1974; and

Section 38(4) of the NEM: PAA requires marine and terrestrial protected areas with common boundaries to be managed as an integrated protected area by a single management authority including:

- Any Marine Protected Areas declared in terms of the Marine Living Resources Act, (Act No. 18 of 1998) sharing a common boundary with the terrestrial protected area.

7.1.3 Guiding Principles

- Reserve Management will ensure the reserve is awarded secure legal status according to the Protected Areas Act.
- Reserve Management will ensure that the reserve boundaries are clearly demarcated and known to local residents.
- Reserve Management shall identify and prioritise parcels of land, public and private, to be incorporated into the reserve through an on-going systematic, defensible and socially acceptable procedure in accordance with the CapeNature Protected Area Expansion Strategy and Implementation Plan 2010-2015.
- Reserve Management shall strive to seek the incorporation of identified land parcels at the lowest possible financial, social and ecological net cost to the reserve.
- Reserve Management shall continue to work together with private, public, and communal landowners, to enable the donation, purchase and contracting-in of conservation worthy land into the reserve in accordance with the CapeNature Protected Area Expansion Strategy.
- Reserve Management shall, with the co-operation of stakeholders, strive to prevent any fragmentation of the reserve and of areas that have been identified for inclusion into the reserve.

7.1.4 Management Actions

Refer to Table 7.1

7.1	LEGAL STATUS AND RESERVE EXPANSION				
Objective 3 Objective 4	- To secure the conservation estate. - To expand the conservation estate.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
1. The RNRC has secure permanent legal conservation status in terms of NEM: PAA.	- Declare the Robberg Nature Reserve in terms of NEM:PAA. - The protected area is listed in the National Register as required by NEM:PAA.	Executive Director: Conservation Management, DEA, DEADP. Law Administration. Stewardship Programme Manager.	The RNRC is legally secure.	Year 1-2	NEM:PAA
2. The RNRC boundary is known and appropriately demarcated and secure.	- Survey MPA boundaries where it joins the land on the northern and southern side of Robberg. - Beacons placed to clearly demarcate boundaries.	Conservation Manager; Law Administration.		Year 1-2	NEM:PAA
3. To consolidate all possible land within the RNRC, as well as other identified conservation-worthy areas adjacent to and contiguous with the reserve as identified.	- Declare RNRC as WHS extension. - Identify potential stewardship agreements with the surrounding landowners in line with CNPAES. - Ensure local strategy for Robberg Nature Reserve expansion is included in CNPAES. - Investigate the re-zonation of MPA to a No-Take zoned section.	Conservation Manager; Conservation Services Manager; Programme Manager: MPAs, Estuary and Islands; Programme Manager: Stewardship Programme.	Hectares added to the conservation estate .	Year 1-5	CapeNature Protected Area Expansion Strategy and Implementation Plan 2010-2015; Extension nomination for the Cape Floral Region Protected Areas World Heritage Site.

Budget Allocation	Development	
	Operation (5 Year Forecast)	R190,888

7.2 Regional Integrated Planning and Cooperative Governance

7.2.1 Legislation

When South Africa implemented the new Constitution [Constitution of the Republic of South Africa Act, (Act No. 108 of 1996)], adopted in 1996, they included a South African innovation: a chapter on 'cooperative government', which aims to ensure good relations between South Africa's three spheres of government. This is captured in the Intergovernmental Relations Framework Act, (Act No. 13 of 2005).

It is therefore essential that co-operative relationships are maintained and improved with all spheres of government and stakeholders and that all directly or indirectly contribute to the attainment of the vision and objectives of the RNRC. The same applies to regional planning and initiatives within the Province.

7.2.2 Guiding Principles

- Reserve Management shall co-operate with national, provincial and local government and stakeholders in strategic conservation initiatives aimed at conserving conservation-worthy areas adjacent, or related, to the reserve.
- Reserve Management, together with relevant authorities, shall strive to integrate planning and development in areas of their respective control.
- Reserve Management shall, in co-operation with the local and provincial authorities, strive to avoid further fragmentation of contiguous natural areas within and adjacent to the reserve.
- Reserve Management shall co-operate with other conservation initiatives adjacent to the reserve, especially where these are contiguous with the reserve.

7.2.3 Management Actions

Refer to Table 7.2.

7.2	REGIONAL INTEGRATED PLANNING AND COOPERATIVE GOVERNANCE				
Objective 1 Objective 2 Objective 4	To conserve and manage biodiversity and natural processes representative of the southern Cape terrestrial and marine ecological systems. To improve the reach and quality of biodiversity management To expand and secure the conservation estate				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
4. The RNRC is integrated into land-use planning outside of the nature reserve.	- Integrate with the SDFs and IDP's of the district and local municipalities. - Provide comments/input into development/Landuse change proposals adjacent to the reserve.	Conservation Manager, Community Conservation Manager; Biodiversity Mainstreamer.	The protected area is integrated into land-use planning outside of the protected area	Ongoing	SDF and IDP planning processes, NEMA regulations
5. Establish a functioning Advisory committee for the RNRC.	- PAAC representative of all stakeholders functioning. - Meetings are held. - Decisions taken are communicated to PAAC.	Conservation Manager; Community Conservation Manager	Advisory committee for the RNRC has been established, is functioning and effective.	Ongoing	Ref Section 10.1.3; Draft regulations for proper the administration of nature reserve (2009).

Budget Allocation	Development	
	Operation (5 Year Forecast)	R763,552

7.3 Ecosystem and biodiversity management

Conserving biodiversity is vital, not only in terms of its intrinsic values but because continued human existence is based on healthy and functioning natural ecosystems. Any use of natural resources must be sustainable and the conservation and management of biodiversity is essential for the maintenance of natural ecosystems.

7.3.1 Legislation

Although all legislation mentioned in Part 1 can be applied, the following is specific to the conservation of biodiversity:

- National Environmental Management Act, (Act No. 107 of 1998)
- National Environmental Management Biodiversity Act, (Act No. 10 of 2004)
- National Environmental Management: Protected Areas Act, (Act No. 57 of 2003)
- Conservation of Agricultural Resources Act, (Act No. 43 of 1983)
- Sea Birds and Seals Protection Act, (Act No. 46 of 1973)
- Western Cape Nature Conservation Board Act, (Act No. 15 of 1998)
- Nature and Environmental Ordinance, (Ordinance No. 19 of 1974)
- Threatened or Protected Species Regulations, 2007
- Draft Alien and Invasive Species Regulations, 2009
- CITES Regulations, 2009
- Draft Regulations for the proper administration of nature reserves, 2010 in terms of NEM: PAA
- Norms and Standards for the compilation of Biodiversity Management Plans for Species (BMP-s) in terms of. NEM: BA
- Draft Norms and Standards for the management of protected areas in South Africa in terms of NEM: PAA

7.3.2 Guiding Principles

- Biodiversity resources must be conserved at community and species levels in the long term and the reduction of population levels of indigenous species, or the extinction of any species, as a result of human activity, must be prevented.
- Adequate management attention must be given to maintaining and improving, where relevant, the status of endemic, rare or threatened species (species of conservation concern).
- The introduction into the reserve of any alien plant species must be controlled.
- An active adaptive management, minimum intervention approach, based on scientific evidence will be followed.
- The knowledge base available to the reserve will be promoted and developed to support applied and other research.
- Research cooperation and collaboration partnership will be established and maintained.
- All research carried out on CapeNature reserves require permits.

Guidelines for Research

- Research can only be initiated after a proper project proposal has been evaluated by the Scientific Services provided and approval obtained from the reserve manager.
- Research will be permitted via formal agreements and projects will need to be registered. Research projects which contribute to the overall objectives of the reserve should be encouraged, but essentially “pure” research will not be discouraged, providing it is judged to be of sufficient merit and is not in conflict with the objectives of the reserve. Partnerships with local academic institutions should be strengthened.
- CapeNature research will be aimed at providing baseline information for monitoring and other purposes, advising on management problems, and providing general biological advice.
- Research by external researchers will be actively encouraged and will be managed as follows:
 1. Where necessary research projects can be commissioned by CapeNature. This will be done under contract. Funding and facilities will be provided. Research by persons external to CapeNature must be according to standards and specific permit conditions set by CapeNature. Feedback of results to CapeNature is vital.
 2. Projects initiated by outside bodies, that are considered of importance to Robberg Nature Reserve and CapeNature will be supported.
 3. Projects initiated by outside bodies that are not considered to be of a priority nature for Robberg Nature Reserve and CapeNature, in general will not be provided with support in terms of the use of facilities or funds.
- Non-consumptive research can be undertaken anywhere in the Robberg Nature Reserve, with conditions.
- Consumptive research will be subject to the following conditions:
 1. Destructive research will not be encouraged, but can be undertaken if the overall effect will not have long-term detrimental consequences.
 2. Destructive research of any kind will only be allowed under prescription.
 3. Where destructive research is necessary it must be conducted in delimited areas and where necessary, must be explained to the public.
 4. The research must have approval of the Departmental Ethics Committee, and comply with all permit conditions set by CapeNature.
- All publications and research reports pertaining to Robberg Nature Reserve must be filed and kept at the reserve office.
- Copies of documents and publications resulting from the research, will be made available to the reserve management.

7.3.3 Threats to Biodiversity and Ecosystems

- Negative impacts from uncontrolled tourist activities
- Inappropriate development within and outside the reserve
- Large numbers of seasonal users
- Habitat destruction and fragmentation
- Buffer areas are vulnerable to land use changes
- Illegal harvesting (poaching) of e.g. fish
- High potential for hazardous spills, e.g. oil spills

- Introduction of alien invasive organisms
- Limited options for expansion of reserve due to development pressure adjacent to reserve
- Urban expansion increasing the 'island' effect
- Anthropogenic climate change

7.3.4 Management Actions

Refer to Table 7.3.

7.3	ECOSYSTEM AND BIODIVERSITY MANAGEMENT				
Objective 1	To conserve and manage biodiversity and natural processes representative of the southern Cape terrestrial and marine ecological systems.				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
6. Compile and Ecological Plan of Operation and Ecological Matrix (i.e. the ecological projects planned for the reserve complex for the year) for RNRC (including the MPA).	- Compile an Ecological Plan of Operations to support the Ecological Matrix. - Collate all relevant monitoring and research protocols and data sheets to inform the Ecological Plan of Operations. - Develop and implement an approved Ecological Matrix for the RNRC.	Conservation Manager; Regional Ecologist; Ecological Coordinator, GIS Technician.	The RNRC will annually indicate an upward trend in METT-SA score. 100% of actions identified in the integrated auditing system will be implemented. Research projects undertaken to address management needs and inform management actions.	Ongoing	Ecological Plan of Operations, Ecological Matrix
7. A biodiversity resource inventory for the RNRC (including the MPA) is in place.	- Prioritisation of species for inclusion on the Ecological Matrix. - Compile and implement the Ecological Matrix - Collect specimens (where relevant) and submit to Scientific Services. - Analyse data, re-assess and implement adaptive management strategies.	Conservation Manager; Regional Ecologist; Ecological Coordinator, GIS Technician; Programme Manager: MPAs, Estuary and Islands;	Ecological Plan of Operations compiled. Ecological Matrix compiled, approved and implemented.	Ongoing	Baseline data collection and monitoring manual (2010); SOB.
8. A monitoring programme for the RNRC (including the MPA) is being implemented.	- Review monitoring protocols. - Identify monitoring needs of the reserve in consultation with Scientific Services. - Establish indicators for monitoring. - Implement monitoring activities as per the Ecological Matrix. - Report on monitoring activities as per the Ecological Matrix. - Analyse data, re-assess and implement adaptive management strategies. - Hard and digital copies of all documents and publications resulting from all monitoring and research in the reserve must be catalogued and stored at the Plettenberg Bay office with backup copies sent to Scientific Services. - Implement seal monitoring in partnership with DEA: Oceans and Coast. - Collection of climatic data on the RNRC. - Install Automatic weather station.	Conservation Manager; Regional Ecologist; Ecological Coordinator, GIS Technician; SS Manager: Biodiversity; Programme Manager: MPAs, Estuary and Islands.		Ongoing	Baseline data collection and monitoring manual (2010); SOB.

Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
9. A research programme for the RNRC is being implemented.	- Identify research needs for the reserve. - Develop and implement an applied research programme for the reserve in consultation with Scientific Services. - Results of research projects are fed back to the management of the reserve. - Results are used to adapt management of the nature reserve where relevant. - Implement research projects in MPA in partnership with DEA and NMMU.	Conservation Manager; Regional Ecologist; Ecological Coordinator; Programme Manager: MPAs, Estuary and Islands.		Ongoing	CN research needs list; Fynbos Forum research strategy, CN permitting procedure
10. The RNRC contributes to the maintenance of ecosystem services.	- Design and implement appropriate fire (Refer to Table 7.5) and alien invasive management (Refer to Table 7.6) programmes. - Conduct a roads and footpath assessment. - Close and rehabilitate inappropriate roads and footpaths within the reserve. - Monitor site recovery.	Conservation Manager		Ongoing	ICM, AVM APO's, CapeNature Fire Policy Version 8
11. Prevent and mitigate soil erosion on the RNRC.	- Conduct trail profile monitoring to access soil erosion. - Map and ensure photo's available. - Conduct ad hoc trail maintenance informed by trail profile monitoring. - Monitor the affectivity of the erosion control mitigation. - Monitor cost effectiveness of maintenance. - Monitor site recovery.	Conservation Manager		Ongoing	
12. Conserve, protect and manage Marine Protected Areas (MPA).	- Implement the Robberg MPA management plan. - Revise the MPA management plan.	Conservation Manager; Programme Manager: MPAs, Estuary and Islands;		Ongoing	Robberg MPA Management Plan
13. The protection of flora species of conservation concern.	- Identify plant species of conservation concern and map localities of populations in the reserve. - Conduct monitoring of populations of plant species of special concern. - Limit activities that may impact on species of conservation concern.	Conservation Manager; Regional Ecologist; Ecological Coordinator.		Ongoing	SOB, SANBI TSP programme
14. Conservation of Threatened	Identify threatened and endemic	Conservation		Ongoing	Ecological Plan of

Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
and Endemic Fauna	species and map localities of populations on the reserve. • Baseline data collection the reserve.	Manager; Regional Ecologist; Ecological Coordinator.			Operations, Ecological Matrix, SOB
15. Manage consumptive utilisation of biological resources.	• Database established indicating all utilised species and the extent of their use within the reserve.	Conservation Manager		Ongoing	CapeNature Policy on consumptive utilisation (2007).

Budget Allocation	Development	
	Operation (5 Year Forecast)	R954,440

7.4 Wildlife Management

7.4.1 Legislation

- Western Cape Nature and Environmental Ordinance, (Ordinance 19 of 1974)
- Regulations proclaimed in terms of the Ordinance, Provincial Notice 955 of 1975.

7.4.2 Guiding Principles

- Biodiversity resources of the reserve must be protected from illegal harvesting and unsustainable use.
- Re-Introduction of species to the reserve is only considered if a species occurred historically and suitable habitat is still available on the reserve. Genetics of source populations is also taken into consideration to prevent 'contamination'.
- Lethal control may be used as a management tool in certain instances. This should be professionally done through a tender process. Species must be selected only through extensive research and knowledge of population dynamics.
- Damage causing wildlife/nuisance fauna shall be managed in a humane manner, through recommendation from CapeNature's Wildlife Advisory Committee and authorisation from CapeNature Executive.

7.4.3 Management Actions

Refer to Table 7.4.

7.4	WILDLIFE MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
16. Ensure effective game management on RNRC.	Seal census conducted.	Conservation Manager, Regional ecologist, Ecological Coordinator.	Population database	Ongoing	Ecological Plan of Operations
17. Manage damage causing / nuisance fauna.	Address stray dogs and nuisance monkeys on the reserve when required.	Conservation Manager	No dogs or other pets occurring on the reserve.	Ongoing	CN Pets on the Reserve Policy

Budget Allocation	Development	
	Operation (5 Year Forecast)	R190,888

7.5 Fire Management

The overall goals of fire management in the Western Cape are as follows:

- The maintenance of the optimum levels of biodiversity in all regions managed either directly or indirectly by CapeNature.
- The conservation of all natural processes within the Fynbos Biome.
- The reduction of fire risk and hazard in all protected and neighbouring areas.

The aims of fire management include:

- The maintenance of fire as a vital ecological process in fynbos ecosystems.
- The integration of Fire Management into programmes aimed at the reduction and control of invasive alien plant species.
- The minimisation of the occurrence and extent of ecologically undesirable or otherwise potentially damaging wildfires.

7.5.1 Legislation

- National Veld and Forest Fire Act, (Act No. 101 of 1998)
- National Forest Act, (Act No. 84 of 1998)

7.5.2 Guiding Principles

- Fire management in CapeNature is governed by the Fire Management Policy and Guidelines Version 6 (Erasmus 2010).
- Prescribed burning will be used when and where appropriate to achieve ecological goals.
- Unplanned wildfires that occur in areas where they could have undesirable ecological effects will be suppressed or controlled where possible.
- Fires that threaten neighbouring property will also be controlled where possible.
- Unplanned wildfires that occur in areas where they will do no ecological or other harm can or may be allowed to burn, provided that safety concerns and the relevant threshold of potential concern (TPC) are not compromised.
- Fire protection measures and resources (equipment, trained personnel, fire-breaks, etc.) must be maintained at optimal levels of suitability and affectivity at all times.
- Reserve Management will implement integrated fire and alien vegetation management to limit the proliferation of fire adapted alien vegetation and facilitate the alien vegetation control programmes.
- Reserve Management will establish partnerships with neighbours and other role-players through agreements and membership of Fire Protection Associations.

Ecological Thresholds

The overwhelming majority (more than 90%) of fires must burn within the ecological thresholds of plant/fire adaptation with regard to frequency, season and intensity:

Season

- Prescribed burns will only be considered in veld that is older than 20 years, with the proviso that there are no exotic plants which are likely to be favoured by fire in the area and that the TPCs for that area will not be compromised.
- Prescribed burns will only be undertaken from December to March, unless circumstances dictate otherwise and authority has been obtained from the Quarterly Ecological Management Meeting.

Frequency

- In the Robberg Nature Reserve, veld fires, irrespective of their origin, that occur in veld younger than 20 years, will be confined to as small an area as possible.
- The minimum rotation for prescribed burns will be sufficiently long to allow adequate regeneration of the slow-maturing species, and should therefore not be shorter than 20 years.
- Senility pre-emption burns will be considered (based on flower production levels), if the veld remains unburnt for 30 years. This refers to areas that have been artificially isolated from natural fires through human activities.

Intensity

- When executing prescribed burns, normal fire weather conditions should prevail, implying that hot, dry periods will not be avoided at all costs.

7.5.3 Management Actions

Refer to Table 7.5.

7.5	FIRE MANAGEMENT				
Objective 1	To conserve and manage biodiversity and natural processes representative of southern Cape terrestrial and marine ecological systems				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
18. Reduce / avoid the spread of fires across the reserves borders and minimize accidental/deliberate fires within the reserve.	• Compile Fire Management Plan. • Update and implement Fire Protection and Reaction Plans including risk assessments. • Construct priority firebreaks according to schedule. • Assess appropriateness of current firebreak network and re-align where appropriate. • Negotiate firebreak agreement with neighbours where relevant. • Fuel reduction around infrastructure to minimise risk. • Conduct a pre-fire season fire audit.	Conservation Manager, Regional Ecologist, Ecological Coordinator, Catchment Manager.	Reserve has a minimum pre-fire season audit score of 90% by Year 5. The distribution and range of veld age is within the limits of acceptable change (TBD).	Years 1-5	Fire Management Policy and Guidelines; Fire break register; ICM APO
19. To allow for natural fire processes to occur without negatively impacting on safety and infrastructure.	• Fire Reports completed. • Mapping of all fires and capture on GIS. • De-briefing sessions held after each fire and records kept.	Conservation Manager		Years 1-5	Fire Management Policy and Guidelines.
20. Establish and maintain partnerships to improve fire management on the RNRC.	• Attend FPA meetings.	Conservation Manager		Years 1-5	Fire Management Policy and Guidelines ; FPA operational rules and guidelines.
21. Determine and implement thresholds of potential concern for fire management on the RNRC.	• Establish a series of fixed point photograph monitoring plots. • Conduct post fire vegetation surveys. • Monitor fire according to methods described in EPO.	Conservation Manager, Regional Ecologist, Ecological Coordinator.		Years 1-5	Fire Management Policy and Guidelines; Baseline data collection and Monitoring Manual; Ecological Matrix.
22. Wildfires as a result of human negligence are reduced.	• Create a fire awareness programme for tourists, local communities and staff.	Conservation Manager; Community Conservation Manager		Years 1-5	Fire Management Policy and Guidelines; Fire wise Implementation Guidelines

Budget Allocation	Development	
	Operation (5 Year Forecast)	R286,332

7.6 Invasive and Non-invasive Alien Species Management

7.6.1 Legislation

Although most legislation mentioned in Section 2.1 can be applied, the following is specific to the eradication of alien and invasive species:

- Section 64 to 77 of the National Environmental Management: Biodiversity Act, (Act No. 10 of 2004).

It must be noted that Section 77 of the National Environmental Management: Biodiversity Act, (Act No. 10 of 2004) states the following: The management authority of a protected area must at regular intervals prepare and submit to the Minister for Environmental Affairs in the Province a report on the status of any listed invasive species that occurs in that area.

A status report must include -

- a. a detailed list and description of all listed invasive species that occur in the protected area
 - b. a detailed description of the parts of the area that are infested with listed invasive species;
 - c. an assessment of the extent of such infestation; and
 - d. a report on the efficacy of previous control and eradication measures.
- Conservation of Agricultural Resources Act, (Act No. 43 of 1983): Amendments published in the Government Gazette Vol. 429, No 22166 of 30 March 2001.

7.6.2 Guiding Principles

- Maintain the integrity of local species biodiversity by prohibiting and, as far as possible, preventing the introduction of alien and invasive species.
- Discourage the keeping of domestic animals within and from entering the reserve from surrounding areas.
- Removal of alien and invasive species must be performed in a cost-effective manner.
- Methods of invasive alien species removal must be based on current best practice based on guidelines established by Working for Water (including or example: Biological Control).
- The active control and eradication of alien taxa will continue to be carried out according to the reserve's long-term strategic plans. Priority should be given to controlling those species that impact most significantly on the key conservation objectives of the reserve.
- If alien and non-local indigenous taxa outside of the reserve are identified as potential threats to the reserve's conservation objectives, then steps should be taken to implement control measures through partnerships with other departments and stakeholders. It is recognised that due to the continuous re-infestation of invasive alien plants into the reserve from neighbouring properties, neighbouring landowners should be encouraged to initiate invasive alien plant removal programmes.
- Only indigenous local plant species will be permitted for landscaping purposes for developments within the reserve.

- Groups of, or individual alien plants growing on difficult-to-reach sites, or dangerous working areas (such as cliff faces) will be removed using specialised techniques and equipment.
- Control efforts must not just focus on the symptom of the problem (i.e., the colonising plants) but also the cause.

7.6.3 Management Actions

Refer to Table 7.6.

7.6	INVASIVE AND NON-INVASIVE ALIEN SPECIES MANEGEMEMNT				
Objective 1 Objective 2	To conserve and manage biodiversity and natural processes representative of southern Cape terrestrial and marine ecological systems. To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
Invasive Alien Flora					
23. Eradicate alien and invasive species within the RNRC on an on-going basis.	- Identify and map all alien and invasive flora within the RNRC or threatening the reserve. - Attend regional ICM Meetings. - Compile a Management Unit Clearing Plan. - Prioritise removal in collaboration with Catchment manager and REST.	Conservation Manager, Catchment Manager; Ecological Co-ordinator, Regional Ecologist, Project Manager	100% of hectares IAP's cleared annually versus planned. 95 % total area cleared where IAP's have been controlled to a maintenance phase by Year 5.	Years 1-5	Ecological Plan of Operations, Ecological Matrix planning, ICM APO
24. Monitoring of alien vegetation on the RNRC informs adaptive management strategies.	Monitor clearing costs per NBAL.	Conservation Manager, Catchment Manager, Project Manager.		Years 1-5	AVM & ICM APO's
25. Implement biological control as a method of IAP management.	- Bio control sites mapped and updated. - Monitor success of bio control. - Record keeping.	Conservation Manager, Ecological Coordinator		Years 1-5	Working for Water Guidelines
26. Prevent the introduction of alien and invasive species from neighbouring landowners.	Ensure surrounding landowners are aware of relevant legislation.	Conservation Manager		Years 1-5	Working for Water and Dept Agriculture Landcare Guidelines
Invasive Alien Fauna					
27. Control alien and invasive species within the RNRC on an on-going basis	- Tourists not permitted to bring in any domestic animals. Identify alien fauna occurring on the reserve. - Implement control measures where appropriate.	Conservation Manager		Ongoing	CNC Policy on domestic animals on nature reserves

Budget Allocation	Development	
	Operation (5 Year Forecast)	R477,220

7.7 Cultural Heritage Resource Management

7.7.1 Legislation

- National Heritage Resource Act, (Act No. 25 of 1999) which has repealed the National Monuments Act, (Act No. 28 of 1969)
- World Heritage Convention Act, (Act No. 49 of 1999)

7.7.2 Guiding Principles

- Reserve Management will seek to respect, protect and promote the natural and cultural heritage resources of the reserve.
- Cultural Heritage referred to in the Management Plan includes cultural, historical, archaeological and paleontological resources.
- Acknowledgement of the area's diverse cultural heritage and a commitment to ensuring the safeguarding of this heritage.
- The acceptance of responsibility for ensuring that the effective protection, preservation and sustainable utilisation of cultural resources are integrated into the process of environmental management of the reserve.
- The management policy should establish a trusteeship for both natural and cultural heritage components, so that these assets can be taken into account in development projects and that the needs and values of especially local and neighbouring communities are honoured in this respect.
- Cave sites and their biota should be regarded as highly sensitive.
- No foreign materials may be introduced into heritage sites. No smoking, fires, digging in Strandloper sites, collection of souvenirs, or creating *graffiti* is permitted (refer to South African National Heritage Resources Act 25 of 1999).
- Strict control must be exercised over access to all sites. No general use will be made of caves and cave systems for tourism and environmental education without integrated planning

7.7.3 Management Actions

Refer to Table 7.7.

7.7	CULTURAL HERITAGE RESOURCE MANAGEMENT				
Objective 7	To effectively conserve our cultural heritage attributes.				
Key Deliverable	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
28. To protect cultural heritage resources.	- Compile a cultural heritage resource inventory for the RNRC. - Establish and maintain a cultural heritage resource database and capture it on GIS.	Conservation Manager; Ecological Coordinator, GIS Technician	Inventory compiled and maintained. Cultural Heritage Resource Plan compiled.	Year 1-5	Ecological plan of Operations, Eco-matrix
29. Cultural Heritage resources are managed to meet the protected area objectives.	- Approach tertiary institution to source a student to compile a Cultural Heritage Resource Plan. - Compile a Cultural Heritage Resource Management Plan for the RNRC and determine management priorities. - Implement the Cultural Heritage Resource Management Plan.	Conservation Manager		Year 1-5	CapeNature's Research needs list
30. Monitor cultural heritage resources.	Manage access control to cultural sites and maintain barriers.	Conservation Manager		Year 1-5	Ecological plan of Operations, Eco-matrix
31. Collaboration with external partners, ensure the protection and preservation of cultural heritage resources.	- External involvement. - Engage external partner for expertise.	Conservation Manager, Ecological Coordinator		Year 1-5	
32. Management interventions for cultural heritage resources.	- Actions to minimise impact at Nelson Bay Cave: - After rainfall events water must be removed (pumped) to minimise damage to display. - Ensure barriers and signage are adequate and maintained. - Boardwalks maintained. - Ensure display is maintained.	Conservation Manager		Year 1-5	

Budget Allocation	Development	
	Operation (5 Year Forecast)	R572,665

7.8 Law Enforcement and Compliance

7.8.1 Legislation

- National Environmental Management Act, (Act No. 107 of 1998)
- National Environmental Management: Protected Areas Act, (Act No. 57 of 2003)
- National Environmental Management: Biodiversity Act, (Act No. 10 of 2004)
- Threatened or Protected Species (ToPS) Regulations, 2007
- Marine Living Resources Act, (Act No. 18 of 1998)
- Government Notice R1111 of 1998 - Marine Living Resource Regulations
- National Environmental Management: Integrated Coastal Management Act, (Act No 24 of 2008).
- Seashore Act, (Act No 21 of 1935).
- Western Cape Nature and Environmental Ordinance, (Ordinance 19 of 1974)
- Regulations proclaimed in terms of the Ordinance, Provincial Notice 955 of 1975.
- Proclamation 357 of 1972, Fish and Rivers Regulations.

Also the provisions of the Bill of Rights detailed in Chapter 2 in the Constitution, No. 108 of 1996, as well as the provisions of the Criminal Procedure Act, (Act No. 51 of 1977), are also important when performing law enforcement actions.

7.8.2 Guiding Principals

- Reserve Management and personnel will ensure that all law enforcement actions are executed in a fair, reasonable and objective manner, with due respect for Human Rights and in accordance with applicable Law.
- Reserve Management and personnel will identify and prioritise sensitive areas and species and prioritise law enforcement patrols accordingly, in order to ensure that resources are allocated in the most efficient and effective manner.
- Reserve Management and personnel will partner with local law enforcement role-players, such as SAPS, local authorities and DEA: Oceans and Coast, in order to effectively utilise resources to combat biodiversity crime within the protected area.
- Reserve Management will liaise with adjacent communities, in conjunction with relevant components, in order to identify and prioritise areas of natural and cultural heritage significance, in order to effectively manage impacts and to prevent illegal activities in these areas.

7.8.3 Management Actions

Refer to Table 7.8.

7.8	LAW ENFORCEMENT AND COMPLIANCE				
Objective F	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
33. Law enforcement for the RNRC is effective.	- All staff must have a working knowledge of all legislation applicable to their function and mandate. - The RNRC staff is adequately capacitated to enforce legislation within the organisation's mandate and does so effectively. - Staff must be formally designated to enforce the relevant legislation. - Appropriate staff has been designated as environmental management inspectors. - Staff have the necessary equipment to enable them to do law enforcement effectively. - The nature reserve receives adequate law enforcement support from other sections of the organisation. - Specific relevant training has been identified and staff have received relevant training. - Local policing forum meetings are attended in priority areas in order to build partnerships with local law enforcement.	Conservation Manager.	Number of peace officers trained and appointed Number of EMI's trained and appointed. Number of sea fisheries officers trained and appointed.	34. Year 1-5	Criminal Procedure Act 51 of 1977; Bill of Rights; Constitution
35. Protection systems are in place and operating effectively.	- The following management mechanisms to control both illegal and legitimate access and use: - Control legitimate access. - Develop standard operating procedures to control activities within the nature reserve for relevant aspects of management. - Implement all standard operating procedures for controlling activities. - Adjacent communities are engaged in order to promote the reserve, to build relationships and to identify priority areas. - Awareness raising activities are held with adjacent communities in order to raise awareness concerning reserve and biodiversity conservation. - Areas in the nature reserve have	Conservation Manager.		Year 1-5	

Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
	been identified and prioritised in terms of conservation value or type of utilisation, etc. - Regular routine patrols are performed in all identified priority areas. - Monitor fishing activities within the MPA. - Initiate regular meetings with all relevant parties in order to agree on and implement a strategic approach to eradicating illegal harvesting. Enlist the support of local CBOs and NGOs where possible and highlighting the issue through press releases as required. - All compliance documentation is properly completed and retained as Means of verification. - All relevant cases are reported via BMS and documents submitted as verification.				

Budget Allocation	Development	
	Operation (5 Year Forecast)	R954,440

7.9 Infrastructure Management

7.9.1 Legislation

- Occupational Health and Safety Act, (Act No 85 of 1993)
- Water Services Act, (Act No.108 of 1997)
- National Water Act, (Act No. 36 of 1998)
- Constitution of the Republic of South Africa (1996)
- According to the Constitution of the Republic of South Africa (1996), responsibility for waste management functions is to be devolved to the lowest possible level of government.
- Water Services Act, (Act No. of 1997)
- The management of sewage sludge is currently regulated by this Act.
- National Environmental Management Act, (Act No. 107 of 1998) (NEMA)
- NEMA increases the ambit of people who can be held responsible for pollution damage from not only any person, company or government department causing pollution, to any person, company or department owning, using or controlling the land on which the problem exists - even if the pollution causing activity was authorised by law.
- White Paper on Integrated Pollution and Waste Management, 1998
- White Paper on the Energy Policy of the Republic of South Africa (approved by Cabinet on 2 December 1998)

7.9.2 Guiding Principles

- Infrastructure management includes the planning, construction, maintenance, replacement, control and monitoring of all fixed structures, equipment and other moveable assets.
- Reserve management will strive to improve systems so as to reduce costs and negative impacts on the physical environment.
- Ensure that future developments within the reserve are socially, environmentally and economically sustainable.
- Reserve Management will strive to phase out all French drains, pit latrines and other non-environmentally friendly sewerage systems on the reserve and replace them with environmentally friendly treatment systems.
- Environmental management includes waste, dumping sites, potable water, water systems, sewage systems and herbicide and fuel stores.
- The principles of waste management are *inter alia* those of the Constitution of the Republic of South Africa, 1996 (Act No.108 of 1996), the Bill of Rights contained in the Constitution, the Environmental Management Policy for South Africa (No. 18894 of 1998), the Environmental Management Act, 1998 (Act No. 107 of 1998) and the Draft White Paper on Integrated Pollution and Waste Management for South Africa (1998).
- To be an energy efficient Nature Reserve, i.e. to improve the performance of the Nature Reserve's own energy systems, so as to reduce costs and negative impacts on the physical environment.
- Ensure that future energy requiring developments within the reserve are socially, environmentally and economically sustainable.
- Infrastructure development and maintenance must be planned and managed to minimize environmental impact and optimize cost efficiency.

- Maintenance schedules for road and path maintenance must be drawn up on the basis of the relative importance of each individual route, potential for erosion, and tendency for becoming overgrown.
- Roads that are identified as essential must be regularly maintained according to this schedule, with special attention being given to adequate drainage.
- Care must be exercised with regards to the resurfacing of roads since material used may result in the spreading of alien invasive plants, as well as necessitating the usage of borrow pits which are inevitably difficult to rehabilitate and are aesthetically displeasing.
- Only sterile material (*i.e.* free of exotic plant seeds) from outside the reserve may be used for maintenance.
- Any further development of infrastructure will require an EIA, and will also be subject to WCNCB conditions, and the reserve's zonation policy.
- The RNRC caters for a variety of outdoor activities. The road network should be kept to a minimum, but sufficient to allow for these and for Reserve management purposes.
- Services such as electricity, telephone and water should be located so as to minimise their environmental impact.
- The reserve management staff requires a two-way radio system for efficient reserve management. All other radios must comply with licensing and other regulatory requirements, and the use of bandwidths must be formalised through agreement with the Board.

7.9.3 Infrastructure Maintenance

7.9.3.1 Roads/Jeep Tracks

The only road within Robberg Nature Reserve is the 400 m paved access road to the visitor's parking area. The old access roads to the Thesen's and Fourie Huts have been closed and are being rehabilitated.

7.9.3.2 Trails

A network of hiking trails exists on the reserve. Sensitive sections have been covered with boardwalks and concrete or wooden steps occur in certain areas. Trail profile monitoring is being done to keep track of potential erosion. Footpaths resulting due to visitors deviating from the official trails are barricaded off and allowed to rehabilitate.

7.9.3.3 Buildings

These include the gate kiosk and entrance boom, public toilet facilities and the visitor's information centre. There are viewing decks and braai facilities next to the parking area. The Fountain shack is the only overnight facility.

7.9.3.4 Fences

There is no fence on the south western boundary between Robberg and the van Rooyen property to allow for movement of small mammals along the coastal belt.

On the north western boundary between Robberg and Robberg Beach End development the fence was removed also to allow for migration of small mammals, with only a fence between Robberg and the property of Mr. Johan Jerling, to keep dogs out of the reserve.

7.9.3.5 Environmental Management

No waste disposal sites are available within the reserve. Primate-proof refuse bins are available at the public parking area and at The Gap. Waste is collected on a daily basis and stored in a cubicle at the parking area, from where it is taken to and dumped at the Municipal registered dumping site once a week. It is policy to use primate proof dustbins at all development or other sites to prevent pollution and to discourage nuisance animals (Refer to Waste Management Programme).

Robberg has a municipal water connection which leads to the public toilets at the car park, with a holding tank (5000l capacity) located behind the toilet facilities. Currently the sewage system consists of a conservancy tank near the public parking area. The tank is pumped out on a regular basis by the Bitou Municipality to prevent unnecessary spillage and overflows. The conservancy tank will be replaced with a link to the municipal sewage system. The overnight facility “The Fountain Shack” has a waterless enviro-loo system.

7.9.3.6 High Sites

The Port-Net lighthouse is located on the eastern point of Robberg. There is no known registered servitude. Port-Net has been requested to inform CapeNature if there is a registered servitude on their records.

7.9.3.7 Signage

Signage consists of health and safety- , interpretative- and general information boards to guide hikers and promote the safety of visitors. This signage has been placed strategically as required.

7.9.4 Management Actions

Refer to Table 7.9.

7.9	INFRASTRUCTURE MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
36. Ensure maintenance of infrastructure and equipment.	- Map all infrastructure and compile infrastructure register. - The infrastructure necessary to manage the nature reserve effectively is in place (U-AMP). - Assess if staff facilities are adequate to perform critical management activities. - Ensure that there is adequate operational equipment as required for operational management purposes. - Maintenance of Infrastructure as scheduled in registers to ensure upkeep and prevent degradation. - Equipment is maintained in good working condition. - Liaise with Public Works where required.	Conservation Manager, Public Works, Technical Advisor, Area Manager	Maintenance of infrastructure and equipment is adequate. Means of verifications: Infrastructure database Maintenance schedules	Ongoing	Infrastructure registers and Public Works Schedules
37. Align all infrastructures to the conservation development framework and zonation.	- Prevent future permanent infrastructure within the active coastal zone. - Assess infrastructure development appropriateness to the CDF. - Compile a re-alignment plan. - Implement the re-alignment plan.	Conservation Manager	Infrastructure located in appropriate zones.	Ongoing	CDF; Infrastructure registers
38. Roads/Jeep Tracks and Trails are managed to minimise impact on the environment.	- Conduct an assessment on the RNRC. - Compile maintenance plan. - Re-align trail network and align with the CDF. - Rehabilitate where necessary. - Monitor use and impact. - Monitor cost effectivity of maintenance.	Conservation Manager, Ecological Coordinator	Updated infrastructure register. Maintenance of scheduled infrastructure works.	Ongoing	Infrastructure register and Public Works schedule
39. Buildings are effectively maintained.	- Compile and maintain a building register. - Provide Department of Public Works with works list to reflect maintenance requirements. - Maintenance of new infrastructure is appropriately planned (EMP), approved by the QEM and if required the appropriate EIA completed. - Ensure energy saving and	Conservation Manager, Area Manager; Public Works	Building register compiled and maintained.	Thatch roofs are maintained annually.	Infrastructure registers and Public Works Schedules

Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
	environmentally sound options are being implemented by Department of Public Works (Green Building principals). Maintain thatched roofs bi-annually or replace with non-obtrusive and non-flammable roofs.				
40. Maintain fences according to legislative requirements.	- Conduct a fence assessment. - Compile fence management plan. - Monitor usage and impact.	Conservation Manager.	Maintenance of fences according to register.	Ongoing	Infrastructure registers and Public Works Schedules
41. Environmental Management: Waste Disposal	Maintenance of storage bins as scheduled in registers to ensure upkeep and prevent pollution.	Conservation Manager, Tourism Officer	Updated Infrastructure Registers Maintenance of scheduled infrastructure works Awareness campaign implemented. Compliance with policy.	Ongoing	Infrastructure registers and Public Works Schedules
42. Environmental Management: Water	- Maintenance of water works as scheduled in registers to ensure upkeep and prevent degradation. - Schedule regular inspections.	Conservation Manager.	Water works maintained according to schedule.	Years 1-5	OHS Act, National Water Act
43. Environmental Management: Sewage	Install effective environmentally friendly sewage facilities.	Conservation Manager.	Sewerage system is effective and not resulting in pollution.	Ongoing	OHS Act, National Water Act
44. Environmental Management: Energy	Energy and water saving devices and cost effective habits.	Conservation Manager, Tourism Officer.	Appropriate technologies introduced in all new developments and where feasible in existing developments with reduced energy consumption resulting.	Ongoing	National Guidelines
45. Management of High Sites.	- Map all High sites (and take photo's). - Monitor impacts. - Access control.	Conservation Manager, Ecological Coordinator.	Ecological file with fixed point photos; Matrix Review; Eco Audit	Ongoing	
46. Signage is appropriate and effective to support management.	- Conduct a signage audit. - Compile a signage register with maintenance plan.	Conservation Manager, Tourism Officer.	Audit report and signage register.	Years 1, 3, 5	

Budget Allocation	Development	
	Operation (5 Year Forecast)	R668,108

7.10 Disaster Management

7.10.1 Legislation

- Disaster Management Act, (Act No. 57 of 2002)
- Occupational Health and Safety Act, (Act No. 85 of 1993)
- Seabirds and Seals Protection Act, (Act No. 46 of 1973)
- South African Maritime Safety Act, (Act No. 5 of 1998)

7.10.2 Guiding Principles

- The first priority of disaster management is the protection of the people who are most at risk. The second priority is the protection of the critical resources and systems on which communities depend.
- Disaster prevention and preparedness should be an integral part of every development policy.
- Disaster assistance must be provided in an equitable, consistent and predictable manner in association with the Local and Provincial authorities.
- Communities, with the assistance from the Local and Provincial tiers of government and Reserve Management, must know what disaster management and risk reduction stand for, what their own responsibilities are, how they can help prevent disasters, how they must react during a disaster (and why) and what they can do to support themselves and relief workers, when necessary.

7.10.3 Management Actions

Refer to Table 7.10.

7.10	DISASTER MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
47. Disaster prevention and preparedness	- Conduct a risk assessment and identify areas of potential concern - Compile and implement disaster management plan for RNRC. - Engage and assist with disaster management units from municipalities. - Conduct an annual audit of disaster management plans and mitigation measure readiness. - Annual review and exercise of contingency and evacuation plans.	Conservation Manager, Area Manager, Community Conservation Manager, Tourism Officer.	Communities, tourists and staff are aware and prepared for any likely disaster. Appropriate signage in place. Membership obtained, communication links with local municipalities in place. ICS training certificate.	Annually	Risk Management Policy; Fire management programme; Health and safety Act, Forest, Veld and Forest Fire Act; OHS Act; Bitou Search and Rescue; Mountain Rescue; ICS systems; NSRI
48. Disaster response.	- Train staff and NGOs to ensure capacity to manage and mitigate the effects of disasters. - Procure equipment for disaster response and mitigation. - Participate and assist district municipality disaster management structure. - Activate evacuation and contingency plans.	Conservation Manager, Community Conservation Manager, Area Manager.		Annually	Bitou Search and Rescue; Mountain Rescue; ICS systems; NSRI

Budget Allocation	Development	
	Operation (5 Year Forecast)	R381,776

7.11 People and Conservation

7.11.1 Community Partnerships

The long term success of the RNRC is dependent on developing a constructive, mutually beneficial relationship between the reserve and communities resident adjacent to the reserve.

Various projects and programmes that enhance the relationship between the reserve and the neighbouring communities are currently in progress. Expansion in partnerships with the surrounding communities of the RNRC is essential for the success of the reserve.

7.11.2 Guiding Principles

- The RNRC's contribution to the local and regional economy must be recognised and therefore will be seen as a vehicle through which rural development and transformation may be achieved.
- Promote the strong sense of ownership and empowerment amongst resident people and communities and ensure a strong supporting institutional base.
- The right to equality, a healthy environment and the right to information are to be guaranteed.
- Co-operative governance should take place between citizens and between different government departments.
- Benefits from biodiversity are to be fairly shared and the benefit flows to people in and around protected areas improved.
- The capacity of neighbouring communities should be developed in order to participate in protected area management.
- Equitable accessibility by all people to the reserve is to be ensured.
- Community based initiatives and partnerships shall promote and support economic and employment opportunities, particularly for local disadvantaged persons and communities.

7.11.3 Management Actions

Refer to Table 7.11.

7.11	PEOPLE AND CONSERVATION				
Objective 5	To create environmental awareness.				
Objective 6	To promote social and economic environmental opportunities and sustainable utilisation.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
49. Create access to the conservation economy through the implementation and management of appropriate initiatives and projects.	- Create jobs through a range of projects, such as: - Clearing of Invasive Alien Plants; maintenance of fire breaks; security guards at gate entrances and cleaning services and garden services. - Complete reporting on EPWP database monthly.	Conservation Manager, Catchment Manager	Number of EPWP job opportunities (n). Number of EPWP full time equivalents (n). Number of people directly benefitting from Sustainable Livelihood Programmes (n)	Ongoing	Trade World; Procurement Procedures; Supply Chain Management Policy; WCNCB Outsourcing Policy 2004
50. The RNRC provides community development opportunities through various capacity building interventions, linked to job creation opportunities.	Training (ICM, Health and Safety, Services training for security guards, etc.).	Conservation Manager, Community Conservation Manager	Number of person days employment created (n).	Ongoing	Training and Development Policy
51. Manage consumptive utilisation of biological resources.	Capture catch card information provided by anglers on database and submit to Oceanographic Research Institute (ORI).	Conservation Manager		Ongoing	Marine Living Resources Act
52. Access for spiritual or religious purposes is allowed and controlled.	Access to the RNRC for spiritual, cultural and traditional purposes will be allowed subject to permit conditions and with prior approval.	Community Conservation Manager, Conservation Manager	Number of persons accessing CapeNature protected areas for cultural, traditional, spiritual, and sustainable harvesting activities (n).	Ongoing	

Budget Allocation	Development	
	Operation (5 Year Forecast)	R190,888

7.12 Awareness, Youth Development and Volunteers

Environmental education should be actively encouraged especially in the context of developing knowledge in protected area management, especially for learners from the area. Where possible, partnerships should be established with role players and interested parties to ensure that this takes place.

Facilitate youth and community development through environmental awareness and assist in developing the knowledge, skills, values and commitment necessary to achieve sustainable development.

7.12.1 Guiding Principles

- Focus awareness on the protection of the natural environment and sustainable use of natural resources.
- The image of CapeNature to be promoted among local communities, provincial and national politicians and the public.
- Reserve Management shall develop an interpretive and educational programme, which will provide each visitor with an interpretive experience that is enjoyable and inspirational, within the context of the reserves tangible resources and the values they represent.
- Reserve Management shall provide both on- and off-site interpretive presentations and media, which facilitate a connection between the interests of the visitor and the meanings of the reserve.
- Educational Programmes must align with the National School Curriculum.
- Opportunities to participate in National Environmental Initiatives such as Arbour Day, and Marine Week should be utilised where appropriate.
- Reserve Management will create an enabling environment that provides youth with opportunities for learning/training, personal growth and healing.
- The RNRC seeks to create an environment which contributes directly to the growth and development of responsible young citizens.
- Facilitate and promote the use of the natural environment for the development of youth.
- Environmental education activities will be restricted to appropriate zones within the reserve.
- Promote the use of the RNRC as a place of self-discovery, personal growth, emotional healing, formal learning and adventure.
- Volunteers are encouraged to contribute to projects on the reserve.

7.12.2 Management Actions

Refer to Table 7.12.

7.12	AWARENESS, YOUTH DEVELOPMENT AND VOLUNTEERS				
Objective 5	To create environmental awareness.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
53. Ensure awareness raising initiatives elevate awareness of the RNRC.	• Compile information and material on RNRC for dissemination and presentation on Environmental Awareness calendar days (e.g. Heritage day, National Marine Week and Marine Protected Area Awareness, Arbour day). • Collaborate with partners to arrange events on Environmental Awareness events and scheduled school activities. • Facilitate production of media releases. • Present talks, presentations when requested. • Submit an article on the RNRC for publication to a popular conservation themed magazine, annually.	Community Conservation Manager, Conservation Manager, Eco-coordinator, Conservation Services Manager	Number of learners provided with environmental education opportunities (n).	Ongoing	People and Conservation Action Plan, CapeNature Communication Policy Development of Educational Resources (Corporate Strategic Plan) Youth Development & Environmental Education Programme Strategic Plan
54. Environmental education is provided to promote an understanding of biodiversity and the use of the natural environment as a vehicle for learning and development.	• Develop and implement an education and awareness plan linked to the objectives of RNRC. • Management will strive to raise the profile of World Heritage Site and Biosphere Reserve through linked awareness and education programmes.	Community Conservation Manager, Conservation Manager, Conservation Services Manager		Ongoing	People and Conservation Action Plan, CapeNature Communication Policy
55. Volunteers actively assist in the management of the RNRC.	• Involve volunteers from ORCA in reserve activities where appropriate.	Conservation Manager, Community Conservation Manager.	Number of volunteer hours worked (n).	Ongoing	People and Conservation Action Plan

Budget Allocation	Development	
	Operation (5 Year Forecast)	R572,664

7.13 Management Effectiveness

7.13.1 Legislation

- The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)
- Public Finance Management Act, (Act No.1 of 1999).
- National Environmental Management: Protected Areas Act, (Act No. 57 of 2003)

Management effectiveness is further guided by the following documents:

- The White Paper on Transforming Public Service Delivery (Batho Pele White Paper) 1997;
- Green Paper on National Performance Management (2009);
- Policy Framework for a Government-wide Monitoring and Evaluation System (2007); and
- National Treasury Framework for Managing Programme Performance Information (2007).

7.13.2 Guiding Principals

- As a listed provincial public entity, CapeNature must comply with all the provisions of the PFMA, with particular reference to Chapter 6 thereof which deals with the responsibilities of public entities. CapeNature is subject to, and guided by, the provincial budget and strategic planning processes. In-year reporting from CapeNature comprises quarterly expenditure and revenue, earmarked funding, non-financial performance, financial normative and other reports as requested by either the Department and/or Provincial Treasury.
- As Protected Area management in the Western Cape is a mandate of CapeNature, all activities in this regard are embedded into the organisation's planning and review mechanisms.
- To monitor and evaluate non-financial performance of the organisation, CapeNature conforms to the following protocols: a strategic five-year Plan; annual performance plan; quarterly reporting and the production of an annual report.
- In addition to the above required protocols, CapeNature also implements a Performance Management System which ensures that organisational targets are embedded in individual performance contracts. This is essential as targets in the reserve management plan become specific measurable targets for individual staff members who are evaluated on them, ensuring accountability.
- All monitoring and evaluation regarding Protected Area management is imbedded in CapeNature's current systems.

7.13.3 Management Actions

Refer to Table 7.13.

7.13	MANAGEMENT EFFECTIVENESS				
Objective 2	To improve the reach and quality of biodiversity management				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
56. Implement and maintain the METT-SA	- Conduct annual METT-SA assessments. - Monitor and improve METT-SA Score through the development of action plans and implementation thereof. - Report to DEA as per requirement for national evaluation of METT-SA scores.	Regional Ecologist, Ecological Co-ordinator, Conservation Manager, Area Manager, Programme Manager: Quality Management.	The RNRC will annually indicate an upward trend in METT-SA score.	Annually	METT-SA
57. Auditing systems inform management.	- Conduct CapeNature integrated auditing system. - Compile actions lists to address audit issues. - Track action list for progress. - Apply adaptive management strategies.	Regional Ecologist, Ecological Co-ordinator, Conservation Manager, Area Manager, Programme Manager: Quality Management.		Every 2 nd year	Eco-audit process
58. A detailed work plan (APO) identifying specific targets for achieving management objectives is approved by CapeNature.	- Assess and prioritise actions from audit results into APO. - Compile APO in terms of actions identified in the Management Plan.	Regional Ecologist, Ecological Co-ordinator, Conservation Manager, Area Manager, Programme Manager: Quality Management.		Every 2 nd year	APO, PAMP
59. Progress reports are compiled.	- Compile quarterly BMS progress reports. - Progress reports as required. (list of relevant reports needed).	Conservation Manager, Area Manager, Programme Manager: Quality Management.		Quarterly	BMS
60. Implement and review the Management Plan for the RNRC.	- Assess all PAM audit results and ensure adaptive management strategies are implemented. - Bi-annual assessment on progress of PAM actions. - Compile annual report on the status of implementation of the PAMP and submit to the Provincial Minister.	Conservation Manager, Area Manager, Programme Manager: Quality Management.		Bi-annually	Eco-audit, PAMP

Budget Allocation	Development	
	Operation (5 Year Forecast)	R381,776

7.14 Administration

7.14.1 Finance and Administration Management

7.14.1.1 Financial Sustainability

Nature Reserves within South Africa are expected to provide a high level of internal and public accountability for the use of resources through the use of accounting systems. The RNRC will have to have the support of external funding from international and local authority sources over and above support received from the provincial body and the income it generates itself.

Legislation

- Public Finance Management Act, (Act No.1 of 1999).

7.14.1.2 Guiding Principles

- Ensure that the reserve continually seeks improvements in the management of its financial resources and operations.
- Strive to develop a robust income base for the reserve from diverse sources, while conserving the integrity of its ecological, cultural, and scenic resources.
- Support initiatives aimed at increasing grant funding and donations to the reserve.
- Assess opportunities for donor funding within the reserve, evaluate appropriate donor funding organisations for projects, establish and manage contacts with such organisations and maintain relationships with potential and existing donor organisations.
- Seek, and where possible create, opportunities for economic empowerment and the involvement of Small, Medium and Micro Enterprises (SMMEs) in developing public private partnerships in commercial activities.
- Apply, and be subject to, sound and transparent financial policies and practices, and shall make available detailed information about its income, expenditure and budgets, as well as about the assumptions upon which such budgets are based.
- Financial management will be within the parameters of the PFMA, Treasury regulations and internal policies of CapeNature, e.g. Supply Chain Management, delegation of powers *etc.*
- Charge appropriate fees for the use of the reserve's utilisable zones by tourists and operators.

7.14.1.3 Management Actions

Refer to Table 7.14.1.

7.14.1	FINANCE AND ADMINISTRATION MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
61. To ensure financial accountability in terms of the PFMA and the Treasury Regulations.	- Facilitate an annual internal audit of the nature reserve financial records. Internal audit report with findings and recommendations is tabled. - External audit report with findings and recommendations communicated. - Provide relevant financial information to reserve management. - An operational budget is allocated to fund the critical management needs of the nature reserve. - Cash flow management - Supply Chain Management - Relevant SCM reports. - Financial management practice enables efficient and effective protected area management. - Monthly management reports submitted to reserve management. - Acknowledgement of report by Conservation Manager. - Variance report signed and returned. - Reserve Management provide input to monthly cash flow forecast. - Signed and approved budget provided by 1 April.	Financial Management section Conservation Manager	Percentage increase shown on revenue as a result of additional funding sourced. Annual increase in visitor numbers.		Budgeting process; APO. SAP system; Supply Chain Management Act. Statements of GRAP.
62. Identify opportunities that are robust to create a diverse income base.	- Identify sources of potential income. - Maintain new and existing partnerships with external funders / stakeholders.	Conservation Manager, Planning & Financial sections Marketing and Eco-tourism Foundation Management		Annually	National Treasury Regulations with regard to Donations, Sponsorships.
63. Fixed Asset Management	- To manage the assets of the reserve in accordance with the relevant legislation. - To ensure that all reserve assets are bar coded. - To ensure that all reserve assets are verified bi-annually. - To provide input into infrastructure asset management plan annually. - Fixed Asset Register is approved by	Conservation Manager Financial Management section		Bi-annually / monthly	SOP's and policies. Statement of GRAP, UAMP guidelines.

Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
	- the Conservation Manager. - Verification Report is approved by the reserve management. - Disposal of assets in line with policies. - GIAMA requirement is met annually. - Trip authorisation forms in place. - To manage CapeNature and Government Motor Transport assets in accordance with policy.				
64. Capacity Building among staff.	Provide relevant financial and Administrative training to reserve staff.	Conservation Manager Financial Management section		Annually	SOP's and policies PFMA

Budget Allocation	Development	
	Operation (5Year Forecast)	R763,552

7.14.2 Human Resource Management

7.14.2.1 Legislation

CapeNature's Human Resources and Labour Relations Practices are primarily based premised on the following legislation:

- The Constitution of the RSA, (1996)
- The Western Cape Nature Conservation Board Act, (Act No.15 of 1998)
- Labour Relations Act, (Act No. 66 of 1995)
- Basic Condition of Employment Act, (Act No. 75 of 1997)
- Employment Equity Act, (Act No 55 of 1998).
- Occupational Health and Safety Act, (Act No. 85 of 1993)
- Skills Development Act, (Act No. 97 of 1998)
- The Protected Disclosures Act, (Act No. 26 of 2000)
- The Promotion of Access to Information Act, (Act No. 2 of 2000)
- The Promotion of Administrative Justice Act, (Act No. 3 of 2000)

Our policies are further shaped by the Public Service Act, (Act No 38 of 2008) and the Regulations thereto, the collective agreements entered into in the public service bargaining chambers as well as the Public Finance Management Act, (Act No. 1 of 1999) and Treasury Regulations issued in terms thereof.

7.14.2.2 Guiding Principles

- (1) CapeNature commits itself to the principles enshrined in the Labour Relations Act (Act No. 66 of 1995), these being:
 - (a) to give effect to the right to fair labour practices and those further rights enshrined in section 23 of the Constitution of the Republic of South Africa;
 - (b) to give effect to obligations incurred by the Republic as a member state of the International Labour Organisation;
 - (c) to provide a framework within which employees and their trade unions, employers and employers' organisations can-
 - (i) collectively bargain to determine wages, terms and conditions of employment and other matters of mutual interest; and
 - (ii) formulate industrial policy.
 - (d) to promote-
 - (i) orderly collective bargaining;
 - (ii) collective bargaining at sectorial level;
 - (iii) employee participation in decision-making in the workplace; and
 - (iv) the effective resolution of labour disputes.
- (2) CapeNature will interact with its employees or its representatives in a manner which fosters transparent, respectful and harmonious working relationships between management and employees and between employees and employees.
- (3) CapeNature is an equal opportunities employer that is committed to using its recruitment and selection processes to address, in a fair manner, all workplace injustices caused by Apartheid policies.
- (4) We are committed to growing our human capital by providing appropriate training and development initiatives for our employees.

- (5) We are further committed to maximising career-pathing to ensure that employees are constantly growing and that the workplace remains challenging and stimulating.

7.14.2.3 Management Actions

See Table 7.14.2.

7.14.2	HUMAN RESOURCE MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
65. Ensure an adequately resourced staff complement on the reserve.	- Ensure current posts are filled and appointment of additional staff (subject to funding). - Ensure resourced (tools and skills) staff in line with approved budget to manage the nature reserve effectively (subject to funding). - Prioritise all critical posts for filling and develop a phased implementation plan in line with approved personnel budget. - Ensure on-going assessment of workloads (volumetric analysis) through interventions in consultation with the Organisational Development Unit of the Department of the Premier. - Employment relationship is in line with employment contract commitments. - Implement an Employment Well-being Programme	Conservation Manager, Area Manager, Executive Directors: Conservation Management and HR	Human resource capacity is adequate to manage the protected area effectively subject to funding	On-going	Recruitment and Selection Policy; Standard Operating Procedures for Recruitment and Selection SA Constitution Labour Relations Act Basic Conditions of Employment Act Employment Equity Act Occupational Health & Safety Act Overtime Policy Equate System for Job Evaluation Leave Policy
66. Integrate and align organisational and employee performance.	- There is an effective Performance Management System in place. - Ensure compliance with Code of Conduct.	Line Manager; Conservation Manager; Area Manager; Executive Director Conservation Management, HR and CEO	Performance agreements completed and signed for all employees. Performance appraisals completed for all employees.	Annually	Performance Management Handbook Annual Plan of Operations Rewards Foundation Policy Disciplinary Code and Procedures (Managing poor performance) Code of Conduct
67. Skilled employees on the reserve	- All staff are skilled to perform according to job specification in the roles they occupy in line with mandatory legislative requirements. - Develop personal development plan for all staff on the reserve. - Roll out of personal development plan for all staff on the reserve. - Reflect capacity development interventions which are supported by mentorship and coaching agreements. - Conduct annual Skills audit.	Conservation Manager; Area Manager; HR and Employment Equity and Training Committees	Develop personal development plan for all staff on the reserve. Mentorship and coaching agreements. Implement Skills Plan according to priorities and budget availability	Annually	Individual PDPs Mentorship strategy and toolbox Skills Development Act Training Policy Bursary Policy Internship Policy

Budget Allocation	Development	
	Operation (5 Year Forecast)	R477,220

7.14.3 Occupational Health and Safety Management

7.14.3.1 Legislation

- The Occupational Health and Safety Act, (Act No. 85 of 1993), as amended, with reference to:
- The Regulations which fall within the ambit of the Act;
- Standards and Approved Codes of Practice under the Act.
- Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993)

7.14.3.2 Guiding Principles

- Reserve Management must bring about and maintain, as far as reasonably practicable, the safety of workers, contractors, volunteers, students and the public.
- Reserve Management must bring about and maintain, as far as reasonably practicable, a work environment that is safe and without risk to the health of the staff members.
- Where this is not possible, Reserve Management must inform staff of these dangers, how they may be prevented, and how to work safely, and provide other protective measures for a safe workplace.
- The staff member must also take care of his or her own health and safety, as well as that of other persons who may be affected by his or her actions or negligence to act.
- Appropriate training, awareness, education on the use of universal infection control measures so as to identify, deal with and reduce the risk of HIV transmission in the workplace will be provided.

7.14.3.3 Management Actions

Refer to Table 7.14.3.

7.14.3	OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
68. To implement policies, procedures and systems to ensure compliance to the Occupational Health and Safety Act. (OS4909H Act).	Implement Occupational Health and Safety System.	Conservation Manager, OHS manager	No disabling injuries occur.	Year 1-5	OHS Act, Internal Health and Safety System
69. To inform the workers, contractors, volunteers, students and the public of these dangers, how exposure could be prevented, and how to work safely.	- Attend Accredited OHS Training: (HIRA) - Attend Accredited OHS Training to renew certificates (OHS Reps & First Aid Officers). - Attend in-house OHS Training Workshops. - Provide monthly Toolbox Talks.	Conservation Manager, OHS Reps, operators of equipment and machinery, First Aid Officers; Designated OHS risk specific appointments, OHS Officer OHS Manager		Year 1 on-going	OHS Training Needs Analysis (conducted annually and aligned with available legislative requirements and available resources)
70. Hazard Identification, Risk Assessment and Risk Management and Risk Control are implemented on the RNRC.	- Conduct regular HIRA processes to determine key risks with highest impact potential. - Recommend remedial action plans to address key risks. - Follow-up to ensure effective implementation.	Conservation Manager Reserve staff OHS Officer		Year 1 on-going	HIRA Report Safe Operating Procedure
71. Monitor and review to ensure adaptive management strategies are applied to improve health and safety on the RNRC.	Assist in conducting of internal Audit Process to determine effectiveness and level of compliance of implementation of OHS Management Control System.	Conservation Manager, OHS Officer, OHS Manager		Year 1	Worksite Audit Report

Budget Allocation	Development	
	Operation (5 Year Forecast)	R477,220

7.14.4 Risk Management

7.14.4.1 Specific Legislation

Risk Management is based on the requirements of the Public Finance Management Act, (Act No. 1 of 1999) which requires the Accounting Authority to implement systems of financial management, risk management and internal control.

7.14.4.2 Guiding Principals

- To promote the highest standards of corporate governance in providing assurance to stakeholders that organisational goals and objectives are achieved in an effective and efficient manner and within an ethical environment.
- Ensure the implementation of risk management systems and procedures for the identification, assessment and monitoring of risks. All risks are to be documented and controls identified to mitigate these risks.
- Ensure the development and implementation of standard operating procedures for all relevant business processes.

7.14.4.3 Management Actions

Refer to Table 7.14.4.

7.14.4	RISK MANAGEMENT				
Objective 2	To improve the reach and quality of biodiversity management.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
72. Ensure effective and integrated risk management within a framework of sound corporate governance.	• Documenting of business processes. • On site risk identification and analysis. • On site identification of controls/mitigations. • Monitoring of risks.	Conservation Manager Chief Risk Officer	Risks in the Risk Register mitigated in a cost effective manner and to an acceptable level.	Year 1-5	PFMA Section 38. Risk Management Policy and Strategy.

Budget Allocation	Development	
	Operation (5 Year Forecast)	R286,332

7.15 Visitor Management and Services

7.15.1 Legislation

- Tourism Act, (Act No. 72 of 1993)

7.15.2 Guiding Principles

- Acknowledgement of the area's diverse natural heritage and a commitment to ensuring the safeguarding thereof for future generations.
- The responsible and sustainable development of tourism facilities compatible with the nature reserve's zonation policy.

7.15.3 Visitor management and services

- The short to medium-term strategic focus for tourism and recreation in the RNRC is:
- The maintenance of a range of low impact recreational adventure activities;
- Access control at entry points;
- The maintenance of key information on visitor profiles and their needs.

7.15.4 Concessionaries

- Currently none, but tourism officer is busy finalising an abseiling concession.

7.15.5 Management Actions

Refer to Table 7.15.

7.15	VISITOR MANAGEMENT AND SERVICES				
Objective 3	To provide appropriate opportunities and facilities for recreation.				
Key Deliverables	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
73. To plan for and manage visitor facilities.	- Monitor and manage visitor numbers and their environmental impact. - Plan for and develop visitor facilities within CDF and local area plans. - Monitor visitor numbers. - Survey visitor opinions. - Ensure tourism facilities are accessible for disabled persons.	Conservation Manager and Tourism Manager	Annual increase in visitor numbers. Annual increase in tourism income.	Ongoing	Tourism Plan
74. To strive to ensure visitor safety.	- Outsource security management. - Appoint and train volunteers. - Establish collaborative relationships with policing authorities. - Gate Entrances to be protected against armed robberies and hi-jackings. - Liaise with local authorities and stakeholders on security issues.	Conservation Manager		Ongoing	Tourism plan, OHSA
75. To promote and manage access to the reserve.	- Set management guidelines for different use zones. - Provide season ticket and special user discounted rates to enable equitable access including the <i>Wild Card</i> system. - Monitor pay access points and control access where required. - Identify areas requiring special management strategies and protection from visitor use. - Facilitate access for disadvantaged groups on request.	Conservation Manager		1-5 Years	Tourism plan.

Budget Allocation	Development	
	Operation (5 Year Forecast)	R763,552

7.16 Conservation Development Framework

7.16.1 Legislation

Environmental legislation relevant to infrastructure development and conservation management activities:

- National Environmental Management Act (NEMA, Act 107 of 1998) - provides a framework for environmental governance and decision making.
- National Environmental Management: Protected Areas Act, 2003 (NEMPAA), as amended 2009 – regulates development, use and management of all protected areas.
- NEMA Environmental Impact Assessment Regulations (GN No. R. 543 of June 2010 as corrected by Correction Notices 1 (GN No. R. 660 of July 2010) and 2 (GN R. 1159 of December 2010)- stipulates environmental authorisation process for a wide range of activities.
- National Water Act (Act 36 of 1998, as amended by Act 45 of 1999) – controls use of ground and surface water, and sets standards for wastewater quality.
- National Heritage Resources Act (Act 25 of 1999) – protects and provides for authorisation relating to heritage features including buildings, archaeological and paleontological sites, and landscape character.
- The National Waste Act (Act 59 of 2008) – controls disposal of waste
- Tourism Act, (Act No. 72 of 1993) – provides a grading and classification scheme for tourism accommodation.
- Occupational Health and Safety Act, (Act No 85 of 1993) – specifies requirements for a safe and healthy working environment for all employees.

7.16.2 Guiding Principles for infrastructure planning and development

- Before any significant infrastructure development, reserves must have:
 - a zoning scheme based on a defensible environmental analysis of sensitivity and opportunities, proper internal consultation, and CapeNature regional strategy; and
 - an infrastructure development plan that specifies the type and location of all new infrastructure.
- Any infrastructure or activity, including change of use, must comply with all legislated licencing and authorisation requirements.
- Roads and tracks have the highest environmental and cost impact – planning should focus on providing efficient, lowest-impact road and trail networks.
- Layout of existing infrastructure and operations should be re-evaluated.
- Development Zones and Access Zones should be peripheral to nature reserve, and easily accessible to staff and visitors.
- Viewshed impacts of new infrastructure should be considered, especially any that might impact Wilderness Areas.
- Development Zones should be as tightly clustered as possible.
- All planning must explicitly avoid, minimise and mitigate fire risk.
- Management vs. tourism infrastructure should be close but separate.

- Tourism products should be located to balance visitor experience against environmental impact and access.
- Development Zones should utilise existing degraded or transformed habitat, although road access must be factored into the overall impact footprint.
- All new development or expansion must be informed by a financial feasibility study, reserve sensitivity analysis, and if appropriate specialist assessment of impact.
- New building infrastructure, especially in remote or sensitive locations, must consider total lifespan impact including decommissioning and removal.
- Green building techniques must be implemented to reduce carbon emissions, energy and water use, and waste contamination associated with construction and operation, although the primary consideration must be reducing local impact.

7.16.3 Management Actions

Refer to Table 7.16.

7.16	CONSERVATION DEVELOPMENT FRAMEWORK				
Objective 3	To provide appropriate opportunities and facilities for recreation.				
Action plans	Management/Monitoring Activities	Responsibility	Indicators	Timeframe	Reference to Existing Procedures
76. To provide nature and cultural tourism and recreational opportunities within the reserve without affecting the ecological processes negatively.	- Establish and implement concessionaire process. - Prioritise different types of tourism development within the reserve. - Monitor concessionaire compliance with national and international standards.	Conservation Manager and Standards Committee Reserve Management and Concessionaires	Concession of selected tourism opportunities Standards are set in specified and approved schedules (including hospitality standards based on those by the South African Grading Council). Standards Committee established for monitoring tourist facilities within the reserve Development priorities in place and implemented in the correct Zones within the reserve Recommendations within these plans implemented Concessionaire compliance audited	Year 1 on-going	Reserve Zonation
77. Promote Community-Based Tourism and SMME initiatives in and around the reserve	Facilitate private / community sector involvement in the planning, design, financing and / or running of tourist facilities.	Conservation Manager and Private/Community Sector	Successful operation (stable tourist flow and financial success) of SMMEs and community-based tourist facilities		
78. Ensure tourism contributes to conservation through the reserve	- Monitor Tourist use and interest within the reserve, including negative impacts, adapt where necessary. - Establish a Financial Management System for the reserve. - Ensure proper control of the reserve's assets. - Identify the potential for negative consequences and their adverse effects on tourism (Risk assessment).	Conservation Manager	Tourist Use Monitoring Programme in place Management systems (financial, risk and asset register) are in place and implemented	By year 3	

Budget Allocation	Development	
	Operation (5 Year Forecast)	R190,888

Part 4

SECTION 8: REFERENCES

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8.2 List of Acronyms and Abbreviations

AIS	Alien and Invasive Species
APO	Annual Plan of Operations
APP	Annual Performance Plan
AVM	Alien Vegetation Management
BIRP	Birds in Reserve Project
BMP-s	Biodiversity Management Plan for Species
BMS	Biodiversity Monitoring System
CAP	Conservation Action Priority
CAPE	Cape Action Plan for the Environment
C.A.P.E.	Cape Action for People and the Environment
CBOs	Community Based Organisations
CEO	Chief Executive Officer
CDF	Conservation Development Framework
CFR	Cape Floristic Region
CITES	Convention on International Trade in Endangered Species
CN	CapeNature
CNC	Cape Nature Conservation (now CapeNature)
CPA	Cape Provincial Administration
CR	Critically Endangered
CWAC	Coordinated Waterbird Counts
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DEA&DP	Department of Environmental Affairs and Development Planning
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Project
EMI	Environmental Management Inspector
EMP	Environmental Management Plans/ Programme
EN	Endangered
FPA	Fire Protection Association
FSP	Fine-scale Plan
GCBR	Gouritz Cluster Biosphere Reserve

GIAMA	Government Immovable Asset Management Act
GIS	Geographical Information System
GRAP	Generally Recognised Accounting Practice
GRI	Garden Route Initiative
HIRA	Hazard Identification and Risk Assessment
HR	Human Resources
IAP	Invasive Alien Plants
IAS	Invasive Alien Species
IBL	Integrated Biodiversity Layer
ICM	Integrated Catchment Management
ICS	Incident Command System
IDP	Integrated Development Plan
IUCN	International Union for Conservation of Nature
LT	Least Threatened
METT-SA	Management Effectiveness Tracking Tool
MOU	Memorandum of Understanding
MPA	Marine Protected Area
MTEF	Medium Term Expenditure Framework
MTO	Mountains to Oceans
NBAL	Natural Biological Alien
NBF	National Biodiversity Framework
NEMA	National Environmental Management Act
NEM:BA	National Environmental Management Biodiversity Act
NEM:PAA	National Environmental Management: Protected Areas Act, 57 of 2003
NGO	Non-Governmental Organisation
NR	Nature Reserve
NRC	Nature Reserve Complex
NBA	National Biodiversity Assessment
NSBA	National Spatial Biodiversity Assessment (now NBA)
NSRI	National Sea Rescue Institute
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Act
ORCA	Oceans Research Conservation Africa
ORI	Oceanographic Research Institute
OUF	Outstanding Universal Value
PA	Protected Area
PAAC	Protected Area Advisory Committee
PAM	Protected Area Management
PAMP	Protected Area Management Plan
PFMA	Public Finance Management Act
QDS	Quarter Degree Squares
QEM	Quarterly Ecological Meeting
RMC	Reserve Management Committee
RNRC	Robberg Nature Reserve Complex
SABAP	South African Bird Atlas Project
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks

SAP	System Application and Products
SAPS	South African Police Services
SASS	South African Scoring System
SCM	Supply Chain Management
SDF	Spatial Development Framework
SKEP	Succulent Karoo Ecosystem Programme
SOB	State of Biodiversity
SOP	Standard Operating Procedures
SMME	Small, Medium and Macro Enterprises
SWOT	Strengths, Weaknesses, Opportunities and Threats
ToPS	Threatened or Protected Species
ToR	Terms of Reference
TPC	Threshold of Potential Concern
UAMP	User Asset Management Plan
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VU	Vulnerable
WCNCB	Western Cape Nature Conservation Board
WESSA	Wildlife and Environment Society of South Africa
WfW	Working for Water
WHS	World Heritage Site
WoF	Working on Fire
WWF	World Wide Fund for Nature

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