EZEMVELO KZN WILDLIFE™

Conservation, Partnerships & Ecotourism

QUEEN ELIZABETH PARK NATURE RESERVE

Protected Area

MANAGEMENT PLAN

Shiven Rambarath

QUEEN ELIZABETH PARK NATURE RESERVE

Protected Area Management Plan

EZEMVELO KZN WILDLIFE™

Conservation, Partnerships & Ecotourism

Prepared by

Ezemvelo KZN Wildlife

Protected Area Management Planning Unit

& Queen Elizabeth Park Nature Reserve Planning Committee

Developed: 2017

Citation:

Queen Elizabeth Park Nature Reserve: Management Plan. Version 1.0 (2017), Ezemvelo KZN Wildlife, Pietermaritzburg, KwaZulu-Natal, South Africa.

PREFACE

Ezemvelo KZN Wildlife has adopted an overarching protected area management strategy that focus on developing, together with stakeholders - a Protected Area Management Plan for Queen Elizabeth Park Nature Reserve. This management plan is its primary and overarching management document and sets out the desired state for Queen Elizabeth Park Nature Reserve and the objectives to achieve this desired state. It forms the framework within which the protected area will be managed and developed towards the achievement of its management objectives, derived in collaboration with the protected area's stakeholders.

The protected area management planning process has been designed to meet the statutory requirements of the National Environmental Management Protected Area Act No. 57 of 2003 and other relevant legislation. The protected area management planning process requires participation from the protected area's stakeholders, the general public and specialists during the various stages of the development and implementation of the plan. An annual review process of the management plan and its subsidiary plans will ensure an active adaptive management planning approach.

A long-term business approach has also been introduced that ensures that the protected area's management objectives are operationalised and reflected through an Annual Plan of Operation. A Financial Plan will, at the same time, actively pursue additional and improved funding and income towards the achievement of the protected area's objectives. Ezemvelo KwaZulu-Natal Wildlife, as the appointed Management Authority for Queen Elizabeth Park Nature Reserve, hereby commits itself to the implementation of this plan.

B Khoza
Acting Chief Executive Officer

AUTHORISATION

The Protected Area Management Plan for Queen Elizabeth Park Nature Reserve is recommended by the Queen Elizabeth Park Nature Reserve Planning Committee, a multi-disciplinary team consisting of:

EZEMVELO KZN WILDLIFE

Robert Rees Faure	Conservation Manager: Umgungundlovu District
Steve McKean	District Ecologist
Richard Zuma	Conservation Manager: Queen Elizabeth Park Nature Reserve
Maureen Zimu	Community Conservation Officer
Nontuthuko Nzama	District Conservation Officer
Shiven Rambarath	Protected Area Management Planning Technician

APPROVAL

This Protected Area Management Plan for Queen Elizabeth Park Nature Reserve is approved by:

DEPARTMENT OF ECONOMIC DEVELOPMENT, TOURISM & ENVIRONMENTAL AFFAIRS

TITLE	NAME	SIGNATURE	DATE
MEC: ECONOMIC DEVELOPMENT, TOURISM & ENVIRONMENTAL AFFAIRS	SIHLE ZIKALALA		16/07/2018

RECOMMENDED:

EZEMVELO KZN WILDLIFE

TITLE	NAME	SIGNATURE	DATE
A/CHIEF EXECUTIVE OFFICER	Bhekisisa Khoza		31/05/2018

TABLE OF CONTENTS

PREFACE ---- I

AUTHORISATION ---- III

APPROVAL ---- III

EXECUTIVE SUMMARY ---- IX

ABBREVIATIONS ---- XI

1 INTRODUCTION ---- 1

1.1 Purpose of the plan ---- 1

1.2 Structure of the plan ---- 1

1.3 The legislative basis for the management of protected areas ---- 3

1.4 Institutional framework for the management of protected areas in KwaZulu-Natal ---- 3

1.5 The policy framework guiding the management of protected areas ---- 3

1.6 Planning approach ---- 5

1.6.1 Public Trust Doctrine ---- 5

1.6.2 Ecosystem-based Management ---- 5

1.6.3 Adaptive Management ---- 6

1.6.4 Collaboration and Transparency ---- 7

2 DESCRIPTION OF QUEEN ELIZABETH PARK NATURE RESERVE AND ITS CONTEXT ---- 8

2.1 Background to Queen Elizabeth Park Nature Reserve ---- 8

2.2 The values of Queen Elizabeth Park Nature Reserve ---- 10

2.3 The purpose of Queen Elizabeth Park Nature Reserve ---- 10

2.4 Proclamation status of Queen Elizabeth Park Nature Reserve ---- 11

2.5 The regional and local planning context of Queen Elizabeth Park Nature Reserve ---- 11

2.5.1 The National Protected Area Expansion Strategy ---- 11

2.5.2 The Provincial Protected Area Expansion Plan ---- 11

2.6 The history of Queen Elizabeth Park Nature Reserve ---- 12

2.6.1 History of Conservation in Queen Elizabeth Park Nature Reserve ---- 12

2.6.2 History of Tourism in Queen Elizabeth Park Nature Reserve ---- 13

2.7 Socio-economic context ---- 13

2.8 Ecological context of Queen Elizabeth Park Nature Reserve ---- 13

2.8.1 Climate and Weather ---- 13

2.8.2 Topography ---- 13

2.8.3 Geology and Soils ---- 15

2.8.4 Hydrology ---- 18

2.8.5 Vegetation ---- 20

2.8.5.1 Subtropical Alluvial Vegetation ---- 20

2.8.5.2 Eastern Temperate Freshwater Wetlands ---- 20

2.8.5.3 Midlands Mistbelt Grassland ---- 20

2.8.5.4 Moist Coast Hinterland Grassland ---- 21

2.8.6 Fire Regime ---- 23

2.8.7 Invasive Species ---- 23

2.8.8 Mammalian Fauna ---- 23
2.8.9 Avifauna ---- 23
2.8.10 Herpetofauna (reptiles and amphibians) ---- 24
2.8.11 Invertebrates ---- 25

2.9 Operational management context of Queen Elizabeth Park Nature Reserve ---- 25
2.9.1 Infrastructure ---- 25
2.9.1.1 Conservation ---- 25
2.9.1.2 Ezemvelo KZN Wildlife Head Office ---- 25
2.9.1.3 Nursery ---- 25
2.9.1.4 Stores - Uniform ---- 26
2.9.1.5 Public Use Infrastructure ---- 26
2.9.2 Staffing Establishment ---- 28
2.9.3 Security and Access Control ---- 28
2.9.4 Funding Levels at Queen Elizabeth Park Nature Reserve ---- 28
2.9.5 Management Effectiveness in Queen Elizabeth Park Nature Reserve ---- 28
2.9.6 Risk assessment ---- 29

2.10 Summary of management issues – StrenGths, Weaknesses Opportunities and Threats (SWOT) ---- 31

3 STRATEGIC MANAGEMENT FRAMEWORK ---- 32

3.1 Queen Elizabeth Park Nature Reserve vision ---- 32

3.2 Objectives and strategic outcomes ---- 32

3.3 Conservation development Framework ---- 36
3.3.1 Zonation Plan ---- 36

3.4 ADMINISTRATIVE STRUCTURE ---- 40

4 OPERATIONAL MANAGEMENT FRAMEWORK ---- 41

4.1 Determination of priorities for strategic outcomes ---- 41

4.2 Legal compliance and law enforcement ---- 42

4.3 Stakeholder engagement ---- 46

4.4 Buffering mechanisms & Regional management ---- 48
4.4.1 Protected area expansion and buffer zone / Zone of influence management ---- 48
4.4.2 Regional management ---- 48

4.5 Environmental education and awareness ---- 51

4.6 tourism management & development ---- 53
4.6.1 Tourism product development and management ---- 53

4.7 biodiversity resource & Conservation management ---- 56
4.7.1 Fire management ---- 56
4.7.2 Invasive plant control ---- 58
4.7.3 Soil erosion control ---- 58
4.7.4 Alien animal control ---- 61
4.7.5 Resource utilisation ---- 61
4.7.6 Wildlife Management ---- 64
4.7.7 Conservation Targets ---- 66
4.7.8 Cultural Heritage Management ---- 69

4.8 Operational management ---- 72
4.8.1 Financial and human resources ---- 72
4.8.2 Facilities and infrastructure ---- 72

5 MONITORING AND REPORTING ---- 76

5.1 Annual monitoring ---- 76

5.2 Annual protected area management plan implementation review ---- 79

6 QUEEN ELIZABETH PARK NATURE RESERVE ANNUAL PLAN OF OPERATION ----80

6.1 Implementation of the protected area management plan ---- 80

6.2 Responsibilities in implementing the protected area management plan ---- 81

6.3 Queen Elizabeth Park Nature Reserve resource requirements ---- 81

6.3.1 Staff and equipment ---- 81

6.3.2 Projects ---- 81

6.4 Annual financial plan ---- 82

6.5 Financial accounting system ---- 82

6.6 Financial reporting ---- 82

REFERENCES ----83

LIST OF TABLES

Table 1: Structure of the management plan ---- 2
Table 2: Values of Queen Elizabeth Park Nature Reserve ---- 10
Table 3: Management effectiveness assessment - Pressures, threats and issues ---- 29
Table 4: Objectives and strategic outcomes for Queen Elizabeth Park Nature Reserve ---- 33
Table 5: Zonation categories for Queen Elizabeth Park Nature Reserve ---- 38
Table 6: Framework for Legal Compliance and Law Enforcement ---- 43
Table 7: Framework for Stakeholder Engagement ---- 47
Table 8: Framework for Buffering Mechanisms & Regional Management ---- 49
Table 9: Framework for Environmental Education and Awareness ---- 52
Table 10: Framework for Tourism Management & Development ---- 54
Table 11: Framework for Biodiversity Resource & Conservation Management - Fire Management ---- 57
Table 12: Framework for Biodiversity Resource & Conservation Management - Invasive Plant control & Soil Erosion Control ---- 59
Table 13: Framework for Biodiversity Resource & Conservation Management - Alien Animal Control & Resource utilisation ---- 62
Table 14: Systematic Conservation targets to which Queen Elizabeth Park Nature Reserve contributes ---- 66
Table 15: Framework for Biodiversity Resource & Conservation management - Wildlife management and Conservation Targets ---- 67
Table 16: Framework for Biodiversity Resource & Conservation Management - Cultural Heritage Management ---- 70
Table 17: Framework for Operational Management - Financial, Human Resources and Infrastructure ---- 73
Table 18: Annual Surveillance and Monitoring Schedule ---- 77

LIST OF FIGURES

Figure 1: Structure of the protected area management plan ---- 2
Figure 2: The adaptive management cycle ---- 6
Figure 3: Comparison of METT Scores for QEP from 2010 to 2016 ---- 29
Figure 4: Management cycle - IUCN framework for evaluating management effectiveness in protected areas 30
Figure 5: Organisational structure for Queen Elizabeth Park Nature Reserve ---- 40
Figure 6: Process for the implementation of Protected Area Management Plans ---- 80

LIST OF MAPS

Map 1: Locality of Queen Elizabeth Park Nature Reserve 9
Map 2: Topography of Queen Elizabeth Park Nature Reserve 14
Map 3: Geology of Queen Elizabeth Park Nature Reserve 16
Map 4: Soils of Queen Elizabeth Park Nature Reserve 17
Map 5: Hydrology of Queen Elizabeth Park Nature Reserve 19
Map 6: Vegetation of Queen Elizabeth Park Nature Reserve 22
Map 7: Infrastructure of Queen Elizabeth Park Nature Reserve 27
Map 8: Zonation of Queen Elizabeth Park Nature Reserve 37

LIST OF APPENDICES

Appendix A: Definition of terms 85
Appendix B: Proclamation of Queen Elizabeth Park Nature Reserve 88
Appendix C: List of statutes to which Queen Elizabeth Park Nature Reserve is subject 89
Appendix D: Environmental impact assessment regulations listed activities in terms of Regulation R. 985, Listing Notice 3 90
Appendix E: List of policies, servitudes, unpublished documents and supporting documentation 93
Appendix F: Species list for Queen Elizabeth Park Nature Reserve 98
Appendix G: Financial Plan for Queen Elizabeth Park Nature Reserve 107
Appendix H: Lease Agreement between KwaZulu Natal Nature Conservation Services and Msunduzi Municipality 112
Appendix I: Service Level Agreement was entered into, between KwaZulu-Natal Nature Conservation Services and the Victoria Country Club Estate 119

EXECUTIVE SUMMARY

The Queen Elizabeth Park Nature Reserve (QEP), is a 93 Hectare (Ha) protected area located on the outskirts of Pietermaritzburg in KwaZulu-Natal. The reserve is bordered by the National Road (N3) on the western side, while the Victoria Country Club Golf Course borders on the eastern boundary. The reserve is situated within the UMgungundlovu District Municipality and the Msunduzi Local Municipality.

The reserve was proclaimed in 1960 under ordinance 35 of 1947 as a nature reserve and the land is currently being leased from the Pietermaritzburg City council. The main reason for establishment of the nature reserve, was to provide a locality for the Head Office of the Natal Parks, Game and Fish Preservation which is now known as Ezemvelo KZN Wildlife.

Queen Elizabeth Park Nature Reserve is surrounded by a number of nature reserves such as Doreen Clark Nature Reserve, which lies 3.2km west of QEP and Midmar Nature Reserve which is situated 14.7km north-west of QEP. The Reserve does offer some low use tourism activities such as picnic sites and walking trails with the potential to improve in the future.

Queen Elizabeth Park Nature Reserve comprises of the following vegetation: Moist Coast Hinterland Grassland, Midlands Mistbelt Grassland and Eastern Temperate Wetlands. Floral species of importance includes the Hilton Daisy (*Gerbera aurantiaca*) which is endangered according to South African Red Data Book and Christmas Bells (*Sandersonia aurantiaca*) which is declining. The *Dierama argyreum* is specially protected under the Ordinance and is endemic and restricted to KwaZulu-Natal. The Caterpillar Bean (*Zornia capensis capensis*), Sticky-leaved Monopsis (*Monopsis stellarioides stellarioides*), Brown Bonnet (*Eriosema salignum*), Wild Penstemon (*Graderia scabra*), Witchweed (*Striga asiatica*), False Assegaai (*Maesa lanceolata*), Ox-eye Daisy (*Callilepis laureola*) and Golden Everlasting (*Helichrysum aureonitens*) are all listed as least concern according to the South African Red Data Book but is controlled under the Ordinance.

Important avifauna species at QEP includes the Southern Ground-Hornbill (*Bucorvus leadbeateri*) which are considered Endangered according to the South African Red Data Book. Other species such as the Black Stork (Ciconia nigra), Lanner Falcon (*Falco biarmicus*), Short-tailed Pipit (*Anthus brachyurus*), Black Eagle (*Aquila verreauxii*), African Crowned Eagle (*Stephanoaetus coronatus*) and the African Grass-owl (*Tyto capensis*) are all listed as vulnerable according to the South African Red Data Book.

Mammals present in the reserve, and are off special importance includes Blue duiker (*Philantomba monticola bicolor*) and the Large-eared free-tailed bat (*Otomops martiensseni Icarus*) which are listed as vulnerable according to the South African Red Data Book. The African clawless otter (*Aonyx capensis capensis*) and the Southern reedbuck (*Redunca arundinum arundinum*) are also present and listed as protected under the Threatened or Protected Species Regulations. Other mammals such as Blesbok (*Damaliscus pygargus phillipsi*), Plains Zebra (*Equus quagga antiquorum*), Bushbuck (*Tragelaphus scriptus sylvaticus*) and Grey duiker (*Sylvicapra grimmia*) can also be spotted in the reserve.

Queen Elizabeth Park Nature Reserve is also home to the Intermediate Spiny Reed Frog (*Afrixalus spinifrons intermedius*) which have been classified as Near Threatened according to the IUCN and is restricted and endemic to KwaZulu-Natal. The Midlands robberfly (*Ischiolobos mesotopus*) and Goldtail (*Allocnemis leucosticta*) is restricted and endemic to KwaZulu-Natal as well.

Vision and objectives of Queen Elizabeth Park Nature Reserve

"To maintain the nature reserve as a site for the Headquarters of Ezemvelo KZN Wildlife whilst conserving biodiversity, improving neighbour relations and utilising the nature reserve for educational, research and recreational purposes."

Management issues, challenges and opportunities at Queen Elizabeth Park Nature Reserve

QEP is an urban park and experiences all the issues relating to urban parks such as influx of alien plants and animals from surrounding neighbours. The relationship between management and surrounding neighbours has been inconsistent which has led to poor communication between both parties. The reserve also experiences

inappropriate behaviour from visitors such as littering and the excessive consumption of alcohol. Infrastructure is dilapidated and outdated.

Managing the issues, challenges and opportunities at Queen Elizabeth Park Nature Reserve

QEP will require a dedicated management team to rectify issues identified above. An increase in stakeholder engagement will eliminate a few of the problems mentioned above such as the influx of alien plants and animals into the reserve. Infrastructure will need to be assessed and updated in order to promote the values of the nature reserve. Stricter control of the nature reserve from a security point of view will eliminate inappropriate behaviour.

Annual plan of operation

Each year an annual plan of operation will be prepared, based on the objectives, strategic outcomes, management activities and targets contained in the protected area management plan. This will guide implementation and monitoring of the management plan.

ABBREVIATIONS

AMAFA	Amafa aKwaZulu-Natali (KwaZulu-Natal Provincial Heritage Agency)
APO	Annual Plan of Operation
CARA	Conservation of Agricultural Resources Act No. 43 of 1983
CCA	Community Conservation Area
CDP	Conservation Development Plan (Component of Ezemvelo KZN Wildlife protected area management plan)
CEO	Chief Executive Officer
CMS	Co-management Structure
DCO	District Conservation Officer
DEA	National Department of Environmental Affairs
DWAS	Department of Water Affairs and Sanitation
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EIA	Environmental Impact Assessment
Ezemvelo	Ezemvelo KwaZulu-Natal Wildlife
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EWT	Endangered Wildlife Trust
FP	Financial Plan
FPA	Fire Protection Association
GDP	Gross Domestic Product
GIS	Geographical Information System
IDP	Municipal Integrated Development Plan
IUCN	International Union for the Conservation of Nature
KZN	KwaZulu-Natal Province of the Republic of South Africa
KZNCMA	KwaZulu-Natal Nature Conservation Management Act No. 9 of 1997
KZNHRA	KwaZulu-Natal Heritage Resources Act No. 10 of 1997
MEC	Member of the Executive Council
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
MP	Management Plan
NEMA	National Environmental Management Act No. 107 of 1998
NEMBA	National Environmental Management: Biodiversity Act No. 10 of 2004
NEMPAA	National Environmental Management: Protected Areas Act No. 57 of 2003
NHRA	National Heritage Resources Act No. 25 of 1999
NPAES	National Protected Area Expansion Strategy
NR	Nature Reserve

NRPC	Nature Reserve Planning Committee
NSBA	National Spatial Biodiversity Assessment
OCNPA	Operations Committee Northern Protected Areas
PA	Protected Area
PFMA	Public Finance Management Act No. 1 of 1999
PPC	Park Planning Committee
QEP	Queen Elizabeth Park Nature Reserve
SA	Republic of South Africa
SAHRA	South African Heritage Resources Agency
SANDF	South African National Defence Force
SAPPI	South African Pulp and Paper Industry
SAPS	South African Police Service
SDF	Municipal Spatial Development Framework
SMME	Small, Micro and Medium Enterprises
SWOT	Strengths, weaknesses, opportunities and threats analysis
TFCA	Transfrontier Conservation Area
TFP	Transfrontier Park
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WWF	Word Wildlife Fund

1 INTRODUCTION

1.1 PURPOSE OF THE PLAN

Protected area management plans are high-level, strategic documents that provide the direction for the development and operation of protected areas. They inform management at all levels, from the staff on-site through to the CEO, the Board and the MEC. The purpose of the management plan is to:

- facilitate compliance with the National Environmental Management: Protected Areas Act No. 57 of 2003;
- provide the primary strategic tool for management of Queen Elizabeth Park Nature Reserve, informing the need for specific programmes and operational procedures;
- provide motivations for budgets and provide indicators that the budget is spent correctly;
- build accountability into the management of Queen Elizabeth Park Nature Reserve;
- provide for capacity building, future thinking and continuity of management and
- Enable Ezemvelo KZN Wildlife to develop and manage Queen Elizabeth Park Nature Reserve in such a way that its values and the purpose for which it was established are protected.

1.2 STRUCTURE OF THE PLAN

The management plan has been divided into three main sections to provide an easy to use reference for protected area management. The Context section provide background information to both the protected area and the planning process (Part 1 - 2), the Strategy section provides the 'roadmap' to the management of the protected area (Part 3 – 5) [What is the desired state and how will we get there?] and the Operational section (Part 6 – 8) provides for the implementation of the management plan. This section together with the conservation targets and wildlife management strategies and the Annual Plan of Operation forms the Operational Management Plan that are extracted in a separate document to facilitate implementation.

CONTEXT	
Section 1	Provides an introduction and background to the management plan. It describes the legislative basis and the institutional and policy framework for the management of protected areas. This section also address the planning approach that was followed in the development of the management plan as well as the planning approach for managing the protected area.
Section 2	Establishes the context of the protected area, providing the basis for the strategic and operational management frameworks that follow. It establishes the values and the purpose of the protected area that needs to be addressed in the management plan and requires protection from negative impacts. This section relates directly to site specific context of the protected area.
STRATEGY	
Section 3	Sets out the vision and objectives that must be achieved in efforts to effectively conserve the protected area.
Section 4	Sets out the zonation of the Queen Elizabeth Park Nature Reserve, outlining the permissible land uses in particular zones. It also established principles for the buffer areas contiguous to the protected area.
Section 5	Describes the administrative structure required to effectively manage Queen Elizabeth Park Nature Reserve. It indicates both current structure and required structure for the effective management of the protected area.
OPERATIONS	

Section 6	Sets out the detailed management targets that must be achieved in managing the protected area. These are provided in the management tables which are the operational or implementing component of the management plan.
Section 7	Sets out the monitoring measures required to determine if management targets are being met and the requirements for reporting on performance in implementing the plan.
Section 8	Describes the components that must be included in the annual plan of operation.

Table 1: Structure of the management plan

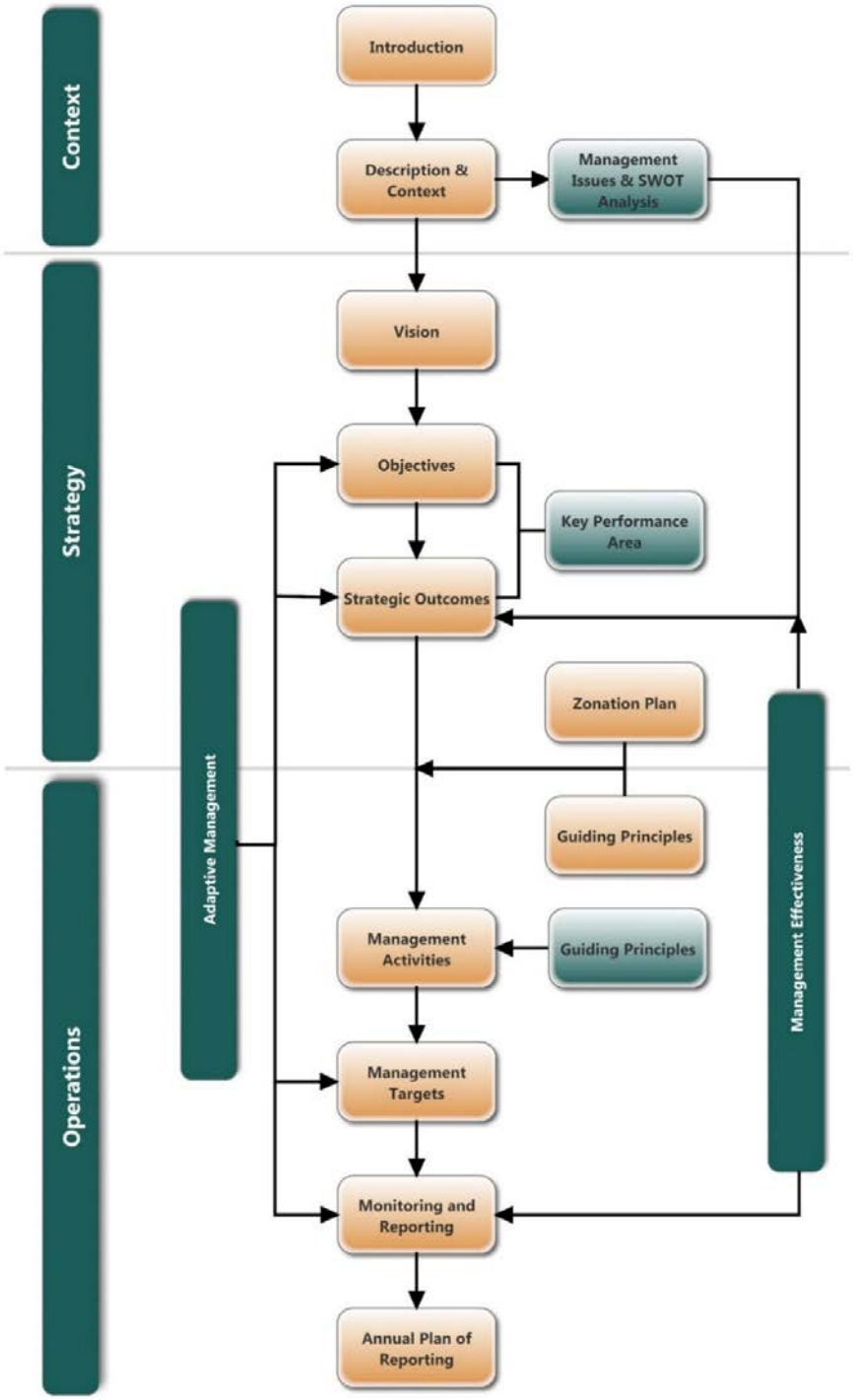


Figure 1: Structure of the protected area management plan

1.3 THE LEGISLATIVE BASIS FOR THE MANAGEMENT OF PROTECTED AREAS

There is a large body of legislation that is relevant to the management of protected areas in South Africa, but the primary legislation guiding the management of protected areas is the National Environmental Management: Protected Areas Act No.57 of 2003.

The Act establishes the legal basis for the creation and administration of protected areas in South Africa, as its objectives include provisions *"for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes"*. It sets out the mechanisms for the declaration of protected areas and the requirements for their management. A detailed list of relevant legislation is provided in Appendix C. Managers are required to familiarise themselves with the purpose and contents of the statutes and their subsequent amendments and regulations.

In terms of Section 76 of the National Environmental Management: Biodiversity Act No. 10 of 2004, the management authority of a protected area must incorporate an invasive species control and eradication strategy in the protected area management plan.

In terms of the National Environmental Management Act No. 107 of 1998 environmental impact assessment (EIA) Regulations, various activities require environmental authorisation before they may commence. In addition, in terms of Regulation R.985, Listing Notice No.3, there are a number of activities that require environmental approval specifically as a result of their proximity to a protected area. The implication of this is that if any of the activities listed in Appendix D are proposed in the protected area, or within five kilometres of it, they will be subject to either a basic assessment or a full scoping and EIA process. A number of general activities and those proposed for either tourism development or operational management within the protected area or its buffer areas will thus also require environmental authorisation.

1.4 INSTITUTIONAL FRAMEWORK FOR THE MANAGEMENT OF PROTECTED AREAS IN KWAZULU-NATAL

The KwaZulu-Natal Nature Conservation Board, established in terms of the KwaZulu-Natal Nature Conservation Management Act No.9 of 1997, was appointed by the KwaZulu-Natal MEC: Agriculture and Environmental Affairs as the management authority for all provincial protected areas in KwaZulu-Natal. The Board's implementing agency is Ezemvelo KZN Wildlife.

Management of Queen Elizabeth Park Nature Reserve will be undertaken in accordance with relevant legislation and the management policies of Ezemvelo KZN Wildlife, which includes a commitment to maintain the character and ecological, cultural and aesthetic integrity of the site.

The KwaZulu-Natal Nature Conservation Board will be responsible for reporting on the management of Queen Elizabeth Park Nature Reserve to the designated KwaZulu-Natal Provincial Member of the Executive Committee (MEC) and the Premier thus ensuring coordination of those matters that may affect the protected area through the relevant provincial departments, district and local municipalities.

1.5 THE POLICY FRAMEWORK GUIDING THE MANAGEMENT OF PROTECTED AREAS

In conserving and managing the biodiversity of KwaZulu-Natal, Ezemvelo KZN Wildlife operations are undertaken within a broad framework of policies. At a national level, overarching policy is set out in:

- White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997.
- Bioregional Approach to South Africa's Protected Areas, 2001/2002.
- Community Based Natural Resource Management Guidelines, 2003.
- National environmental management principles set out in section 2 of the National Environmental Management Act.

Within the province, Ezemvelo KZN Wildlife has adopted a Five Year Strategic Plan and Performance Plan for 2015-2020, which has developed the following corporate strategic profile:

VISION

"To be a world renowned leader in the field of biodiversity management"

MISSION STATEMENT

"To ensure effective conservation, sustainable use of biodiversity, and promote ecotourism within KwaZulu-Natal in collaboration with stakeholders for the benefit of present and future generations"

CORE VALUES

- Passion — We shall be passionate in what we do.
- Respect — We shall perform our duties in a professional, ethical manner.
- Trust — We shall act transparently with integrity and honesty in all we do.
- Innovation — We shall embrace a culture of learning, adaptation and creativity at all times.
- Excellence — We shall strive to best apply best practices to achieve the highest quality and standards at all times.

STRATEGIC OUTCOMES

- Environmental assets and natural resources that are well protected and continually enhanced.
- An efficient, effective and development orientated public service and an empowered, fair and inclusive citizenship.
- Decent employment through inclusive economic growth.
- To be an efficient, effective and compliant organisation, with good governance.
- To effectively promote the mandate of the organisation to stakeholders.

This management plan has utilised the abovementioned body of policies to develop a strategic and operational management framework for Queen Elizabeth Park Nature Reserve that is consistent with the broad goals and specific policy requirements of Ezemvelo KZN Wildlife.

In all of the sections of the management plan, where relevant, mention should be made of specific Ezemvelo KZN Wildlife policies that relate to the topic under discussion.

1.6 PLANNING APPROACH

The preparation of this management plan has been undertaken based on the following guiding principles:

1.6.1 Public Trust Doctrine

Section 3 of the National Environmental Management: Protected Areas Act No. 57 of 2003 mandates the State, and hence Ezemvelo KZN Wildlife to act as the trustee of protected areas. This trusteeship is derived from the Public Trust Doctrine, which in this context obligates the Ezemvelo KZN Wildlife to support the management of all protected areas and the resources therein for the benefit for current and future generations (the beneficiaries of the Public Trust). Thus it is incumbent on Ezemvelo KZN Wildlife to use all practical means to fulfil its responsibilities as trustee of the protected area for current and succeeding generations. [See White Paper on Environmental Management — Policy for South Africa GG 749 of 1998]

1.6.2 Ecosystem-based Management

Decision-making associated with the protection of protected area's ecosystems will be scientifically based on internationally accepted principles and concepts of conservation biology. The Protected area ecosystems will be managed with minimal interference to natural processes. Specific management may be desirable, when the structure or function of a habitat or ecosystem has been significantly altered by way of human induced impacts or previous management. Specific management will only be considered when this option is the only possible alternative available to restore ecological integrity.

Provided that park ecosystems will not be impaired, the manipulation of naturally occurring processes (e.g. creation of firebreaks, damage causing animals) may take place when no reasonable alternative exists and when monitoring has demonstrated, that without direct intervention:

- there will be serious adverse effects on neighbouring lands; or
- protected area's facilities, public health or safety will be threatened; or
- The objectives of a protected area's management plan prescribing how certain natural features or cultural resources are to be maintained cannot be achieved.

Where directed management is required, it will be based on scientific research, and will employ techniques that emulate natural processes as closely as possible.

Ezemvelo KZN Wildlife will strive to be exemplary in the implementation of conservation and other environmental legislation including but not limited to environmental impact assessment and review.

Within the protected area, effort must be directed at maintaining ecosystems in as natural a state as possible and human induced disturbance must primarily be avoided. Where in those rare circumstances avoidance cannot be achieved the disturbance must be mitigated and ameliorated in compliance with Ezemvelo KZN Wildlife's conservation policies and norms and standards, and in particular the Integrated Environmental Management Policy.

It is recognised that the Queen Elizabeth Park Nature Reserve does not contain complete or unaltered ecosystems. This, combined with increasing and cumulative disturbances from sources outside of the protected area such as adjacent land use, upstream effects of pollution, colonisation of invasive and alien species, and visitor use, is likely to result in irreversible degradation of the protected area's ecosystems, the loss of biodiversity and impoverishment of gene pools.

Ecosystem management must be derived from a conceptual and strategic basis for the protection of park ecosystems which is based on sound research and monitoring. It must involve a holistic view of the natural environment to ensuring that all management decisions take into consideration the complex interactions and dynamic nature of the ecosystems and their limited capacity to withstand and recover from human induced disturbance.

It is recognised that the Ezemvelo KZN Wildlife's protected areas are becoming increasingly important, if not vital, in national and international efforts to maintain biodiversity and genetic resources of South Africa. Thus the management of the protected areas ecosystems must be credible and solidly based in science and best management practice. In this, a rigorous application of conservation science in the collection and interpretation of research and monitoring data must be achieved.

It is further recognised that, in particular cumulative, human induced disturbance or poor management practices have far-reaching, long-lasting and potentially irreversible negative impacts effects on species, habitats, ecosystems and the protected area as a whole. It is thus recognised that a cautious and risk adverse approach must be exercised.

1.6.3 Adaptive Management

Adaptive management is a structured, iterative process in which decisions are made using the best available information, with the aim of obtaining better information through monitoring of performance (Figure 2). In this way, decision making is aimed at achieving the best outcome based on current understanding, whilst accruing the information needed to improve future management. Adaptive management can lead to revision of a part or if necessary the whole management plan.

Adaptive management enables protected area managers to:

- Learn through experience.
- Take account of, and respond to, changing factors that affect the protected area.
- Continually develop or refine management processes.
- Adopt best practices and new innovations in biodiversity conservation management.
    - Demonstrate that management is appropriate and effective.

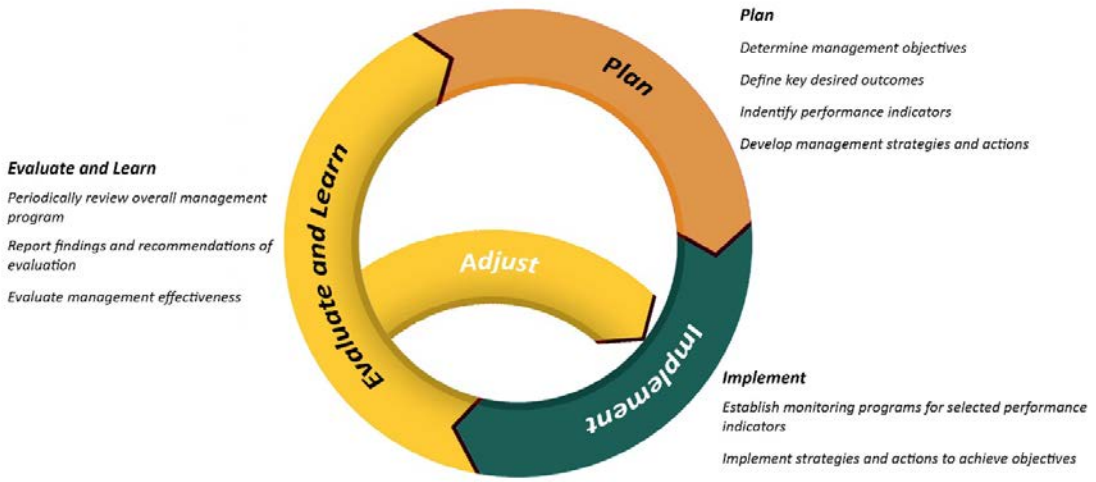


Figure 2: The adaptive management cycle

1.6.4 Collaboration and Transparency

Stakeholder involvement and support is an important aspect of effective protected area management. It is also a requirement in terms of Sections 39(3) and 41(2) (e) of the National Environmental Management: Protected Areas Act No. 57 of 2003. Accordingly, the development of this management plan has been undertaken through a collaborative process, involving local communities and other key stakeholders.

Public consultation has been undertaken through a series of meetings and discussions with key stakeholders culminating in a key stakeholder workshop, held on the 17th May 2017. Furthermore, the draft management plan has been made available for public review and comment prior to its finalisation. This process has ensured a great deal of valuable input into the development of the management plan, the outcomes of which have been incorporated into it. A detailed public participation report is available upon request from the protected area management.

2 DESCRIPTION OF QUEEN ELIZABETH PARK NATURE RESERVE AND ITS CONTEXT

2.1 BACKGROUND TO QUEEN ELIZABETH PARK NATURE RESERVE

The Queen Elizabeth Park Nature Reserve (QEP), is a 93 Hectare (Ha) protected area located on the outskirts of Pietermaritzburg in KwaZulu-Natal. The reserve is bordered by the National Road (N3) on the western side, while the Victoria Country Club Golf Course borders on the eastern boundary. The reserve is situated within the UMgungundlovu District Municipality and the Msunduzi Local Municipality.

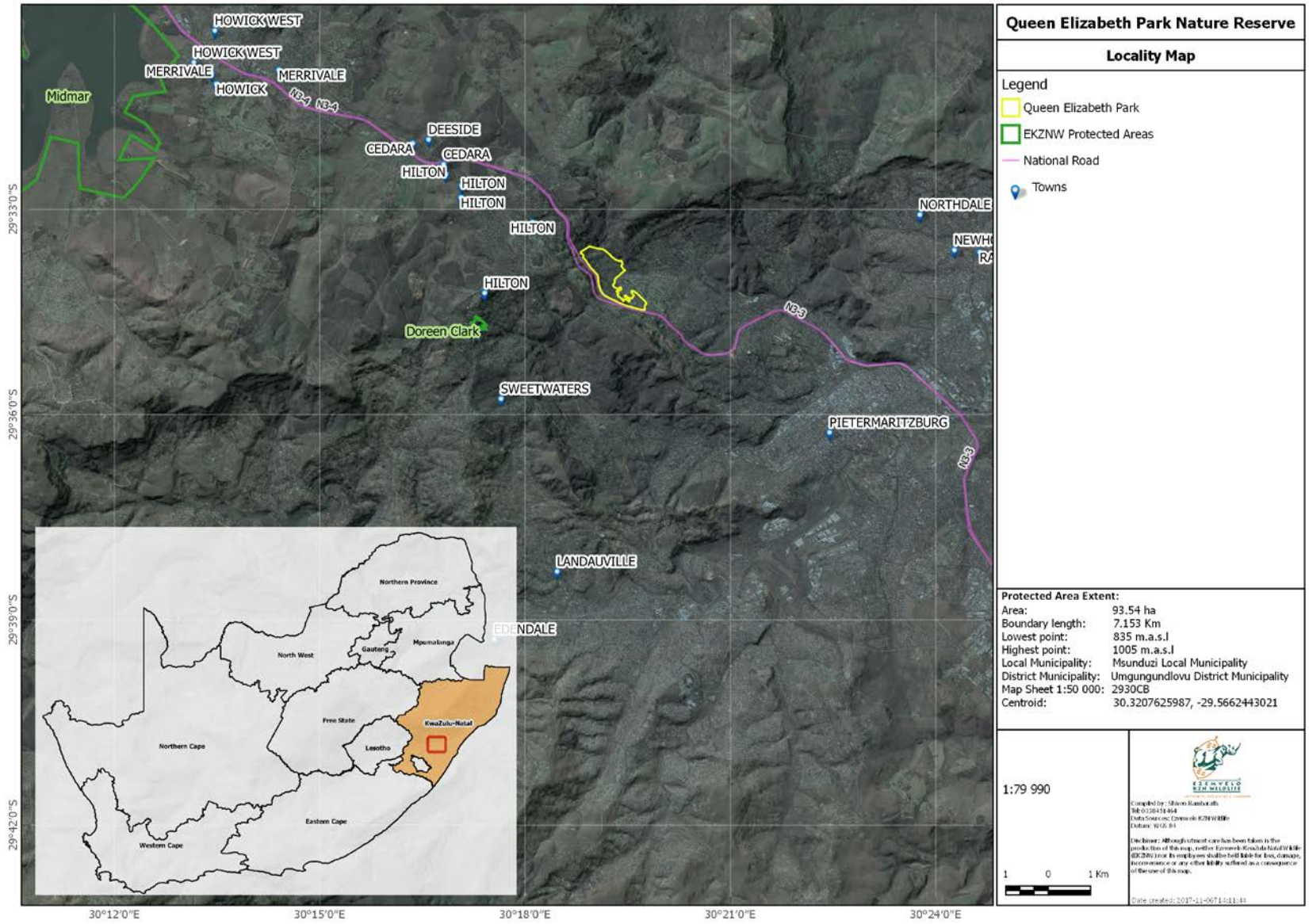
The reserve was proclaimed in 1960 under ordinance 35 of 1947 as a nature reserve and the land is currently being leased from the Pietermaritzburg City council. The main reason for establishment of the nature reserve, was to provide a locality for the Head Office of the Natal Parks, Game and Fish Preservation which is now known as Ezemvelo KZN Wildlife.

Queen Elizabeth Park Nature Reserve is surrounded by a number of nature reserves such as Doreen Clark Nature Reserve, which lies 3.2km west of QEP and Midmar Nature Reserve which is situated 14.7km north-west of QEP. The Reserve does offer some low use tourism activities such as picnic sites and walking trails with the potential to improve in the future.

Queen Elizabeth Park Nature Reserve comprises of the following vegetation: Moist Coast Hinterland Grassland, Midlands Mistbelt Grassland and Eastern Temperate Wetlands. Floral species of importance includes the Hilton Daisy (*Gerbera aurantiaca*) which is endangered according to South African Red Data Book and Christmas Bells (*Sandersonia aurantiaca*) which is declining. The *Dierama argyreum* is specially protected under the Ordinance and is endemic and restricted to KwaZulu-Natal. The Caterpillar Bean (*Zornia capensis capensis*), Sticky-leaved Monopsis (*Monopsis stellarioides stellarioides*), Brown Bonnet *(Eriosema salignum*), Wild Penstemon (*Graderia scabra*), Witchweed (*Striga asiatica*), False Assegaai (*Maesa lanceolata*), Ox-eye Daisy (*Callilepis laureola*) and Golden Everlasting (*Helichrysum aureonitens*) are all listed as least concern according to the South African Red Data Book but is controlled under the Ordinance.

Important avifauna species at QEP includes the Black Stork (*Ciconia nigra*), Lanner Falcon (*Falco biarmicus*), Short-tailed Pipit (*Anthus brachyurus*), Black Eagle (*Aquila verreauxii*), African Crowned Eagle (*Stephanoaetus coronatus*) and the African Grass-owl (*Tyto capensis*) are all listed as vulnerable according to the South African Red Data Book.

Mammals present in the reserve that are of special importance includes Blue duiker (*Philantomba monticola bicolor*) and the Large-eared free-tailed bat (*Otomops martiensseni Icarus*) which are listed as vulnerable according to the South African Red Data Book. The Southern reedbuck (*Redunca arundinum arundinum*) is also present and listed as protected under the Threatened or Protected Species Regulations. Other mammals such as Plains Zebra (*Equus quagga antiquorum*), Bushbuck (Tragelaphus scriptus sylvaticus), Caracal (*Caracal caracal caracal*), Impala (*Aepyceros melampus melampus*) and Grey duiker (*Sylvicapra grimmia*) can also be spotted in the reserve. The reserve is also home to the Intermediate Spiny Reed Frog (*Afrixalus spinifrons intermedius*) which have been classified as Near Threatened according to the IUCN and is restricted and endemic to KwaZulu-Natal. The Midlands robberfly (*Ischiolobos mesotopos*) and Goldtail (*Allocnemis leucosticta*) is restricted and endemic to KwaZulu-Natal as well.



Map 1: Locality of Queen Elizabeth Park Nature Reserve

2.2 THE VALUES OF QUEEN ELIZABETH PARK NATURE RESERVE

The values of a place are those remarkable attributes that exemplify it and are largely the reason that it has been proclaimed as a protected area. The values are important in planning and management, as they are the aspects of the place that must be protected.

The protected area's values, in particular those that underlie the functioning of its ecosystems, will be given the highest degree of protection to ensure the persistence of these systems.

Table 2: Values of Queen Elizabeth Park Nature Reserve

Natural values	▪ Contribute to protection of important vegetation types (i.e. Midlands Mistbelt Grassland Moist Coast Hinterland Grassland) and habitat types and species. ▪ Protection of important species such as Hilton daisy (Gerbera aurantiaca) and Christmas Bell (Blandfordii nobilis) ▪ Ecosystem goods and services (Resources, water, soil etc.) especially since the nature reserve is set in an urban environment.
Heritage values	▪ Provide a locality for the Head Office of Ezemvelo KZN Wildlife.
Socio-economic values	▪ High value of Environmental Education awareness to surrounding schools and communities since the nature reserve is situated in an urban environment.
Recreational Value	▪ Area of peace and tranquillity – People use the park to relax, exercise and socialise with families at the allocated picnic sites. ▪ Visitors enjoy the sense of place by utilising the hiking trails in the nature reserve. ▪ The nature reserve is also used for cycling.

2.3 THE PURPOSE OF QUEEN ELIZABETH PARK NATURE RESERVE

Consistent with Section 17 of the Protected Areas Act, the purpose of Queen Elizabeth Park Nature Reserve is to:

- Protect ecologically viable areas representative of KwaZulu-Natal's biological diversity and its natural landscapes;
- Preserve the ecological integrity of the area;
- Conserve the important biodiversity in the province of KwaZulu-Natal;
- Protect areas representative of ecosystems, habitats and species naturally occurring in the province;
- Protect an area which is vulnerable or ecologically sensitive;
- Assist in ensuring the sustained supply of environmental goods and services;
- Provide for the sustainable use of natural and biological resources;
- Create or augment destinations for nature-based tourism;
- Manage the interrelationship between natural environmental biodiversity, human settlement and economic development;
- Contribute to human, social, cultural, spiritual and economic development; or
- Rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species.

2.4 PROCLAMATION STATUS OF QUEEN ELIZABETH PARK NATURE RESERVE

Queen Elizabeth Park (QEP) was proclaimed as a Nature Reserve under the Ordinance no. 35 of 1947, dated 3 June 1960. The nature reserve is a Category IV Protected Area, a Habitat and Wildlife Management area, as defined under the Environment Conservation Act no. 73 of 1989.

The land at which the nature reserve is situated on is currently leased from the Pietermaritzburg City Council.

A copy of the proclamation of Queen Elizabeth Park Nature Reserve is contained in Appendix B and the lease agreement is contained in Appendix H.

2.5 THE REGIONAL AND LOCAL PLANNING CONTEXT OF QUEEN ELIZABETH PARK NATURE RESERVE

2.5.1 The National Protected Area Expansion Strategy

In an effort to address a lack of effective protection and representation of all vegetation types within the protected areas system, a National Protected Area Expansion Strategy (NPAES) (Department of Environmental Affairs and Tourism, 2008) has been developed and approved at a national ministerial level. The purpose of the NPAES is to provide a national framework for the expansion and consolidation of the protected area system, focussing on priority areas for representation and persistence of biodiversity.

In terms of the NPAES, areas around the northern boundary of Queen Elizabeth Park Nature Reserve are identified as priorities for protected area expansion. The protected area falls within Region 37 of the National Protected Area Expansion Strategy focus areas, the Thukela Focus Area in KwaZulu-Natal.

On the basis of the NPAES, at a national level, Queen Elizabeth Park Nature Reserve is a strategically important protected area that forms a critical nodal point for the expansion of protected area efforts.

2.5.2 The Provincial Protected Area Expansion Plan

The KwaZulu-Natal Protected Area Expansion Plan (Ezemvelo KZN Wildlife, 2010) also identified areas around the borders of Queen Elizabeth Park Nature Reserve as priorities for protected area expansion and the protected area forms a key hub in creating a connected protected area system in the region.

Certain areas around Queen Elizabeth Park Nature Reserve are characterised by high levels of irreplaceability, largely due to losses of natural habitat within the grassland biome and the individual vegetation types in which they occur. This is exacerbated as the grassland biome and many of its vegetation types are poorly protected.

2.6 THE HISTORY OF QUEEN ELIZABETH PARK NATURE RESERVE

2.6.1 History of Conservation in Queen Elizabeth Park Nature Reserve

It is speculated that in correlation with the dates specified, the date of the Natal Parks Board's initial occupation of the land (1951) coincide with that of the coronation of Queen Elizabeth II in 1952, therefore this might have been the Board's decision to commemorate Natal's British loyalty to the Queen at the time, by naming the reserve after her, during this period.

The history of the conservation began with an unknown private owner who converted the land into his personal Arboretum where he planted various exotic plants. These plants include both indigenous and exotic plants from across the world, some still present in the nature reserve. When he passed away, the land was given to the then Pietermaritzburg Council as intended in his will. Following this, it was instructed that the land should be kept in its original state, untainted and with no developments built. The Natal Parks Board's occupation of the land was a result of the Pietermaritzburg Council wanting to keep the land and the conservation inside it, preserved. Therefore, the Natal Parks Board, who originally occupied many small offices around Pietermaritzburg, was given permission to settle their office within the land.

The Natal Parks Board started life in just two rooms, located above the billiard room of the Natal Provincial Council. During 1951, the organisation moved to three rooms in the Old Parliament Buildings. Sometime later the Natal Parks Board grew to five rooms in the same buildings. As the organisation expanded, so larger premises were required and a subsequent move to the South African Permanent saw the occupation of the first floor. Still later more growth required the occupation of two floors of the same buildings.

The Director at the time, Colonel Vincent, endeavoured to impress upon the City Council that the Province's important conservation body was situated in a bustling metropolis, instead of more fitting surroundings. The Director attended three Council sittings to put forward the Board's case for a more suitable site. The Mayor of Pietermaritzburg offered the Director the 230 acres of Queen Elizabeth Park.

Queen Elizabeth Park was then leased for 50 years from the Natal Provincial Council by the Board with the assurance that they would at no time develop the park such that it would detract from the beauty of the northern approaches to Pietermaritzburg.

During the time the park was under the control of the Pietermaritzburg Council, many organisations had an interest in it, e.g. the Rotary Club planted an avenue of liquid ambers. The Director undertook to ensure that no existing exotic plants would be removed without the consent of the Council.

There is an extensive row of Plane Trees (*Plantanus*) within the Victoria Country Club Estate (VCCE) area that was originally planted after the Second World War as a memorial to the (fallen soldiers.) This row of Plane Trees lines an avenue within the VCCE and was kept for aesthetic purposes. Between these rows of Plane Trees there is a plaque which describes the purpose of these trees. It is supposedly VCCE's responsibility to maintain and protect them.

There is also a monument in front of the Ezemvelo Head Office, in memory of Douglas Edgar Mitchell, who founded the Natal Parks, Game and Fish Preservation Board in 1947, and was also the Administrator of the Natal Province between 1948 and 1974. The Head Office building is named as the Douglas E. Mitchell Centre, in commemoration of his contribution to nature conservation.

There is also a piece of land where the Hilton Daisies (Gerbera aurantiaca) were originally growing, which was the property of VCCE and was relinquished to Ezemvelo, as the Hilton Daisy is considered Endangered, and requires protection. Therefore due to the expansion of the VCCE, there was a specific conservation area that was put aside and fenced, where the Hilton Daisies were transplanted to, although not many survived that process.

The original agreement between VCCE and the Natal Parks Board, was supposed to allow wildlife to run freely through the golf estate as it was considered an aesthetic appeal for the estate, and there was plenty of ground for the animals to walk through. Unfortunately, after a while, the occupants of the golf estate began complaining about the animals ruining the golfing grounds by eating patches of grass and digging up the golf course,

therefore, VCCE decided to fence their estate area, cutting out Queen Elizabeth Park and fencing in the remaining animals still inside the estate. These animals were mostly the Impala that mysteriously disappeared.

2.6.2 History of Tourism in Queen Elizabeth Park Nature Reserve

Queen Elizabeth Park Nature Reserve have always provided recreational facilities for communities since its time of establishment. The reserve has several picnic sites with ablution facilities, walking trails and a small scale Educational Centre.

2.7 SOCIO-ECONOMIC CONTEXT

Land situated on the east of the reserve consists of a gated community in the form of the Victoria Country Club Estate that borders the reserve, making use of the reserve for recreational purposes such as cycling, running, and hiking. There are also nearby suburban areas such as Ferncliff, Town bush Valley and Oak Park which border the reserve from east to south of the reserve. Inhabiting neighbours that visit the reserve for recreational purposes. Local schools, utilise the reserve as a recreational area and means to provide environmental education, through observing the flora and fauna found within the protected area as well as exploring the recreational activities such as hiking trails.

There is also, the Victoria Country Club situated below the reserve, which houses various companies found near the reserve. Within the Nursery area, staff accommodation is provided for the field ranger staff as well as a square-dawel house which is utilised by the Ezemvelo interns, therefore the reserve provides accommodation for some of the staff working in the reserve and the Ezemvelo Head Office.

The reserve is located in the Montrose Suburb and is situated approximately 5.75km away from central Pietermaritzburg. The N3 highway and the Regional Road, R103, pass the reserve along the western boundary, making it easily accessible to the public. It is also an indication that conjoining roads may be well maintained due to the nature reserve being so close in proximity to large transport routes.

2.8 ECOLOGICAL CONTEXT OF QUEEN ELIZABETH PARK NATURE RESERVE

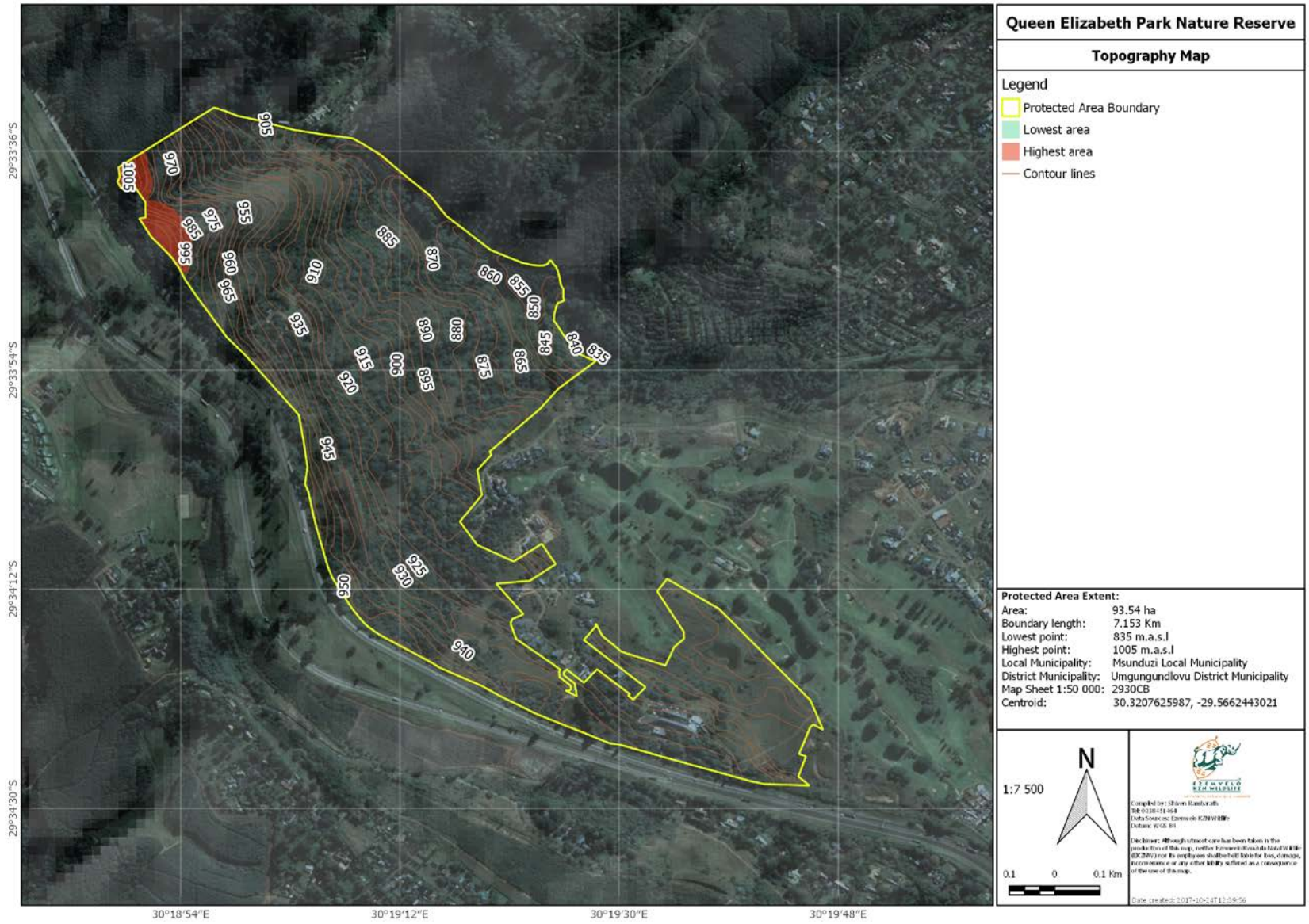
2.8.1 Climate and Weather

The climate and local weather within the Msunduzi region are influenced by topography. The higher lying areas to the north and west of the municipality are cooler and receive more rainfall. Average annual temperature varies between 16.3° C and 17.9° C. The nature reserve is situated on the edge of the Natal Mist belt.

The region is located within a summer rainfall consisting of dry winters and wet summers with thunderstorms being common in summer. Average rainfall in Msunduzi Municipality varies between 748mm and 1017mm per annum. The area receives an average of about 695mm of annual rain, with most of the rain occurring in mid-summer. It receives the lowest rainfall (6mm) in June and the highest (112mm) in January. Specifically, the monthly distribution of average, daily maximum temperatures for Pietermaritzburg range from 20.5° C in June to 27° C in February. The region is the coldest during July when nocturnal temperatures drop to an average of 5.6° C.

2.8.2 Topography

The reserve is situated on the north-east facing slope of Town Hill at the head of the Town bush Valley. It is situated on the slope of the hillside and is intersected by seasonal drainage lines. The ground is of an undulating nature sloping away to the east. The reserve looks out over the indigenous bush on the south-west slopes of the Ferncliff hills which are covered by exotic timber on the lower slopes.



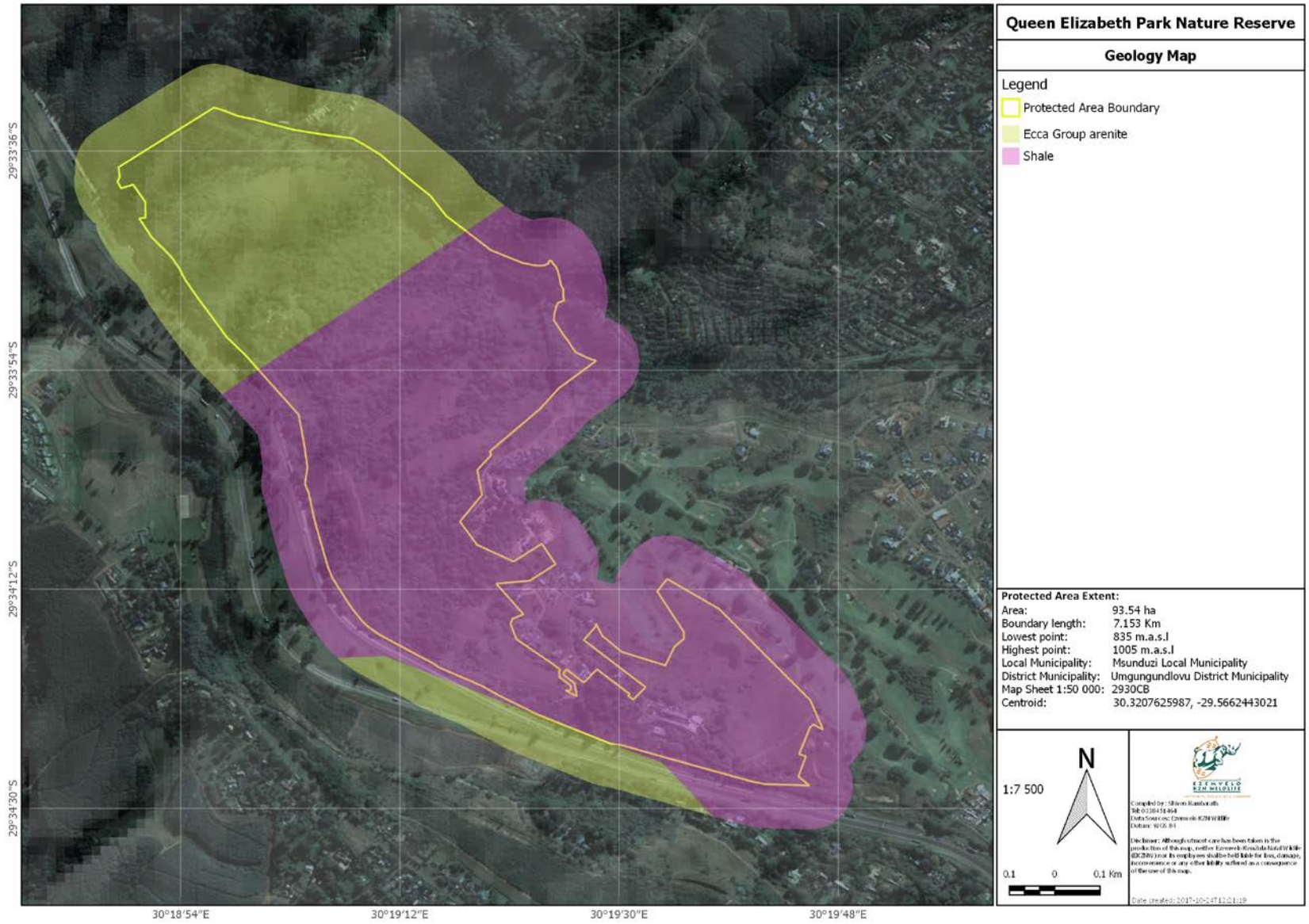
Map 2: Topography of Queen Elizabeth Park Nature Reserve

2.8.3 Geology and Soils

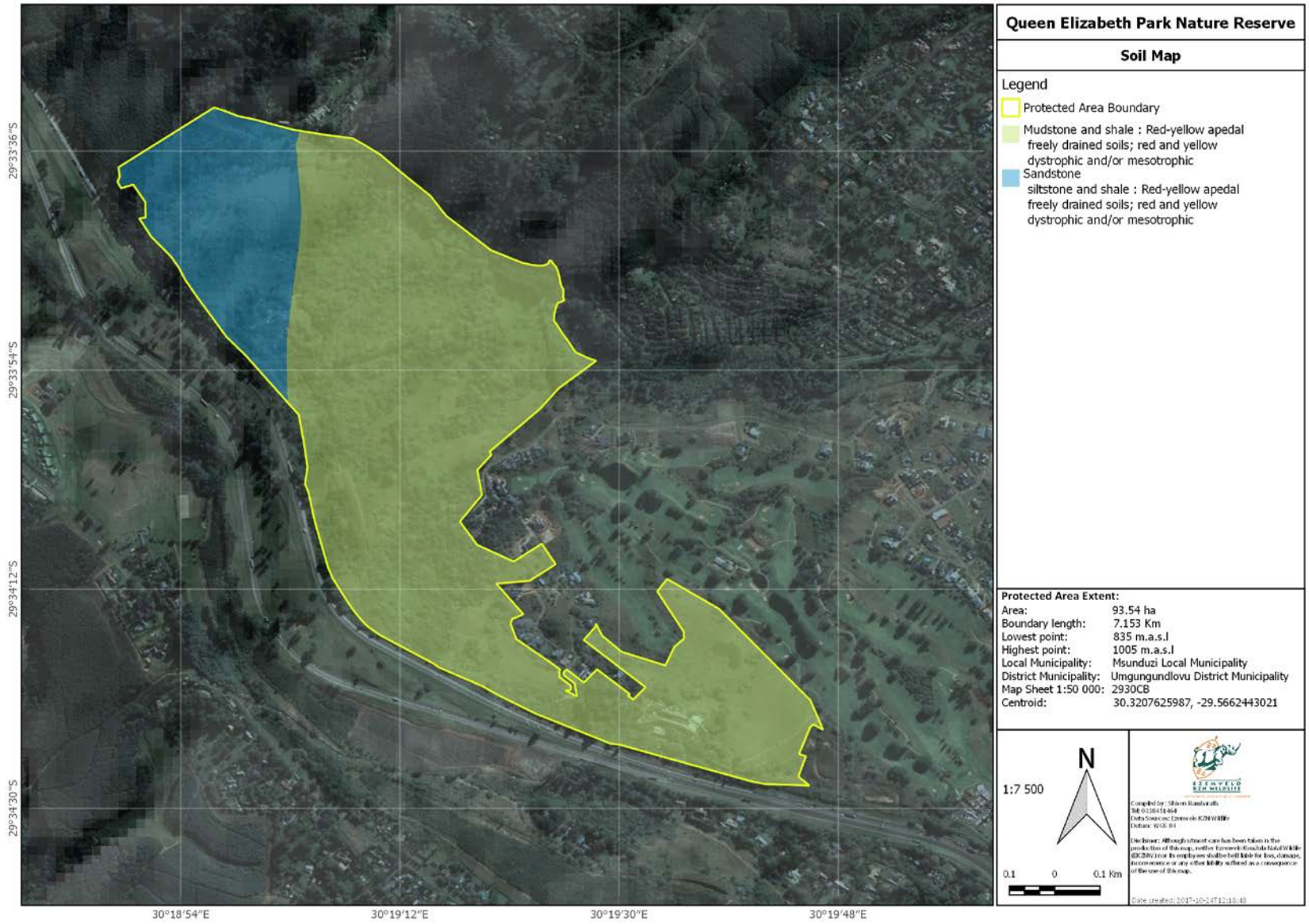
The reserve consists of mainly shale and ecca group Arenite formations. The shale found in the reserve may form part of the Pietermaritzburg formation, a name which was given by the South African Committee for Stratigraphy. The unit is made entirely of shale and has a maximum thickness of over 400 meters. The upper boundary is gradational and is defined as a horizon above which the shale ration is greater than 0.5. The formation is dominated by dark grey shale, carbonaceous shale, siltstone and subordinate sandstone. The vegetation likely to prosper in this soil is the Mistbelt Grassland, which is classified as Endangered, under the IUCN Redlist status. The soils within the Pietermaritzburg formation show similarities to sedimentary rocks, this constitutes them as easily erodible soils as they occur in layered formations, as well as basic igneous rocks. This makes soils found in Pietermaritzburg formation rather unique. The formations for the shale include soils such as red and yellow-brown apedal soil patterns where dystrophic soils are dominant or occur with mesotrophic soils. Another soil pattern has red apedal and red structured soils with mainly eutrophic base status. In this pattern, there are also Hutton soils, black clays (Bonheim, Mayo and Milkwood), duplex soils and lithosols. There can be ferralitic weathering processes which occur due to the presence of lithosols that contain dystrophic and eutrophic Hutton soils found in the Pietermaritzburg shale. This weathering process is likely to occur where there is no lime present.

The Municipal area where the Nature Reserve is found remains underlain by sedimentary rocks of Ecca and Dykes formation. Jurassic post-Karoo dolerite sheets, dykes and sills intrude the sedimentary rocks on the outskirts (Msunduzi IDP; 2013).

Within the Moist Coast Hinterland region, the soils are acidic and leached, perilous burning as well as selective overgrazing has caused poor quality veld cover. The soils found in the Moist Midlands Mistbelt region are primarily leached and the inherent nutrient status is quite low, experiencing phosphorous fixation problems and aluminium toxicity. Little value has been placed on veld management practices as the area has high potential for arable areas within the Bio Resource Group, this includes excessive veld burning within the season of grass growth and selective overgrazing. These man made practices have resulted in destruction of palatable grass species and grassland of low pastoral value (Msunduzi IDP; 2013).



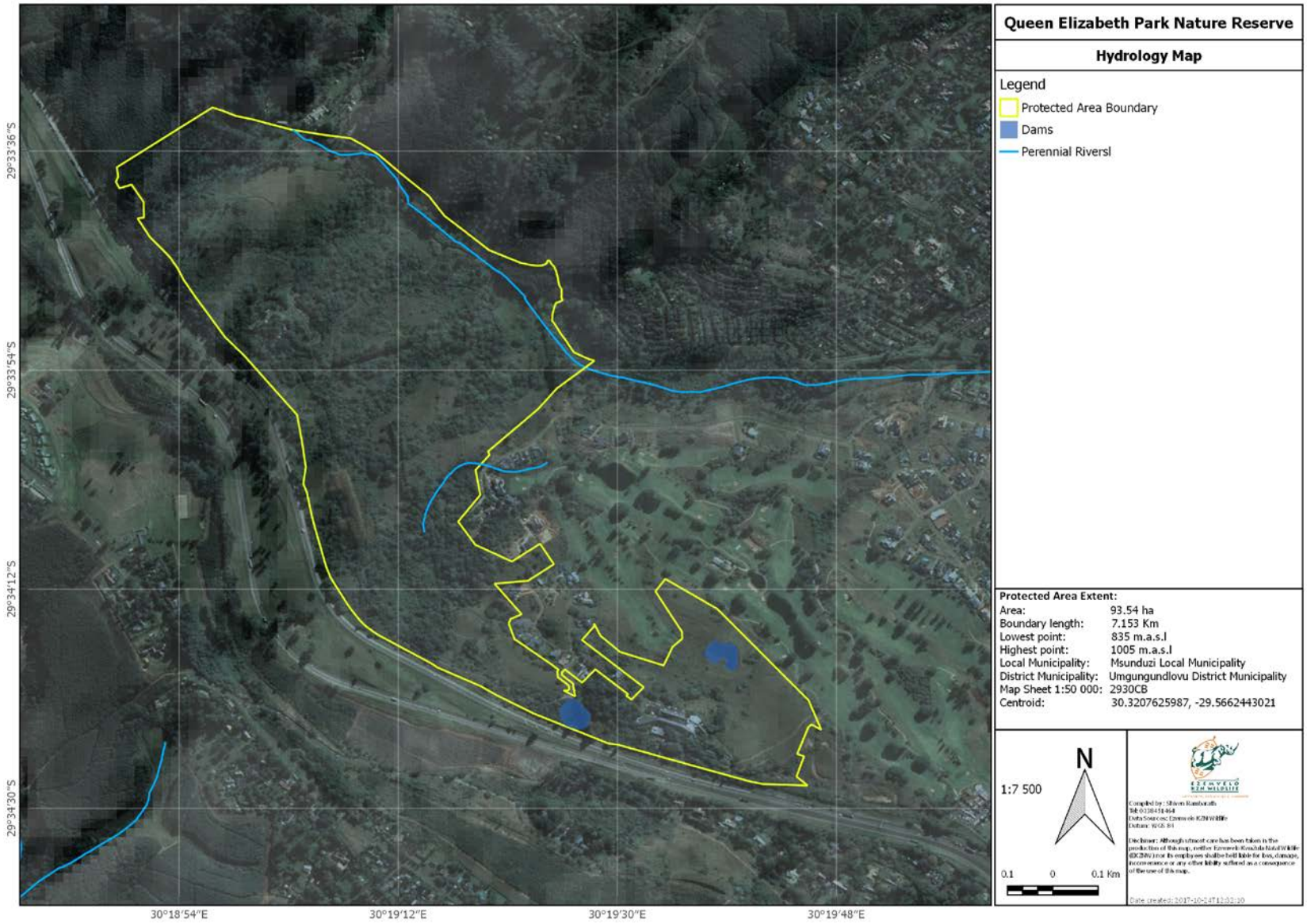
Map 3: Geology of Queen Elizabeth Park Nature Reserve



Map 4: Soils of Queen Elizabeth Park Nature Reserve

2.8.4 Hydrology

According to Alcock (2014) the Town Bush Stream rises to the east of the N3 freeway above the suburb of Oak Park, with the Cascades Falls found upstream of the Queen Elizabeth Park Nature Reserve. The Falls were a favoured picnic site in earlier times. A separate tributary of the Town Bush Stream rises slightly to the east within a nearby residential area in Ferncliff. Another tributary rises in Montrose in the vicinity of Neden Road. More to the east, a set of springs is the source of the Chase Valley Spruit which merges with the Town Bush Stream near the Cascades shopping centre. There is a seasonal wetland on the western side of the reserve opposite the Victoria Country Club Estate, which is fed by the nearby stream tributaries flowing from the north downstream during summer.



Map 5: Hydrology of Queen Elizabeth Park Nature Reserve

2.8.5 Vegetation

According to the Ezemvelo KZN Wildlife Vegetation Layer, the following vegetation types are present:

2.8.5.1 Subtropical Alluvial Vegetation

Distribution:

Limpopo, Mpumalanga and KwaZulu-Natal Provinces and in Swaziland: Broad river alluvia and around some river-fed pans in the subtropical regions of eastern South Africa, in particular in the Lowveld, Central Bushveld and in northern KwaZulu-Natal. The most important alluvia include the Limpopo, Luvubu, Olifants, Sabie, Crocodile, Phongolo, Usutu and Mkuze Rivers. This unit is fully embedded within the Savanna Biome. Altitude ranging from 0–1 000 m.

Vegetation and Landscape features:

Flat alluvial riverine terraces supporting an intricate complex of macrophytic vegetation (channel of flowing rivers and river-fed pans), marginal reed belts (in sheltered ox-bows and along very slow-flowing water courses) as well as extensive flooded grasslands, ephemeral herblands and riverine thickets.

This can also be subdivided into:

- Alluvial Wetlands : Subtropical Alluvial Vegetation : Lowveld Floodplain Grasslands
- Alluvial Wetlands : Subtropical Alluvial Vegetation : Lowveld Floodplain Grasslands : Short Grass/ Sedge Wetlands
- Alluvial Wetlands : Subtropical Alluvial Vegetation : Lowveld Floodplain Grasslands : Tall Reed Wetland
- Alluvial Wetlands : Temperate Alluvial Vegetation
- Alluvial Wetlands : Temperate Alluvial Vegetation : Midland Alluvial Woodland & Thicket
- Alluvial Wetlands : Temperate Alluvial Vegetation : Midland Floodplain Grasslands

2.8.5.2 Eastern Temperate Freshwater Wetlands

Distribution:

Northern Cape, Eastern Cape, Free State, North-West, Gauteng, Mpumalanga and KwaZulu-Natal Provinces as well as in neighbouring Lesotho and Swaziland: Around water bodies with stagnant water (lakes, pans, periodically flooded vleis, edges of calmly flowing rivers) and embedded within the Grassland Biome. Altitude ranging from 750–2 000 m.

Vegetation and Landscape features:

Flat landscape of shallow depressions filled with (temporary) water bodies supporting zoned systems of aquatic and hygrophilous vegetation of temporarily flooded grasslands and ephemeral herblands.

2.8.5.3 Midlands Mistbelt Grassland

Distribution:

KwaZulu-Natal and Eastern Cape Provinces: KwaZulu-Natal Midlands—scattered in broad belt in the form of several major patches including Melmoth-Babanango area, Kranskop and Greytown, Howick Lions River, Karkloof, Balgowan, Cedara, Edendale, Hilton, Richmond, the Ixopo-Highflats area, Mount Malowe in the Umzimkhulu enclave of the Eastern Cape Province and the Harding-Weza area. The south-westernmost section in the Eastern Cape Province falls in the Bulembu, Gxwaleni, Longweni and Flagstaff areas. Altitude 760–1 400 m.

Vegetation and Landscape features:

Hilly and rolling landscape mainly associated with a discontinuous east-facing scarp formed by dolerite intrusions (south of the Thukela River). Dominated by forb-rich, tall, sour *Themeda triandra* grasslands transformed by the invasion of native 'Ngongoni grass (*Aristida junciformis subsp. junciformis*). Only a few patches of the original species-rich grasslands remain.

2.8.5.4 Moist Coast Hinterland Grassland

Distribution:

KwaZulu-Natal and Eastern Cape Provinces: From near Melmoth in the north to near Libode in the south (including Eshowe, New Hanover, Thornville, Richmond, Harding, Lusikisiki) generally occurring below Gs 9 Midlands Mistbelt Grassland. Altitude 450 - 900 m.

Vegetation and Landscape Features:

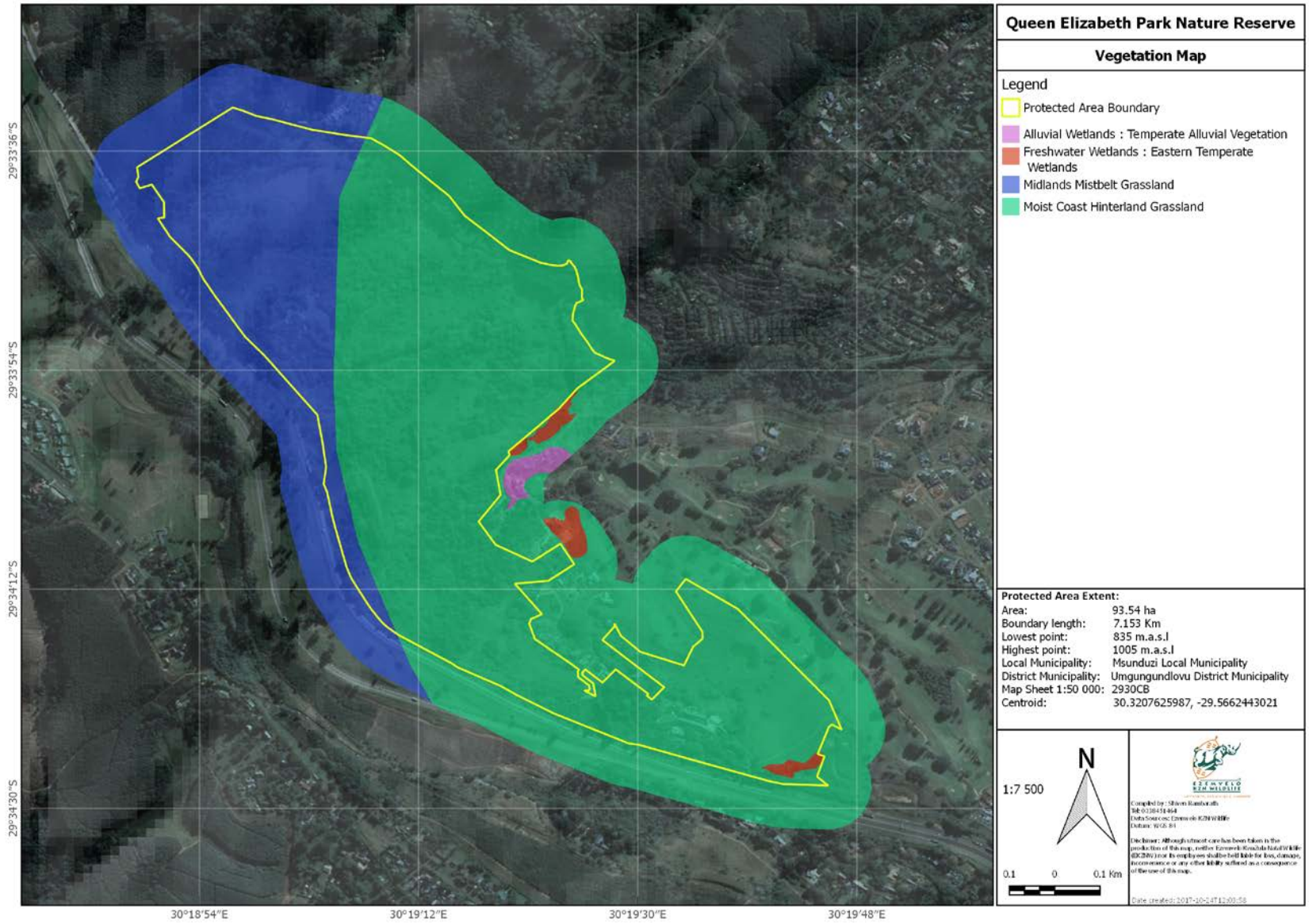
Rolling and hilly landscape. Dense tall sour grassland dominated by unpalatable Ngongoni grass (*Aristida junciformis*) with this mono-dominance associated with low species diversity, when in good condition dominated by *Themeda triandra* and *Tristachya leucothrix*.

Geology & Soils:

Acid, leached heavy soils are derived from Karoo Supergroup sediments (including significant Dwyka tillites) and intrusive Karoo dolerites. Shallow sandy soils are derived from Natal Group Sandstone.

Climate:

Summer rainfall with some rain in winter. MAP about 800 to 1160 mm. Frost infrequent.



Map 6: Vegetation of Queen Elizabeth Park Nature Reserve

2.8.6 Fire Regime

Pre-burn inspections are carried out by the regional ecologist and conservation manager every year and burning is done based on scientific principles which is based on a spatial and time fire rotation between set burning blocks.

Mist belt grassland tends to be dominated to a degree by *A. junciformis*. Some areas are not managed with fire as well as they should be, due to practical and legal imperatives of having to burn annual fire breaks for neighbouring housing developments and plantations.

2.8.7 Invasive Species

There has been a continuous programme of "problem" alien eradication, including wattle, exotic ginger, bug weed (*Solanum mauritianum*), Lantana *(Lantana camara*) and Cestrum (*Cestrum laevigatum*). This programme needs to grow at a more intense rate as the reserve is more susceptible to infestations due the high number of vehicles passing through the reserve.

A formal Alien and Invasive species monitoring and control plan needs to be developed.

2.8.8 Mammalian Fauna

Queen Elizabeth Park Nature Reserve is home to a number of mammals such as the Large-eared free-tailed bat (*Otomops martiensseni Icarus*) and Blue Duiker (*Philantomba monticola bicolor*) which is listed as Vulnerable according to the South African Red Data List. Mammals such as Bushbuck (*Tragelaphus scriptus sylvaticus*), Grey Duiker (*Sylvicapra grimmia*), Plains Zebra (*Equus quagga antiquorum*) and Impala (*Aepyceros melampus melampus*) roam freely around Ezemvelo KZN Wildlife Head Office.

A large number of introductions have taken place in past and the only naturally occurring large animals that were present at the time of initial proclamation were Bushbuck (*Tragelaphus scriptus sylvaticus*), Grey Duiker (*Sylvicapra grimmia*) and Bush-pig (*Potamochoerus larvatus koiropotamus*).

Appendix F contains the mammal species list for Queen Elizabeth Park Nature Reserve.

2.8.9 Avifauna

Near-Threatened bird species that have been spotted in the Reserve are the African Crowned Eagle (*Stephanoaetus coronatus*), Lanner falcon (*Falco biarmicus*), Black Stork (*Ciconia nigra*), Broad-tailed Warbler (*Schoenicola brevirostris*) and Bush Blackcap (*Lioptilus nigricapillus*). Vulnerable birds that have found shelter in the Reserve include the Short-tailed Pipit (*Anthus brachyurus*) and the African Grass Owl (*Tyto capensis*). According to Van Rooyen (2012), the African Grass Owl in particular is a predatory bird that is found in areas of dense thicket, grassland and near wetlands. It is believed that they choose wetland areas for protection from fires and due to the vegetation structure. The thicket is suitable for their nest building as the dense grass allows for tunnels to be formed for the nest.

According to Rieger *et al.* (2007), suggest that they prefer grasslands as they are normally in close proximity to water bodies. The densest grass is usually found on the fringes of wetlands so it makes the nature reserve a suitable area for these birds to roost and nest. The African Grass Owl (*Tyto capensis*) has a diet that includes rodents such as the Western Vlei Rat (*Otomys occcidentalis*) and the Hartwig's Soft-furred Mouse (*Praomys hartwigi*), as well as small mammals that include the Forest Shrew (*Myosorex varius*) and the Dark-footed Shrew (*Myosorex cafer*), these mammals are usually found in forest and thicket vegetation, therefore the African Grass Owl is found within this vegetation type.

Appendix F contains the bird species list for Queen Elizabeth Park Nature Reserve.

2.8.10 Herpetofauna (reptiles and amphibians)

Reptiles and amphibians form an important part of the ecosystem and certain species serve as bio-indicators due to their sensitivity to environmental factors. Much remains to be discovered about the reptile and amphibian species complement of the area, their life histories, inter-relationships and contributions to the functioning of its ecosystems.

Amphibians

There are a number of amphibian species found in the reserve, amongst them is the Natal Leaf-folding Frog (*Afrixalus Spinifrons*), a rare small frog that grows up to 25mm and is classified as Vulnerable in the Frog Atlas and Red Data Book of the Frogs of South Africa, Lesotho and Swaziland, and is endemic to these areas. Combrink and Kyle (2006) describe the amphibian specie as one commonly found in Coastal Bushveld Grasslands and swamp-like grassy wetlands, as it breeds in stagnant water; therefore the reserve serves as an agreeable habitat. According to Measey *et al.* (2011), their habitat is threatened by the increase in urban and recreational development, afforestation, expansion of agricultural activities within wetland areas as the land is favoured for being fertile.

A near Threatened species called the Natal Banana Frog (*Afrixalus spinifrons intermedius*), is a small yellow frog that is associated with low vegetation and in shrub vegetation. According to an Ecological Habitat Assessment undertaken by Cook in 2012, it breeds in marshy patches as an explosive breeder due to its breeding patterns occurring during short reproduction cycles in inundated grasslands and seasonal wetlands. They utilise emergent vegetation to create egg nests, where they lay between 20 and 50 eggs on vegetation emerging through the water, so as to allow the hatching tadpoles to take refuge in the water during the metamorphosis stage. Therefore the reserve's grassland biome and seasonal wetland area make a suitable habitat for these small amphibians.

Razzetti and Msuya (2002) describe the Painted Reed Frog (*Hyperolius marmoratus*) as a medium sized tree frog with a snout vent and grows to a length of 30mm. Its colour pattern varies greatly as its dorsum is dark brown with small white spots that can be completely absent in other individuals. During the day, when this specie is resting, on vegetation, its pigmentation can turn completely white. A few males, particularly juveniles are beige or brown with undulating dorsolateral stripes. The limbs are red, especially on the underside. This specie is found along Southern African landscapes at higher altitudes. Its habitat is associated with emergent vegetation at the margins of rivers, grasslands and shrub land as well as human-modified habitat, including cultivated land, towns and gardens. The Painted Reed Frog (*Hyperolius marmoratus*) can be found near slow flowing streams and swampy areas, the male calls from the reeds or nearby submerged trees.

The Tinker Reed Frog (*Hyperolius tuberilinguis*) is endemic to Southern Africa on the East Coast, from Swaziland to Port Edward, and their distribution has spread more inland. They are found in reed beds on the periphery of rivers or dense vegetation surrounding seasonal pans.

Reptiles

The nature reserve provides a habitat for several reptiles that have common habitat preferences.

Snakes: The reserve inhabits various snakes such as the Near Threatened, Natal Black Snake which inhabits Coastal Bushveld in the Eastern Coastal Region to Zululand. According to Schmidt (2006) it is mostly black with smooth scales with tiny white specks. This type of snake prefers burrowing through moist leaf litter and humic soil and surfaces on warm, moist nights. It is also a good swimmer. The Natal Black Snake's diet includes rain frogs, other smaller snakes, small mammals like rodents, and legless lizards such as skinks. QEP is also home to a number of Puff Adders (*Bitis arietans*).

Lizards: Bodenstein (2005) describes the Black-headed Dwarf Chameleon (*Bradypodion melanocephalum*) as a small, vulnerable species of chameleon that is about 11cm long. Its tail is as long as its body, although the female is a bit shorter. It is also one of the reptiles found in the reserve as it inhabits various vegetation types, such as high grasslands, bushes, trees and riparian thicket. The Black-headed Dwarf Chameleon (*Bradypodion*

melanocephalum) is found along the North and South coast of KwaZulu Natal and also inland towards Pietermaritzburg and Greytown.

Appendix F contains the reptile and amphibian species list for Queen Elizabeth Park Nature Reserve.

2.8.11 Invertebrates

Invertebrate fauna constitutes the greatest component of species diversity in natural systems but it is often poorly understood while their role in ecosystems is important and often overlooked. In terms of biodiversity and the provision of ecosystem services however, it is important to acknowledge that they are fundamentally important. Invertebrates form important components of food webs, assist nutrient cycling and aeration of soil, decomposition and pollination of plants and trees. For many of these invertebrate species habitat conservation is the most important management intervention required with habitat loss being the biggest threat to their survival.

The Nature Reserve houses invertebrates such as the Rainforest Brown (*Cassionympha cassius*), Semi-clear-winged Cicada (*Pycna semiclara*) and White Bristled Spotted-winged Robberfly (*Dasophrys androclea*), Transvaal Rove Beetles (*Stenus Transvaalensis*), amongst others, which are endemic to South Africa, Lesotho or Swaziland. Alien invasive Earthworms such as the *Allolobophora rosea, Amyntas aeruginosus, Amynthas minimus* and *Octolasion lacteum* are found in the Nature Reserve, within various biomes. In essence, worms help to condition the soil for various plants, decomposing organic matter and returning the nutrients to the soil, Endogeic worms burrow deep into the soil, pulling organic matter as well as fungi and bacteria which fertilize the soil beneath the ground. On the other hand, Epigeic worms live closer to the surface, churning the soil and organic matter into nutrient rich frass of casts (worm droppings) that fertilize the soil. Unfortunately, this allows Invasive Alien species to grow easily in the area and thus accelerate the spread of Alien plants in the reserve (Brown et al.; 2006).

Appendix F contains the Invertebrate species list for Queen Elizabeth Park Nature Reserve.

2.9 OPERATIONAL MANAGEMENT CONTEXT OF QUEEN ELIZABETH PARK NATURE RESERVE

2.9.1 Infrastructure

2.9.1.1 Conservation

- Fence around the entire reserve (Fence line deviates from the proclaimed boundary at certain areas)
- 1 x Reservoir (not in use)
- 1 x Pump House (not in use)
- Various management tracks

2.9.1.2 Ezemvelo KZN Wildlife Head Office

- Administration building (Head Office)
- 1 x Generator
- 1 x Waste shed
- 2 X Sheltered staff car ports for vehicles
- 3 x Open parking areas
- 2 x Secured shaded parking areas

2.9.1.3 Nursery

- Fencing

- Various roads
- Nursery
- Numerous greenhouses
- 6 x Staff accommodation
- 1 x Store room

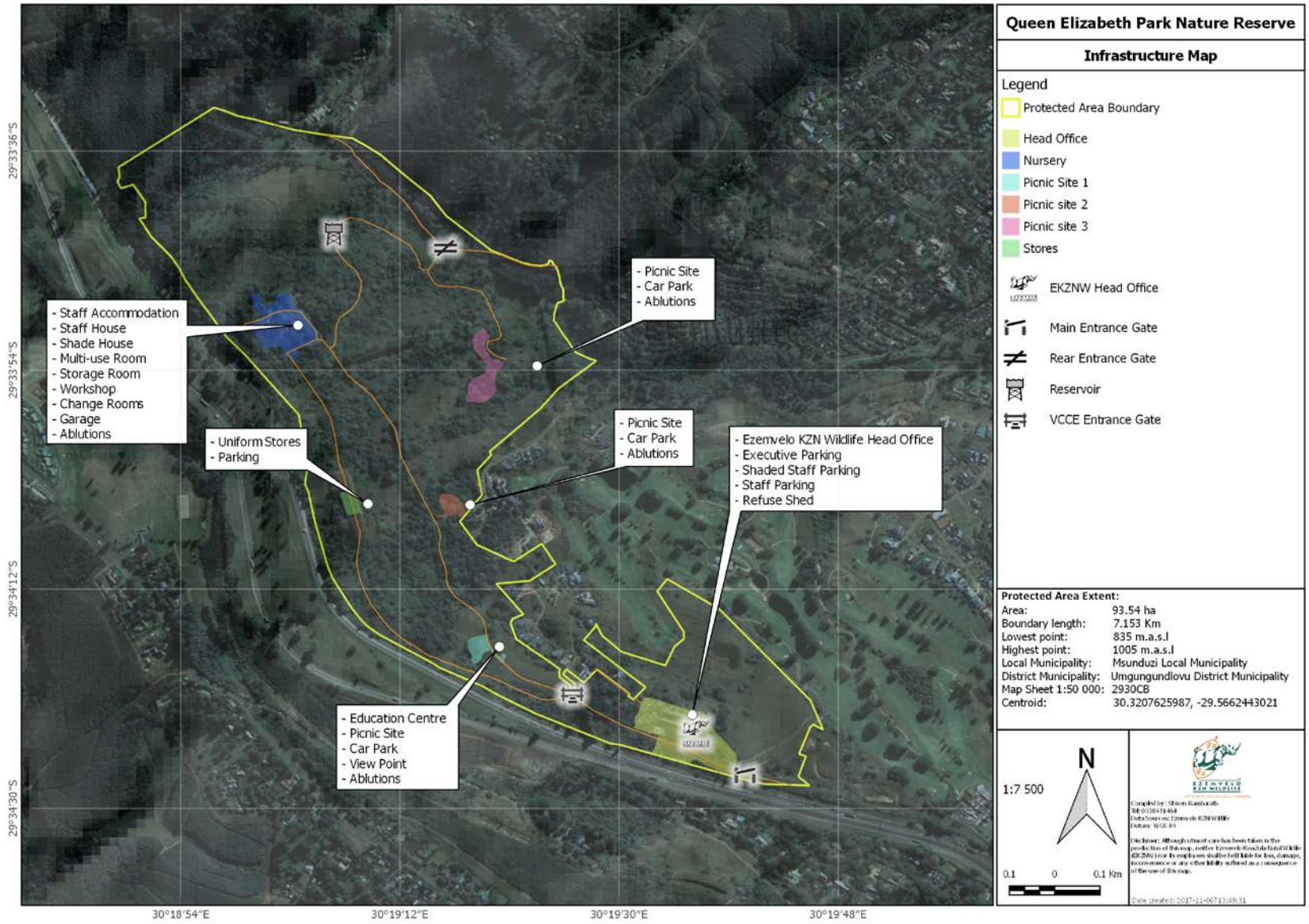
2.9.1.4 Stores - Uniform

- 1 x Store room (Staff Uniforms)
- 1 x open parking area

2.9.1.5 Public Use Infrastructure

- 3 x Picnic Sites with Parking
- 3 x Hiking Trails
- 3 x Public Toilets

1 x Education Centre (Ezemvelo Head office to supply educational material)



Map 7: Infrastructure of Queen Elizabeth Park Nature Reserve

2.9.2 Staffing Establishment

QEP should have a total staff complement of 13 personnel in order for the reserve to be managed at its optimum level.

2.9.3 Security and Access Control

There is currently a service level agreement in place between KwaZulu-Natal Conservation Services and Victoria Country Club for the supervision and monitoring of the gate area, designated buildings and other specified areas.

The agreement is contained in Appendix I.

2.9.4 Funding Levels at Queen Elizabeth Park Nature Reserve

During the 2010 METT Assessment for QEP, it was recorded that the reserve had an operational budget of R190 000 and an additional R60 000 was sourced as additional funding – which brought the total budget to R250 000.

Due to various government decisions, the current funding have been reduced.

Appendix G contains the template for the financial plan for Queen Elizabeth Park Nature Reserve.

2.9.5 Management Effectiveness in Queen Elizabeth Park Nature Reserve

In 2010 Ezemvelo KZN Wildlife conducted management effectiveness assessments for all of its protected areas (Carbutt & Goodman, 2010) and these assessments have subsequently been done on an annual basis. Management effectiveness assessments consider protected area design, the appropriateness of management systems and processes, and delivery of protected area objectives. These assessments assist with the following:

- Promote adaptive management
- Improve project planning
- Promote accountability

Such assessments are intended to enable conservation organisations to refine their strategic, system-wide responses to the most pervasive threats and management weaknesses (Carbutt & Goodman, 2010). They are not performance assessments of individuals but serve to reflect an organisation's proficiency for protected area management as a whole. The assessments for Queen Elizabeth Park Nature Reserve are peer reviewed and evidence based.

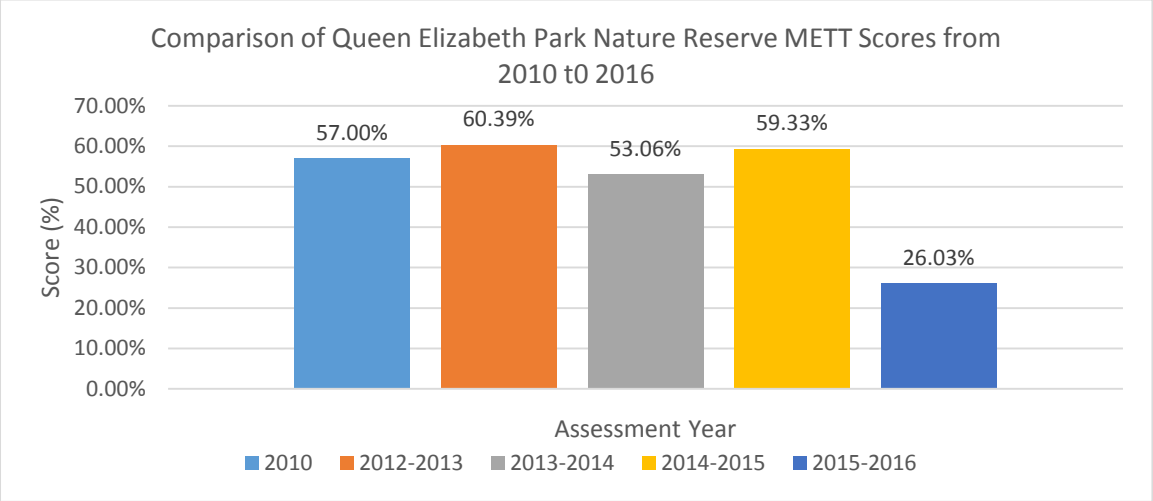


Figure 3: Comparison of METT Scores for QEP from 2010 to 2016

In Figure 3 above, it is clear that the METT score for QEP fluctuated between 53% and 61% from 2010 to 2015. The assessment for the 2015-2016 period saw a substantial decrease. This drastic drop in score could have been due to a change in the Management Effectiveness questionnaire, protocols and the fact that the reserve did not have a manager for 2 years.

2.9.6 Risk assessment

Pressures and threats (Ervin, 2003) are defined as follows:

Pressure: a force, activity, or event that have already had a detrimental impact on the integrity of the protected area over the past five years. Threat: potential or impending pressures in which a detrimental impact is likely to occur or continue to occur in the future, over the next five years.

Table 3 indicates the Pressures, threats and management issues identified through the assessment of Queen Elizabeth Park Nature Reserve updated by the protected area planning committee.

Table 3: Management effectiveness assessment - Pressures, threats and issues

PRESSURES AND THREATS	MANAGEMENT ISSUES
Alien plants & animals	Lack of Financial and Human Resources
Climate change (droughts, flooding, habitat alteration)	Poorly maintained infrastructure
Poaching	Access control to the nature reserve
Land-Use Change	Waste management
Pollution	Inadequate parking space for Head Office Staff
Solid Waste	

Figure 4 indicates the six elements of protected area management and its indicators as per the IUCN METT guidelines that forms the basis for SA METT 3. PA managers should familiarise themselves with these elements and indicators and should be able to back up the assessment of their PA with acceptable evidence. Ezemvelo together with all other national and provincial conservations agencies have implemented the standard SA METT 3 in 2016.

Figure 4: Management cycle - IUCN framework for evaluating management effectiveness in protected areas

2.10 SUMMARY OF MANAGEMENT ISSUES – STRENGTHS, WEAKNESSES OPPORTUNITIES AND THREATS (SWOT)

The table below provides a summary of key management issues, strengths, weaknesses, opportunities, and threats which will be addressed through this management based on the descriptions and issues highlighted in the sections above.

STRENGTHS

- Provides a locality for the Head Office of Ezemvelo KZN Wildlife.
- Important biodiversity conservation of threatened species.
- Provides Environmental Awareness to surrounding schools and communities.
- Nature reserve is used for recreational purposes and serves the people.
-

WEAKNESSES

- Influx of alien plants and animals into the reserve.
- Inadequate parking for Head Office staff.
- Inappropriate vehicle entry system into the reserve.
- Boundary does not follow the proclaimed boundary.
- Litter from visitors in the reserve.
- Certain facilities are dilapidated.
- Biodiversity monitoring is inconsistent.
- Poaching and illegal resource use.
- Poor relationships with neighbours.
- Internal reserve rules are poorly enforced.
- Poor waste management.
- Unclear responsibility between units in QEP e.g. Head office, Nursery
- Inadequate signage.
- Reserve lacks an information desk.

OPPORTUNITIES

- Upgrade current environmental Awareness and education Infrastructure.
- Upgrade infrastructure e.g. picnic sites, ablutions and Baboon proof bins.
- Improved signage throughout the nature reserve to provide more environmental awareness.
- Potential to increase relationships with surrounding neighbours.
- Potential to have a coffee shop at the nursery to supplement the reserve.

THREATS

- Encroaching developments on the periphery of the protected area.
- Disrespectful behaviour from visitors.
- Influx of domestic animals from surrounding neighbourhoods.
- Influx of alien plants from surrounding neighbouring properties.
- Loss of grassland.
- Threat of pollution from spillages from the National Road (N3).
- Poor waste management.

3 STRATEGIC MANAGEMENT FRAMEWORK

In an effort to ensure that Queen Elizabeth Park Nature Reserve is effectively managed, the following strategic framework has been developed. It is aimed at providing the strategic basis for the protection, development and operation of the protected area over the next five years and has been prepared collaboratively through a process involving stakeholders within Ezemvelo KZN Wildlife, the communities around the protected area, local and provincial government departments and other stakeholders.

The vision describes the overall long-term goal for the operation, protection and development of Queen Elizabeth Park Nature Reserve. The objectives and strategic outcomes that follow are intended to provide the basis for the achievement of the vision. The objectives provide a broad description of the goals for each key performance area. The strategic outcomes, which flow from the objectives, set out what is needed to achieve the objectives, based on the management issues, strengths, weaknesses, opportunities and threats and described in Section 2 above.

3.1 QUEEN ELIZABETH PARK NATURE RESERVE VISION

"To maintain the nature reserve as a site for the Headquarters of Ezemvelo KZN Wildlife whilst providing a refuge for biodiversity, improving neighbour relations and utilising the nature reserve for educational, research and recreational purposes."

3.2 OBJECTIVES AND STRATEGIC OUTCOMES

An objective has been identified for each of Queen Elizabeth Park Nature Reserve key performance areas, which follow from the management challenges, issues and opportunities, and relate to the important functions and activities necessary to protect, develop and manage it effectively. The objectives have then been translated into strategic outcomes, which form the basis for the management activities and targets set out in the operational management framework, described in Section 6 below. Table 4 sets out the key performance areas, the objective for each key performance area and the strategic outcomes, required to realise the objectives.

Table 4: Objectives and strategic outcomes for Queen Elizabeth Park Nature Reserve

KEY PERFORMANCE AREAS	OBJECTIVES	STRATEGIC OUTCOMES
Legal Compliance and Law Enforcement	Comply with and enforce legislation pertaining to the protection, development and management of Queen Elizabeth Park Nature Reserve.	▪ Ensure that the full extent of the Queen Elizabeth Park Nature Reserve have secured permanent conservation in terms of relevant legislation. ▪ Ensure that the full extent of the PA is appropriately demarcated and that the demarcation is known by surrounding communities. ▪ Ensure that there is adequate law enforcement within the Queen Elizabeth Park Nature Reserve. ▪ Ensure effective control of legitimate access in Queen Elizabeth Park Nature Reserve.
Stakeholder Engagement	Enable and maintain effective stakeholder relations through communication and collaboration.	▪ Constructive interaction and co-operation with community, neighbours and stakeholders ▪ Ensure as far as possible that the Queen Elizabeth Park Nature Reserve enjoys public support
Buffering Mechanisms & Regional Management	Protect the biodiversity and cultural assets of Queen Elizabeth Park Nature Reserve by promoting compatible Land-use, activities and water-use in areas surrounding the protected area.	▪ Ensure that the size and shape of the Queen Elizabeth Park Nature Reserve is sufficient to achieve its management objectives. ▪ Determination of the buffer zone / zone of influence requirements around the Queen Elizabeth Park Nature Reserve. ▪ Ensure that water-use planning and Land-use planning take cognisance of the Queen Elizabeth Park Nature Reserve objectives.
Environmental Education & Awareness	Actively promote an understanding and appreciation of the values of Queen Elizabeth Park Nature Reserve.	▪ Implement an effective Environmental education and awareness programme linked to the objectives of Queen Elizabeth Park Nature Reserve and focussed on the surrounding communities and neighbours.
Tourism Management & Development	Maintain sustainable low-use nature based tourism in Queen Elizabeth Park Nature Reserve to provide a high quality visitor experience whilst promoting the natural and cultural values of the protected area.	▪ Ensure that there are adequate visitor facilities that can cope with the volume of tourist. ▪ Ensure that tourism facilities are maintained to an acceptable standard and that activities of visitors are coordinated in line with the Queen Elizabeth Park Nature Reserve zonation map.

KEY PERFORMANCE AREAS	OBJECTIVES	STRATEGIC OUTCOMES
Biodiversity Resource & Conservation Management	Protect the ecological integrity of Queen Elizabeth Park Nature Reserve through active interventions based on principles of adaptive and ecosystem based management.	▪ Implementation of the Fire Guidelines Document for the Umgungundlovu District. ▪ Adequate fire safety within the Queen Elizabeth Park Nature Reserve is ensured. ▪ Development and maintenance of an invasive species control plan for the protected area. ▪ Achievement of a significant reduction in levels of invasive plant infestations in the protected area. ▪ Implementation of procedures to identify, rehabilitate and manage areas that have been significantly impacted by soil erosion. ▪ Implementation of procedures to manage alien animals found within the protected area. ▪ If extractive resource use is undertaken, it is done legally and conforms to Ezemvelo KZN Wildlife policy. ▪ If bioprospecting is undertaken, it is done legally and conforms to Ezemvelo KZN Wildlife policy. ▪ Develop and implement a strategy for the introduction and management of wildlife into the protected area in accordance with Ezemvelo KZN Wildlife policies. ▪ Development and implementation of a strategy for human/wildlife conflict. ▪ Ensure that there is sufficient information and understanding of biodiversity in Queen Elizabeth Park Nature Reserve to inform and support the achievement of specific biodiversity objectives. ▪ Processes are established to determine success of management interventions in protecting the ecosystems, communities and species of the protected area.
Cultural Heritage Resource Management	Ensure the protection and public appreciation of all cultural and heritage resources within the Queen Elizabeth Park Nature Reserve in accordance with statutory requirements.	▪ Ensure that there is sufficient information and understanding of cultural heritage in Queen Elizabeth Park Nature Reserve to inform and support their management. ▪ Ensure the protection and the improved awareness of the cultural heritage resources and values of Queen Elizabeth Park Nature Reserve.

KEY PERFORMANCE AREAS	OBJECTIVES	STRATEGIC OUTCOMES
Operational Management	Provide adequate human resources, equipment, infrastructure and funding to enable the effective protection, development and management of Queen Elizabeth Park Nature Reserve.	▪ Development and submission of an annual financial plan that identifies the resource needs to achieve the objectives for the protected area. ▪ Ensure that the protected area is resourced with a sufficient staff establishment for its effective management and operation. ▪ Ensure that there is an effective staff management programme in place. ▪ Ensure that the protected area is compliant with the Occupational Health and Safety Act No 85 of 1993. ▪ Ensure adequate understanding betweeen the different units in QEP and the associated responsibilities. ▪ Ensure that facilities and infrastructure in the protected area are adequately maintained.

3.3 CONSERVATION DEVELOPMENT FRAMEWORK

The purpose of the zonation of Queen Elizabeth Park Nature Reserve is to control the intensity and type of use within it, in efforts to ensure the overriding goals of biodiversity conservation are met whilst enabling acceptable levels of eco-cultural tourism and other resource use. On this basis, within some zones, the permissible intensity of use will be relatively higher than in others.

General principles of zonation:

- There is a general gradation in the zonation categories ranging from high to low protection.
- An overlay zone provides additional protection and may be overlaid onto another zone in order to strengthen the protection e.g. Key Feature Protection Zone.
- A node is an area where tourism, management and service infrastructure can be developed and that has a specified footprint.
- The Wilderness Zone will be buffered by the Low Use Zone.
- Where possible both management and tourism infrastructure should be developed outside the protected area.
- Development of infrastructure should preferably be on the periphery of the zone towards a higher impact/less sensitive adjacent zone.
- Deviations or exceptions in any zones require approval from the management authority. (Operations Committee level)
- Any activities permitted in a category of higher protection are also permitted in a category of lower protection, e.g. activities permitted in the Low Use Zone can also be permitted in the Moderate Use Zone.

All activities and/or developments that take place must be in accordance with the legislative framework, Ezemvelo KZN Wildlife policies, norms and standards and the local protected area rules and regulations.

3.3.1 Zonation Plan

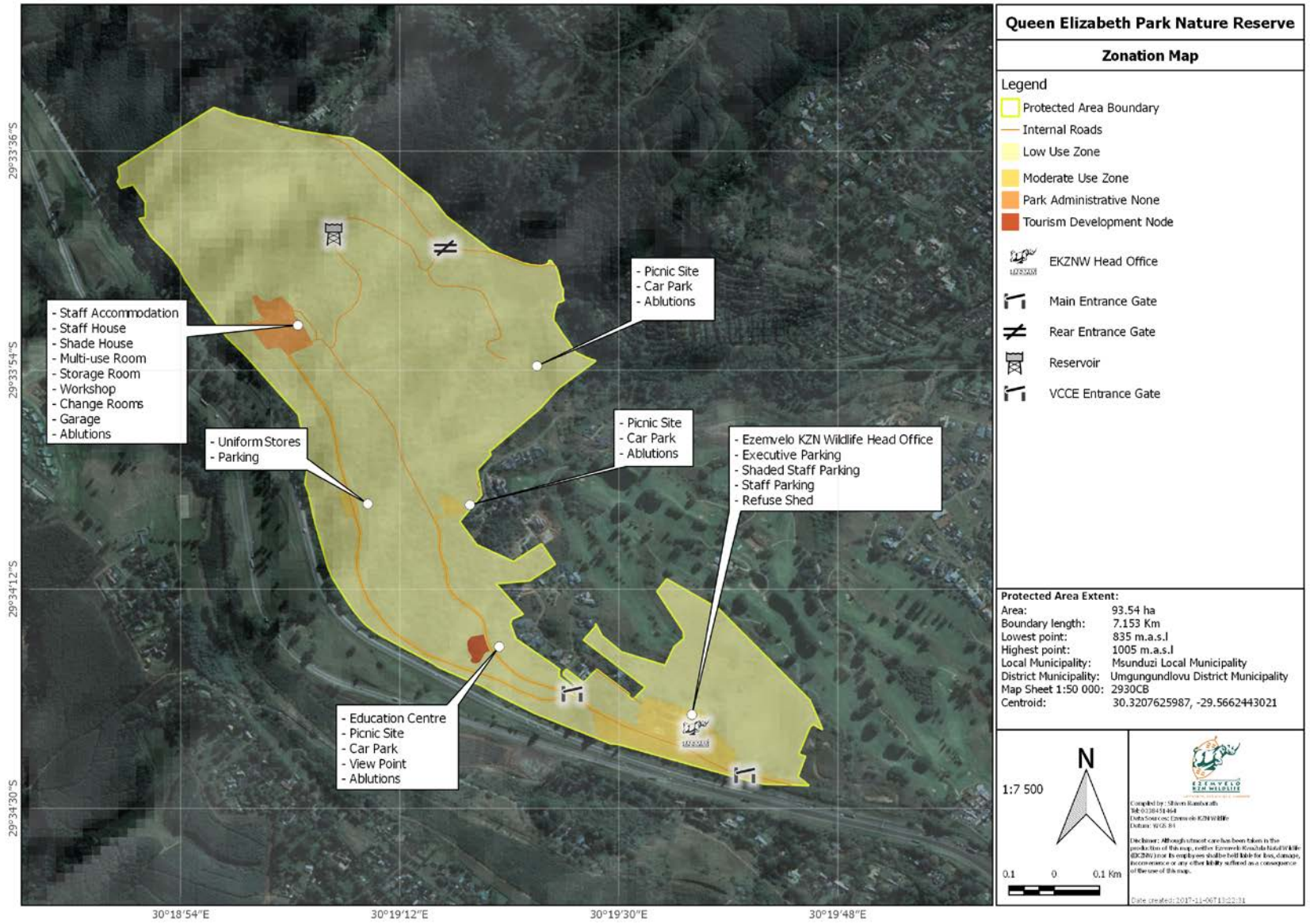
The purpose of zonation within a protected area is to identify types and levels of usage that are acceptable, based on an area's sensitivity and resilience, and to manage visitor experience and inter-user conflict. Zonation is used to identify areas in which infrastructure and/or activities may be located or take place.

A standardised zonation system has been developed for all of Ezemvelo KZN Wildlife's protected areas. This system enables a protected area to be zoned according to six categories, which are spread along a continuum, from pristine wilderness to higher intensity nature-based uses. The zonation system recognises and reflects:

- Sensitive features associated with a protected area (i.e. biophysical, cultural and sense of place).
- A general gradation in the zonation categories, in which the next use level provides a buffer to the lower use level.
- Influence of existing and historic facilities, infrastructure and use.
- Opportunities and constraints (biophysical, social or managerial constraints) for use.

Zonation is a composite of ecological zonation (based on natural resource sensitivity), sense of place, cultural features, patterns of environmental settings, and existing development and use patterns. The final zonation map is represented as a desired state, i.e. directing management towards a vision for each zone, which reflects and respects the broader conservation and eco-cultural tourism objectives for the protected area.

Not all zonation categories have been applied in determining the system of zonation for Queen Elizabeth Park Nature Reserve, as some are not appropriate to it.



Map 8: Zonation of Queen Elizabeth Park Nature Reserve

Table 5: Zonation categories for Queen Elizabeth Park Nature Reserve

Low use zone	
Description	An area where there is little evidence of modification of natural processes and landscapes, that is more sensitive than the moderate use zone and where the ecotourism principles of low human impact will prevail.
Objective	To designate an area for tourism experiences and management activities that are focused primarily on low impact activities and where general sensitivity requires that management and tourism impacts on the natural landscape should be mitigated.
Activities and infrastructure	▪ Facilities of a rustic nature such as trails. ▪ Motorized access is low-key and 4 x 2 access is provided to points where trails start or to tourist facilities. ▪ 4 x 4 tracks are allowed in this zone (limit to number of tracks and frequency of use) as per site specific rules and regulations. ▪ Hiking and formalised trails. Management activities must focus on protecting park resources and core values. ▪ Limited management roads and tracks. ▪ Controlled extractive resource use in line with Ezemvelo KwaZulu-Natal Wildlife policies and norms and standards.
Constraints and implementation	▪ Activities are mostly low impact and low density. ▪ No modern facilities such as restaurants and shops are permissible in this zone. ▪ Where possible, facilities should be developed on the periphery of the zone towards the less sensitive adjacent zone.
Moderate use zone	
Description	An area where natural processes and the landscape may be altered to support protected area operations (QEP and at an organisational level) and objectives of the protected area. This zone is less sensitive than the low use zone and this is where experiences, facilities, infrastructure and services are provided to visitors and where general park management activities can take place as well as park management at an organisational level since the inclusion of the Ezemvelo KZN Wildlife Head Office.
Objective	To designate a tourism and management area that is focused on visitor experience and management of the park as well as the organisation while still securing the values of the protected area and an area that serves the operational and support functions of the protected area.
Activities and infrastructure	▪ Management roads and tracks. ▪ Management activities are directed to maintaining park infrastructure for biodiversity conservation, park operations, equipment and material storage. ▪ Controlled extractive resource use. ▪ Walking on formalised trails.

	▪ Infrastructure is accessible by motorised access. ▪ The tourism road network including access roads and game viewing roads. ▪ Traditional game viewing routes with associated more formalised infrastructure. ▪ Infrastructure is accessible by motorised access.
Constraints and implementation	▪ Within the moderate use zone a specific **Tourism Development Node** will be defined which could include areas of commercial use. ▪ Where possible this node should be outside the protected area. ▪ The node should preferably be on the periphery of the Moderate and Low Use Zones, to ensure a quality visitor experience in the lower use zone but with the bulk of the impact e.g. access roads and services in the higher use zone. ▪ This node should be developed in the less sensitive part of the Moderate Use Zone. ▪ The Tourism Development Node can only be developed in areas where it does not compromise the values of the protected area. ▪ The node must have a specified footprint. ▪ Examples of developments in a Tourism development node include picnic areas and an interpretation centre. ▪ **Park Administrative Node** (within the Moderate use zone) caters for facilities such as staff accommodation, administrative offices, other operational required infrastructure, waste handling sites etc. ▪ Wherever possible, facilities and infrastructure related to park operations should be located outside of the protected area. If not possible they will form part of this node. ▪ The node must have a specified area as a footprint.

3.4 ADMINISTRATIVE STRUCTURE

A recommended organisational structure for Queen Elizabeth Park Nature Reserve is set out in Figure 5. The figure represents the staff complement and positions that are required to enable the effective operation, management and protection of Queen Elizabeth Park Nature Reserve.

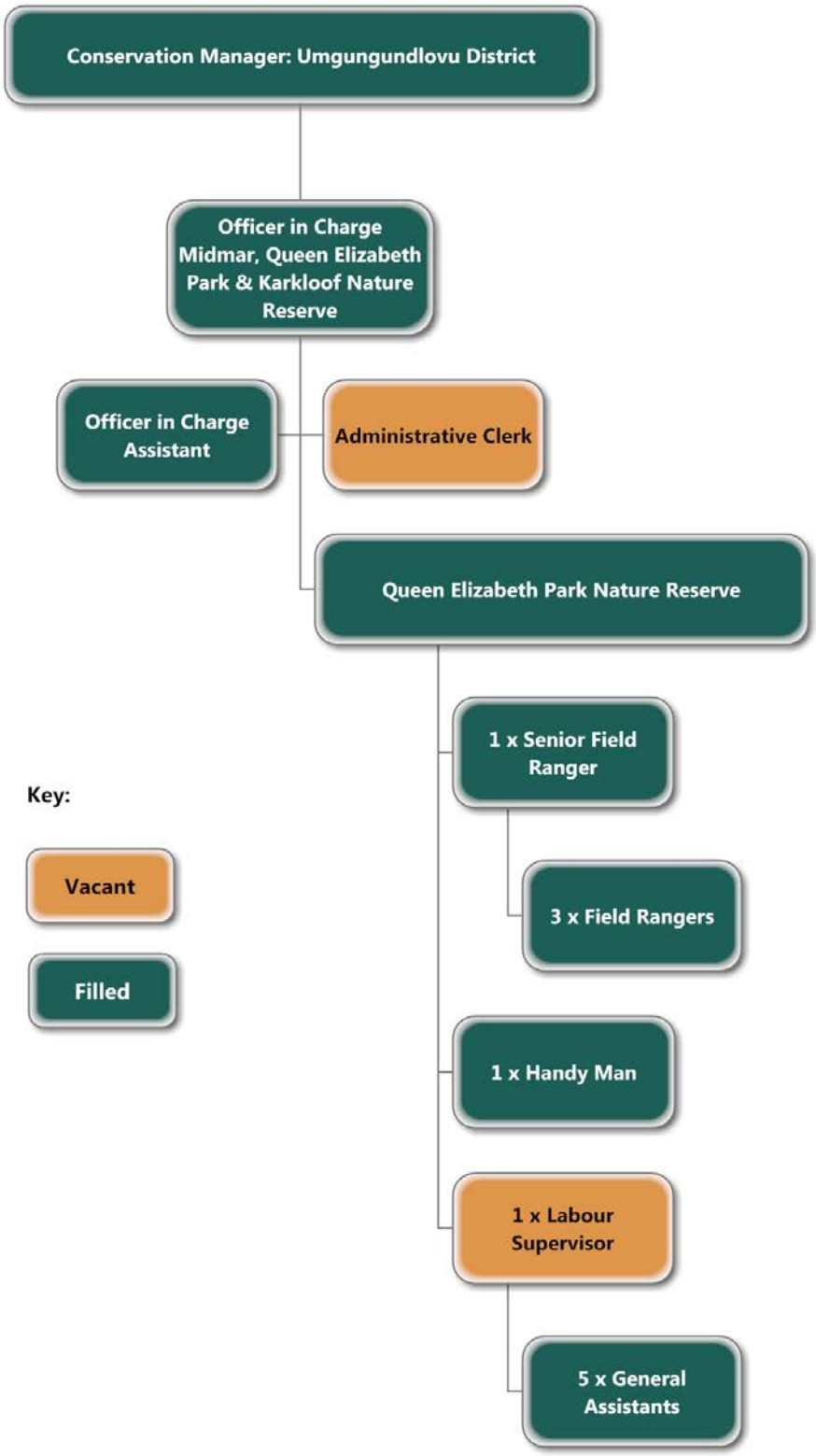


Figure 5: Organisational structure for Queen Elizabeth Park Nature Reserve

4 OPERATIONAL MANAGEMENT FRAMEWORK

This section translates the strategic management framework described in Section 3 above into management activities and targets, which will be used to inform annual plans of operation and the resources required to implement them. The management targets will form the basis for monitoring of performance in implementing the plan and are thus measurable.

Areas that are shaded light grey indicates operational sections that relate to the METT assessment and implementing these sections of the Operational Management Framework should lead directly to an improvement of the METT score for the Queen Elizabeth Park Nature Reserve.

4.1 DETERMINATION OF PRIORITIES FOR STRATEGIC OUTCOMES

In the tables that follow in this section, a column has been included entitled "Priority", which is intended to convey the level of priority attached to its management target. The purpose of prioritising activities is to direct funds and resources to the most important activities, in the event that there are insufficient funds or resources to undertake all of the activities outlined in a particular year. Priorities are ordered in three categories, which have been determined on the following basis:

Priority 1:	A management target that is central to the responsibilities and mandate of Ezemvelo KZN Wildlife or that addresses an aspect of management that is fundamental to the protection of the values and purpose of Queen Elizabeth Park Nature Reserve.
Priority 2:	A management target that addresses an aspect of management that contributes towards community involvement and support for the conservation of Queen Elizabeth Park Nature Reserve, which is a key principle of effective protected area management.
Priority 3:	A management target that indirectly contributes towards the protection of biodiversity or the development of social and/or economic benefits and opportunities for Queen Elizabeth Park Nature Reserve and/or its surrounding local communities.

Time frames and associated strategic outcomes are dependent on the availability of resources.

4.2 LEGAL COMPLIANCE AND LAW ENFORCEMENT

Through its mandate to undertake the conservation and management of protected areas in KwaZulu-Natal, Ezemvelo KZN Wildlife must ensure that the province's protected areas are appropriately legally protected and that the laws governing the use of protected areas and the prohibition of particular activities are enforced. In fulfilling this role, the managers of Queen Elizabeth Park Nature Reserve will adhere to the following guiding principles:

- All reasonable efforts must be made to ensure the effective conservation of biodiversity within and on the boundaries of the protected area.
- Cooperative structures should be established to enable participation by key stakeholders such as local communities and the South African Police Service in addressing offences and breaches of the law.
- Law enforcement within the protected area will be undertaken through surveillance, monitoring and appropriate reaction in the event of an offence.
- Managers should familiarise them with all relevant legislation and legal agreements and apply this to their management actions

The operational requirements for legal compliance and enforcement, stakeholder engagement is set out in Table 6 below.

Table 6: Framework for Legal Compliance and Law Enforcement

Strategic Outcome	Management Activities	Management Target	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
LEGAL COMPLIANCE AND LAW ENFORCEMENT						
Ensure that the full extent of the Queen Elizabeth Park Nature Reserve have secured permanent conservation in terms of relevant legislation.	▪ Re-survey the boundary of the protected area ▪ Declare the new extents of the protected area in terms of the National Environmental Management Protected Areas Act.	All areas managed as part of the PA have been declared and are listed and the registrar of deeds has registered the declaration against the relevant registers and documents	▪ Government gazette notice ▪ PA register ▪ Survey diagram	▪ The protected area boundary is not consistent with the proclamation ▪ The protected area is not surveyed	**Year 1**	Conservation Manager with Planning
Ensure that the full extent of the PA is appropriately demarcated and that the demarcation is known by surrounding communities.	▪ Upgrade signage to ensure sufficient demarcation at all entry gates. ▪ Communicate awareness of boundary of protected area through presentations/ maps at the PA Liaison forum and other relevant forums.	▪ Appropriate demarcation of boundaries - In Queen Elizabeth Park Nature Reserve this will be signage at the back gate. ▪ Knowledge of the boundary by general public	▪ PA map ▪ Signage at main access areas ▪ Fence specifications and monitoring reports ▪ Minutes and presentations at meetings	▪ The boundary is not surveyed and appropriately demarcated to achieve its management objectives ▪ The protected area boundary is not known by the general public	**Year 1**	Conservation Manager
Ensure that there is adequate law enforcement within the Queen Elizabeth Park Nature Reserve	Develop and implement an integrated security strategy (Integrated Compliance Plan) for the Queen Elizabeth Park Nature Reserve, which ensures collaboration with all relevant institutions	▪ Creation of cooperative structures with local communities and law enforcement officials ▪ Informant networks ▪ Co-ordinated security efforts	▪ Minutes and attendance registers of meetings of cooperative structures ▪ Integrated Compliance Plan	Ad hoc security measures that are not integrated into the broader security strategies and programmes	Year 2	Conservation Manager
	Develop and gazette internal rules for controlling use & activities in Queen Elizabeth Park Nature Reserve	Compliance with NEMPAA in terms of gazetting of internal rules that will	Copy of Gazette Notice for internal rules	Lack of control of use & activities in Queen Elizabeth Park Nature Reserve	Year 2	Conservation Manager

Strategic Outcome	Management Activities	Management Target	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
		facilitate effective law enforcement				
	Ensure that there is sufficient law enforcement capacity including staff numbers, skills, equipment and support	Capacitated work force that can fulfil the organisation's mandate in terms of law enforcement	▪ Organogram ▪ Asset register ▪ Skills audit ▪ Occupational health and safety file ▪ Training records	PA management lacks the capacity or is constrained by limited capacity to enforce the law in keeping with the organisation's mandate	Year 2	Conservation Manager with relevant regional and support services staff
	▪ Regular patrols covering the full extent of the Queen Elizabeth Park Nature Reserve ▪ Prosecution of any offender caught committing an offence	Legal protection of the full extent of Queen Elizabeth Park Nature Reserve in terms of NEMPAA	▪ Park specific rules ▪ Standard Operating Procedure ▪ Patrol book/reports ▪ Occurrence book records ▪ Fire records (arson fires) ▪ Incident reports	▪ Increase or frequent recovery of snares ▪ Increase in security breaches ▪ Recorded losses of game species and/or losses of rare and endangered plants ▪ Increase in arson fires	Ongoing	Conservation Manager
Ensure effective control of legitimate access in Queen Elizabeth Park Nature Reserve.	Compile a servitude register of all servitudes and their specific conditions for Queen Elizabeth Park Nature Reserve	Enforcement of conditions of relevant servitudes by Queen Elizabeth Park Nature Reserve staff	Register / copy of servitudes and their conditions on station	Lack of knowledge of PA staff or servitudes and their conditions and therefore lack of enforcing these correctly	Year 1	Conservation Manager
	▪ Develop and implement Standard Operating Procedures /Station orders for gate access and control ▪ Ensure staff is capacitated to control protected area access ▪ Maintain access control records	Effective control measures for protected area access	▪ Standard operating Procedures / Station orders ▪ Gate records ▪ Records of the key register	▪ Ineffective or partially effective control measures to control protected area access. ▪ Increase in illegal entry incidents.	Ongoing	Conservation Manager

Strategic Outcome	Management Activities	Management Target	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
	▪ Maintain a key register for Queen Elizabeth Park Nature Reserve		▪ Occurrence books records			

4.3 STAKEHOLDER ENGAGEMENT

Constructive relationships with adjacent landowners and communities are an important aspect of the effective conservation of protected areas. Stakeholder engagement should be aimed at developing a strong sense of partnership between the neighbours and communities around the protected area and its managers. The following guiding principles should be adhered to:

- Efforts should be made to ensure that the communities living around the protected area are aware of the role that it fulfils in biodiversity protection and the provision of ecosystem services to the region.
- Stakeholder engagement should be undertaken to engender a sense of ownership of the protected area, within the communities, and support for its biodiversity conservation objectives.
- A common understanding of the issues that affect both the protected area and the surrounding communities should be developed and efforts to resolve them should be undertaken cooperatively.

The detailed operational requirements for Stakeholder engagement are set out in Table 7 below.

Table 7: Framework for Stakeholder Engagement

STAKEHOLDER ENGAGEMENT						
Strategic Outcome	**Management Activities**	**Management Target**	**Target Indicator (Evidence)**	**Indicators of Concern**	**Priority**	**Responsibility**
Constructive interaction and co-operation with community, neighbours and stakeholders	▪ Identify/ update list of key neighbours and stakeholders of Queen Elizabeth Park Nature Reserve ▪ Establish the Queen Elizabeth Park Nature Reserve Advisory Forum ▪ Facilitate regular constructive meetings with the Advisory Forum to facilitate input into the decision making process	▪ Key neighbours have been identified and there is a formalised programme of regular pro-active interaction between PA management and neighbouring land users ▪ The formal community forums provide input into decisions relating to PA management	▪ Updated list/database with contact details of key neighbours, communities and stakeholders ▪ Terms of reference of the Advisory Forum ▪ Advisory Forum meetings agendas and minutes	▪ Neighbours, communities and stakeholders is not known to the protected area managers. ▪ No process is in place for engagement with key neighbours, communities and stakeholders.	Year 1	Conservation Manager and Community Conservation Officer
Ensure as far as possible that the Queen Elizabeth Park Nature Reserve enjoys public support	▪ Implement a mechanism to test public support. ▪ Actively encourage support for the protected area through open communication channels and conflict resolution	An understanding of the extent of or lack of public support	▪ Survey results/ minutes of meetings ▪ Records of mitigating measures, meetings, minutes and attendance records.	The protected area is not supported by neighbours and public and there is antagonism towards the protected area management	Annually	Conservation Manager
	Facilitate an economic and social benefit assessment for Queen Elizabeth Park Nature Reserve	An objective assessment of social and economic benefits of Queen Elizabeth Park Nature Reserve	Social & economic benefit report for Queen Elizabeth Park Nature Reserve		Year 4	Conservation Manager with Social Ecology Unit

4.4 BUFFERING MECHANISMS & REGIONAL MANAGEMENT

4.4.1 Protected area expansion and buffer zone / Zone of influence management

In terms of Ezemvelo KZN Wildlife's protected area expansion strategy, it has identified a number of areas as priorities for protected area expansion around the protected area.

In order to safeguard the biodiversity within the Queen Elizabeth Park Nature Reserve and to counter any threatening processes or edge effects, suitable buffer zones and appropriate land uses in these zones should be identified. Appropriate actions may then be taken to secure these buffer zones through protected area expansion mechanisms and local planning tools, as described in Section 6.5.2 below. In ensuring the protection of its biodiversity, the following guiding principles will be adopted in terms of protected area expansion and buffer zone management:

- If under threat, efforts must be made to formally protect the areas of critical habitat, located outside of the protected area.
- Threatening processes and edge effects on the protected area's boundary and beyond it must be identified.
- Appropriate actions must be taken to manage threatening processes and edge effects on the protected area's boundary and beyond it.

4.4.2 Regional management

It is important, in managing the buffer areas around the protected area, that Ezemvelo KZN Wildlife work with local government authorities to ensure that their land use planning considers the biodiversity conservation imperatives of Queen Elizabeth Park Nature Reserve. In this regard it is necessary to ensure that buffer zone considerations are captured in planning tools such as IDPs, SDF's and Land Use Management Schemes (LUMS). In developing relationships with the local and district municipality, Ezemvelo KZN Wildlife will adhere to the following guiding principles:

- Relationships with local government and other provincial and national departments will be developed in the spirit of cooperative governance.
- Ezemvelo KZN Wildlife will endeavour to assist the local and district municipality in determining appropriate land uses and development strategies in the areas surrounding the protected area.
- Ezemvelo KZN Wildlife will endeavour to align its plans and strategies with the programmes and strategies of the local and district municipality, where appropriate.

The detailed operational requirements for buffer zone protection and regional management are set out in Table 8 below.

Table 8: Framework for Buffering Mechanisms & Regional Management

Strategic Outcome	Management Activities	Management Targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
PROTECTED AREA EXPANSION						
Ensure that the size and shape of the Queen Elizabeth Park Nature Reserve is sufficient to achieve its management objectives	▪ Identify opportunities for protected area expansion / stewardship in areas surrounding Queen Elizabeth Park Nature Reserve ▪ Actively pursue opportunities to ensure appropriate design and size of Queen Elizabeth Park Nature Reserve	Programme with appropriate mitigating action to address design and size limitation of Queen Elizabeth Park Nature Reserve e.g. protected area expansion, stewardship agreements etc.	Map and proclamation of appropriate design based on expansion opportunities e.g. protected area expansion, stewardship agreements etc.	The design of the protected area severely limits the achievement of the protected area objectives	Year 5	Conservation Manager with legal unit, Planning and Protected Area expansion unit
LOCAL AND REGIONAL PLANNING						
Determination of the buffer zone / zone of influence requirements around the Queen Elizabeth Park Nature Reserve	▪ Determine the ecological impacts and edge effects influencing the ecology of the Queen Elizabeth Park Nature Reserve on its boundary ▪ Determine the areas that should be demarcated as buffer zones for the purposes of protecting the biodiversity within the Queen Elizabeth Park Nature Reserve ▪ Negotiate protected area buffer and enter into agreements with neighbouring landowners	▪ Knowledge of threatening processes on the Queen Elizabeth Park Nature Reserve's boundary ▪ Spatial representation (map) of the protected area buffer ▪ Agreements with neighbouring landowners	▪ Analysis of threat/ threatening processes in buffer area ▪ Map of protected area buffer ▪ MOA's, MOU's with landowners ▪ Biodiversity agreements with landowners	▪ No protected area buffer has been established ▪ Incompatible land uses that negatively affect the protected area values in areas surrounding the PA. ▪ Edge effects such as invasive plant encroachment along the Queen Elizabeth Park Nature Reserve's boundary	Year 2	Conservation Manager with Ecological Advice Unit

	Pro-actively encourage neighbours to introduce 'soft' / conservation-friendly land-uses to facilitate buffering of the protected area.	Conservation friendly/ 'soft' land-uses in areas surrounding the Queen Elizabeth Park Nature Reserve's boundary	Minutes of meetings to address Land-use issues, and/ or environmental awareness programme to facilitate an understanding of the need for buffering the protected area	Unsustainable and/ or detrimental Land-use in the area surrounding the protected area.	Ongoing	Conservation manager with District Conservation Officer and Community Conservation Officer
Ensure that water-use planning and Land-use planning take cognisance of the Queen Elizabeth Park Nature Reserve objectives.	▪ Make inputs into the development of local and district municipality IDP's and SDF's in an effort to avoid environmentally harmful land uses in Queen Elizabeth Park Nature Reserve's buffer zones ▪ Incorporate requirements for the Queen Elizabeth Park Nature Reserve's protection into Land use planning schemes (LUMS) ▪ Input into water-use planning in relevant catchments to ensure that the protected area ecological requirement and infrastructure requirements (potable water) are addressed in the planning process ▪ Active membership of the relevant catchment management forum	▪ Adoption of environmentally appropriate land uses in IDPs and SDFs in the areas immediately surrounding the protected area ▪ Retention of existing benign land uses in the areas immediately surrounding the protected area ▪ Maintenance of ecological functioning of the protected area in terms of water use ▪ Provision of sufficient good quality water to staff and tourists	▪ IDP of Local and District municipality that acknowledges the importance of and requirements for the protection of the Queen Elizabeth Park Nature Reserve ▪ Appropriate zoning in SDF and LUMS ▪ Minutes from Land and Water – use meetings ▪ Proof of membership of catchment management forum ▪ Water monitoring quality/quantity report ▪ Water quality scores	▪ Identification / approval of environmentally harmful land uses on the boundaries of the Queen Elizabeth Park Nature Reserve. ▪ Adjacent Land-use and water-use planning do not consider the protected area's objectives	Annually	Conservation Manager with District Conservation Officer and Planning Unit

4.5 ENVIRONMENTAL EDUCATION AND AWARENESS

Environmental interpretation and education of Queen Elizabeth Park Nature Reserve's natural and cultural resources will be aimed at creating awareness, understanding and appreciation of its unique cultural heritage, biodiversity and ecological function, and their significance. In developing an environmental interpretation and education programme, the following guiding principles should be adhered to:

- Environmental interpretation and education must be in the form of static displays, strategically positioned in the nature reserve.
- There should be a strong focus on neighbouring communities, in efforts to engage, inform and benefit them.
- Wherever possible, local community members should be trained to assist and operate environmental interpretation and education tours.
- Where possible, partnerships with NGO's should be established to ensure effective environmental education and awareness.

The detailed operational requirements for Environmental education and awareness are set out in Table 9 below.

Table 9: Framework for Environmental Education and Awareness

Strategic Outcome	Management Activities	Management Targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
ENVIRONMENTAL EDUCATION AND AWARENESS						
Implement an effective Environmental education and awareness programme linked to the objectives of Queen Elizabeth Park Nature Reserve and focussed on the surrounding communities and neighbours	▪ Develop and implement an environmental education and awareness programme for the Queen Elizabeth Park Nature Reserve based on the above guiding principles ▪ Compile information and material relating to Queen Elizabeth Park Nature Reserve and its values for presentation to school groups/ communities & stakeholders ▪ Collaborate with partners to arrange environmental education and awareness events during national and international environmental days	▪ Increased capacity and understanding of the importance of the protection of Queen Elizabeth Park Nature Reserve by stakeholders and surrounding communities	▪ Education and awareness programme programmes and attendance lists ▪ Effectiveness of assessment / monitoring documentation	Lack of understanding and awareness of the values of the protected area and biodiversity conservation in communities around the protected area	Year 3	Conservation Manager, Community Conservation Officer and EKZNW Head Office

4.6 TOURISM MANAGEMENT & DEVELOPMENT

4.6.1 Tourism product development and management

Ezemvelo KZN Wildlife has the mandate to sustainably develop Queen Elizabeth Park Nature Reserve to fully realise its eco-cultural tourism and associated income-generating potential, within the context of protecting its biodiversity and cultural values.

In further developing and managing tourism within the protected area, the following guiding principles should be adhered to:

- Tourism products developed within the protected area must be appropriate to the values and purpose for which the protected area has been proclaimed and must not threaten its biodiversity or ecological function.
- In developing tourism products, requirements for environmental authorisation must be considered and adhered to.
- Tourism products should be designed to capitalise on the unique beauty and biodiversity features of the protected area.
- Tourism products should be developed in response to tourism market demands and opportunities within the protected area and should be carefully assessed to determine their viability.
- The development of tourism products within the protected area must be integrated with tourism strategies and plans in the region.
- Tourism should be used as a tool for the generation of economic activity and employment in the communities surrounding the protected area.
- Tourism infrastructure should be maintained to an acceptable standard based on the Ezemvelo standard and infrastructure must be incorporated in the Scheduled maintenance programme of the protected area.

The detailed operational requirements for Tourism are set out in Table 10 below.

Table 10: Framework for Tourism Management & Development

Strategic Outcome	Management Activities	Management Targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
TOURISM MANAGEMENT & DEVELOPMENT						
Ensure that there are adequate visitor facilities that can cope with the volume of tourist	▪ Evaluate current facilities in terms of the demand and standard required to service current and potential future visitors to the Queen Elizabeth Park Nature Reserve ▪ Identify projects for facilities required to meet visitor's needs where gaps exist, develop business plans in order to secure funding ▪ Submit development projects requiring environmental scoping and assessment through either internal or external EIA processes for approval by Ezemvelo DevCo committee or the relevant provincial or national department ▪ Implement the tourism development project based on the relevant approval ▪ Investigate potential external funding on a project basis. (Stakeholders, honorary rangers and NGO's)	▪ Understanding of the gaps in current tourism facility versus tourist requirements ▪ Approved and funded project for tourism development	▪ Assessment report of current tourism facilities against current use and needs ▪ Business plans for new projects and ROD's or DevCo approvals for tourism development projects ▪ Contracts, Minutes of site meetings and OH&S files	▪ There is a need for tourism infrastructure but no tourism development has taken place ▪ Lack of funding to implement required tourism developments ▪ Non-compliance with relevant environmental legislation and internal environmental policies	Year 4	Conservation Manager with Planning Unit, Projects and Technical Unit
Ensure that tourism facilities are maintained to an acceptable standard and that activities of visitors are coordinated in line with the Queen	▪ Regular inspections of all tourism facilities for maintenance requirements including rehabilitation measures for areas degraded / damaged due to visitor use ▪ Implement scheduled maintenance / rehabilitation measures for tourism facilities or areas to ensure the Ezemvelo standard is maintained.	Fully functional and safe tourism facilities	▪ Tourism facility inspection forms / reports ▪ Scheduled maintenance and where required rehabilitation plan	▪ Increased number of visitor conflicts ▪ Lack of visitor satisfaction ▪ Degradation of conservation values due to tourism	Ongoing	Conservation Manager

Elizabeth Park Nature Reserve zonation map			▪ Occupational health and safety file ▪ Tourist satisfaction feedback	operators / visitors impact		

4.7 BIODIVERSITY RESOURCE & CONSERVATION MANAGEMENT

4.7.1 Fire management

Fire plays an important role in the ecological dynamics of grasslands and wetlands, and has important effects on vegetation composition, primary productivity and nutrient cycling. In developing burning and fire management strategies for the protected area, the following guiding principles should be adhered to:

- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape.
- A patch mosaic of burnt and un-burnt areas should be maintained.
- The burning of areas should be undertaken in such a way that promotes patchy burns (i.e. within the block being burnt, some patches will remain un-burnt rather than aiming for a complete burn).
- Burning must be undertaken with due consideration to the biodiversity conservation requirements of the protected area and the need to protect rare and endangered species.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act No.101 of 1998.

In terms of Section 17 of the National Veld and Forest Fires Act, a landowner (in this case the protected area must have such equipment, protective clothing and trained personnel for extinguishing fires as may be prescribed or, if not prescribed, reasonably required in the circumstances. It is therefore necessary to consider the following in relation to firefighting:

- The need to maintain a system of firebreaks to enable the management of controlled burns and to effectively fight wildfires.
- The size of the protected area and the requirements necessary to access different areas in the event of a wildfire, this relates to both roads and vehicles.
- The number of personnel necessary to effectively fight wildfires.
- The equipment necessary to effectively fight wildfires.
- This would include:
- Water tankers and pressure pumps mounted on or pulled behind tractors.
- Firefighting equipment mounted on the backs of vehicles.
- Backpack sprayers
- Beaters
- Safety equipment for personnel involved in firefighting.

The detailed operational requirements for fire management are set out in Table 11 below.

Table 11: Framework for Biodiversity Resource & Conservation Management - Fire Management

Strategic outcome	Management activities	Management targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
FIRE MANAGEMENT						
Implementation of the Fire Guidelines Document for the Umgungundlovu District	▪ Implement the Fire Guidelines Document for the Umgungundlovu District. ▪ Undertake annual pre-burn assessments ▪ Implement the outcomes of the pre-burn assessments	Implementation of the fire guidelines documents. Outcomes of the pre-burn assessment are carried out.	▪ Annual pre-burn assessment sheets ▪ Fire returns ▪ Fire maps	Burning regimes that result in ecological degradation of the protected area	Year 1	Conservation Manager and Ecological Advice Unit
Adequate fire safety within the Queen Elizabeth Park Nature Reserve is ensured	▪ Maintain a system of firebreaks within the protected area that are of adequate extent, which are prepared at the correct time of the year under the appropriate weather conditions. ▪ Ensure that staff are trained and that adequate firefighting equipment is available within the protected area. ▪ Maintain membership of the local Fire Protection Association, or if one does not exist, champion the creation of one.	Compliance with the National Veld and Forest Fires Act	▪ Fire returns ▪ Letters to neighbours to inform them of burning ▪ Notices placed informing stakeholders of burning ▪ Training registers ▪ Fire Protection Association membership and meeting minutes	▪ Inadequate personnel, equipment or an inability to communicate effectively in fighting fires. ▪ Wildfires spreading from the protected area to neighbouring properties ▪ Legal actions against Ezemvelo due to non-compliance with the National Veld and Forest Fire Act	Ongoing	Conservation Manager

4.7.2 Invasive plant control

A listed invasive species means any species, which is listed in terms of section 70 of the Biodiversity Act, whose establishment and spread occurs outside of its natural distribution range. Such plants are considered to be a serious threat to the ecological functioning of natural systems and to water production, and must be strictly controlled. In undertaking invasive plant control, the following guiding principles will be adhered to:

- Invasive plant control will require an ongoing programme that prioritises key infestations along water courses, drainage lines and upper catchment areas.
- Initial clearing efforts should focus on containing infestations that are most likely to spread into new areas.
- All follow-up requirements must be strictly adhered to otherwise the problem will be exacerbated.

Strategic partnerships and poverty relief programmes such as the Working for Water programme should be utilised in controlling invasive plants.

4.7.3 Soil erosion control

In addressing soil erosion, the following guiding principles should be adhered to:

- Areas impacted by soil erosion should be stabilised and re-vegetated with indigenous plant species to prevent the spread of listed invasive plant species.
- Areas susceptible to soil erosion, or showing early signs of soil erosion such as loss of vegetation cover, must be managed to prevent soil erosion.

Soil erosion control and rehabilitation measures may include the need to re-vegetate disturbed areas. A detailed assessment of the nature and extent of soil erosion within the protected area will determine the appropriate responses required and the costs associated with them.

The detailed operational requirements for invasive plant and soil erosion control are set out in Table 12 below.

Table 12: Framework for Biodiversity Resource & Conservation Management - Invasive Plant control & Soil Erosion Control

Strategic Outcome	Management Activities	Management Targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
INVASIVE PLANT CONTROL						
Development and maintenance of an invasive species control plan for the protected area.	▪ Develop a Standard Operating Procedure for Alien and invasive plant control for Queen Elizabeth Park Nature Reserve ▪ Develop a detailed inventory of the listed invasive species. ▪ Map the areas and extent of invasive species infestations. ▪ Describe previous efforts to control and eradicate invasive plants. ▪ Cost the alien and invasive control plan to assist with budget submissions and sourcing sufficient funding ▪ Outline the measures required to monitor, control and eradicate the listed invasive species. ▪ Identify measurable indicators of progress and success in implementing the invasive species control plan	Compliance with the Biodiversity Act 10 of 2004 Section 76	▪ Inventory of invasive species ▪ Maps indicating invasive species and infestation densities ▪ Records of previous control efforts ▪ Monitoring records of control efforts ▪ Photographs of control efforts and fixed point photographs to assess change in infestation over time	▪ Further spread of existing levels of infestation of listed invasive species ▪ Persistence of existing infestations ▪ New infestations of listed invasive species	Year 5 and then annually	Conservation Manager, Ecological Advice Unit and Alien Plant Control Unit
Achievement of a significant reduction in levels of invasive plant infestations in the protected area.	▪ Implement concerted, sustained control efforts in identified areas of invasive plant infestation based on the invasive control plan ▪ Undertake suitable rehabilitation measures, including re-vegetation using indigenous plant species, to prevent soil	▪ 50% reduction in wattle infestation levels in five years ▪ 50% reduction in infestations of all other listed	▪ MoU/MoA with strategic partners ▪ Monitoring records and reports of alien and invasive plant control efforts		Year 5	Ezemvelo KZN Wildlife Alien Plant Control Unit and Conservation Manager

Strategic Outcome	Management Activities	Management Targets	Target Indicator (Evidence)	Indicators of Concern	Priority	Responsibility
INVASIVE PLANT CONTROL						
	erosion, following clearing of invasive plant species ▪ Develop partnerships with Working for Water and other strategic programmes	invasive plants in five years	▪ Maps and photos indicating changes in infestations due to control efforts			
SOIL EROSION CONTROL						
Implementation of procedures to identify, rehabilitate and manage areas that have been significantly impacted by soil erosion	▪ Undertake a detailed survey of the protected area to identify the extent and severity of soil erosion ▪ Identify the requirements for soil erosion control and rehabilitation within the protected area ▪ Implement soil erosion control and rehabilitation measures, focussing strategically on key areas such as those impacting on watercourses or that are growing larger ▪ Undertake preventative measures in areas with low plant cover that may be at risk of soil erosion	Effective soil erosion control measures in areas in which plant cover is low, which are susceptible to erosion	▪ Records of control efforts implemented ▪ A detailed map depicting areas of soil erosion within the protected area ▪ Monitoring records including maps and fixed point photographs to measure success of efforts	▪ Further erosion of impacted areas ▪ Sedimentation impacts in watercourses and wetland areas	Year 5	Conservation Manager

4.7.4 Alien animal control

Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of Queen Elizabeth Park Nature Reserve and can be vectors for the spread of diseases. In dealing with the control of alien animals, procedures to deal with animals that stray into the protected area should be developed. In addressing alien animal control, the following guiding principles should be adhered to:

- Domestic animals such as horses and donkeys will only be allowed if kept at the protected area for official purposes such as patrolling.
- Feral animal species that pose a threat to indigenous species will be destroyed (as humanely as practicably possible with due regard to the tourist experience).

4.7.5 Resource utilisation

It is an accepted tenet of biodiversity conservation in South Africa and KwaZulu-Natal that the sustainable use of natural and biological resources may be undertaken within a protected area, provided that it does not compromise its ecological functioning or biodiversity conservation imperatives. Accordingly, applications for the extractive use of resources within the protected area will be considered, based on the following guiding principles:

- The context of the protected area's zonation plan, in particular the ecological sensitivity of particular areas.
- The benefits that such resource use will provide to the neighbouring communities around the protected area.
- The equitable access of members of the neighbouring communities to such resource use opportunities.
- Whether activities such as the collection of biological materials/samples are for legitimate scientific purposes, are from bone fide South African research institutions and are undertaken in accordance with relevant Ezemvelo KZN Wildlife policies.
- The ability of the protected area's managers to effectively control and monitor such resource use.

The detailed operational requirements for Alien animal control and Resource utilisation are set out in Table 13 below.

Table 13: Framework for Biodiversity Resource & Conservation Management - Alien Animal Control & Resource utilisation

Strategic Outcomes	Management Activities	Management target	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
ALIEN ANIMAL CONTROL						
Implementation of procedures to manage alien animals found within the protected area.	▪ Together with neighbouring communities, agree on the approach to dealing with domestic animals found in the protected area, particularly dogs ▪ Develop a policy to address the control of feral animals found within the protected area	▪ Creation of cooperative structures between Ezemvelo KZN Wildlife, local communities and law enforcement officials ▪ Control of any alien animals found within the protected area	▪ Policy to address control of feral animals and the use of domestic animals in the protected area ▪ Incident records ▪ Occurrence book reports	Uncontrolled access of domestic animals within the protected area.	Year2	Conservation Manager
RESOURCE UTILISATION						
If extractive resource use is undertaken, it is done legally and conforms to Ezemvelo KZN Wildlife policy.	▪ Develop an approach to sustainable extractive resource use in the protected area ▪ Ensure that any approved extractive resource use is aligned to the protected area zonation plan ▪ Communicate the approach for sustainable resource use to the neighbouring communities ▪ Record and valuate all extractive resource use	Ecologically sustainable extractive resource use that benefits local communities	▪ Resource returns ▪ Cost reports of natural resource use ▪ Minutes of meetings with communities	Uncontrolled or unsustainable resource extraction	If required	Conservation Manager
If bioprospecting is undertaken, it is done legally and conforms to	Collection of biological materials or samples if the appropriate permits or permission has been given in accordance with Ezemvelo KZN Wildlife policy	Sustainable, legal collection of biological material or samples	▪ Permits for bioprospecting	Illegal collection of biological material or samples.	If required	Conservation Manager and Resource Use Ecologist

Strategic Outcomes	Management Activities	Management target	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
Ezemvelo KZN Wildlife policy			▪ Monitoring records/ returns			

4.7.6 Wildlife Management

Management interventions related to indigenous wildlife will be limited to those that are for the purposes of safeguarding populations of rare and endangered species or to meet set conservation targets. Interventions may also be required for problem animal management. In addressing wildlife management, the following guiding principles should be adhered to:

- Wildlife management must be focussed primarily on protecting the ecological functioning of the protected area and meeting set provincial conservation targets for species and vegetation types.
- The introduction of indigenous species into the protected area must be undertaken in accordance with relevant Ezemvelo KZN Wildlife policies.
- Population management of wildlife species may be required to ensure that such species are not causing ecological degradation of the protected area.

Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour must be managed in accordance with relevant Ezemvelo KZN Wildlife policies.

Genetic diversity is one of three levels of biological diversity requiring conservation (Frankham, 1996) (and small population size reduces the evolutionary potential of wildlife species. In an effort to maintain genetic diversity and also to avoid genetic pollution of game populations, especially in small protected areas (PAs), it is essential to regularly bring in new individuals into the populations in order to augment the populations genetically as well as to avoid introducing and/or keeping closely related subspecies in one protected area. The keeping of closely related subspecies in one protected area has, undesirably, resulted in hybridization between subspecies (e.g. blue wildebeest & black wildebeest, etc.) which could lead to the loss of both subspecies through the production of hybrids. Hybrids are undesirable in conservation since they are not genetically pure species. To a certain extent the differing abilities of individuals of a species to respond successfully to environmental variation are genetically based (Mace, 1986), therefore, maintaining the genetic diversity of species populations is even more important nowadays due to the rapidly occurring climate change processes which will put pressure on species to adapt rapidly to their changing environment. In the absence of genetic diversity, species populations have little or no chance of survival by means of adaptation to the rapidly changing environment. Due to the recent spike in the intensive breeding for colour morphs (variants) by the private game ranching industry it has become necessary for conservationists to guard against the possible introduction of the genetically compromised colour morphs into the protected area in order to protect the genetically pure populations from contamination by compromised genes.

According to Ezemvelo KZN Wildlife Norms & Standards for the management of large herbivores, Protected Areas should develop where necessary economic carrying capacity and management strategies for the management of these populations.

The following strategies are used in the management of wildlife in Ezemvelo Protected Areas.

The following management strategies are used to manage all large herbivore species in Ezemvelo Protected Areas and has been extracted from the Ezemvelo KZN Wildlife Norms and Standards for the Management of Large herbivores:

No Management:

Apply to species in a system that can be allowed to achieve ecological carrying capacity without knowingly endangering other important biodiversity components in the protected area. This management option assumes that the important ecological processes responsible for establishing the equilibrium between the species and its resources are largely intact.

Ecological Process Management:

Applies to species in a system where clearly one or more ecological processes are dysfunctional and need to be simulated or re-established in order to create an equilibrium between the species and its resources. Management interventions include one or a combination of the following

- Reconfiguring landscape drivers: of population dynamics e.g. artificial water supply, range expansion, corridor development etc.
- Simulating ecological process e.g. dispersal (via dispersal sinks), predation (via predator simulation removals).
- Re-establishing ecological process e.g. re-establishing indigenous predators
- Curtailment of population eruption e.g. managing the growth rate and age and sex structure of a population to stay within the ecological or economic carrying capacity – removals, limited duration contraception etc.

Biodiversity Management:

Management associated with a recognised direct threat to other biodiversity that the species to be managed poses e.g. impacts on resources or competition with threatened or declining species. This management option often entails a fixed upper limit for species and is usually applicable to smaller protected areas that are fenced or species such as elephants that are ecosystem engineers that could potentially have a large impact on the environment and could cause irreversible changes to the state of vegetation.

Conservation Management:

Management associated with live removal of a proportion of the population explicitly for establishing additional populations within the species natural range e.g. black rhino removal and range expansion programme. Populations may be maintained at ecological carrying capacity to optimise production.

Sustainable Harvest Management:

Population management associated with a predetermined and authorised commitment to harvest one or more animal populations for economic purposes e.g. hunting or live sale. Sustainable harvesting are restricted to areas zoned for hunting or resource use areas in the PA zonation plan.

Scientific Research:

The removal of animals to collect material required to achieve a research objective must be identified and approved through a registered research proposal. Capture or culling of animals for research purposes can only be permitted where material cannot be derived from removal operations authorised for other reasons.

4.7.7 Conservation Targets

The 2011 version of the KwaZulu-Natal systematic biodiversity plan identifies the provincial conservation targets. The conservation of Queen Elizabeth Park Nature Reserve contributes towards the achievement of a portion of some of these targets. Targets will continue to be updated as knowledge develops about the ecology of areas, connectivity between them, and other process requirements for ecosystems, communities and species. On this basis, the conservation targets should be viewed as a set of working hypotheses around which conservation planning and evaluation can take place. An advantage of developing strategies around targets is that this process highlights critical knowledge deficits thus guiding future research.

Table 14: Systematic Conservation targets to which Queen Elizabeth Park Nature Reserve contributes

Description	Feature	Status	Amount in PA	Unit	Provincial Target	% target that QEP contributes to
Amphibian	*Afrixalus spinifrons intermedius*		17.8	AREA	6448	0.276054591
Butterfly	*Charaxes xiphares penningtoni*		3.08	AREA	5000	0.0616
Diplopoda	*Dasophrys androclea*		1	PU	12	8.333333333
Diplopoda	*Ischiolobos mesotopos*		1	PU	3	33.33333333
Diplopoda	*Millenarius graminosus*		1	PU	9	11.11111111
Grasshopper	*Eremidium erectus*		8.6	AREA	35975	0.02390549
Grasshopper	*Odontomelus eshowe*		10.88	AREA	977	1.113613101
Grasshopper	*Whitea alticeps*		2.12	AREA	43937	0.00482509
Grasshopper	*Whitea coniceps*		6.48	AREA	30906	0.020966803
Millipede	*Centrobolus tricolor*		2.12	AREA	120897	0.001753559
Millipede	*Doratogonus cristulatus*		33.52	AREA	8449	0.396733341
Millipede	*Doratogonus montanus*		1.4	AREA	204449	0.000684767
Millipede	*Doratogonus natalensis*		21.28	AREA	10267	0.207265998
Millipede	*Doratogonus peregrinus*		23.64	AREA	6386	0.370184779
Millipede	*Spinotarsus glomeratus*		6.48	AREA	9875	0.065620253
Mollusc	*Euonyma lymneaeformis*		23.76	AREA	44414	0.053496645
Mollusc	*Sheldonia burnupi*		11.52	AREA	1193	0.965632858
Plant	*Scilla natalensis*	VU	1	PU	31	3.225806452
Plant	*Senecio exuberans*	EN	5.2	AREA	4000	0.13
Reptile	*Bradypodion bourquini*		5.2	AREA	3160	0.164556962
Vegetation Type	Eastern Temperate Wetlands	LT	0.88	AREA	8536	0.010309278
Vegetation Type	Midlands Mistbelt Grassland	CR	7.44	AREA	125041	0.005950048
Vegetation Type	Moist Ngongoni Veld	CR	39.56	AREA	110163	0.035910424
Vegetation Type	Temperate Alluvial Vegetation: Midland Floodplain Grassland	VU	0.08	AREA	24450	0.000327198

VU	Vulnerable
EN	Endangered
LT	Least Threatened
CR	Critically Endangered
PU	Planning unit

The detailed operational requirements for wildlife management and the achievement of conservation targets are set out in Table 15 below.

Table 15: Framework for Biodiversity Resource & Conservation management - Wildlife management and Conservation Targets

Strategic Outcomes	Management Activities	Management Targets	Target Indicators (Evidence)	Indicators of Concern	Priority	Responsibility
WILDLIFE MANAGEMENT						
Develop and implement a strategy for the introduction and management of wildlife into the protected area in accordance with Ezemvelo KZN Wildlife policies.	▪ Ensure that any proposals for the introduction of wildlife species conform to Ezemvelo KZN Wildlife policies ▪ Ensure that only species known to have historically occurred in the protected area are re-introduced ▪ Ensure that species introductions are adequately documented	An agreed upon approach to future wildlife species introductions	▪ Introduction proposals and relevant internal committee approvals ▪ Introduction permits and monitoring reports	Ad hoc introductions of species, particularly those that may not have historically occurred in the protected area	Year 5	Ezemvelo KZN Wildlife Ecological Advice Unit and Conservation Manager
	Ensure adequate population control measures for the management of wildlife in the protected area	Wildlife Population managed based on the determined ecological carrying capacity	▪ Monitoring reports ▪ Population trend graphs and reports	Ecological degradation as a result of over-stocking of wildlife species Complaints from tourist due to understocking of wildlife species	Ongoing	
Development and implementation of a strategy for human/wildlife conflict	▪ Undertake preventative measures, such as boundary fence maintenance, to minimise the need for human/wildlife conflict ▪ Apply appropriately humane methods, if animals must be destroyed or captured	Effective procedures and relationships with neighbours in dealing with human/wildlife conflict	▪ Records of preventative actions ▪ Incident reports ▪ Permits	Frequent complaints from neighbours with no clear response	Year 1	Conservation Manager

Strategic Outcomes	Management Activities	Management Targets	Target Indicators (Evidence)	Indicators of Concern	Priority	Responsibility
CONSERVATION TARGETS						
Ensure that there is sufficient information and understanding of biodiversity in Queen Elizabeth Park Nature Reserve to inform and support the achievement of specific biodiversity objectives	▪ Identify priority / key species, habitats and ecosystems ▪ Identify gaps in available knowledge with regard to these species ▪ Develop internal and external partnerships to address these gaps ▪ Ensure that the abovementioned data is in an understandable format and readily accessible for decision making purposes to the Conservation Manager.	Priority species, habitats and ecosystems has been identified and information is available on site to support planning and decision making	▪ Priority species, habitat and ecosystem conservation targets ▪ List of required information/ research needs ▪ Information management system containing supporting information	▪ Priority species, habitats and ecosystems have not been identified Information is not sufficient to support planning and decision making	Year 1 and then annually	Conservation Manager and Eco Advice Unit
Processes are established to determine success of management interventions in protecting the ecosystems, communities and species of the protected area	Develop surveillance and monitoring plans for key management interventions in accordance with the Ezemvelo KZN Wildlife policies and norms and standards	Achievement of protected area conservation targets	▪ Surveillance and monitoring plans for key threatening processes ▪ Monitoring plans for key rare and endangered species	Lack of awareness of the status of key threatening processes including infestations of invasive plant species and severity and extent of soil erosion	Year 3	Ezemvelo KZN Wildlife Ecological Advice Unit

4.7.8 Cultural Heritage Management

According to the National Heritage Resources Act No. 25 of 1999 the 'conservation, in relation to heritage resources, includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance'.

The Queen Elizabeth Park Nature Reserve has both natural and cultural values that need to be protected. In addressing Cultural heritage management, the following guiding principles should be adhered to:

- Access to cultural heritage sites must be of a nature that considers the safety of the visitors.
- The cultural heritage sites including grave sites needs to be properly demarcated in order to prevent accidental damage by fire or other means.
- Sites (if required and based on the AMAFA recommendation) must be cleared of excess vegetation to reduce fire risk.

In managing the cultural assets of Queen Elizabeth Park Nature Reserve, in accordance with the National Heritage Resources Act the following guiding principles will apply:

- All Cultural resources must be carefully managed to ensure their survival.
- Heritage resources contribute significantly to research, education and tourism and must be managed and used in a way that ensures respect for cultural values.
- Promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs.
- Heritage resources must be researched, documented and recorded.

The detailed operational requirements for wildlife management and the achievement of conservation targets are set out in Table 16 below.

Table 16: Framework for Biodiversity Resource & Conservation Management - Cultural Heritage Management

Strategic outcome	Management activities	Management targets	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
CULTURAL HERITAGE MANAGEMENT						
Ensure that there is sufficient information and understanding of cultural heritage in Queen Elizabeth Park Nature Reserve to inform and support their management	Undertake a formal cultural heritage investigation	Developing a critical set of cultural heritage information to support planning and decision making	▪ Cultural heritage values included in protected area management plan ▪ Cultural heritage report for Queen Elizabeth Park Nature Reserve	▪ Cultural heritage sites not known ▪ Lack of sufficient cultural heritage knowledge to base planning and decision making	Year 5	Conservation manager with AMAFA
	Facilitate in partnership with AMAFA the identification and recording of all cultural heritage sites and values within the Queen Elizabeth Park Nature Reserve		▪ Photographic and descriptive records of heritage sites ▪ Maps indicating cultural heritage ▪ List of required information/ research needs ▪ Information management system containing supporting information	No cultural heritage investigation has been undertaken and therefore no management of these resources are taking place.	Year 2	Conservation manager with AMAFA
	Identify & prioritise research needs for cultural heritage management in Queen Elizabeth Park Nature Reserve & develop partnerships with institutions to facilitate these	▪ Prioritised research list that address management needs ▪ MoU's with institutions for the implementation of	▪ Research priority list ▪ MoU with partners ▪ Published research	Research is not taking place or do not address management's needs	Year 3	Conservation manager with AMAFA & Eco-advice

		these research priorities				
Ensure the protection and the improved awareness of the cultural heritage resources and values of Queen Elizabeth Park Nature Reserve	Develop & implement site specific management plans including a Collections plan for all cultural heritage sites of significance in Queen Elizabeth Park Nature Reserve	Effective guidelines for management of all cultural heritage sites in Queen Elizabeth Park Nature Reserve	Management guidelines for each heritage site	Vandalism or damage to heritage sites due to inappropriate tourism or management activities	Year 5	Conservation Manager with Amafa
	Assess the effectiveness of cultural heritage management through a cultural heritage condition assessment	Management effectiveness assessment for cultural heritage management	Cultural heritage management condition assessment report	Cultural heritage sites not effectively managed	Ongoing	External specialist

4.8 OPERATIONAL MANAGEMENT

4.8.1 Financial and human resources

Queen Elizabeth Park Nature Reserve cannot be effectively managed without adequate sustained funding and sufficient human resources. In addressing the financial and human resource needs of the protected area, the following guiding principles should be adhered to:

- Adequate funding must be provided for the management of the Queen Elizabeth Park Nature Reserve to ensure the protection of its biodiversity and cultural values and the continued provision of its ecosystem services.
- Commercial operations within the Queen Elizabeth Park Nature Reserve must be self-sufficient and, if profitable, should be used to subsidise its conservation and community programmes.
- Adequate, properly trained and experienced staff must be employed at the Queen Elizabeth Park Nature Reserve to undertake the operations required for its effective management.

4.8.2 Facilities and infrastructure

In order for Queen Elizabeth Park Nature Reserve to operate appropriately, adequate facilities and infrastructure need to be developed and maintained both for management and eco-cultural tourism purposes. In addressing facilities and infrastructure needs in the protected area, the following guiding principles will be adhered to:

- Facilities and infrastructure must be maintained to avoid any damage to the environment and ensure the safety of staff and visitors to the protected area.
- Facilities and infrastructure must be provided to ensure the effective management and operation of the protected area.
- Practical solutions to the provision of electricity should be sought at the protected area based on available renewable energy technologies.
- Facilities and infrastructure must be provided to support the eco-cultural tourism activities in the protected area.

The detailed operational requirements for financial and human resource, and facilities and infrastructure development and management are set out in Table 17 below.

Table 17: Framework for Operational Management - Financial, Human Resources and Infrastructure

Strategic outcome	Management activities	Management target	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
FINANCIAL RESOURCES						
Development and submission of an annual financial plan that identifies the resource needs to achieve the objectives for the protected area	▪ Develop and submit annual budget requests based on the Annual plan of operation and the financial plan ▪ Manage the budget in line with the park management plan and the Public Finance Management Act No 1 of 1999	Secure and sufficient budget to address critical protected area needs	▪ Budget request ▪ Annual plan of operation ▪ Commitment ledger	▪ No operational budget ▪ Inadequate operational budget	Year 2 onwards	Ezemvelo KZN Wildlife Regional Management Unit and Conservation Manager
HUMAN RESOURCES						
Ensure that the protected area is resourced with a sufficient staff establishment for its effective management and operation	▪ Undertake a review of current staffing levels to determine the human resource needs to effectively manage the Queen Elizabeth Park Nature Reserve ▪ Employ sufficient, appropriately skilled staff to meet the management and operational requirements of the Queen Elizabeth Park Nature Reserve ▪ Undertake regular training and skills development to ensure that staff are able to effectively complete their duties	▪ Staff establishment that is adequate for the achievement of critical management needs ▪ Protected area staff adequately skilled for the execution of their duties	▪ Organogram ▪ Training requests, records and registers	▪ Staff establishment is inadequate for the achievement of critical management needs ▪ Protected area staff lack skills for protected area management ▪ No skills development programme	Year 2	Ezemvelo KZN Wildlife Regional Management Unit and Conservation Manager
Ensure that there is an effective staff management programme in place	▪ Effective supervision of staff and continual assessment of standard of work	Fully implemented staff management system ensuring that staff execute	Staff work plans, attendance records and	No staff management programme is in place and	Ongoing	Conservation Manager

Strategic outcome	Management activities	Management target	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
	▪ Implementation of a performance management system	duties to a high standard	performance assessments	unacceptable standard of work		
Ensure that the protected area is compliant with the Occupational Health and Safety Act No 85 of 1993	▪ Appoint Health and safety representatives ▪ Provide training in work considered Listed work under the act as well as first aid training ▪ Identify hazards and evaluate risks for listed work ▪ Provide safety equipment where required ▪ Keep record of any incidents including Injury on Duty ▪ Collaborate with OH&S representatives to minimise risks to employees ▪ Implement a formal programme for hazardous substances with the relevant infrastructure to keep these securely ▪ Provide such facilities, assistance and training as a health and safety representative may reasonably require and as have been agreed upon for the carrying out of his functions ▪ Ensure that any chemical or listed substances that are required to be stored or handled by protected area staff are stored and handled in a safe way	PA management effectively and fully implement the requirements in the Occupational Health and safety Act No 85 of 1993	▪ Occupational Health and Safety Files ▪ Training records of first aiders ▪ Inspection sheets for OH&S representatives ▪ Incident reports ▪ IOD documentation ▪ Hazardous substance programme documentation	Noncompliance with the Occupational Health and safety Act No 85 of 1993	Ongoing	Conservation Manager

Strategic outcome	Management activities	Management target	Target indicator (Evidence)	Indicators of Concern	Priority	Responsibility
FACILITIES AND INFRASTRUCTURE						
Ensure adequate understanding betweeen the different units in QEP and the associated responsibilities	▪ Delineate the boundaries of the different units within QEP ▪ Document the unit and the associated person responsible for the unit. ▪ Agree on the responsibilities of each unit.	Clear understanding of the different units, associated person responsible and their responsibilities.	▪ A Document, outlining the delineation and responsibilities.	▪ Unclear understanding of who is responsible for each unit	Year 1	Conservation Manager to research person responsible for each unit
Ensure that facilities and infrastructure in the protected area are adequately maintained	▪ Ensure that the boundary fence is regularly inspected and adequately maintained to ensure security and to contain game species within the protected area ▪ Develop and implement a schedule maintenance programme to maintain facilities and infrastructure in a condition that meets relevant environmental, health and safety requirements	Regular scheduled maintenance of all facilities and infrastructure	▪ Fence inspection reports and maps ▪ Infrastructure schedule and inspection reports	▪ Environmental, health or safety incidents associated with inadequately maintained facilities and infrastructure ▪ Regular escape of key species due to inadequate fencing	Ongoing	Conservation Manager
	▪ Develop and implement a programme for environmentally responsible service and other infrastructure in Queen Elizabeth Park Nature Reserve	Programme with phased implementation for environmentally responsible infrastructure / technology	▪	▪		

5 Monitoring and reporting

Monitoring and reporting is a critical component of the adaptive management cycle. It enables the effective assessment of management interventions and, if necessary, can be used to direct modifications of management in an effort to achieve the outcomes required.

5.1 ANNUAL MONITORING

The annual monitoring schedule should be designed to monitor the implementation of aspects of the management plan. It should be designed to be straightforward and relatively easy to implement by on-site staff. In accordance with the Ezemvelo KZN Wildlife norms and standards for surveillance and monitoring (Goodman 2011), monitoring is characterised by:

- An objective, target or desired state of the attribute or resource.
- Being part of a formalised adaptive management cycle.
- Establishing and repeatedly evaluating the measures of success of conservation project or management intervention.

Records should be maintained of all key management interventions and of problem events or incidents such as uncontrolled access, poaching, illegal plant collection or uncontrolled/arson fires. In terms of the norms and standards set for surveillance and monitoring (Goodman 2011) these incidents would be deemed to be surveillance.

Scientific monitoring programmes may be established to monitor specific management interventions such as measures for the protection of flagship species. Not all of the management interventions will be monitored through the monitoring schedule. Most of the outcomes of the monitoring process will be captured in an annual report, which will be used to inform the following year's annual plan of operation.

On this basis, a monitoring schedule for Queen Elizabeth Park Nature Reserve is set out in Table 18.

Table 18: Annual Surveillance and Monitoring Schedule

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Law enforcement	Schedule of patrols	Written record	Weekly	Conservation Manager	Annual report
	Recovery of snares	Photographs/written record	Weekly		Annual report
	Illegal incidents	Photographs/written record	Per event		Record of event
Stakeholder engagement	Minutes of meetings of the local board and community trust	Written record	Bi-monthly	Conservation Manager	Annual report
Buffer zone management	Influx of listed invasive vegetation on the protected area's boundaries.	Surveillance plan	To be determined	Conservation Manager supported by Ecological Advice Unit	Annual report
Local and regional planning	Land uses that are approved in the areas around the protected area in local and regional IDPs and SDFs	Written record	Annually	Ezemvelo KZN Wildlife Senior Conservation Manager	Annual report
Eco-cultural tourism	Visitor statistics	Completion of questionnaire	Ongoing	Conservation Manager	Annual report
Fire management	Burning of firebreaks as part of fire management	Written record/map/photography	Annually	Conservation Manager	Annual report
	Burning of blocks as part of controlled burning		Annually		Annual report
	Unplanned wildfires	Written record/map/photography	Per event		Record of event
Invasive plant control	Areas subject to invasive plant control	Monitoring plan	To be determined	Conservation Manager supported by Ecological Advice Unit	Annual report
	State of areas in which invasive plants have been eradicated				
	Records of labour hours/days	Written record	Annually		Annual report

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
	Herbicide usage	Written record	Annually		Annual report
Soil erosion control	Areas subject to erosion control	Monitoring plan	To be determined	Conservation Manager supported by Ecological Advice Unit	Annual report
	State of rehabilitated areas of erosion				Annual report
Conservation targets	Incidents related to flagship species	Photographs/written record	Per event	Conservation Manager	Record of event
	Status of key rare and endangered species, particularly those for which conservation targets have been set	Monitoring plan	To be determined	Conservation Manager supported by Ecological Advice Unit	Annual report/ Annual Biological Returns
Resource utilisation	Extraction of resources from the protected area	Photographs/written records	Per event/ Monthly	Conservation Manager	Annual report/ Annual Biological Returns
Human resources	Staffing levels	Number of full-time staff	Annually	Conservation Manager	Annual report
Facilities and infrastructure	State of roads, 4x4 tracks and paths	Photographs/written records	Quarterly	Conservation Manager	Annual report
	State of the boundary fence	Photographs/written records	Monthly		Annual report
	Weather data	Surveillance plan	To be determined	Ezemvelo KZN Wildlife Ecological Advice Unit	Annual report
	State of facilities and service infrastructure	Maintenance schedule/written records	Monthly	Conservation Manager	Annual report
	Pollution events	Photographs/written records	Per event	Conservation Manager	Per event

As set out in Table 18 the following issues require a surveillance plan:

- The influx of listed invasive vegetation on the Queen Elizabeth Park Nature Reserve's boundaries.
- The capture of weather data – it is recommended that the Ezemvelo KZN Wildlife Ecological Advice Unit approach the South African Weather Service to request that they install a proper weather station at the protected area.

In addition, the following issues require a monitoring plan:

- Measures taken to control invasive plant species.
- Measures taken to control soil erosion.
- Measures taken to manage rare and endangered species, particularly those for which conservation targets have been set.
- The ecological status of the wetlands within the protected area.

These surveillance and monitoring plans must be developed and implemented in accordance with the Ezemvelo KZN Wildlife Norms and Standards: Surveillance and Monitoring Plans for Biodiversity (Goodman 2011).

The preparation of these plans must be undertaken by the Ezemvelo KZN Wildlife Ecological Advice Unit with the support of the Surveillance and Monitoring Working Group of Ezemvelo KZN Wildlife.

5.2 ANNUAL PROTECTED AREA MANAGEMENT PLAN IMPLEMENTATION REVIEW

The purpose of undertaking an annual performance review of implementation of the protected area management plan will be to:

- Determine how effectively the management plan has been implemented.
- Assist in determining the focus for the annual plan of operation and the setting of appropriate time frames and budgets.
- Enable effective adaptive management by identifying changes and modifying management interventions.

The report produced from the annual protected area management plan implementation review should be submitted to the Regional Operations Committee, prior to the annual management meeting for Queen Elizabeth Park Nature Reserve, for its review and comment. Records of recommendations for update/changes to the five-year plan should be kept on record so that when the five-year plan is revised for the subsequent five years, these recommendations can be assessed and included where necessary. This should be undertaken in the form of a running list, which is updated in each annual report so that the final annual report before the five-yearly review of the management plan contains the complete list of recommendations. The review process should include:

- Any recommended minor amendments to the management plan that do not affect the substance of the vision, objectives or zonation.
- Any proposed significant changes to the management plan that are likely to result in amendment to the vision, objectives and zonation must be supported by the Regional Operations Committee and the relevant Operations Committee before being subjected to the appropriate stakeholder participation process and before recommends that the proposed amended protected area management plan be submitted for authorisation to the Ezemvelo KZN Wildlife EXCO Committee, Board and to the MEC.

6 Queen Elizabeth Park Nature Reserve annual plan of operation

Each year an annual plan of operation will be prepared, based on the objectives, strategic outcomes, management activities and targets contained in the protected area management plan.

6.1 IMPLEMENTATION OF THE PROTECTED AREA MANAGEMENT PLAN

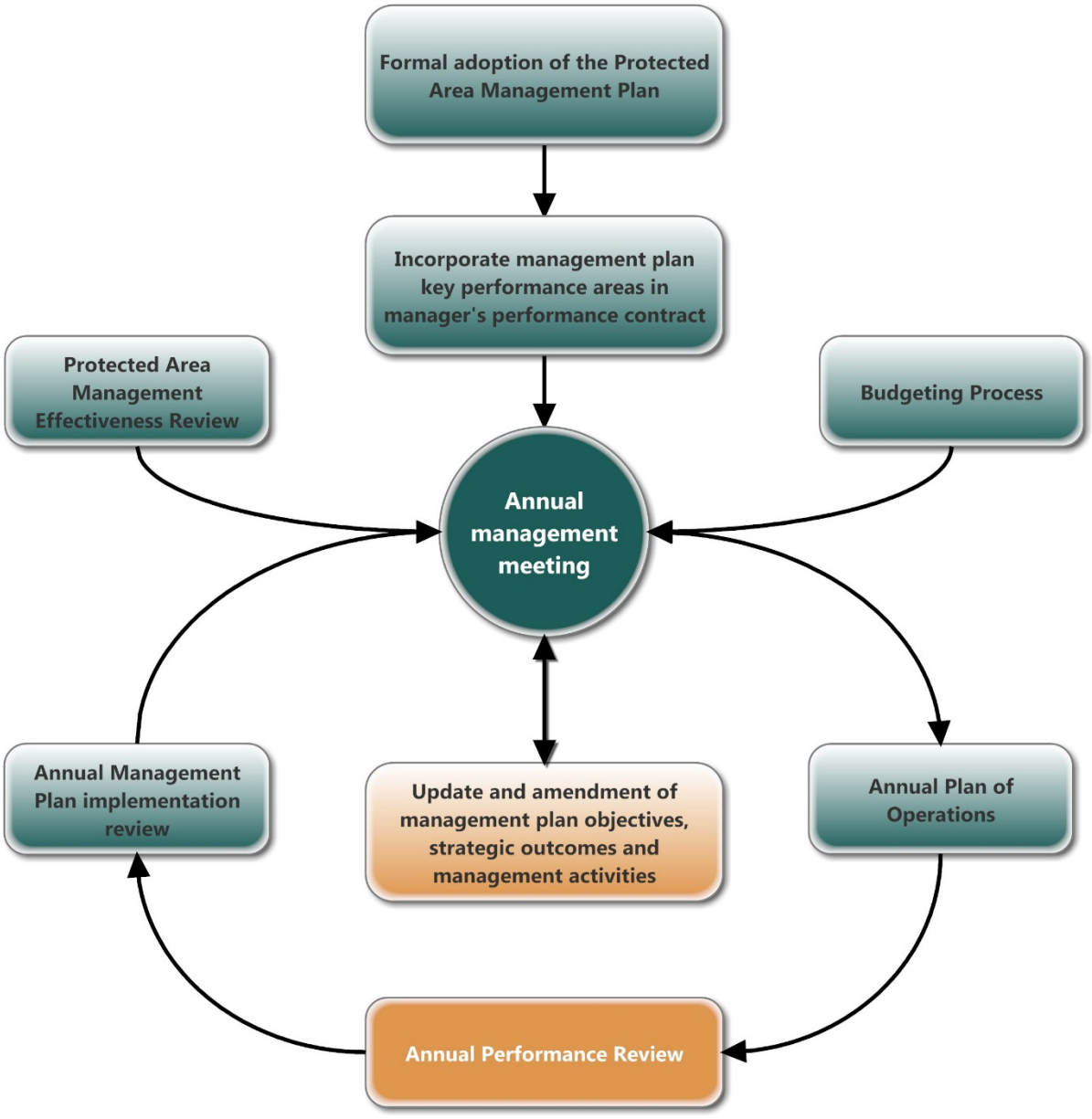


Figure 6: Process for the implementation of Protected Area Management Plans

Each year an annual management meeting is held for each protected area managed by Ezemvelo KZN Wildlife. In terms of the implementation of the protected area management plan, the purpose of the annual management meeting for Queen Elizabeth Park Nature Reserve will be to:

- Finalise the annual report, as part of the annual protected area management plan implementation review described above.

- As part of the annual performance review, determine the need to modify or change any of the management plans objectives, strategic outcomes, management activities or targets.

- Determine management activities for the coming year and to set goals for the year, based on the key performance areas set out in the management plan, in accordance with the Queen Elizabeth Park Nature Reserve manager's performance contract.

- Determine how budgets will be spent in an effort to achieve the goals for each of the quarters of the coming year.

The minutes and notes of the annual management meeting will be compiled in an annual plan of operation, which will include all of the information, set out above, and will determine what management activities need to be completed for the coming year, based on the management plan. The annual plan of operation will be tied to staff performance contracts, and goals set in them will be categorised within the same key performance areas as the integrated management plan.

6.2 RESPONSIBILITIES IN IMPLEMENTING THE PROTECTED AREA MANAGEMENT PLAN

In the tables in the operational management framework, the responsibilities for the completion of management activities are identified. In many cases the people responsible for implementing the activities will be in attendance at the annual management meeting and the requirements for the achievement of the management activities can be discussed and agreed to at the meeting. In some cases, however, the management activities may be required to be referred to the Regional Operations Committee and the relevant Operations Committee in order to assign responsibility for the completion of the management activity.

6.3 QUEEN ELIZABETH PARK NATURE RESERVE RESOURCE REQUIREMENTS

In developing annual plans of operation for Queen Elizabeth Park Nature Reserve the resource requirements, associated with management activities and targets set out in the operational management framework must be considered and budgeted for. The following section broadly identifies the issues that must be considered in determining adequate human resources, funds and equipment for the protected area.

6.3.1 Staff and equipment

Annual plans of operation must consider the staff and equipment needs to undertake the following activities:

- Administration and management of the protected area.
- Patrolling of the protected area and its boundaries.
- An annual burning programme and firefighting response to wildfires.
- An ongoing invasive plant species control programme.
- An ongoing soil erosion control and rehabilitation programme.
- Ecological monitoring and data capture.
- Maintenance of roads, paths and fences within the protected area.
- Maintenance of facilities and infrastructure within the protected area.
- Capture of visitor information and statistics.
- Admitting visitors to the nature reserve and charging entrance fees.
- Community liaison and cooperation.
- Environmental interpretation and education.

6.3.2 Projects

In addition to the requirements for annual recurrent funding for the issues outlined above, there will be a need to identify funding requirements for the following capital projects:

- Equipment and infrastructure required to undertake appropriate waste management practices within the nature reserve.
- Maintain staff houses and administrative facilities within the nature reserve.
- Installation of signage directing tourists to the nature reserve.
- Installation of directional and interpretive signage within the nature reserve.

The abovementioned projects will be prioritised and completed depending on availability of human and financial resources.

6.4 ANNUAL FINANCIAL PLAN

The annual plan of operation must contain a financial plan, which must be approved by the Regional Operations Committee. The annual goals, contained in the annual plan of operation, will be prioritised with the approved budget and guided by the strategic direction of the protected area management plan.

6.5 FINANCIAL ACCOUNTING SYSTEM

It is accepted that all fiscal management will be guided by the Public Finance Management Act (No.1 of 1999) and the Ezemvelo KZN Wildlife Financial Policy and Procedures directive. Funding sources not generated internally will be accounted for in the prescribed process as determined by the donor source.

6.6 FINANCIAL REPORTING

Annual and quarterly fiscal reports will be submitted as directed by the Regional Operations Committee.

REFERENCES

Acocks, J.P.H. (1975) Veld Types of South Africa. Memoir of the Botanical Survey of South Africa No.40. Department of Agricultural Technical Services, Pretoria.

Basson, M.S. (1997) Overview of water resources availability and utilisation in South Africa. Department of Water Affairs and Forestry Report P RSA/00/0197. Pretoria.

Begg, G.W. (1989) the wetlands of Natal (Part 3). The location, status and function of the priority wetlands Natal. Natal Town and Regional Planning Report 73.

Bodenstein, J (2005) Ecological report for Venus-Braamhoek 400 kV transmission line. Indiflora cc Environmental Services.pp.6

Borrini-Feyerabend, G., Farvar, G., Nguinguiri, J. C. & Ndangang, V., (2007). Co-management of natural resources: Organising, Negotiating and Learning-by-Doing. Heidelberg: Kasparek Verlag.

Bowland, A.E et al (2001) Estimation and management of genetic diversity in small populations of plain zebra (Equus quagga) in KwaZulu Natal, South Arica. Pengamon biochemical systematics and ecology (2001).pp. 564-565

Carbutt, C. & Goodman, P. S., (2010). Assessing the Management Effectiveness of State-oned, Land-based Protected Areas in KwaZulu-Natal, Pietermaritzburg: Unpublished report.

Combrink, A.S. and Kyle, R (2006) A handbook on the rare, threatened and endemic species of the Greater St. Lucia Wetland Park. Ezemvelo KZN Wildlife / Greater St. Lucia Wetland Park Authority. Pp. 80-85

Cook, C.L (2012) Preliminary Ecological Habitat Assessment For the Proposed Mbusweni Gravel Road KwaZulu Natal. Thlaho Environmental Consultants. Pp. 25

De Koning, M., (2010). Analysis of a Model designed for land restitution in protected areas in South Africa.. Pretoria: University of Pretoria.

Department of Environmental Affairs and Tourism, (2008). The National Protected Area Expansion Strategy. Pretoria: s.n.

Department of Environmental Affairs and Tourism. (2007) Memorandum of Agreement with Department of Land Affairs. Pretoria.

Ervin, J., (2003). Rapid Assessment and prioritization of protected Area Management (RAPPAM) Methodology. Gland, Switzerland: WWF Forests for Life programme.

Ezemvelo KZN Wildlife. (2010). KZN Protected Area Expansion Strategy and Action Plan. Pietermaritzburg: Unpublished Report.

Frankham, R., (1996). Relationship of geneticvariations to population size in wildlife. Conservation Biology, 10(6), pp. 1500 - 1508.

Grafe, T.U and Linsenmair, K.E. (1989) Protogynous sex change in the reed frog *Hyperolius viridiflavus, Copeia*.pp. 1024

Kepe, T. (2008) Land Claims and Co-management of Protected Areas in South Africa: Exploring the Challenges. Environmental Management.Vol.41 (3) p. 311-321.

Mace, J., (1986). Genetic management of small populations. International Zoo Yearbook, pp. 167 - 174.

Nummelin, M (1990) Tropical Zoology: Relative habitat use of duikers, bushpigs and elephants in Virgin and Selectively logged areas of the Kibale Forest, Uganda. Kibale Forest Project, Taylor and Francis, pp. 119

Razetti, E. and Msunya, C. A (2002) Field guide to the Amphibians and reptiles of Arusha National Park (Tanzania) pp. 34-35

Riegert et al (2007) Diet of sympatric African Grass Owl (Tyto capensis) and Spotted Eagle Owl (Bubo africanus) in the Bamenda Highlands, NW Cameroon. University of South Bohemia, Branisovska. pp. 429-430

Schmidt, W (2006) Reptiles and amphibians of Southern Africa. Struik Publishers.pp.16

Van Rooyen (2012) Avifauna Habitat Assessment, Albert Froneman Consulting. Pp. 8-16

Wenninger, P.S. and Shipley, L. A. (2000) Harvesting, rumination, digestion and passage of fruit and leaf diets by a small ruminant, the blue duiker, Springer-Verlag.pp. 468-471

Appendix A: Definition of terms

Alien species	Species or genotypes, which are not indigenous to Queen Elizabeth Park Nature Reserve and the surrounding area including hybrids and genetically altered organisms.
Biodiversity	The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004]).
Bioprospecting	In relation to indigenous biological resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes – the systematic search, collection or gathering of such resources or making extractions from such resources for purposes of such research, development or application (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004])
Board	The KwaZulu-Natal Nature Conservation Board as defined by the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No.9 of 1997).
Buffer zone	An area surrounding Queen Elizabeth Park Nature Reserve that has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the nature reserve.
Co-management	The term 'Co-management' must be understood within the context of Section 42 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Cultural heritage	As defined in Article 1 of the World Heritage Convention (UNESCO) 1972 , 'cultural heritage' is considered as "monuments, architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of (…) value from the point of view of history, art or science, groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of significance from the point of view of history, art or science, sites, works of man or the combined works of nature and man, and areas including archaeological sites which are of (…) value from the historical, aesthetic, ethnological or anthropological point of view." For the purpose of this IMP, living heritage features such as mountains, pools, rivers, boulders, etc. as well as palaeontological features are included under this definition.
Eco-cultural Tourism (ecotourism):	The travel to natural areas to learn about the way of life and cultural history of people, the natural history of the environment, while taking care not to change the environment and contributing to the economic welfare of the local people (adapted from a definition of ecotourism by Hecto Ceballos Lascurain).
Ecological integrity	The sum of the biological, physical and chemical components of an ecosystem and its products, functions and attributes (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem	A dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem services	As defined in Section 1 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as "environmental goods and services" meaning: a. Benefits obtained from ecosystems such as food, fuel and fibre and genetic resources. b. Benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification. c. Cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;"

	For the purposes of this management plan, sustainable water production is also specifically included under this definition.
Environmental degradation	The deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the loss of species or undesirable reduction of species population numbers from a specific area from an environmental health perspective
Ezemvelo KZN Wildlife	Nature Conservation Service as established in terms of the KwaZulu-Natal Nature Conservation Management Act No. 9 of 1997.
Indigenous species	In relation to a specific protected area, means a species that occurs, or has historically occurred, naturally in a free state of nature within that specific protected area, but excludes a species introduced in that protected area as a result of human activity (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Invasive species	Means any species whose establishment and spread outside of its natural distribution range – a. Threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species. b. May result in economic and environmental harm or harm to human health. (As per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Joint management	The agreed co-ordination of management and/or management actions by landowners and/or mandated managers on their individual or combined properties in order to achieve common management objectives.
Local community	Any community of people living or having rights or interests in a distinct geographical area (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Management	In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community-based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act (as per the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Management authority	In relation to a protected area, means the organ of state or other institution or person in which the authority to manage the protected area is vested (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Monitoring	The collection and analysis of repeated observations or measurements to evaluate change in status, distribution or integrity in order to track the impacts of directed management implemented to achieve a stated management objective.
Nature conservation	The conservation of naturally occurring ecological systems, the sustainable utilisation of indigenous plants and animals therein, and the promotion and maintenance of biological diversity (as per the KwaZulu-Natal Nature Conservation Management Act, 1997 [Act No.9 of 1997]).
Neighbouring community	The communities and people permanently living in the local municipal area/s bordering onto the Nature Reserve.
Natural heritage	As defined in Article 2 of the World Heritage Convention (UNESCO) 1972 'natural heritage' is as: "natural features consisting of physical and biological formations or groups of such formations, which are of (…) value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of (…) value from the point of view of science or conservation, natural sites or precisely delineated natural areas of (…) value from the point of view of science, conservation or natural beauty." For the purposes of this IMP, this would include the required ecological integrity of the protected area for the production of ecosystem services.

Partnerships	A co-operative and / or collaborative arrangement between the Game Reserve management / Ezemvelo KZN Wildlife and a third party that supports the achievement of the Game Reserve management objectives.
Protected areas	Means any area declared or proclaimed as such in terms of section 3 or listed in the Second Schedule to the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997); or Means any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Protected area management committee	Is the management body that deals with the day-to-day management of the protected area and is chaired by the Conservation Manager.
Ramsar Convention	Means: "The Convention on Wetlands of International Importance, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources." (There are presently 158 Contracting Parties to the Convention, the Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.)
Stakeholders/ interested parties	These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups and the general public. According to the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), "stakeholder" means a person, an organ of state or a community contemplated in section 82 (1) (a), or an indigenous community contemplated in section 82(1) (b).
Surveillance	The collection and analysis of single or repeated measurements to establish status or distribution or integrity at a point in time in the absence of a specific management context or objective.
Sustainable	In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
Wilderness area	Means an area designated in terms of section 22 or 26 for the purpose of retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless, without permanent improvements or human habitation (as defined by the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
World heritage site	Means a World Heritage Site as defined in the World Heritage Convention Act, No. 49 of 1999 under Chapter 1, section 1 subsection (xxiv).

Appendix B: Proclamation of Queen Elizabeth Park Nature Reserve

†*No. 31, 1960.

[*English text signed by the Administrator.*]

PROCLAMATION

By the Honourable ALFRED ERNEST TROLLIP,
Administrator of the Province of Natal.

WHEREAS by Section 2 (1) (*c*) of Ordinance No. 35 of 1947 (the Natal Parks, Game and Fish Preservation Ordinance, 1947), I, acting upon the advice and with the consent of the Executive Committee, am empowered to proclaim that any place upon land acquired by the Natal Provincial Administration shall be a Nature Reserve, to assign a name to such Nature Reserve and to define the boundaries thereof:

AND WHEREAS by Section 2 (2) of the said Ordinance, I, acting upon the advice and with the consent of the Executive Committee, am empowered to declare that any Nature Reserve proclaimed in terms of Section 2 (1) (*c*) of the aforesaid Ordinance shall be deemed to be private property:

NOW, THEREFORE, I acting upon the advice and with the consent of the Executive Committee, do hereby proclaim and declare that the property described in the Schedule hereto shall be a Nature Reserve to be known as the Queen Elizabeth Park Nature Reserve and shall be deemed to be private property for the purpose of Ordinance No. 35 of 1947.

GOD SAVE THE QUEEN!

Given under my hand at Pietermaritzburg, Natal, this Third day of June, One Thousand Nine Hundred and Sixty.

A. E. TROLLIP,
Administrator

SCHEDULE.

Queen Elizabeth Park Nature Reserve.

A piece of land in extent approximately 230 acres situated in the City and County of Pietermaritzburg, bounded as follows:—

"From the intersection of the North-eastern boundary of the National Road to Howick with the north-western Boundary of the Townlands of Pietermaritzburg, thence along the borough boundary for a distance of approximately 900 feet to its intersection with the South rn stream boundary of Lot 133, and thence following the middle of this stream along the South-western boundaries of Lot 133, Lot 449, and Lot 450, to a point being the intersection of the stream boundary of Lot 244 with the prolongation of the North-western boundary of Lease Country Club, as depicted on diagram No. L. Vol. 8. Fol. 37, and thence along this said prolongation and the North-western boundary of Lease Country Club, as depicted on diagram No. L. Vol. 8. Fol. 37, to the western corner of Lease Country Club and Lease Country Club A. and thence along the South-western boundaries of Lease Country Club A. and the prolongation of its Southernmost boundary for a distance of approximately 200 ft. and thence at an angle of approximately 97° for a distance of approximately 300 feet and thence at an angle of 255° for a distance of approximately 480 feet thence at an angle of approximately 62° for a distance of approximately 130 feet to the Northern edge of the National Road to Howick and thence along the Northern edge of the said National Road to the intersection first mentioned."

†*No. 31, 1960.

[*Engelse lesing deur die Administrateur onderteken.*]

PROKLAMASIE

Van Sy Edelagbare ALFRED ERNEST TROLLIP,
Administrateur van die provinsie Natal.

NADEMAAL artikel 2 (1) (*c*) van Ordonnansie No. 35 van 1947 (Ordonnansie op die Bewaring van Natalse Parke, Wild en Vis, 1947) my die bevoegdheid verleen om enige plek op grond wat deur die Natalse Provinsiale Administrasie verkry is, op raad en met die toestemming van die Uitvoerende Komitee tot 'n natuurtuin te proklameer, 'n naam aan sodanige natuurtuin toe te ken en die grense daarvan te omskryf:

EN NADEMAAL artikel 2 (2) van vermelde ordonnansie my die bevoegdheid verleen om op raad en met die toestemming van die Uitvoerende Komitee te verklaar dat 'n natuurtuin wat kragtens artikel 2 (1) (*c*) van voormelde ordonnansie geproklameer is, as private eiendom beskou word:

SO IS DIT dat ek hierby op raad en met die toestemming van die Uitvoerende Komitee proklameer en verklaar dat die eiendom wat in die bylae hiervan omskryf word, 'n natuurtuin bekend as die Natuurtuin Koningin Elizabethpark is en vir die doel van Ordonnansie No. 35 van 1947 as private eiendom beskou word.

GOD BEHOEDE DIE KONINGIN!

Gegee onder my handtekening te Pietermaritzburg, Natal, op hede die dag derde van Junie eenduisend nege-honderd-en-sestig.

A. E. TROLLIP,
Administrateur.

BYLAE.

Natuurtuin Koningin Elizabethpark.

'n Stuk grond van ongeveer 230 acres, geleë in die stad en county Pietermaritzburg en begrens as volg:—

„Vanaf die Kruising van die noordoostelike grens van die nasionale pad na Howick en die noordwestelike grens van die stadsgrond van Pietermaritzburg ongeveer 900 voet langs die munisipale grens tot waar hy die suidelike stroomgrens van perseel 133 kruis; daarvandaan in die middel van hierdie stroom langs die suidwestelike grense van perseel 133, perseel 449 en perseel 450 tot waar die stroomgrens van perseel 244 en die verlenging van die noordwestelike grens van Lease Country Club, soos aangedui op kaart No. L boekdeel 8 fol. 37, mekaar kruis; daarvandaan langs vermelde verlenging en die noordwestelike grens van Lease Country Club, soos aangedui op kaart No. L boekdeel 8 fol. 37, tot by die westelike hoek van Lease Country Club en Lease Country Club A; daarvandaan langs die suidwestelike grense van Lease Country Club A en ongeveer 200 voet langs die verlenging van sy mees suidelike grens; daarvandaan ongeveer 300 voet onder 'n hoek van ongeveer 97°; daarvandaan ongeveer 480 voet onder 'n hoek van 255°; daarvandaan ongeveer 130 voet onder 'n hoek van ongeveer 62° tot by die noordelike rand van die nasionale pad na Howick; daarvandaan langs die noordelike rand van vermelde nasionale pad tot by eersvermelde kruising."

Appendix C: List of statutes to which Queen Elizabeth Park Nature Reserve is subject

Biodiversity and Cultural Resource Management and Development:

- Animals Protection Act [No. 71 of 1962]
- Atmospheric Pollution Prevention Act [No. 45 of 1965]
- Conservation of Agricultural Resources Act [No. 43 of 1983]
- Constitution of the Republic of South Africa [No. 108 of 1996]
- Criminal Procedures Act [1977]
- Environment Conservation Act [No. 73 of 1989]
- Forest Act [No. 122 of 1984]
- Hazardous Substances Act [No. 15 of 1973]
- KwaZulu Nature Conservation Act [No. 8 of 1975]
- KwaZulu-Natal Heritage Management Act [No. 10 of 1997]
- KwaZulu-Natal Nature Conservation Management Act [No. 9 of 1997]
- Marine Living Resources Act [No. 18 of 1998]
- National Environmental Management Act [No. 107 of 1998]
- National Environmental Management: Biodiversity Act [No. 10 of 2004]
- National Environmental Management Integrated Coastal Management Act [No. 24 of 2008]
- National Environmental Management: Protected Areas Act [No. 57 of 2003]
- National Environmental Management Waste Act [No. 59 of 2008]
- National Forests Act [No. 84 of 1998]
- National Heritage Resources Act [No. 25 of 1999]
- National Water Act [No. 36 of 1998]
- National Water Amendment Act [No. 45 of 1999]
- National Veld and Forest Fire Act [No 101 of 1998]
- Nature Conservation Ordinance [No. 15 of 1974]
- World Heritage Convention Act [No. 49 of 1999]

General Management:

- Development Facilitation Act [No. 67 of 1995]
- Disaster Management Act [No. 57 of 2002]
- Fire Brigade Services Act [No. 99 of 1987]
- KwaZulu-Natal Planning and Development Act [No. 5 of 1998]
- Land Reform Labour Tenant Act [No. 3of 1996]
- Local Government: Municipal Systems Act [No. 32 of 2000]
- National Road Traffic Act [No. 93 of 1996]
- National Building Standards Act [No. 103 of 1977]
- Natal Town Planning Ordinance [No. 27 of 1949]
- Occupational Health and Safety Act [No. 85 of 1993]
- Promotion of Access to Information Act [No. 2 of 2000]
- Promotion of Administrative Justice Act [No.3 of 2000]
- Restitution of Land Rights Act [No.22 of 1994]
- Spatial Planning and Land Use Management Act [No.16 of 2013]
- Water Services Act [No. 108 of 1997]
- National Tourism Act [No. 3 of 2014]

Financial Management:

- Public Finance Management Act [No. 1 of 1999]
- PAIA/ PAJA

Human Resource Management:

- Basic Conditions of Employment Act [No. 75 of 1997]
- Broad-Based Black Economic Empowerment Act [No. 53 of 2003]
- Compensation for Occupational Injuries and Diseases Act [No. 130 of 1993]
- Employment Equity Act [No. 55 of 1998]
- Labour Relations Act [No. 66 of 1995]
- Pension Funds Act [No. 24 of 1956]
- Skills Development Act [No. 97 of 1998]
- Skills Development Levies Act [No. 9 of 1999]
- Unemployment Insurance Act [No. 63 of 2001]

Appendix D: Environmental impact assessment regulations listed activities in terms of Regulation R. 985, Listing Notice 3

The purpose of this Notice is to list activities where environmental authorisation is required prior to commencement of that activity in specific identified geographical areas only.

The following activities are regulated in terms of Listing Notice 3:

1. **T**he development of billboards exceeding 18 square metres in size outside urban areas, mining areas or industrial complexes.
2. The development of reservoirs for bulk water supply with a capacity of more than 250 cubic metres.
3. The development of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast or tower- a) is to be placed on a site not previously used for the purpose; and b) will exceed 15 metres in height - but exclude attachments to existing buildings and masts on rooftops.
4. The development of a road wider than 4 metres with a reserve less than 13,5 metres.
5. The development of resorts, lodges, hotels and tourism or hospitality facilities that sleep less than 15 people.
6. The development of resorts, lodges, hotels and tourism or hospitality facilities that sleeps 15 people or more.
7. The development of aircraft landing strips and runways 1.4 kilometres and shorter
8. The development and related operation of above ground cableways and funiculars.
9. The development and related operation of zip-lines or foefie-slides exceeding 100 metres in length.
10. The development of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.
11. The development of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles.
12. The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.
13. The development and related operation of facilities of any size for any form of aquaculture.
14. The development of - a) canals & channels exceeding 10 square metre in size; b) bridges exceeding 10 square metres in size; c) dams, where the dam including infrastructure & water surface area exceeds 10 square metres in size; d) weirs, where the weir including infrastructure & water surface area exceeds 10 square metres in size; bulk storm water outlet structures exceeding 10 square metres in size; e) marinas, slipways & jetties exceeding 10 square metres in size; f) buildings & boardwalks exceeding 10 square metres in size, g) infrastructure or structures with a physical footprint of 10 square metres or more; Where such a development occurs - a) within a watercourse; b) in front of a development setback; c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; Excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.
15. The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010.
16. The expansion of reservoirs for bulk water supply where the capacity will be increased by more than 250 cubic metres.
17. The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.
18. The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.
19. The expansion of runways or aircraft landing strips where the expanded runways or aircraft landing strips will be longer than 1,4 kilometres in length.

20. The expansion and related operation of above ground cableways and funiculars where the development footprint will be increased.
21. The expansion of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles, where the development footprint will be expanded.
22. The expansion of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage facilities or infrastructure will be expanded by 30 cubic metres or more but no more than 80 cubic metres.
23. The expansion of - a) canals & channels where the canal or channel is expanded by 10 square metres or more in size; b) bridges expanded by 10 square metres or more in size; c) dams, where the dam is expanded by 10 square metres or more in size; d) weirs, where the weir expanded by 10 square metres or more in size; bulk storm water outlet structures where the structure is expanded by 10 square metres or more in size; e) marinas, slipways & jetties where expanded by 10 square metres or more in size; f) buildings & boardwalks where expanded by 10 square metres or more in size, g) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; Where such a development occurs - a) within a watercourse; b) in front of a development setback adopted in the prescribed manner; c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; Excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.
24. The expansion and related operation of facilities of any size for any form of aquaculture.
25. The expansion and related operation of zip-lines or foefie-slides, where the zip-line or foefie-slide is expanded by 100 metres in length or more.
26. Phased activities listed in Listing Notice 3 which commenced on or after December 2014; Phased activities listed in any other NEMA notice on or after the effective date; where any phase of the activity may be below the threshold but where a combination of phases, including extensions or expansions will exceed a specified threshold; Excluding activities 7, 8, 11, 13, 17,, 20, 21 & 24 in Listing Notice 3.

APPENDIX D

Geographical areas based on environmental attributes		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A protected area identified in terms of NEMPAA					■	■								■					■						■	
A protected area identified in terms of NEMPAA, excluding conservancies		■	■	■			■	■			■		■		■		■	■		■			■	■		
World heritage Site		■	■	■	■	■	■	■			■		■	■	■		■	■	■	■			■	■	■	
Outside urban areas	a) Areas within 10 kilometres from national parks or worl heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve		■	■	■		■				■				■		■	■	■				■			
	b) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined		■	■	■	■	■	■			■	■			■		■	■	■	■		■	■			
	c) Areas within 100 metres of a water course or wetland					■																				
	d) Areas within 100 metres of a watercourse																									
	e) Areas within 500 metres from protected areas identified in terms of NEMPAA																									
	e) All areas outside urban areas								■	■											■					■
	f) Within areas of indigenous vegetation											■										■				
	g) Areas within 100 metres of the edge of a watercourse						■	■			■							■		■			■			
In urban areas	a) Areas zoned for use as public open space		■	■	■	■	■	■	■	■	■	■			■		■	■	■	■	■	■	■			■
	b) Areas seawards of the development setback line or within 100 metres from the high-water mark of the sea if no such development setback line is determined		■	■	■	■	■	■	■	■	■	■			■		■	■	■	■	■	■	■			■
	c) Within urban protected areas		■	■	■												■		■							
	d) Areas within 1 kilometre from protected areas identified in terms of NEMPAA			■																						
	e) Areas within 500 metres from protected areas identified in terms of NEMPAA						■		■	■								■			■					
	f) In an estuarine functional zone								■	■											■					■
	g) A protected area identified in terms of NEMPAA, excluding conservancies								■	■											■					■
	h) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans								■	■											■					■
	i) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority								■	■											■					■
	j) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose								■	■					■						■					■
	k) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined								■	■											■					■
	l) Areas within 32 metres from the edge of a watercourse											■										■				
Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve		■					■													■						
Sites or areas identified in terms of an international convention		■	■	■	■	■	■	■			■		■	■	■		■	■	■	■			■	■	■	
Provincial Protected Area Expansion Strategy Focus areas						■																				
Trans-frontier protected areas managed under international conventions		■	■	■	■	■	■				■		■	■			■	■	■				■		■	
Community Conservation Areas		■	■	■	■	■	■	■			■		■	■	■		■	■	■	■			■	■	■	
Biodiversity Stewardship Programme Biodiversity Agreement areas		■	■	■	■	■	■	■			■		■	■	■		■	■	■	■			■	■	■	
Core areas in biosphere reserves																							■		■	
In an estuarine functional zone		■	■	■	■	■	■	■			■	■	■	■	■		■	■	■	■		■	■	■	■	
Within 500 metres of an estuarine functional zone											■												■			
Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose		■	■	■	■	■	■	■			■	■	■	■			■	■	■	■		■	■		■	
Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined		■																								
Within any critically endangered or endangered ecosystem listed in terms of Section 52 of NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004													■													
Within the littoral active zone or 100 metres inland from the high-water mark of the sea or an estuarine functional zone, whichever distance is greater, excluding where such removal will occur behind the development setback line on erven in urban areas													■													
On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning													■													
Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined														■											■	
Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans															■											
Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans		■	■	■	■	■	■	■			■	■	■	■			■	■	■			■	■		■	
Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority		■	■	■	■	■	■	■			■	■	■	■	■		■	■	■	■		■	■		■	

APPENDIX E

Appendix E: List of policies, servitudes, unpublished documents and supporting documentation

Copies available from:
a) Reserve Management and / or,
b) Regional Ecologist

Item:
1. Ezemvelo KZN Wildlife Corporate Strategic Plan and Performance Plan for 2015 - 2020
2. Ezemvelo KZN Wildlife Corporate Policies and Procedures (Norms & Standards) listed in the table below
3. Ezemvelo KZN Wildlife Biodiversity Database Checklists for Queen Elizabeth Park Nature Reserve
4. Proclamations of Queen Elizabeth Park Nature Reserve
5. Queen Elizabeth Park Nature Reserve Public Participation Report, 2017

Listed below are the Ezemvelo KZN Wildlife corporate policies (norms and standards) referenced from the intranet that are most relevant to Ezemvelo KZN Wildlife protected area management. It is the responsibility of all management and other personnel associated with management of protected areas to ensure that they familiarise themselves and comply with the most recent versions of all Ezemvelo KZN Wildlife Board Approved Policies.

APPENDIX E

CORPORATE AFFAIRS	
B 2	Access to Ezemvelo KZN Wildlife Areas and Employment
B 5	Outsourcing of Functions and Services
B 7	Monuments, Memorials and Names of Protected Areas under the control of Ezemvelo KZN Wildlife
B 8	Restricted use of Board Theatres, Halls and Conference Facilities etc
B 9	Code of Ethics / Conduct
B 10	Photography in Board Protected Areas
B 13	Mission Statement
B 14	Access to Information
INTERNAL AUDIT	
C 5	Management Control
Biodiversity conservation operations	
1. NATURAL RESOURCE SUSTAINABILITY	
Threatened Species and Ecosystems	
D 1.1	Disposal of Black Rhino
D 1.2	Disposal of Surplus White Rhino
D 1.3	Strategy for the Management of Southern White Rhino in KwaZulu-Natal
D 1.4	Strategy for the Biological Management of Black Rhino in KwaZulu-Natal
D 1.5	Rhinoceros Products
D 1.6	Crocodilians
D 1.7	Cycads
D 1.8	Disposal of Threatened Species
Exotic and Invasive species	
D 1.9	Release of Alien Species
D 1.10	Control Measures for Red-billed Quelea
D 1.12	Grass Carp
D 1.13	Establishment of Alien Plantations
Migratory Species	
D 1.14	Black Wildebeest and Blue Wildebeest Hybridization and Conservation
D 1.15	Permit authorising the collection of Biological Material within Board Areas
2. CONSERVATION EFFECTIVENESS	
Strategic applications	
D 2.1	Involvement of the KwaZulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme
Conservation management: protected areas management	
D 2.2	Management of Wilderness Areas
D 2.3	Protected Area Development
D 2.4	Prohibition of Works and Servitudes in Board Areas
D 2.5	Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board
D 2.6	Quarries in KZN Protected Areas
D 2.7	Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas

D 2.8	Ecotourism and Protected Areas
D 2.9	Solid Waste Management within Protected Areas
D 2.10	State Security Service Activities within Board Areas
D 2.11	Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas
Integrated environmental management	
D 2.12	Integrated Environmental Management - incorporating the procedure for the assessment of the impact of proposed development projects on nature conservation concerns.
D 2.13	Precautionary Principle
D 2.14	Shark Net Installations
D 2.15	Bioprospecting in KwaZulu-Natal
D 2.17	Use of Pesticides by the Ezemvelo KZN Wildlife: Safety to Humans and the Environment
D 2.18	Interference with the Mouth of a Lagoon or River (Breaching)
Ex Situ Wild Animal Management	
D 2.21	Re-establishment of Terrestrial Mammals in Board Areas
D 2.22	Translocation of Animals
D 2.25	Elephant Introductions and Elephant in Enclosures
D 2.27	Introduction and Keeping of Large Predators in Enclosures in KZN
D 2.28	Use of Narcotic Drugs
D 2.29	Falconry
Human Animal Conflict - Inside and Outside Protected Areas	
D 2.30	Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas
D 2.31	Problem Animal Control
D 2.32	Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops
D 2.33	Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board

APPENDIX E

Environmental Awareness	
D 2.34	Environmental Education Policy
3. BIODIVERSITY PROTECTION	
Co-management	
D 3.1	Supply of Game to Conservancies, Community Conservation Areas and Biosphere Reserves in KwaZulu-Natal
D 3.2	Establishment and Management of Community Conservation Reserves (CCR)
D 3.4	Community Conservation Programmes
D 3.5	Neighbours' Access to Board Protected Areas
D 3.6	Relationship with Local Boards
D 3.7	Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners
D 3.8	Community Trust
D 3.9	Community Levy Policy and Guidelines
D 3.10	Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal
D 3.11	Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal
Resource use benefits	
D 3.12	Disposal of Venison from Ezemvelo KZN Wildlife Management Operations
D 3.13	Sustainable use of wildlife resources
D 3.14	Freshwater Angling
D 3.15	Freshwater species utilisation
D 3.16	Use of plant resources from protected areas
D 3.17	Use of doomed biological material
D 3.19	Provision of hunting by Ezemvelo KZN Wildlife
4. RELATIONSHIPS	
D 4.1	Neighbour Relations
D 4.2	Participation - Non Government Organisations
D 4.3	Data Access
D 4.4	Consultation and Communication with Stakeholders: Policy and Guidelines
COMMERCIAL OPERATIONS	
E 1	Concessions for Welfare Groups
E 2	Hiking and Mountaineering
E 3	Educational Concessions
E 4	Club Facilities within Board Areas
E 5	Hutted Camps
E 6	Joint Venture Scheme
E 7	Allocation of Sites in terms of the Joint Venture Scheme
E 8	Access to Protected Areas through Unofficial Entry Points
E 9	Visitor Facilities Management by Ezemvelo KZN Wildlife.
E 10	Lease of Lakeshore at State Dam Protected Areas
E 11	Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife)
E 12	Private Sector Reservations Policy
E 13	Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas
E 14	Discounting of Tariffs for Walk-in Guests
E 15	Ecotourism Discounting Strategy
E 16	Travel Trade Commissions: Tour Operator/ Travel Agency
E 17	Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements

APPENDIX E

E 18	Administrative and operational policy on Professional hunting in South Africa
E 19	Commercialisation

Appendix F: Species list for Queen Elizabeth Park Nature Reserve

The species lists was sourced from the Ezemvelo KZN Wildlife biodiversity database to ensure that the information presented is the most current and accurate, both in terms of the species present or absent in the protected area and their threatened status.

Abbreviations:

SARDB South African Red Data Book

Fauna:

Taxon Name	English Name	SARDB Status
Amphibians		
Hyperolius marmoratus	Painted Reed Frog; Marbled Reed Frog; Striped Reed Frog	Least Concern
Afrixalus spinifrons intermedius	Intermediate Spiny Reed Frog; Intermediate Natal Leaf-folding Frog; Intermediate Natal Spiny Reed Frog	Near Threatened
Amietia quecketti	Common river frog	Least Concern
Amietophrynus gutturalis	Guttural Toad; Common African Toad; Greater Cross-marked Toad	Least Concern
Cacosternum nanum	Dwarf Dainty Frog; Bronze Caco	Least Concern
Hyperolius pusillus	Water Lily Frog; Dwarf Reed Frog; Lily Pad Frog	Least Concern
Phrynobatrachus natalensis	Snoring Puddle Frog; Natal Puddle Frog	Least Concern
Tomopterna natalensis	Natal Sand Frog; Natal Burrowing Frog	Least Concern
Birds		
Anas sparsa	African Black Duck	Least Concern
Accipiter badius	Shikra, Little Banded Goshawk	Least Concern
Accipiter melanoleucus	Black sparrowhawk	Least Concern
Accipiter minullus	Little Sparrowhawk	Least Concern
Accipiter tachiro	African Goshawk	Least Concern
Acridotheres tristis	Common Myna, Indian Myna	Least Concern
Alopochen aegyptiaca	Egyptian Goose	Least Concern
Amandava subflava	Orange-breasted Waxbill	Least Concern
Amblyospiza albifrons	Thick-billed Weaver	Least Concern
Anas undulata	Yellow-billed duck	Least Concern
Andropadus importunus	Sombre Greenbul, Sombre Bulbul	Least Concern
Anthus brachyurus	Short-tailed Pipit	Vulnerable
Anthus cinnamomeus	African Pipit, Grassveld Pipit	Least Concern
Apalis thoracica	Bar-throated Apalis	Least Concern
Apaloderma narina	Narina Trogon	Least Concern
Apus affinis	Little Swift	Least Concern
Apus barbatus	African Black Swift, Black Swift	Least Concern
Apus caffer	White-rumped Swift	Least Concern
Aquila verreauxii	Verreauxs' Eagle, Black Eagle	Vulnerable
Ardea cinerea	Grey Heron	Least Concern
Ardea melanocephala	Black-headed Heron	Least Concern
Ardea purpurea	Purple Heron	Least Concern
Aviceda cuculoides	African Cuckoo Hawk	Least Concern
Batis capensis	Cape Batis	Least Concern
Bostrychia hagedash	Hadeda Ibis	Least Concern
Bradypterus baboecala	Little Rush-Warbler, African Sedge Warbler	Least Concern
Bubo africanus	Spotted Eagle-Owl	Least Concern
Bubulcus ibis	Cattle Egret	Least Concern
Bucorvus leadbeateri	Southern Ground-Hornbill, Ground Hornbill	Endangered
Buteo buteo	Steppe Buzzard	Least Concern
Buteo rufofuscus	Jackal Buzzard	Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Bycanistes bucinator	Trumpeter Hornbill	Least Concern
Camaroptera brachyura	Green-backed Camaroptera, Bleating Warbler	Least Concern
Campephaga flava	Black Cuckooshrike	Least Concern
Campethera abingoni	Golden-tailed Woodpecker	Least Concern
Caprimulgus pectoralis	Fiery-necked Nightjar	Least Concern
Cecropis abyssinica	Lesser Striped Swallow	Least Concern
Cecropis cucullata	Greater Striped Swallow	Least Concern
Centropus burchellii	Burchell's Coucal	Least Concern
Cercotrichas leucophrys	White-browed Scrub-Robin, White-browed Robin	Least Concern
Ceryle rudis	Pied Kingfisher	Least Concern
Chalcomitra amethystina	Amethyst Sunbird, Black Sunbird	Least Concern
Chalcomitra senegalensis	Scarlet-chested Sunbird	Least Concern
Chlorophoneus olivaceus	Olive Bush-Shrike	Least Concern
Chlorophoneus sulfureopectus	Orange-breasted Bush-Shrike	Least Concern
Chrysococcyx caprius	Diederick Cuckoo, Diederik Cuckoo	Least Concern
Chrysococcyx cupreus	African Emerald Cuckoo, Emerald Cuckoo	Least Concern
Chrysococcyx klaas	Klaas's Cuckoo	Least Concern
Ciconia ciconia	White Stork	Least Concern
Ciconia nigra	Black Stork	Vulnerable
Cinnyricinclus leucogaster	Violet-backed Starling, Plum-coloured Starling	Least Concern
Cinnyris afer	Greater Double-collared Sunbird	Least Concern
Cinnyris chalybeus	Southern Double-collared Sunbird, Lesser Double-collared Sunbird	Least Concern
Cinnyris talatala	White-bellied Sunbird	Least Concern
Cisticola aberrans	Lazy Cisticola	Least Concern
Cisticola fulvicapilla	Neddicky	Least Concern
Cisticola juncidis	Zitting Cisticola, Fan-tailed Cisticola	Least Concern
Cisticola natalensis	Croaking Cisticola	Least Concern
Cisticola tinniens	Levaillant's Cisticola	Least Concern
Coccopygia melanotis	Swee Waxbill	Least Concern
Colius striatus	Speckled Mousebird	Least Concern
Columba arquatrix	African Olive-Pigeon, Rameron Pigeon	Least Concern
Columba guinea	Speckled Pigeon, Rock Pigeon	Least Concern
Columba larvata	Lemon Dove, Cinnamon Dove	Least Concern
Coracias garrulus	European Roller	Near Threatened
Coracina caesia	Grey Cuckooshrike	Least Concern
Corvus albicollis	White-necked Raven	Least Concern
Corvus albus	Pied Crow	Least Concern
Corythornis cristatus	Malachite Kingfisher	Least Concern
Cossypha caffra	Cape Robin-Chat, Cape Robin	Least Concern
Cossypha dichroa	Chorister Robin-Chat, Chorister Robin	Least Concern
Cossypha natalensis	Red-capped Robin-Chat, Natal Robin	Least Concern
Coturnix coturnix	Common Quail	Least Concern
Coturnix delegorguei	Harlequin Quail	Least Concern
Creatophora cinerea	Wattled Starling	Least Concern
Crithagra gularis	Streaky-headed Seedeater, Streaky-headed Canary	Least Concern
Crithagra mozambica	Yellow-fronted Canary, Yellow-eyed Canary	Least Concern
Crithagra scotops	Forest canary	Least Concern
Crithagra sulphurata	Brimstone Canary, Bully Canary	Least Concern
Cuculus clamosus	Black Cuckoo	Least Concern
Cuculus solitarius	Red-chested Cuckoo	Least Concern
Cyanomitra olivacea	Olive Sunbird	Least Concern
Cyanomitra veroxii	Grey Sunbird	Least Concern
Cypsiurus parvus	African Palm-Swift, Palm Swift	Least Concern
Delichon urbicum	Common House-Martin, House Martin	Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Dendrocygna viduata	White-faced Duck	Least Concern
Dendropicos fuscescens	Cardinal Woodpecker	Least Concern
Dendropicos griseocephalus	Olive Woodpecker	Least Concern
Dicrurus adsimilis	Fork-tailed Drongo	Least Concern
Dryoscopus cubla	Black-backed Puffback, Puffback	Least Concern
Elanus caeruleus	Black-shouldered Kite	Least Concern
Emberiza flaviventris	Golden-breasted Bunting	Least Concern
Emberiza tahapisi	Cinnamon-breasted Bunting, Rock Bunting	Least Concern
Estrilda astrild	Common Waxbill	Least Concern
Estrilda perreini	Grey Waxbill	Least Concern
Euplectes ardens	Red-collared Widowbird, Red-Collared Widow	Least Concern
Euplectes orix	Southern Red Bishop, Red Bishop	Least Concern
Falco biarmicus	Lanner falcon	Vulnerable
Gallinula chloropus	Common Moorhen	Least Concern
Gymnoris superciliaris	Yellow-throated Petronia, Yellow-throated Sparrow	Least Concern
Halcyon albiventris	Brown-hooded Kingfisher	Least Concern
Haliaeetus vocifer	African Fish-Eagle	Least Concern
Hedydipna collaris	Collared Sunbird	Least Concern
Hirundo albigularis	White-throated Swallow	Least Concern
Hirundo fuligula	Rock Martin	Least Concern
Hirundo rustica	Barn Swallow, European Swallow	Least Concern
Iduna natalensis	Dark-capped Yellow Warbler, Yellow Warbler	Least Concern
Indicator indicator	Greater Honeyguide	Least Concern
Indicator minor	Lesser Honeyguide	Least Concern
Jynx ruficollis	Red-throated Wryneck	Least Concern
Lagonosticta rubricata	African Firefinch, Blue-billed Firefinch	Least Concern
Lamprotornis nitens	Cape Glossy Starling, Glossy Starling	Least Concern
Laniarius ferrugineus	Southern Boubou	Least Concern
Lanius collaris	Fiscal Shrike	Least Concern
Lanius collurio	Red-backed Shrike	Least Concern
Lioptilus nigricapillus	Bush Blackcap	Vulnerable
Lonchura cucullatus	Bronze Mannikin	Least Concern
Lonchura nigriceps	Red-backed Mannikin	Least Concern
Lophaetus occipitalis	Long-crested Eagle	Least Concern
Lybius torquatus	Black-collared Barbet	Least Concern
Macronyx capensis	Cape Longclaw, Orange-throated Longclaw	Least Concern
Macronyx croceus	Yellow-throated Longclaw	Least Concern
Malaconotus blanchoti	Grey-headed Bush-Shrike	Least Concern
Mandingoa nitidula	Green Twinspot	Least Concern
Megaceryle maxima	Giant Kingfisher	Least Concern
Melaenornis pammelaina	Southern Black Flycatcher, Black Flycatcher	Least Concern
Melierax gabar	Gabar Goshawk	Least Concern
Milvus migrans	Black Kite,Yellow-billed Kite	Least Concern
Mirafra africana	Rufous-naped Lark	Least Concern
Monticola explorator	Sentinel Rock-Thrush	Least Concern
Motacilla aguimp	African Pied Wagtail	Least Concern
Motacilla capensis	Cape Wagtail	Least Concern
Muscicapa adusta	African Dusky Flycatcher, Dusky Flycatcher	Least Concern
Nectarinia famosa	Malachite Sunbird	Least Concern
Numida meleagris	Helmeted guineafowl	Least Concern
Oenanthe familiaris	Familiar Chat	Least Concern
Onychognathus morio	Red-winged Starling	Least Concern
Oriolus larvatus	Black-headed Oriole	Least Concern
Parus niger	Southern Black Tit	Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Passer diffusus	Southern Grey-headed Sparrow, Grey-headed Sparrow	Least Concern
Passer domesticus	House Sparrow	Least Concern
Phalacrocorax africanus	Reed Cormorant	Least Concern
Phalacrocorax lucidus	White-breasted Cormorant	Least Concern
Phoeniculus purpureus	Green Wood-Hoopoe, Red-billed Woodhoopoe	Least Concern
Phyllastrephus terrestris	Terrestrial Brownbul, Terrestrial Bulbul	Least Concern
Phylloscopus ruficapilla	Yellow-throated Woodland-Warbler, Yellow-throated Warbler	Least Concern
Phylloscopus trochilus	Willow Warbler	Least Concern
Plectropterus gambensis	Spur-winged goose	Least Concern
Ploceus bicolor	Dark-Backed Weaver, Forest Weaver	Least Concern
Ploceus capensis	Cape Weaver	Least Concern
Ploceus cucullatus	Village Weaver, Spotted-backed Weaver	Least Concern
Ploceus ocularis	Spectacled Weaver	Least Concern
Pogoniulus pusillus	Red-fronted Tinkerbird, Red-fronted Tinker Barbet	Least Concern
Pogonocichla stellata	White-starred Robin, Starred Robin	Least Concern
Polyboroides typus	African Harrier-Hawk, Gymnogene	Least Concern
Prinia hypoxantha	Drakensberg Prinia	Least Concern
Prinia subflava	Tawny-flanked Prinia	Least Concern
Prodotiscus regulus	Brown-backed Honeybird, Sharp-billed Honeyguide	Least Concern
Promerops gurneyi	Gurney's Sugarbird	Least Concern
Psalidoprocne pristoptera	Black Saw-wing, Black Saw-wing Swallow	
Pternistis natalensis	Natal Spurfowl, Natal Francolin	Least Concern
Pycnonotus tricolor	Dark-capped Bulbul, Black-eyed Bulbul	Least Concern
Quelea quelea	Red-billed Quelea	Least Concern
Riparia paludicola	Brown-throated Martin	Least Concern
Sarothrura elegans	Buff-spotted Flufftail	Least Concern
Saxicola torquatus	African Stonechat, Stonechat	Least Concern
Schoenicola brevirostris	Broad-tailed Warbler	Least Concern
Scleroptila shelleyi	Shelley's Francolin	Least Concern
Scopus umbretta	Hamerkop	Least Concern
Serinus canicollis	Cape Canary	Least Concern
Sphenoeacus afer	Cape Grassbird, Grassbird	Least Concern
Stephanoaetus coronatus	African Crowned Eagle	Vulnerable
Streptopelia capicola	Cape Turtle-Dove	Least Concern
Streptopelia semitorquata	Red-eyed Dove	Least Concern
Streptopelia senegalensis	Laughing Dove	Least Concern
Strix woodfordii	African Wood-Owl, Wood Owl	Least Concern
Sylvietta rufescens	Long-billed Crombec	Least Concern
Tachymarptis melba	Alpine Swift	Least Concern
Tchagra senegalus	Black-crowned Tchagra	Least Concern
Tchagra tchagra	Southern Tchagra	Least Concern
Telophorus zeylonus	Bokmakierie	Least Concern
Terpsiphone viridis	African Paradise-Flycatcher, Paradise Flycatcher	Least Concern
Threskiornis aethiopicus	African Sacred Ibis, Sacred Ibis	Least Concern
Tockus alboterminatus	Crowned Hornbill	Least Concern
Trachyphonus vaillantii	Crested Barbet	Least Concern
Tricholaema leucomelas	Acacia Pied Barbet, Pied Barbet	Least Concern
Trochocercus cyanomelas	Blue-mantled Crested-Flycatcher, Blue-mantled Flycatcher	Least Concern
Turdus libonyanus	Kurrichane Thrush	Least Concern
Turdus litsitsirupa	Groundscraper Thrush	Least Concern
Turdus olivaceus	Olive Thrush	Least Concern
Turnix sylvaticus	Kurrichane Buttonquail	Least Concern
Turtur tympanistria	Tambourine Dove	Least Concern
Tyto alba	Barn Owl	Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Tyto capensis	African Grass-Owl, Grass Owl	Vulnerable
Upupa africana	African Hoopoe, Hoopoe	Least Concern
Urocolius indicus	Red-faced Mousebird	Least Concern
Vidua funerea	Dusky Indigobird, Black Widowfinch	Least Concern
Vidua macroura	Pin-tailed Whydah	Least Concern
Zosterops virens	Cape White-eye	Least Concern
Earthworms and Leeches		
Allolobophora rosea		
Amynthas aeruginosus		
Amynthas minimus		
Octolasion lacteum		
Insects		
Allocnemis leucosticta	Goldtail	
Achaea lienardi		
Afroholopogon anassa	Queen robberfly	
Afrorestia sp.		
Anax imperator mauricianus	Blue emperor	
Apocrypta sp.		
Apocryptophagus sp. B		
Bunaea alcinoe	Common emperor	
Caenoura annulitarsis		
Cassionympha cassius	Rainforest Brown	
Ceratosolen capensis	Cape fig wasp	
Cicadetta sp. nov.		
Coryphosima stenoptera	Narrow-winged grasshopper	
Cyrtothyrea marginalis	Marginal fruit chafer	
Dasophrys androclea	White-bristled spotted-winged robberfly	
Dasophrys fortis	Strong robberfly	
Diopsina sp.		
Epiphora mythimnia	White-ringed atlas	
Erichsonius dorsumsuis	Hogsback Erichson's rove beetle	
Eurema desjardinsii regularis	Angled Grass Yellow	
Euscelidia brunnea		
Euscelidia sp.		
Gynanisa maja	Speckled emperor	
Heniocha apollonia	Southern marbled emperor	
Hippotion eson	Common striped hawk	
Imbrasia rectilineata	Straight-lined Emperor	
Ischiolobos mesotopos	Midlands robberfly	
Leptogaster sp. 1		
Leptogaster sp. 2		
Mentaxya albifrons	White Quaker	
Microstylum sp.		
Millenarius graminosus	Grassland millennium robberfly	
Nannolaphria nigra	Tiny black robberfly	
Neolophonotus albopilosus		
Neolophonotus wroughtoni		
Nudaurelia wahlbergi	Wahlberg's emperor	
Ommatius chiastoneurus		
Ommatius terminalis		
Orthetrum julia falsum	Julia's orthetrum	
Pacidara venustissima	Venus' turntail	
Pardopsis punctatissima	Polka Dot	

Taxon Name	English Name	SARDB Status
Pegesimallus calvifrons	Bald-fronted robberfly	
Phloeonotus humilis		
Pingasa abyssinaria	Duster	
Platypleura cf. brunnea		
Precis octavia sesamus	Gaudy Commodore	
Promachus fasciatus sp. group		
Promachus nr amastrus		
Pycna semiclara	Semi-clear-winged cicada	
Pyrops natalensis		
Rhabdogaster rustica		
Rhipidocephala caffra		
Rhipidocephala obscurata		
Spathosternum nigrotaeniatum		
Stenus asper	Rough rove beetle	
Stenus peringuyei	Peringuey's rove beetle	
Stenus transvaalensis	Transvaal rove beetle	
Theretra capensis	Cape Hawk	
Zerenopsis lepida	Leopard Magpie	
Mammals		
Sylvicapra grimmia	Common duiker, Grey duiker	
Aepyceros melampus melampus	Impala	
Aonyx capensis	Cape clawless otter, African clawless otter	
Aonyx capensis capensis	Cape clawless otter, African clawless otter	
Atilax paludinosus paludinosus	Water mongoose	
Caracal caracal caracal	Caracal	
Damaliscus pygargus phillipsi	Blesbok	
Equus quagga antiquorum	Plains Zebra	
Galerella sanguinea	Slender mongoose	
Genetta tigrina	South African large-spotted genet	
Herpestes ichneumon cafer	Large grey mongoose	
Hystrix africaeaustralis	Cape porcupine	
Ichneumia albicauda grandis	White-tailed mongoose	
Myosorex cafer	Dark-footed forest shrew	Data Deficient
Neoromicia capensis	Cape serotine bat	
Otomops martiensseni	Large-eared free-tailed bat	Vulnerable
Otomops martiensseni icarus	Large-eared free-tailed bat	Vulnerable
Panthera pardus melanotica	Leopard	
Philantomba monticola bicolor	Blue duiker	Vulnerable
Pipistrellus hesperidus broomi	African pipistrelle	
Poecilogale albinucha	African striped weasel	Data Deficient
Potamochoerus larvatus koiropotamus	Bushpig	
Procavia capensis capensis	Rock hyrax	
Rattus rattus	House rat	
Redunca arundinum arundinum	Southern reedbuck	
Scotophilus dinganii	African yellow bat	
Tadarida aegyptiaca aegyptiaca	Egyptian free-tailed bat	
Tragelaphus scriptus	Bushbuck	
Tragelaphus scriptus sylvaticus	Bushbuck	
Millipedes		
Doratogonus cristulatus	Cristulate black millipede	
Doratogonus sp.		

APPENDIX F

Taxon Name	English Name	SARDB Status
Reptiles		
Bradypodion melanocephalum	Kwazulu dwarf chameleon; Black-headed dwarf chameleon	Vulnerable
Acanthocerus atricollis atricollis	Southern tree agama; Tree agama; Black-necked agama	Least Concern
Afroedura pondolia	Pondo flat gecko	Least Concern
Afrotyphlops bibronii	Bibron's blind snake	Least Concern
Aparallactus capensis	Black-headed centipede eater; Cape centipede eater	Least Concern
Bitis arietans arietans	Puff adder	Least Concern
Duberria lutrix lutrix	South African slug-eater; Common slug-eater	Least Concern
Gonionotophis capensis capensis	Common file snake; Cape file snake	Least Concern
Hemidactylus mabouia	Common tropical house gecko; Moreau's tropical house gecko	Least Concern
Leptotyphlops scutifrons conjunctus	Peter's thread snake	Least Concern
Lycodonomorphus inornatus	Olive ground snake; Black house snake; Olive house snake	Least Concern
Lycodonomorphus rufulus	Brown water snake; Common water snake; Common brown water snake	Least Concern
Lycophidion capense capense	Cape wolf snake	Least Concern
Lygodactylus capensis capensis	Common dwarf gecko; Cape dwarf gecko	Least Concern
Macrelaps microlepidotus	Kwazulu-Natal black snake	Near Threatened
Philothamnus hoplogaster	Southeastern green snake; Green water snake	Least Concern
Philothamnus natalensis occidentalis	Western Natal green snake	Least Concern
Pseudaspis cana	Mole snake	Least Concern
Trachylepis punctatissima	Speckled rock skink; Montane speckled skink	Least Concern
Trachylepis varia	Variable skink	Least Concern
Varanus niloticus	Nile monitor; Water monitor	Least Concern
Slugs, snails, limpets		
Cochlitoma granulata	Granular agate snail	
Sheldonia burnupi		
Trachycystis subpinguis		
Spiders, scorpions, ticks, mites		
Uroplectes formosus spenceri	Spencer's beautiful scorpion	
Smeringopus natalensis		

Flora:

Taxon Name	English Name	SARDB Status
Acalypha schinzii		
Adhatoda andromeda		Least Concern
Adiantum incisum		Least Concern
Aeschynomene micrantha		Least Concern
Anthericum cooperi		
Apium leptophyllum		
Argyrolobium pauciflorum var. pauciflorum		
Aspidoglossum ovalifolium		Least Concern
Aster bakeranus	Wild Aster	Not Evaluated
Becium grandiflorum var. capitatum		
Berkheya rhapontica rhapontica		Least Concern
Berkheya setifera		Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Callilepis laureola	Ox-eye Daisy	Least Concern
Cassia didymobotrya		
Chaetacanthus burchellii		Least Concern
Cissampelos torulosa		Least Concern
Clerodendrum triphyllum var. triphyllum		
Clutia cordata		Least Concern
Combretum kraussii		Least Concern
Conostomium natalense var. glabrum		Least Concern
Corbichonia decumbens		Least Concern
Cynoglossum enerve		
Cyphia elata var. elata		Least Concern
Dierama argyreum		Least Concern
Dierama floriferum		Least Concern
Dioscorea cotinifolia		Least Concern
Ekebergia capensis	Cape Ash,Dog Plum,Essenhout	Least Concern
Eriosema distinctum		Least Concern
Eriosema salignum	Brown Bonnet,Narrow-leaved Salignum	Least Concern
Eriospermum mackenii mackenii	Yellow Fluffy-seed	Not Evaluated
Euphorbia epicyparissias var. epicyparissias		
Euphorbia kraussiana var. erubescens		Least Concern
Euryops laxus		Least Concern
Galopina circaeoides		Least Concern
Gazania linearifolia		
Gerbera aurantiaca	Hilton Daisy	Endangered
Gomphocarpus physocarpus		Least Concern
Graderia scabra	Wild Penstemon,Pink Ground-Bells	Least Concern
Heimia myrtifolia		Not Evaluated
Helichrysum acutatum		Least Concern
Helichrysum aureonitens	Golden Everlasting	Least Concern
Helichrysum aureum var. monocephalum		Least Concern
Helichrysum cephaloideum		Least Concern
Helichrysum panduratum var. panduratum		Least Concern
Helichrysum pandurifolium		Least Concern
Helichrysum pilosellum		
Hypoxis acuminata		Least Concern
Hypoxis costata		Least Concern
Impatiens hochstetteri hochstetteri		Least Concern
Indigofera hilaris var. hilaris		Least Concern
Ledebouria cooperi		Least Concern
Linum thunbergii		Least Concern

APPENDIX F

Taxon Name	English Name	SARDB Status
Lotononis corymbosa		Least Concern
Loudetia simplex		Least Concern
Maesa lanceolata	False Assegaai	Least Concern
Melinis nerviglumis		Least Concern
Microgramma lycopodioides		
Monopsis stellarioides stellarioides	Sticky-leaved Monopsis	Least Concern
Myrsiphyllum asparagoides		
Ophioglossum sp.		
Pellaea calomelanos var. calomelanos		Least Concern
Pentanisia prunelloides latifolia		Least Concern
Phyllanthus reticulatus var. reticulatus		Least Concern
Plantago virginica		Not Evaluated
Polygala virgata var. decora		Least Concern
Ranunculus multifidus	Common Buttercup	Not Evaluated
Rhus dentata		
Ruellia ovata		
Sandersonia aurantiaca	Christmas Bells;	Declining
Schizostylis coccinea		
Scilla nervosa		
Senecio glaberrimus		Least Concern
Senecio polyanthemoides		Least Concern
Senecio speciosus		Least Concern
Senecio variabilis		Least Concern
Senna didymobotrya		Not Evaluated
Solanum rigescens		Not Evaluated
Striga asiatica	Witchweed	Least Concern
Stylochiton natalensis		
Thunbergia alata		Least Concern
Thunbergia natalensis	Natal Bluebell,Dwarf Thunbergia	Least Concern
Trachyandra reflexipilosa		Least Concern
Triglochin bulbosa		
Tritonia lineata var. lineata		
Tulbaghia leucantha		Least Concern
Ursinia nana nana		Least Concern
Verbena bonariensis		Not Evaluated
Verbena tenuisecta		
Vernonia natalensis		
Zantedeschia aethiopica	Arum Lily,Calla	Least Concern
Zantedeschia albomaculata albomaculata		Least Concern
Zornia capensis capensis	Caterpillar Bean	Least Concern

Appendix G: Financial Plan for Queen Elizabeth Park Nature Reserve

Purpose of the financial plan

The National Environmental Management: Protected Areas Act (No.57 of 2003) establishes the need for a costing plan to be prepared for the approval of a Protected Area Management Plan by the MEC or Minister.
Management Effectiveness of protected areas relates directly to the availability of financial resources to achieve biodiversity conservation objectives. It is recognised that most protected areas do not have adequate financial resources to achieve their vision and stated objectives.

The Financial plan has been developed in the context of the management plan in the interests of proper planning and sustained conservation management of the Queen Elizabeth Park Nature Reserve.

Financial management of Queen Elizabeth Park Nature Reserve

The financial objective for the Queen Elizabeth Park Nature Reserve is to:

Provide adequate human resources, equipment, infrastructure and funding to enable the effective protection, development and management of the protected area.

Financial management of the Queen Elizabeth Park Nature Reserve will be done in accordance to the Public Finance Management Act [No. 1 of 1999] and Ezemvelo KZN Wildlife policies.

Special projects:

Current funding is not sufficient to effectively maintain the Queen Elizabeth Park Nature Reserve and the table below provides a cost estimate of the requirements for the implementation of the management plan.

Opportunities to source external funding through various partnerships for specific projects should be investigated.

Various NGO's or the private sector could be approached to facilitate these partnerships.

APPENDIX G

Table G1: Queen Elizabeth Park Nature Reserve - a cost estimate

	Year 1	Year 2	Year 3	Year 4	Year 5
Income					
Gate Fees	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Other	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Total Income	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Projected Operational Budget					
Admin Exp - Printing, Stationery & Photocopy Expen	R 3 000.00	R 3 330.00	R 3 762.90	R 4 289.71	R 4 804.47
Admin Exp - Publications, Subscriptions & Journals	R 3 500.00	R 3 885.00	R 4 390.05	R 5 004.66	R 5 605.22
Admin Exp - Publications, Subscriptions & Journals	R 4 500.00	R 4 995.00	R 5 644.35	R 6 434.56	R 7 206.71
Asset Purchase: Communication Equipment	R 12 000.00	R 13 320.00	R 15 051.60	R 17 158.82	R 19 217.88
Asset Purchase: Communication Equipment - field radio	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Asset Purchase: Firearm & Sighting Equipment	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Asset Purchase: Furniture & Fixtures - Fridge/ Freezer	R 10 000.00	R 11 100.00	R 12 543.00	R 14 299.02	R 16 014.90
Asset Purchase: Plant & Machinery - Compactor/ Cement Mixer	R 5 000.00	R 5 550.00	R 6 271.50	R 7 149.51	R 8 007.45
Asset Purchase: Tools & Equipment - bruch cutters	R 10 000.00	R 11 100.00	R 12 543.00	R 14 299.02	R 16 014.90
Asset Purchase: Tools & Equipment - Chain Saw	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Asset Purchase: Tools & Equipment - Fire Fighting Backpacks	R 40 000.00	R 44 400.00	R 50 172.00	R 57 196.08	R 64 059.61
Asset Purchase: Tools & Equipment - lawnmower	R 15 000.00	R 16 650.00	R 18 814.50	R 21 448.53	R 24 022.35
Asset Purchase: Vehicles	R 500 000.00	R 0.00	R 0.00	R 0.00	R 0.00
Asset Purchase: Vehicles	R 0.00	R 0.00	R 500 000.00	R 0.00	R 0.00
Auxillary Card Costs - Fuel & Oil	R 14 400.00	R 15 984.00	R 18 061.92	R 20 590.59	R 23 061.46
Auxillary Card Costs - Maintenance Costs	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Communication- Cellular Telephone Expense	R 2 400.00	R 2 664.00	R 3 010.32	R 3 431.76	R 3 843.58
Communication- Telephone Expense	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Consumption - Ammunition	R 2 500.00	R 2 775.00	R 3 135.75	R 3 574.76	R 4 003.73
Consumption - Gas Cylinders	R 4 800.00	R 5 328.00	R 6 020.64	R 6 863.53	R 7 687.15
Consumption - Transponders	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Audio-Visual Supplies	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Camp Supplies	R 18 000.00	R 19 980.00	R 22 577.40	R 25 738.24	R 28 826.82
Direct Supplies - Chemicals	R 18 000.00	R 19 980.00	R 22 577.40	R 25 738.24	R 28 826.82
Direct Supplies - Chemicals	R 1 800.00	R 1 998.00	R 2 257.74	R 2 573.82	R 2 882.68
Direct Supplies - Chemicals	R 3 000.00	R 3 330.00	R 3 762.90	R 4 289.71	R 4 804.47
Direct Supplies - Cleaning Materials	R 18 000.00	R 19 980.00	R 22 577.40	R 25 738.24	R 28 826.82
Direct Supplies - Cleaning Materials	R 1 500.00	R 1 665.00	R 1 881.45	R 2 144.85	R 2 402.24
Direct Supplies - Cleaning Materials	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Direct Supplies - Cleaning Materials	R 2 000.00	R 2 220.00	R 2 508.60	R 2 859.80	R 3 202.98
Direct Supplies - Computer Accessories	R 2 500.00	R 2 775.00	R 3 135.75	R 3 574.76	R 4 003.73
Direct Supplies - Consumables	R 2 200.00	R 2 442.00	R 2 759.46	R 3 145.78	R 3 523.28
Direct Supplies - Game Feed Expenses	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Herbicides	R 9 000.00	R 9 990.00	R 11 288.70	R 12 869.12	R 14 413.41
Direct Supplies - Herbicides	R 10 000.00	R 11 100.00	R 12 543.00	R 14 299.02	R 16 014.90
Direct Supplies - Herbicides	R 20 000.00	R 22 200.00	R 25 086.00	R 28 598.04	R 32 029.80
Direct Supplies - Herbicides	R 1 000.00	R 1 110.00	R 1 254.30	R 1 429.90	R 1 601.49

APPENDIX G

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct Supplies - Laboratory Chemicals	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Laundry Materials	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Pharmaceuticals	R 4 000.00	R 4 440.00	R 5 017.20	R 5 719.61	R 6 405.96
Direct Supplies - Photographic Supplies	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Direct Supplies - Protective Clothing	R 17 000.00	R 18 870.00	R 21 323.10	R 24 308.33	R 27 225.33
Direct Supplies - Protective Clothing	R 100 000.00	R 111 000.00	R 125 430.00	R 142 990.20	R 160 149.02
Direct Supplies - Protective Clothing	R 8 000.00	R 8 880.00	R 10 034.40	R 11 439.22	R 12 811.92
Direct Supplies - Protective Clothing	R 20 000.00	R 22 200.00	R 25 086.00	R 28 598.04	R 32 029.80
Direct Supplies - Protective Clothing	R 45 000.00	R 49 950.00	R 56 443.50	R 64 345.59	R 72 067.06
Direct Supplies - Protective Clothing	R 8 000.00	R 8 880.00	R 10 034.40	R 11 439.22	R 12 811.92
Direct Supplies - Sanitary Products	R 18 000.00	R 19 980.00	R 22 577.40	R 25 738.24	R 28 826.82
Direct Supplies - Small Tools & Equipment	R 12 000.00	R 13 320.00	R 15 051.60	R 17 158.82	R 19 217.88
Direct Supplies - Small Tools & Equipment	R 1 500.00	R 1 665.00	R 1 881.45	R 2 144.85	R 2 402.24
Direct Supplies - Small Tools & Equipment	R 10 000.00	R 11 100.00	R 12 543.00	R 14 299.02	R 16 014.90
Direct Supplies - Small Tools & Equipment	R 5 000.00	R 5 550.00	R 6 271.50	R 7 149.51	R 8 007.45
Direct Supplies - Small Tools & Equipment	R 2 000.00	R 2 220.00	R 2 508.60	R 2 859.80	R 3 202.98
Direct Supplies - Small Tools & Equipment	R 20 000.00	R 22 200.00	R 25 086.00	R 28 598.04	R 32 029.80
Direct Supplies - Small Tools & Equipment	R 5 000.00	R 5 550.00	R 6 271.50	R 7 149.51	R 8 007.45
Direct Supplies - Working Stock	R 3 000.00	R 3 330.00	R 3 762.90	R 4 289.71	R 4 804.47
Direct Supplies - Working Stock	R 4 000.00	R 4 440.00	R 5 017.20	R 5 719.61	R 6 405.96
Direct Supplies - Working Stock & Consumables	R 6 000.00	R 6 660.00	R 7 525.80	R 8 579.41	R 9 608.94
Direct Supplies - Working Stock & Consumables	R 60 000.00	R 66 600.00	R 75 258.00	R 85 794.12	R 96 089.41
Direct Supplies - Working Stock & Consumables	R 10 000.00	R 11 100.00	R 12 543.00	R 14 299.02	R 16 014.90
Direct Supplies - Working Stock & Consumables	R 1 000.00	R 1 110.00	R 1 254.30	R 1 429.90	R 1 601.49
Direct Supplies - Working Stock & Consumables	R 1 000.00	R 1 110.00	R 1 254.30	R 1 429.90	R 1 601.49
Direct Supplies - Working Stock & Consumables	R 45 000.00	R 49 950.00	R 56 443.50	R 64 345.59	R 72 067.06
Direct Supplies- Water Treatment Chemicals	R 3 300.00	R 3 663.00	R 4 139.19	R 4 718.68	R 5 284.92
Direct Supplies- Water Treatment Chemicals	R 1 800.00	R 1 998.00	R 2 257.74	R 2 573.82	R 2 882.68
EKZNW Vehicle Running Costs - Fuel & Oil	R 48 000.00	R 53 280.00	R 60 206.40	R 68 635.30	R 76 871.53
EKZNW Vehicle Running Costs - Fuel & Oil	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
EKZNW Vehicle Running Costs - Fuel & Oil	R 40 000.00	R 44 400.00	R 50 172.00	R 57 196.08	R 64 059.61
EKZNW Vehicle Running Costs - Fuel & Oil	R 9 000.00	R 9 990.00	R 11 288.70	R 12 869.12	R 14 413.41
EKZNW Vehicle Running Costs - Fuel & Oil	R 7 500.00	R 8 325.00	R 9 407.25	R 10 724.27	R 12 011.18
EKZNW Vehicle Running Costs - Fuel & Oil	R 12 000.00	R 13 320.00	R 15 051.60	R 17 158.82	R 19 217.88
EKZNW Vehicle Running Costs - Tyres	R 25 000.00	R 27 750.00	R 31 357.50	R 35 747.55	R 40 037.26
Maintenance - Communications Equip	R 14 000.00	R 15 540.00	R 17 560.20	R 20 018.63	R 22 420.86
Maintenance - Computer Equipment	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Maintenance - Dams, Reservoirs & Boreholes	R 35 000.00	R 38 850.00	R 43 900.50	R 50 046.57	R 56 052.16
Maintenance - Dams, Reservoirs & Boreholes	R 50 000.00	R 55 500.00	R 62 715.00	R 71 495.10	R 80 074.51
Maintenance - Fencing	R 80 000.00	R 88 800.00	R 100 344.00	R 114 392.16	R 128 119.22
Maintenance - Fencing	R 300 000.00	R 0.00	R 50 000.00	R 0.00	R 50 000.00
Maintenance - Furniture & Fittings	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Maintenance - Roads	R 210 000.00	R 233 100.00	R 263 403.00	R 300 279.42	R 336 312.95
Maintenance - Roads	R 1 527 500.00	R 1 695 525.00	R 1 915 943.25	R 2 184 175.31	R 2 446 276.34
Maintenance - Sewerage & Reticulation	R 35 000.00	R 38 850.00	R 43 900.50	R 50 046.57	R 56 052.16

APPENDIX G

	Year 1	Year 2	Year 3	Year 4	Year 5
Maintenance - Tools & Equipment	R 17 000.00	R 18 870.00	R 21 323.10	R 24 308.33	R 27 225.33
Maintenance - Tools & Equipment	R 20 000.00	R 22 200.00	R 25 086.00	R 28 598.04	R 32 029.80
Maintenance - Tools & Equipment	R 2 000.00	R 2 220.00	R 2 508.60	R 2 859.80	R 3 202.98
Maintenance & Repairs - Boats	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Maintenance & Repairs - Static Plant	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Maintenance & Repairs - Vehicles	R 35 000.00	R 38 850.00	R 43 900.50	R 50 046.57	R 56 052.16
Maintenance & Repairs - Vehicles	R 15 000.00	R 16 650.00	R 18 814.50	R 21 448.53	R 24 022.35
Maintenance costs-Buildings & Structures	R 150 000.00	R 166 500.00	R 188 145.00	R 214 485.30	R 240 223.54
Maintenance costs-Buildings & Structures	R 5 000 000.00	R 0.00	R 0.00	R 0.00	R 0.00
Maintenance-Aircraft	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Other Services - Fire Extinguisher Services	R 8 000.00	R 8 880.00	R 10 034.40	R 11 439.22	R 12 811.92
Payroll Exp Contract - All Short Term	R 210 000.00	R 233 100.00	R 263 403.00	R 300 279.42	R 336 312.95
Payroll Exp Contract - All Short Term	R 700 000.00	R 777 000.00	R 878 010.00	R 1 000 931.40	R 1 121 043.17
Payroll Exp Contract - All Short Term	R 264 000.00	R 293 040.00	R 331 135.20	R 377 494.13	R 422 793.42
Payroll Exp Contract - All Short Term	R 120 000.00	R 0.00	R 0.00	R 0.00	R 0.00
Payroll Exp Contract - All Short Term	R 600 000.00	R 666 000.00	R 752 580.00	R 857 941.20	R 960 894.14
Payroll Exp Contract - All Short Term	R 264 000.00	R 293 040.00	R 331 135.20	R 377 494.13	R 422 793.42
Payroll Exp Contract - Long Term	R 180 000.00	R 199 800.00	R 225 774.00	R 257 382.36	R 288 268.24
Payroll Exp Danger Allowance	R 18 000.00	R 19 980.00	R 22 577.40	R 25 738.24	R 28 826.82
Payroll Exp Transfer Allowance	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Furniture Removal Costs	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Medical Expenses	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Night Shift Allowance	R 42 000.00	R 46 620.00	R 52 680.60	R 60 055.88	R 67 262.59
Personnel Exp Night Shift Allowance	R 30 000.00	R 33 300.00	R 37 629.00	R 42 897.06	R 48 044.71
Personnel Exp Overtime	R 6 600.00	R 7 326.00	R 8 278.38	R 9 437.35	R 10 569.84
Personnel Exp Overtime	R 24 000.00	R 26 640.00	R 30 103.20	R 34 317.65	R 38 435.77
Personnel Exp Recruitment Adverts. & Fees	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Rewards	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Standby Allowance	R 30 000.00	R 33 300.00	R 37 629.00	R 42 897.06	R 48 044.71
Personnel Exp Standby Allowance	R 72 000.00	R 79 920.00	R 90 309.60	R 102 952.94	R 115 307.30
Personnel Exp Subsistence Allowance	R 3 600.00	R 3 996.00	R 4 515.48	R 5 147.65	R 5 765.36
Personnel Exp Subsistence Allowance	R 1 500.00	R 1 665.00	R 1 881.45	R 2 144.85	R 2 402.24
Personnel Exp Training	R 9 600.00	R 10 656.00	R 12 041.28	R 13 727.06	R 15 374.31
Personnel Exp Tuition Fee	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Personnel Exp Uniform Expenses	R 24 000.00	R 26 640.00	R 30 103.20	R 34 317.65	R 38 435.77
Plant Running Costs - Fuel & Oil	R 12 000.00	R 13 320.00	R 15 051.60	R 17 158.82	R 19 217.88
Toll Fees	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Transport Exp.- MVAS - Running Expenses	R 14 400.00	R 15 984.00	R 18 061.92	R 20 590.59	R 23 061.46
Utility Expenses - Electricity	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Utility Expenses - Electricity - Diesel	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Utility Expenses - Gas	R 14 400.00	R 15 984.00	R 18 061.92	R 20 590.59	R 23 061.46
Utility Expenses - Rates	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Utility Expenses - Refuse Removal	R 9 600.00	R 10 656.00	R 12 041.28	R 13 727.06	R 15 374.31
Utility Expenses - Sewerage	R 9 000.00	R 9 990.00	R 11 288.70	R 12 869.12	R 14 413.41
Utility Expenses - Water	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00

APPENDIX G

	Year 1	Year 2	Year 3	Year 4	Year 5
WBS Fire Asset Purchase - Bukkie Sucker	R 25 000.00	R 27 750.00	R 31 357.50	R 35 747.55	R 40 037.26
Total	R 11 498 400.00	R 6 192 024.00	R 7 546 987.12	R 7 976 565.32	R 8 983 753.15

Appendix H: Lease Agreement between KwaZulu Natal Nature Conservation Services and Msunduzi Municipality

1960

AGREEMENT OF LEASE MADE AND ENTERED INTO BETWEEN THE CITY COUNCIL OF PIETERMARITZBURG, HEREINAFTER REFERRED TO AS THE LESSOR OF THE ONE PART AND THE PROVINCIAL SECRETARY (NATAL), HEREINAFTER REFERRED TO AS THE LESSEE OF THE OTHER PART IN RESPECT OF AREA OF LAND, IN EXTENT APPROXIMATELY 227 ACRES AS INDICATED ON PLAN 723/A/60/1 ANNEXED HERETO AND HEREINAFTER REFERRED TO AS THE LAND.

W I T N E S S E T H

1. The lease shall be for a period of fifty years commencing on the 1st day of June, 1960, and terminating on the 31st day of May, 2010, notwithstanding the date of execution of this agreement.

2. The property hereby leased is approximately 227 acres in extent as shown on the plan attached hereto. The lessee acknowledges that the boundaries of the property have been pointed out to it and hereby accepts the boundaries.

3. The rental shall be fixed at a nominal amount of ten pounds per annum payable without deduction or demand on the 1st day of June each year at the Office of the City Treasurer, City Hall, Pietermaritzburg.

4. With effect from the date of the commencement of the lease, i.e. 1st June, 1960, the lessor undertakes to give possession of the property hereby leased, together with trees, shrubs and other plants established on the property by the lessor.

5. The lessee hereby undertakes that the area of the land referred to in paragraph 2 hereof shall be proclaimed as a Nature Reserve under the provisions of sections 2(i)(c) and (2) of Ordinance No. 35 of 1947 (Natal) for the duration of this lease subject always to the terms and conditions upon which the property is hereby leased.

6. The property hereby leased shall be assigned in the aforesaid proclamation the name of "QUEEN ELIZABETH PARK".

7. The leased property shall remain part of the unalienated Townlands in the private ownership of the City Council and in the excercise of the permissive powers conferred upon the Administrator in terms of section 2(2) and (3) of Ordinance No. 35 of 1947 no subsequent proclamation shall be issued in terms of the said section 2(3) during the currency of this lease without the prior approval of the lessor first had and obtained in writing.

The lessee hereby undertakes that the area proclaimed as aforesaid shall be administered, controlled and managed by the Natal Parks Game and Fish Preservation Board - a corporate body constituted in terms of the provisions of Ordinance No. 35 of 1947 as amended from time to time by the Provincial Council of the Province of Natal - exclusively as a Nature Reserve during the currency of this lease.

9. A Committee shall be appointed to advise on the said Nature Reserve and it shall be a sub-committee of the Board including however an advisory member nominated by the lessor.

10. The aforesaid Board, in the excercise of its permissive powers and functions in respect of the leased area under the provisions of section 12(3) of Ordinance No. 35 of 1947 shall observe the following conditions which the lessee hereby acknowledges shall be deemed to be conditions of this lease :-

(a) No buildings shall be erected on the leased land otherwise than in a position and in accordance with plans approved by the lessor. The Board shall when submitting any such plans for approval include a statement of the estimated costs of any proposed building.

.../2

10. (a)(Continued)

No residential buildings shall be erected on the leased land, other than to provide accommodation which may be necessary for the housing of a caretaker and any bona-fide Non-European servants of the lessee or the Board.

(b) The Board shall at its own expense at all times keep the leased land properly fenced and all existing fences shall be kept in good repair.

(c) The Board shall cause fire breaks not less than 40 feet wide to be cleared not later than the 30th June in each and every year and maintained along the boundaries of the leased land.

(d) The Board shall except during the hours of ~~sunset and sunrise~~ darkness permit members of the public to have access to the said land free of charge.

(e) Any grass burning shall be carried out under proper and efficient supervision.

(f) The lessor or its duly authorised officers shall have the right at all reasonable times to enter upon and inspect the leased land to ensure that the terms of this lease are being complied with and that the land is being beneficially used, developed and maintained for the purpose required in terms of condition 5 hereof.

(g) The Board shall cause all buildings erected in terms of the lease to be maintained in good condition and repair.

(h) The Board shall not during or upon the termination of this lease remove or destroy any trees, shrubs, plants or flowers growing upon the leased land, or planted, introduced or established thereon by the Board, without the permission of the lessor which permission will only be granted if the lessor is satisfied that such removal or destruction is necessary for the purpose of giving proper effect to the terms of this lease or will not be to the detriment of anything done for such purpose.

11. The lessee shall not be entitled to cede or assign this lease or to sublet the leased land or any portion thereof without the written consent f the lessor.

12. The lessor does not guarantee the supply of any particular municipal services, but upon the request of the lessee the lessor is prepared to supply such services as may be available at such rates or charges on the same basis as may be prescribed in the By-Laws of the lessor.

It is hereby specially recorded that the lessor does not guarantee any particular means of access to the leased land and that it shall be the responsibility of the lessee at its own expense to provide a suitable and adequate access road to the leased land subject to the requirements of the National Transport Commission or other body controlling access to and from National roads. The lessee shall, however, in so far as it may be lawful, do all in its power to maintain the present means of access from the National road.

14. In the event of the lessee's legislative powers under section 85 of the South Africa Act either directly or indirectly by means of a Union Act or within the limits of section 13 of the Financial Relations Consolidation and Amendment Act No. 38 of 1945 as amended being contracted, limited, restricted, modified or withdrawn in such a manner that the lessee or the Board (as the case may be) ceases to control the area hereby leased as a Nature reserve during the currency of this lease; or the lessee ceasing in any way to carry out the terms of this lease the lessor may, on giving one year's written notice, cancel or terminate this lease.

On the expiration of such period the lessee shall forthwith give the lessor repossession of the said leased area.

15. Upon the termination of this lease whether by effluxion of time or for any other reason, no compensation whatsoever shall be paid by the lessor to the lessee or the Board as the case may be whether in respect of buildings, improvements or otherwise.

SIGNED by CHARLES BERTRAM DOWNES, in his capacity as MAYOR, and as such representing the CITY COUNCIL OF PIETERMARITZBURG, this ...20th... day of ..June.., 1960, in the presence of the undersigned Witnesses :-

AS WITNESSES:

1. .....

.....
MAYOR
(LESSOR)

2. .....

In terms of Section 135 of Ordinance No. 21 of 1942 (Natal), I hereby certify that this contract has been duly authorised by the City Council.

.....
TOWN CLERK

SIGNED by ...I.Z.P.K. GERHARDUS HORAK., in his capacity as .....Provincial Secretary....., and as such representing the PROVINCIAL SECRETARY (NATAL), at .....Pietermaritzburg....., this ...2nd... day of .....June....., 1960, in the presence of the undersigned Witnesses :-

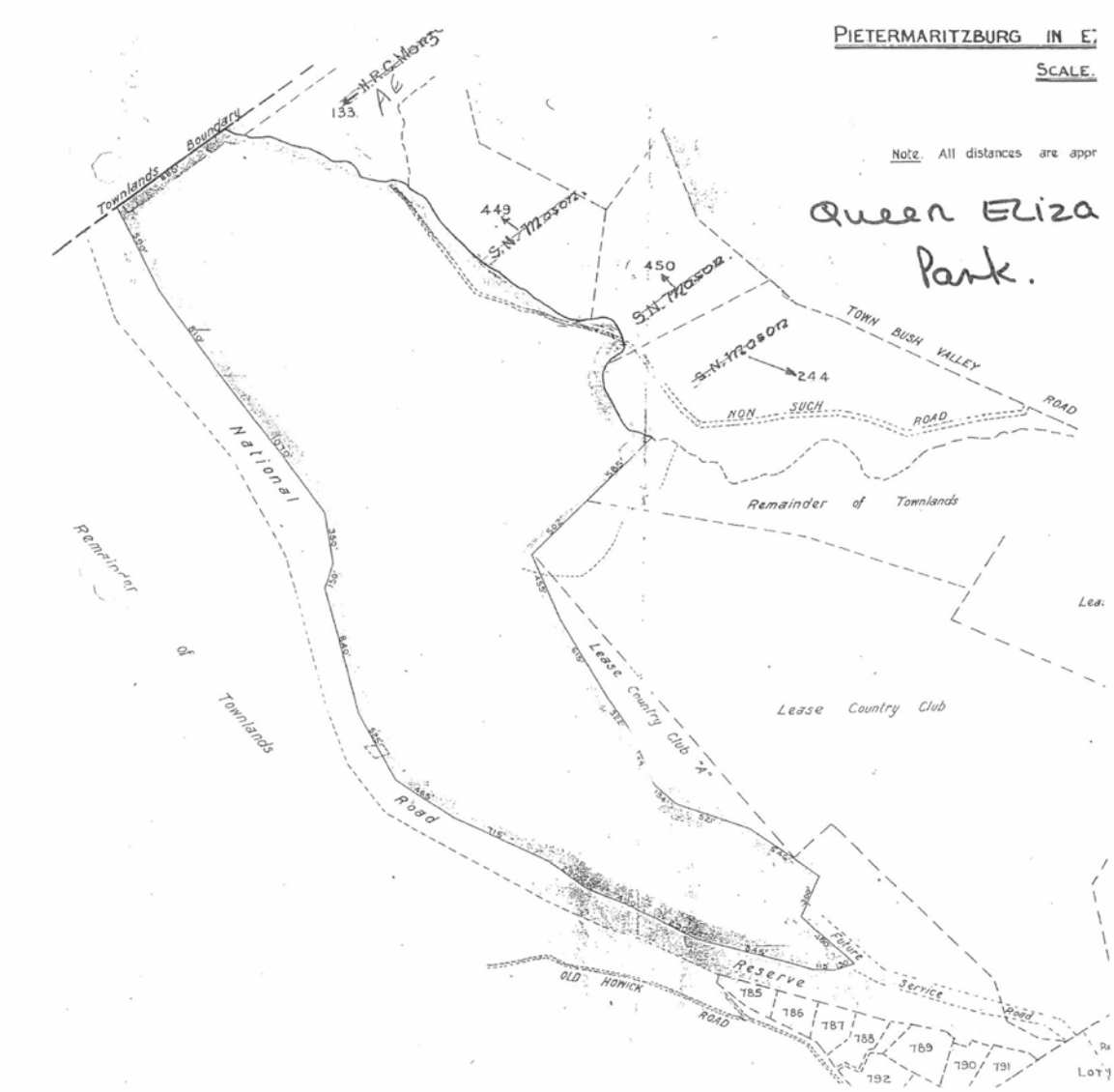
AS WITNESSES:

1. .....

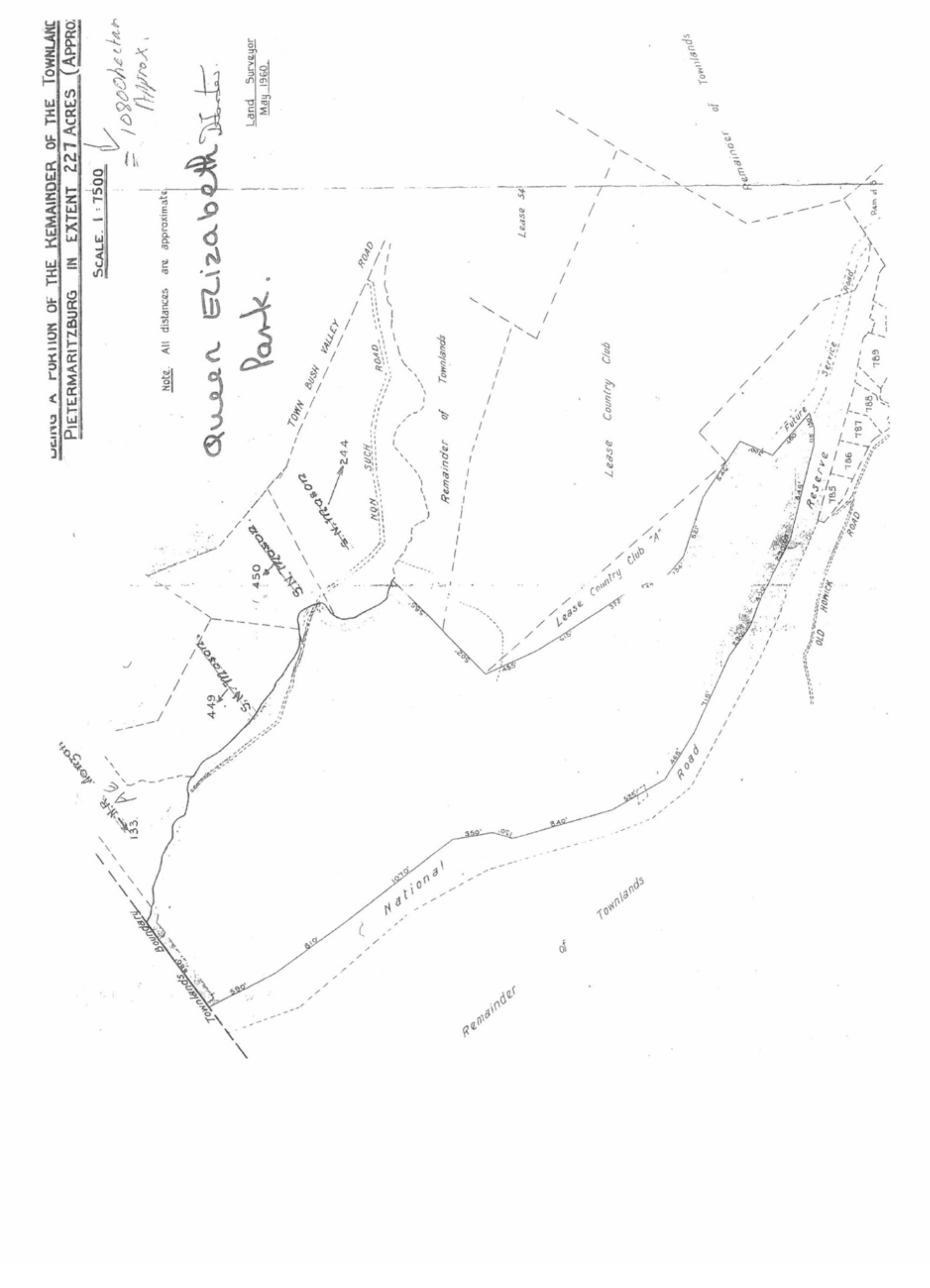
.....
LESSEE
PROVINCIAL SECRETARY,
NATAL.

2. I in hope .....

APPENDIX H


PIETERMARITZBURG IN E
SCALE.
Note. All distances are appr
Queen Eliza
Park.
Townlands Boundary
133
449
S.N. Mason
450
S.N. Mason
S.N. Mason
244
TOWN BUSH VALLEY ROAD
NON SUCH ROAD
Remainder of Townlands
National Road
Remainder of Townlands
Lease Country Club "A"
Lease Country Club
Future Service Road
Reserve
OLD HOWICK ROAD
785
786
787
788
789
790
791
792

APPENDIX H


PIETERMARITZBURG IN EXTENT 227 ACRES (APPRO
SCALE 1 : 7500
= 1080 hectar Approx.
Note. All distances are approximate.
Queen Elizabeth Park.
Land Surveyor
May 1960
TOWN BUSH VALLEY ROAD
NON SUCH ROAD
Remainder of Townlands
Lease Country Club
Lease Country Club "A"
Future Service Road
Reserve
OLD HOWICK ROAD
National Road
Remainder of Townlands
Townlands Boundary
185
186
187
188
189
449
450
244
133

APPENDIX H

2010

CITY OF PIETERMARITZBURG

Addendum to existing Agreement of Lease dated 2nd June, 1960 and 20th June, 1960, entered into between the City Council of Pietermaritzburg and the Provincial Secretary (Natal) in respect of the area of land indicated on Plan No. 723/A/60/1 known as the "Queen Elizabeth Park".

WHEREAS the Parties have come to an agreement to extend the period of the lease for a further period of THREE YEARS

AND WHEREAS the Parties are desirous of setting out the terms and conditions of such agreement.

1.

It is hereby agreed between the said parties that the period of the lease of the property leased by the First Party to the Second Party under the written lease dated 2nd June, 1960 and 20th June, 1960, which terminates on the 31st May, 2010, be extended for a further period of THREE YEARS so as to expire on the 31st May, 2013.

2.

The extended period of lease set out in clause 1 above shall be incorporated into the existing lease and shall be subject to the same terms and conditions set out in the original existing lease.

This Addendum to the existing Agreement of Lease referred to in Clause 1 above is authorised by a Resolution of the City Council dated the 27th February, 1969.

SIGNED by DENIS HUBERT WHITE-COOPER in his capacity as MAYOR and as such representing the City Council of Pietermaritzburg, at Pietermaritzburg, this 13th day of May 1969, in the presence of the undersigned Witnesses:

AS WITNESSES:

1. _____

2. _____

_____
MAYOR

APPENDIX H

2013

CITY OF PIETERMARITZBURG

ADDENDUM to existing Agreement of Lease dated 2nd June, 1960 and 20th June, 1960, entered into between the City Council of Pietermaritzburg and the Provincial Secretary (Natal) in respect of the area of land indicated on Plan No. 723/A/60/1 known as the 'Queen Elizabeth Park'.

WHEREAS the parties have come to an agreement to extend the period of the lease for a further period of TWENTY TWO YEARS, AND WHEREAS the parties are desirous of setting out the terms and conditions of such agreement.

1.

It is hereby agreed between the said parties that the period of the lease of the property leased by the First Party to the Second Party under the written lease dated 2nd June, 1960 and 20th June, 1960. which terminates on the 31st May, 2013, be extended for a further period of TWENTY TWO YEARS so as to expire on the 31st May, 2035.

2.

The extended period of lease set out in Clause 1 above shall be incorporated into the existing lease and shall be subject to the same terms and conditions set out in the original existing lease.

This Addendum to the existing Agreement of Lease referred to in Clause 1 above is authorised by a Resolution of the City Council dated the 18th April, 1983.

SIGNED BY CHARLES MICHAEL HOBBS in his capacity as Estates Manager and as such representing the City Council of Pietermaritzburg, at Pietermaritzburg, this 29th day of June 1984 in the presence of the undersigned Witnesses:

AS WITNESSES

1.

2.

ESTATES MANAGER

In terms of Section 186 of Ordinance No. 25 of 1974 (Natal) I hereby certify that this agreement has been authorised by the City Council.

TOWN CLERK

Appendix I: Service Level Agreement was entered into, between KwaZulu-Natal Nature Conservation Services and the Victoria Country Club Estate

Annexure "A"

to the

SERVICE LEVEL AGREEMENT

for: THE GUARDING OF THE PREMISES AND PERSONEL

site: KZN WILDLIFE EZEMVELO HEAD OFFICE

situated at: QUEEN ELIZEBETH PARK,
MONTROSE,
PIETERMARITZBURG

RECEIVED
2007 -05- 17
LOGISTICS

Service Level Agreement for KZN Wildlife Ezemvelo Revision 01/09/05/2007 Page 1 of 9

RECEIVED
2007 -05- 17
LOGISTICS

APPENDIX I

ANNEXURE "A"

to the

SERVICE LEVEL AGREEMENT

for: THE GUARDING OF THE PREMISES AND PERSONNEL

site: EZEMVELO KZN WILDLIFE HEAD OFFICE

situated at: QUEEN ELIZABETH PARK – MONTROSE PIETERMARITZBURG

1. REQUIREMENTS

1. Two "C Grade" Security guards on duty 24 Hours per day, 7 days per week
2. Guards to be equipped with two way radio.
3. Guards to be equipped with torch.
4. Supervision of the guards by a senior member of the guarding company at least twice a day, once during the day shift and once during the night shift.
5. An occurrence book to be supplied by the guarding company and kept in the guard room.

2. GUARD DUTIES

1. Supervision and monitoring of the gate area, designated buildings and other specified areas.
2. Vehicle and pedestrian traffic recording as specified (refer to paragraph 4).
3. Maintaining shift records (Incident Register/Occurrence Book) 24 Hour communication system with Control Rooms (refer to paragraph 4)
4. Opening/closing of gates at specified times (refer to paragraph 5)
5. Conducting regular patrols as specified
6. Responding to situations as prescribed
7. To keep and maintain in the control room an occurrence book as prescribed.

3. OFFICE HOURS, AFTER HOURS, PUBLIC HOURS

1. Office Hours, 07h30 to 17h00, Mondays to Fridays except holidays and weekends.
2. After Hours, 17h00 to 07h30 Mondays to Fridays. Gate closing to gate opening as per season
3. Public Hours, Gate opening to gate closing as per seasonal times.

4. VEHICLE AND PEDESTRIAN TRAFFIC RECORDING

RECEIVED
2007 -05- 17
LOGISTICS

1. Office hours: all vehicles and pedestrians without prescribed access permits or approved identification to be recorded on the sheet provided by KZN WILDLIFE EZEMVELO HEAD OFFICE.

2. Weekends, Holidays and after hours: all vehicles and pedestrians without prescribed access permits or approved identification to be recorded on the sheet provided by KZN WILDLIFE EZEMVELO HEAD OFFICE. .

3. All vehicles to have the registration number, time of entry or exit and number of occupants recorded on the entry / exit sheet or any other document as prescribed at a later time.

4. All pedestrians to have their names recorded, time of entry or exit recorded on the entry / exit sheet or any other document as prescribed at a later time.

5. The entry / exit sheet is to be changed on a daily basis at the start of the morning shift and all the sheets are to be kept in a file to be retained in the control room. At the beginning of a new calendar month the previous months entry / exit sheets are to bundled and submitted to the client for his safe keeping.

5. OPENING AND CLOSING OF GATES

1. The vehicle enclosure gate is to be opened at 07h00 on working days.

2. The vehicle enclosure gate is to be closed at 18h00 on working days.

6. REGULAR PATROL AREAS

Normal working days.

1. Office hours

1.1 N3 staff and public parking area and the fence line along/adjoining the N3 to be patrolled at least twice during the day shift, the guard to check the area for suspicious persons and /or acvtivities.

2. After hours

2.1 Check the exterior of the buildings and test each door to ensure that it is locked.

[*] DENOTES ALARM INSTALLATION + ARMED RESPONSE BY PMB SECURITY

DOOR NO	FLOOR LEVEL	DESCRIPTION OF AREA	ACCESS DOOR?	TYPE OF DOOR
1	L2	MAIN FRONT DOOR	ACCESS	GLASS HINGED
2	L3	IT SECTION: SIDE ENTRANCE	ACCESS	WOOD PANEL
3	L4	LIFT FOYER	ACCESS	GLASS SLIDING
4	L4	EXEC PARKING: FIRE ESCAPE	ACCESS	WOOD PANEL
5	L4	EXEC PARKING: STORROOM	X	WOOD PANEL
6	L4	AIRCON PLANT ROOM	X	DOUBLE WOOD PANEL
7	L4	ELECTRICAL SWITCH ROOM	X	DOUBLE WOOD PANEL
8	L4	LIFT PLANT ROOM	X	DOUBLE WOOD PANEL
9	L4	EXEC PARKING ENTRANCE	ACCESS	GLASS HINGED
10	L3	IT SECTION: SIDE ENTRANCE	ACCESS	GLASS SLIDING

RECEIVED
2007 -05- 17
LOGISTICS

KM

COPY

APPENDIX I

11	L3	IT SECTION: FIRE ESCAPE	ACCESS	GLASS DOUBLE
12	L4	FINANCE: SIDE ENTRANCE	ACCESS	GLASS HINGED
13	L5	CAFETERIA WING	ACCESS	GLASS SLIDING
14	L6	KITCHEN ENTRANCE	ACCESS	WOOD PANEL
15	L6	STORAGE	X	DOUBLE WOOD LOUVRE
16	L6	STAFF CHANGE ROOM [M]	X	SINGLE LOUVRE
17	L6	STAFF CHANGE ROOM [F]	X	DOUBLE WOOD LOUVRE
18	L6	STORAGE	X	DOUBLE WOOD LOUVRE
19	L6	MENS TOILET	X	WOOD PANEL
20	L6	WOMENS TOILET	X	WOOD PANEL
21	L6	STAFF SIDE ENTRANCE	ACCESS	WOOD PANEL
22	L6	STORAGE	X	WOOD PANEL
23	L6	SIDE ENTRANCE LOADING	ACCESS	DOUBLE WOOD PANEL
24	L6	STORAGE	X	METAL GARAGE DOOR
25	L6	STORAGE	X	WOOD PANEL
26	L6	STORAGE	X	DOUBLE WOOD PANEL
27	L6	STORAGE	X	DOUBLE WOOD PANEL
28	L6	FINANCE: FIRE ESCAPE	ACCESS	WOOD PANEL
29	L5	FINANCE: FIRE ESCAPE	ACCESS	DOUBLE GLASS
30	L5	LIBRARY: SIDE ENTRANCE	ACCESS	DOUBLE GLASS
31	L5	LIBRARY: SIDE ENTRANCE	ACCESS	DOUBLE GLASS
32	L5	LIBRARY: SIDE ENTRANCE	ACCESS	DOUBLE GLASS
33	L5	LIBRARY: SIDE ENTRANCE	ACCESS	DOUBLE GLASS
34	L5	LIBRARY: SIDE ENTRANCE	ACCESS	DOUBLE GLASS
35	L5	HR: FIRE ESCAPE	ACCESS	DOUBLE GLASS
36	L6	HR: FIRE ESCAPE	ACCESS	WOOD PANEL
37	L6	STORAGE	X	WOOD PANEL
38	L6	STORAGE	X	WOOD PANEL
39	L6	STORAGE	X	WOOD PANEL
40	L6	STORAGE	X	METAL
41	L6	STORAGE	X	WOOD PANEL
42	L6	STORAGE	X	WOOD PANEL
43	L6	STORAGE	X	WOOD PANEL
44	L4	PROC: FIRE ESCAPE	ACCESS	WOOD PANEL
45	L3	THEATRE FOYER	ACCESS	GLASS SLIDING
46	L3	PRINTING: SIDE ENTRANCE	ACCESS	GLASS DOUBLE
47	L2	RESERVATIONS ENTRANCE *	ACCESS *	GLASS DOUBLE *
48	L2	RESERVATIONS SIDE DOOR *	ACCESS *	GLASS DOUBLE *

RECEIVED
2007 -05- 17
LOGISTICS

COPY

APPENDIX I

2.2 The doors are numbered with a black numeral on a yellow square and are to be visited in numerical order

2.3 If a door is found to be opened and or unlocked it should be closed, the number of the door noted and an entry made in the occurrence book accordingly.

2.4 Check the exterior of the buildings for opened windows. The position of the opened window is to be recorded as between door numbers.

2.5 While checking that the vehicle enclosure is secure, the interior sections of the enclosure should also be patrolled.

2.6 Check the doors of the Generator and Transformer rooms.

2.7 The following patrol hours must be adhered to.

DAY/NIGHT SHIFT DUTY	PATROL HOURS	NORMAL WORKING DAYS [8AM-5PM]	WEEKENDS & PUBLIC HOLIDAYS
START DAY SHIFT	06H00		
	07H00	DAY PATROL	DAY PATROL
	08H00		
	09H00		
	10H00		DAY PATROL
	11H00		
	12H00		
	13H00		DAY PATROL
	14H00		
	15H00		
	16H00		DAY PATROL
	17H00		
START NIGHT SHIFT	18H00	DAY PATROL	
	19H00		NIGHT PATROL
	20H00	NIGHT PATROL	
	21H00		
	22H00		NIGHT PATROL
	23H00	NIGHT PATROL	
	24H00		
	01H00		NIGHT PATROL
	02H00	NIGHT PATROL	
	03H00		
	04H00		NIGHT PATROL
	05H00	NIGHT PATROL	

2.8 Security guards unless in direct pursuit of an intruder and with the knowledge of the control room or with by direct instruction of EZEMVELO KZN WILDLIFE Management are not permitted to enter the internal sections of the headquarters building after hours..

7. ESCORT DUTIES

1. A guard to be available to meet staff members from Reservations Building to escort them to their vehicles.

2. Reservation staff members working hours end at:

   a. Normal working day 18h00.
   b. Saturdays 13h00
   c. Sundays 12h00
   d. Public holidays 12h00

8. KEY LIST

The following keys are to be retained in the control room in a secure key cabinet provided by the client and are to accounted for by the guarding company and accounted for in the occurrence book on shift changes.

Item	Location	Qty	Tag colour	Type
1	Generator room	1	Orange	Door key
2	Main entrance	1	Green	Hard-Rock Padlock key
3.1	Vehicle enclosure	1	Green	Viro key
3.2	Vehicle enclosure	2	Green	Abus Diskus padlocks
4	Door No 1	1	White/clear	Door key
5	Door No 4	1	Yellow	Door key
6	Door No 29 and 35	1	Yellow	One door key for both locks
7	Door No 28, Finance	1	Yellow	Door key
8	Door No 36, Personnel	1	Yellow	Door key
9	Door No 45, Theatre	1	Yellow	Sliding door key

9.. ALARM PROCEDURE

Should the alarm system at the reservations centre, or any place where an alarm system may be installed, activate the following procedure will be taken.

1. Immediately notify the control room that the alarm has sounded.

3. The patrol guard will proceed to the source of the alarm, check the premises and keep in communication with the gate guard

2. The control room will phone the alarm company to ascertain the violated detection zone of the alarm and then inform the gate guard who will inform the patrol guard.

3. The control room will ensure that the alarm company immediately despatches their armed reaction vehicle to assist the security guard.

4. The alarm company will be responsible for informing the client of the incident and any consequent actions.

10. REPORT WRITING

1. An occurrence book (OB) will be provided by the guarding company and will be kept in the guard room.

1. The purpose of the OB is to keep a diary of the events that take place during every shift.
2. Each time a patrol occurs the departing and return times are to be recorded, together with a suitable comment as to the security of the premises.
3. Every time a representative of either the client, guarding company or SES visits the control room they should sign the book, this ensures that events are monitored and acknowledged.
4. Instructions of a simple nature should be entered into the book and acknowledged by the recipient.
5. Other instructions should be communicated in writing through pre-established methods.

2. Incidents or faults of any nature are to be reported in writing immediately in the Occurrence Book.

3.. It is incumbent on the KZN WILDLIFE EZEMVELO Operations Manager or his appointed representative to check the Occurrence Book on a regular basis, preferably daily, and thereafter take whatever action or call for any reports that he may consider necessary.

4. The guard supervisor will check and sign the occurrence book on each visit

11. GUARDING AMOUNT

Monthly cost of R23, 425.00 (ex. VAT) for two "C grade" security guards.

The remainder of this page is intentionally blank

SIGNATORY SECTION

SIGNED at PIETERMARITSBURG on the 15 / MAY /2007

For: **KZN NATURE CONSERVATION BOARD, T/A EZEMVELO KZN WILDLIFE**

P O BOX 134052, CASCADED 3202

Signed: _____

Name: KHULANI MKHIZE

Designation: CHIEF EXECUTIVE

FOR: KZN NATURE CONSERVATION BOARD
P.O. BOX 13053
CASCADES 3202

ID Number: _____

Witness

_____ ID _____

NMP BOSTOCK

Full name and ID Number

SIGNED at PIETERMARITSBURG on the _____/_____/2007

For: **VICTORIA COUNTRY CLUB ESTATE, MASTER HOMEOWNERS ASSOCIATION.**

Signed: _____

Name: _____

Designation: _____

ID Number: _____

Witness

_____ ID _____

Full name and ID Number

RECEIVED
2007 -05- 17
LOGISTICS

COPY