

# ITHALA GAME RESERVE MANAGEMENT PLAN



Conservation, Partnerships & Ecotourism

Prepared by

Ezemvelo KZN Wildlife

Ithala Game Reserve Management Committee

Developed 2025

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# EXECUTIVE SUMMARY

## Introduction

Ithala Game Reserve (IGR) covers an area of 29 653 ha and lies between the town of Louwsburg and the Phongolo River. The Reserve is approximately 70 km from Vryheid and 80 km from the town of Pongola.

Neighbours include commercial and community landowners on the eastern and western boundaries, Traditional Authority areas on the northern boundary, communal property and the town of Louwsburg on the southern boundary.

In accordance with the Local Government: Municipal Demarcation Act (Act No. 27 of 1998) and the Local Government: Municipal Structures Act (Act No. 117 of 1998), IGR has been demarcated into the Zululand District Municipality and three Local Municipalities, as follows: uPhongolo Local Municipality [KZ262]; Abaqulusi Local Municipality [KZ263]; and eDumbe Local Municipality [KZ261].

IGR is characterised by a considerable altitudinal variation, resulting in various environmental niches due to geological and climatological factors. The Reserve encapsulates the area roamed by one of southern Africa's most productive black rhino populations. The reasons behind the original proclamation were primarily for the conservation of key species and to restore biodiversity value by reversing detrimental human-induced impacts. This led to the dispossession of rights of land occupants, which has, through the Restitution of Land Rights Act (Act No. 22 of 1994), been redressed.

## Vision and Objectives

The Vision of the Ithala Game Reserve is:

***“To contribute to sound environmental management, conservation of key species, cultural heritage and restoration of degraded areas, while providing visitors and neighbours access to the environment through ecotourism, partnerships and sustainable utilisation; and to form the core of a consolidated conservation area.”***

The management team identified an objective for each of Ithala Game Reserve's Key Performance Areas. The management spheres relate to the essential functions and activities necessary to achieve the vision and to protect, develop and manage the area effectively. Objectives support the achievement of the vision for the protected area and form the basis for management interventions, goals, and targets set out in the Annual Operations Plan (AOP).

- The IGR is to be legally secured and clearly demarcated to support effective conservation and the implementation of legal agreements, with sufficient staff capacity and capability maintained to control lawful access and prevent illegal use of its resources.
- Biodiversity and cultural assets of IGR are to be protected by promoting compatible land, activity, and water use in surrounding areas, and by incorporating habitats critical to ecological integrity through site expansion and/or the creation of ecological corridors.
- Organisational procedures and staff capacity are to support management effectiveness; adequate, suitable equipment and infrastructure are to be maintained for protected area operations; secure and well-managed funding is to be provided for protection, development, and management; and the management plan is to be kept current, with threats mitigated and the AOP aligned to the plan and budget for adaptive management.
- Protect the ecological integrity of the IGR through active interventions based on principles of adaptive and ecosystem-based management to contribute to provincial and national biodiversity targets, maintain ecological processes to maximise ecosystem service delivery.
- Ensure the protection and public appreciation of all cultural and heritage resources within the site in accordance with statutory requirements. Ensure that cultural assets are known, targets are set, processes are established to achieve targets, threats are identified and mitigated, and public access and appreciation of the cultural assets are maintained.

- Implement an effective education and awareness approach that reaches a broad range of clearly identified target audiences and focuses on the protected area's values.
- Focus interaction with communities and consistent stakeholder involvement to ensure positive relations and support for the protected area and to facilitate sustainable economic benefits.
- Maintain sustainable nature-based tourism to provide a high-quality visitor experience while promoting the natural and cultural values of the protected area. Ensure well-maintained tourism infrastructure that aligns with responsible tourism practices and mitigates potential environmental impacts.
- Research, monitoring, and reporting systems are to be established and maintained to generate reliable data that informs adaptive management, supports biodiversity conservation, and ensures compliance with national regulations and international commitments.

### **SWOT Analysis and Risk Assessment**

The management team, together with stakeholders, identified the following specific issues (See section 1.11 for the complete SWOT analysis):

- Continually declining levels of financial and human resources,
- Non-compatible land use outside the IGR, such as human settlements encroaching on the boundary and mining threats,
- Alien plant infestations threaten biodiversity,
- Increasing poaching levels,
- Human wildlife conflict creates antagonism against the protected area, particularly since the northern boundary is unfenced,
- Mining threats in the areas surrounding IGR, as well as illegal mining in abandoned mines inside the protected area,
- Opportunities for expansion, research, and environmental education exist,
- The reserve is close to the Zulu cultural heartland with good tourism infrastructure.

### **Annual Operations Plan**

An AOP will be prepared to effectively implement the management plan and address the critical issues identified. The AOP is based on the management plan objectives, targets, SWOT analysis and Management Effectiveness Tracking Tool (METT) assessment. The AOP will guide the implementation and monitoring of the management plan. It includes a component to record any revisions required to the management plan, which will be incorporated into the next iteration of the plan.

### **Revision of the Management Plan**

This management plan is valid from the date of signature of the MEC for a minimum period of 10 years. Annual assessments by the management team and the Protected Area Management Planning Unit (PAMP) will guide the review requirements. Should a substantial change be required to the strategic component of the plan, a review process with public consultation and resubmission to the MEC will be facilitated.

## ABBREVIATIONS

AOP	Annual Operations Plan
CARA	Conservation of Agricultural Resources Act No. 43 of 1983
CCA	Community Conservation Area
CDF	Conservation Development Framework (Component of Ezemvelo KZN Wildlife protected area management plan)
CEO	Chief Executive Officer
CHA	Controlled Hunting Area
DFFE	National Department of Forestry, Fisheries & the Environment
DEVCO	Ezemvelo KZN Wildlife Development Committee
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EIA	Environmental impact assessment
Ezemvelo	Ezemvelo KwaZulu-Natal Wildlife
FPA	Fire Protection Association
IDP	Municipal Integrated Development Plan
IGR	Ithala Game Reserve
IUCN	International Union for the Conservation of Nature
KZN	KwaZulu-Natal Province of the Republic of South Africa
KZNA&RIA	KwaZulu-Natal Amafa and Research Institute [Under Act No. 5 of 2018]
LUMS	Land Use Management Scheme
MEC	Member of the Executive Council
METT	Management Effectiveness Tracking Tool
MoA	Memorandum of Agreement
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
NPAES	National Protected Area Expansion Strategy
PA	Protected Area
SAPS	South African Police Service
SDF	Municipal Spatial Development Framework
SWOT	Strengths, weaknesses, opportunities and threats analysis
TFP	Transfrontier Park
WWF	World Wildlife Fund
ZIASP	Zululand Alien Invasive Species Programme
ZoI	Zone of Influence

## DEFINITION OF TERMS

Alien species	Species or genotypes are not indigenous to the protected area 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, 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	Concerning 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 the protected area with restrictions placed on its use or where 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).
Eco-cultural tourism:	‘Minimal impact tourism’ or ‘environmentally sound tourism’ includes responsible travel of tourists and appreciation of natural and cultural areas. It typically benefits local or hosting communities and increases conservation awareness for both the tourist and local communities affected.
Ecological Integrity	The sum of an ecosystem's biological, physical and chemical components 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), “environmental goods and services” means: <ul style="list-style-type: none"> <li>a. Benefits obtained from ecosystems such as food, fuel and fibre and genetic resources.</li> <li>b. Benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification.</li> <li>c. Cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;”</li> </ul> For this management plan, sustainable water production is also explicitly 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	The Nature Conservation Service established in terms of the KwaZulu-Natal Nature Conservation Management Act (Act No. 9 of 1997) trading as Ezemvelo KZN Wildlife.
Indigenous species	Concerning 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 – <ul style="list-style-type: none"> <li>a. Threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species.</li> <li>b. May result in economic and environmental harm or harm to human health.</li> </ul> (As per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Joint management	The agreed coordination of management and/or management actions by landowners and/or mandated managers on their individual or combined properties 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	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	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 are used to evaluate the change in status, distribution, or integrity and 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.
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	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 Any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Park Management Committee	The management committee that deals with the day-to-day management of the protected area and are chaired by the Conservation Manager.

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, workforce, 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	Concerning 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 to retain 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]), or an area designated as such in the management plan zonation, to manage the area to retain its wilderness character.
Zone of Influence	the area outside the boundary of a protected area where activities of people or other influences may have a negative impact on the purpose, values or objectives and/or efficient and effective management of the protected area and/or continued delivery of tourism and other societal benefits from the protected area, and consequently where protected area management seeks to actively engage with stakeholders in order to promote and retain compatible, and prevent or mitigate incompatible, activities and use of land.

# LIST OF STATUTES FOR PROTECTED AREA MANAGEMENT<sup>1</sup>

## Biodiversity, Environmental and Cultural Resource Management

- 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 (No. 51 of 1977)
- Environment Conservation Act (No. 73 of 1989)
- Forest Act (No. 122 of 1984)
- Hazardous Substances Act (No. 15 of 1973)
- KwaZulu-Natal Amafa and Research Institute Act (No. 5 of 2018)
- KwaZulu-Natal 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: Protected Areas Act (No. 57 of 2003)
- National Environmental Management: Integrated Coastal Management Act (No. 24 of 2008)
- 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 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 and Land Use

- 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. 3 of 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)

## 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)

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<sup>1</sup> As of 2025 and includes any subsequent amendments and regulations promulgated under these acts.

# 1 CONTEXT

## 1.1 INTRODUCTION TO THE MANAGEMENT PLAN

### 1.1.1 Purpose of the management plan

Management plans are high-level documents that provide the strategic direction for the development and operations of the protected area. They inform management at all levels, from the staff on-site through to the Chief Executive Officer (CEO), the Board and the Member of the Executive Council (MEC). The purpose of the management plan is to:

- facilitate compliance with the National Environmental Management: Protected Areas Act (No. 57 of 2003) and other relevant legislation,
- provide the primary strategic tool for the management of protected areas, informing the need for specific programmes and operational procedures,
- offer motivations for budgets and provide indicators that the budget is spent correctly,
- build accountability into the management of protected areas,
- provide for capacity building, future thinking, continuity of management, and
- enable Ezemvelo KZN Wildlife to develop and manage the protected area so that its values and the purpose for which it was established are protected.

### 1.1.2 Structure of the management plan

Table 1 and Figure 1 highlight the structure of the management plan.

**Table 1: Structure of the management plan.**

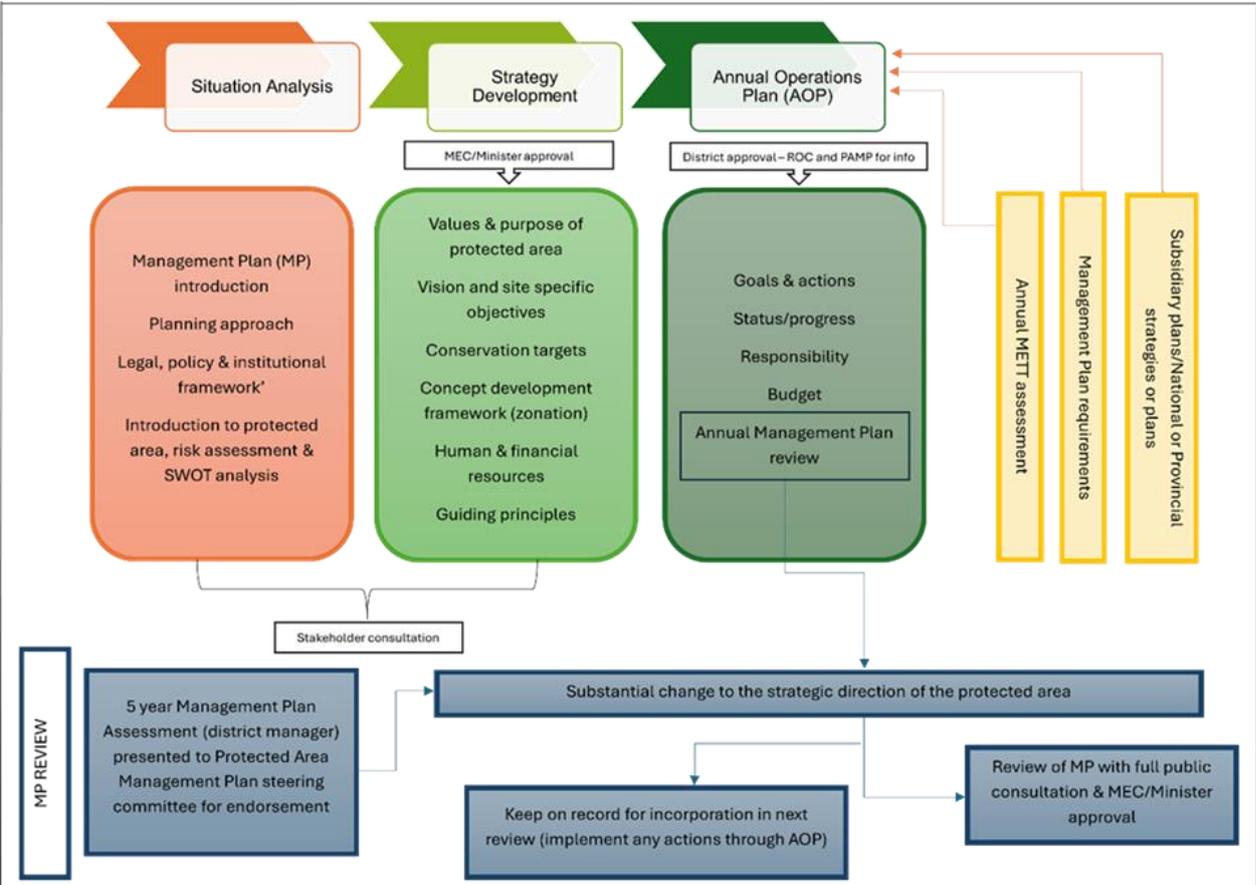
CONTEXT (SECTION 1)	
Section 1 deals with contextual issues, and Sections 1.1 – 1.3 set out the process for the development and implementation of the management plan; it provides an introduction and background to the management plan and its future revision. It sets the scene for the management plan and explains the status of the protected area. Any changes required to this section can be recorded in the Annual Operations Plan during the Annual Goal Setting Meeting as a record for incorporation into the following review. It describes the legislative basis and the policy framework for the management of protected areas. This section also addresses the planning approach followed in the development of the management plan.	
<b>Section 1.1</b>	<b>Introduction to the management plan:</b> This section explains the purpose of the plan, the plan structure, and the process followed to develop, implement, monitor, report, and review the management plan, the implementation, monitoring and reporting and review of the management plan.
<b>Section 1.2</b>	<b>Planning approach:</b> This section deals with the primary planning principles incorporated into the management plan and in the management of the protected area. It includes public trust, ecosystem-based management, adaptive management, collaboration and transparency.
<b>Section 1.3</b>	<b>Legal, Policy and Institutional framework:</b> This section sets out the legislative basis and policy framework for the management of protected areas in Kwa-Zulu Natal (KZN); it also includes the institutional framework of the management authority.
<b>Section 1.4</b>	<b>Background to the protected area:</b> This section provides contextual information relating to the protected area; it includes the background of the protected area, records of boundary deviations, proclamations, servitudes and any co-management agreements, and the protected area expansion opportunities. Furthermore, all ecological, cultural, financial, socio-economic,

	human resources, infrastructure and detailed risk assessment aspects are covered in this section.
Section 1.5	<b>Ecological context to the protected area:</b> This section provides the ecological context for the protected area and includes climate and weather, topography, geology and soils, hydrology, vegetation, fire regime, invasive species, and information on fauna and flora.
Section 1.6	<b>Cultural context of the protected area:</b> This section provides the current cultural context of the protected area and includes cultural heritage sites, living heritage and historical aspects.
Section 1.7	<b>Socio-economic context of the protected area:</b> This section provides the context of the protected area beyond its boundary.
Section 1.8	<b>Staff and funding:</b> This section provides the current resources allocated to the management of the protected area from a financial and human resource perspective.
Section 1.9	<b>Infrastructure:</b> This section provides current infrastructure in the protected area, including bulk, management, and tourism infrastructure.
Section 1.10	<b>Management effectiveness:</b> This section describes the latest management effectiveness assessment, highlights the score it achieved in relation to the national standard, and identifies key findings.
Section 1.11	<b>Risk assessment:</b> This section provides a risk assessment and includes a SWOT analysis that highlights both opportunities and threats.
<b>STRATEGY (SECTION 2)</b>	
This section provides a framework for the strategic direction of the protected area adopted by the MEC. It provides the strategic basis for the protection, development, and operation of the protected area. It will be prepared collaboratively by involving stakeholders within Ezemvelo, the surrounding communities, local and provincial government departments, and other key stakeholders. Should substantive changes to this component be necessary, public consultation and adoption by the MEC will be required.	
Section 2.1	In terms of the National Environmental Management: Protected Area Act (No. 57 of 2003) (NEMPAA), section 40 prescribes that the protected area must be managed exclusively for its declared purpose, per the management plan and other relevant legislation. This section deals explicitly with the purpose of the protected area and is based on the unique resource values of the site.
Section 2.2	Sets out the values of the protected area, providing the basis for the management of the area. The values of a place are those remarkable attributes that exemplify it and are the primary reason for its declaration as a protected area. The values are essential in planning and management, as they are the aspects of the place that must be protected.
Section 2.3	Sets out the long-term vision or desired state of the protected area. This vision will be derived through a consultative process and provide a road map for managing and developing the protected area.
Section 2.4	Sets out the strategic objectives that must be achieved to conserve the protected area effectively. An objective has been identified for each of the protected area's key performance areas based on the critical functions and activities necessary to protect, develop and manage it effectively. The protected area's objectives are translated into site-specific goals, actions, timeframes, responsibilities, and budgets in the AOP.
Section 2.5	Conservation Development Framework: Sets out the development framework and zonation of the protected area, outlining the permissible land uses in particular zones. It also establishes principles for the buffer/ Zone of influence (Zoi) contiguous to the protected area.
Section 2.6	The administrative structure describes the staff required to manage the protected area effectively.

<b>Section 2.7</b>	The financial section deals with budgets, budget shortfalls and funding requirements of the protected area.
<b>Section 2.8</b>	Biodiversity targets provide for the provincial and national targets towards which the protected area contributes.
<b>Section 2.9</b>	Sets out the management strategies for key species. It provides the strategy, targets, and threat identification for these species.
<b>Section 2.10</b>	Provides for all aspects of protected area management and activities that require monitoring and surveillance programmes, and specified reporting requirements for these.
<b>Section 2.11</b>	Provides the guiding principles based on the policy framework of Ezemvelo and best practices that will be used to manage the protected area.

**ANNUAL OPERATIONS PLAN**

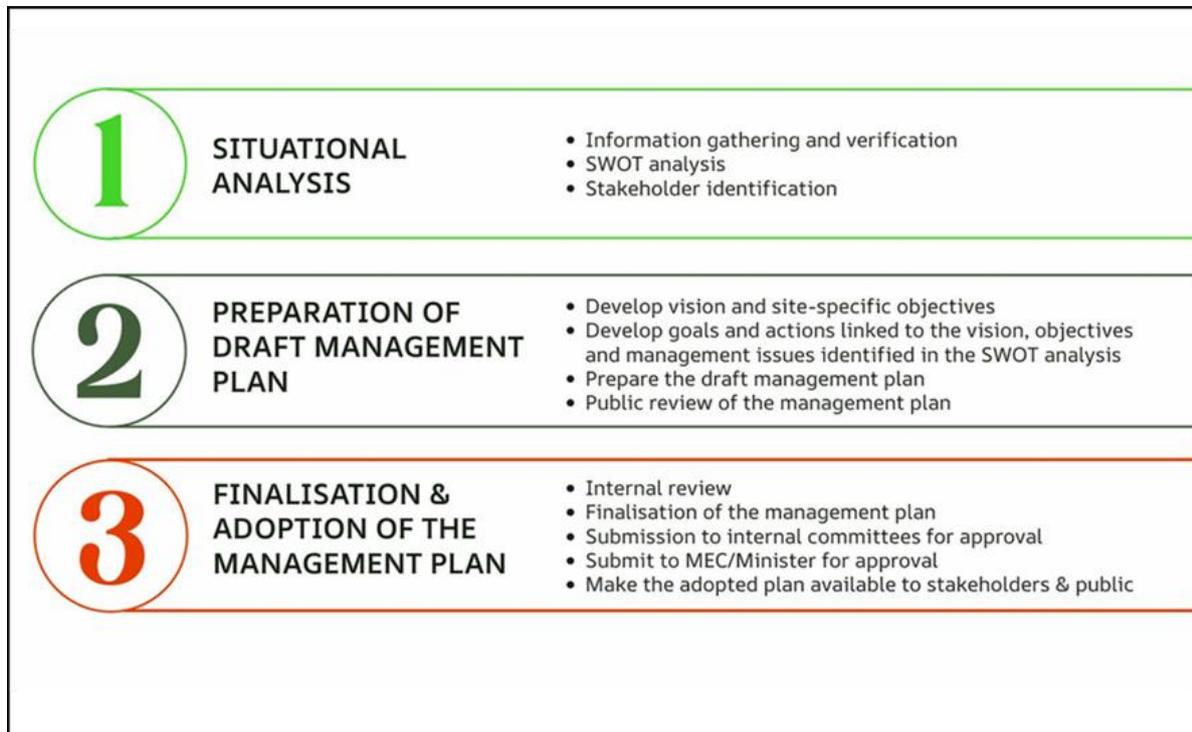
The AOP will be compiled on an annual basis, with quarterly reviews. It will contain specific goals and actions required to implement the management plan. The AOP combines site-specific goal setting, management interventions needed to achieve objectives in the management plan, and the next steps necessary to improve the protected area’s management effectiveness. It furthermore provides a mechanism to review the management plan, assess the requirement for a review process should substantial changes be required, and record minor revisions for updating the management plan. *See Figures 1 and 2.*



**Figure 1: The protected area management plan structure.**

### 1.1.3 Management plan development

The development of a management plan consists of three main steps (indicated in Figure 2):



**Figure 2: Management plan development process.**

### 1.1.4 Management plan implementation

Each year, an AOP (to be completed with the commencement of the new financial year) will be prepared for each protected area managed by Ezemvelo KZN Wildlife. The AOP will be based on the vision, objectives, and risk assessment in the management plan or additionally identified by site management, the Management Effectiveness Tracking Tool (METT) assessment, and any other relevant subsidiary plan or strategy. The AOP provides for the implementation, revision, monitoring and reporting of the management plan. Furthermore, the plan allows site managers to set goals and actions to support the objectives, respond to emerging threats and opportunities, increase management effectiveness, and ensure that financial resources are allocated based on the protected area priorities. This is an essential component of the adaptive management cycle for the implementation of management plans.

The Management Committee that will develop the AOP consist of:

- Conservation Manager
- District Manager
- Ecologist
- Resort Manager
- Community Conservation Officer

The purpose of the annual management meeting for the protected area is to:

- As part of the annual review, assess any changes to the strategic direction or the context of the management plan.

- Determine management activities for the coming year, setting goals and actions based on the management plan, METT outcomes and aligned with the protected area manager’s performance contract.
- Determine how budgets will be spent to achieve the goals for the coming year. The resource requirements associated with management activities and targets in the AOP must be considered and budgeted according to organisational procedures. The following aspects must be considered in determining adequate human resources, funds, and equipment for the protected area:
  - 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,
  - 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,
  - the capture of visitor information and statistics,
  - admitting visitors to the nature reserve and charging entrance fees,
  - community liaison and cooperation, and
  - environmental interpretation and education.

### **1.1.5 Review of the management plan**

The management committee will revise and update the operational component of the management plan (AOP) annually. Reporting and status updates will be facilitated quarterly to provide for Ezemvelo’s high-level reports. A copy of the AOP will be submitted to the Protected Area Management Planning (PAMP) Unit for the management plan review assessment and implementation tracking. If a substantial change to the strategic direction of the management plan is necessary, stakeholder consultation and MEC approval will be required.

The process to maintain and update the management plan can be summarised as follows:

- The management plan will be developed for a minimum of 10 years.
- An annual assessment by the Management Committee will determine if substantial changes are required to the Strategic component (Section 2) of the plan.
- A full review will be required if substantive changes to the vision, objectives and the zonation of the protected area (i.e. changes in the strategic direction of the plan) are required.
- Should no substantial changes be required, the Management Committee will record such minor revisions as needed and keep this on record for incorporation upon the following review. Any actions required from the minor revision must be incorporated into the AOP for implementation. This amendment must be copied to the Protected Area Management Planning Unit for recordkeeping. The AOP, including the annual review, will be submitted to the Protected Area Management Planning Unit.
- Should substantial changes be required, the IGR Management Committee must describe these and refer to the Protected Area Management Plan Steering Committee for review and prioritisation.
- The District Manager must assess the review requirements 5-yearly and submit this assessment to the Protected Area Management Planning unit for recordkeeping purposes.

## **1.2 PLANNING APPROACH**

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

### **1.2.1 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 obligates the Ezemvelo KZN Wildlife to support the management of all protected areas and the resources therein for the benefit of 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 Conservation and Sustainable Use of South Africa's Biodiversity 2023].

### **1.2.2 Ecosystem-based management**

Decision-making associated with the protection of 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 the natural processes. Specific management may be desirable when the structure or function of a habitat or ecosystem has been significantly altered by human-induced impacts or previous management. Specific management will only be considered when this option is the only possible alternative 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 severe adverse effects on neighbouring lands; or
- protected area facilities, public health or safety will be threatened; or
- the objectives outlined in the protected area management plan, prescribing how certain natural features or cultural resources must be maintained, cannot be achieved.

Where directed management is required, it will be based on scientific research and 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, norms, and standards, particularly the Integrated Environmental Management Policy.

It is recognised that the protected area 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 ensure that all management decisions consider the complex interactions and dynamic nature of ecosystems and their limited capacity to withstand and recover from human-induced disturbance.

It is recognised that Ezemvelo KZN Wildlife's protected areas are becoming increasingly important, if not vital, in national and international efforts to maintain the biodiversity and genetic resources of South Africa. Thus, the management of the ecosystems of the protected area must be credible and solidly based on 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.

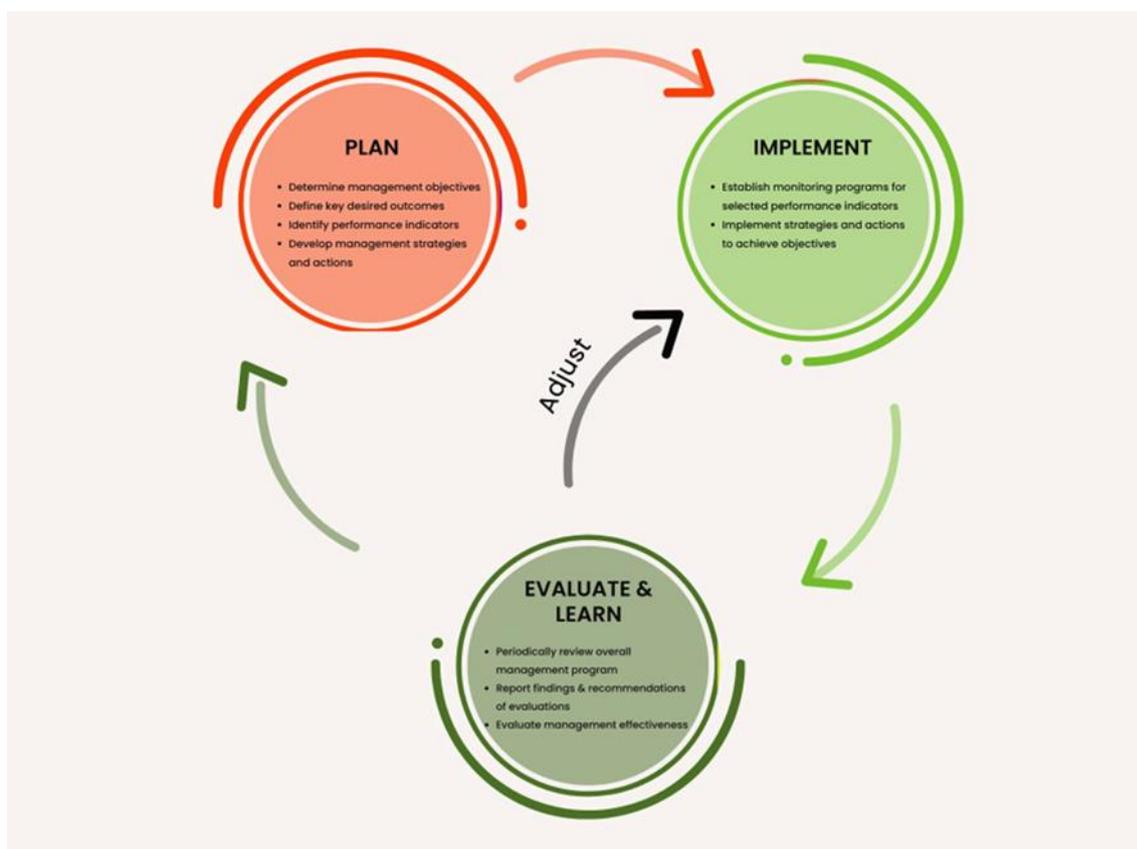
It is further recognised that, in particular, cumulative, human-induced disturbance or poor management practices have far-reaching, long-lasting and potentially irreversible negative impacts on species, habitats, ecosystems and the protected area as a whole. It is thus recognised that a cautious and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

### 1.2.3 Adaptive management

Adaptive management is a structured, iterative process in which decisions are made based on the best available information, to obtain better information through monitoring of performance (*Figure 3*). In this way, decision-making aims to achieve the best outcome based on current understanding while accruing the information required to improve future management. Adaptive management can lead to the 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 innovations in biodiversity conservation management.
- Demonstrate that management is appropriate and effective.



**Figure 3: The adaptive management cycle.**

### 1.2.4 Collaboration and transparency

Stakeholder involvement and support are essential aspects 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)(Republic of South Africa 2003). Accordingly, this management plan has been developed through a collaborative process involving local communities and other key stakeholders.

A detailed public participation report is available upon request from the protected area management.

### **1.3 LEGAL, POLICY & INSTITUTIONAL FRAMEWORK**

#### **1.3.1 The legislative basis for the management of protected areas**

A large body of legislation is relevant to the management of protected areas in South Africa. However, 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”* (Republic of South Africa 2003). 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 on Page xiv. Managers must 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 (Republic of South Africa 2004). An Invasive species monitoring, control and eradication plan must be developed for Ithala Game Reserve.

The National Environmental Management Act (No. 107 of 1998), environmental impact assessment (EIA) Regulations, various activities require environmental authorisation before they may commence. In terms of Regulation R.985, Listing Notice No.3, several activities require environmental approval, specifically as a result of their proximity to a protected area (Republic of South Africa 1998). The implication is that if any of the activities listed are proposed in the protected area or within five kilometres, they will be subject to either a basic assessment or a full scoping and Environmental Impact Assessment process. Several 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.

#### **1.3.2 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, the overarching policy is set out in:

- White Paper on the Conservation and Sustainable Use of South Africa’s Biological Diversity of 2018;
- Bioregional Approach to South Africa’s Protected Areas, 2001/2002;
- Community-Based Natural Resource Management Guidelines, 2003; and
- National environmental management principles in section 2 of the National Environmental Management Act.
- White Paper on Conservation and the Sustainable Use of South Africa’s Biodiversity (2023)

Within the province, Ezemvelo KZN Wildlife has adopted a Five-Year Strategic Plan and Performance Plan, with the following corporate strategic profile:

## VISION

A leader in connecting people and nature for a better world.

## MISSION

For the benefit of the people of the province, working with our stakeholders and partners to:

- Conserve indigenous biological resources sustainably and promote the biodiversity economy.
  - Manage human-wildlife co-existence and conflict.
  - Promote ecotourism in support of inclusive economic growth.
- Monitor and enforce a sound biodiversity management regulatory framework.
  - Generate revenue to enhance the delivery of the core mandate.

## CORE VALUES

### EXCELLENCE

- Strive to apply best practices to always achieve the highest quality and standards.
- Perform at our best in the provision of the services we offer and do things right the first time and all the time.
- Perform our duties in a professional manner.

### UBUNTU

- Enhance interdependence and cordial relations premised on humility and respect.
- Create and maintain shared goals and work together towards improving delivery.
- Emphasise transformation, social unity and generosity of spirit.

### INTEGRITY

- Provide a guarantee of consistency of actions and conduct.
- Display the highest ethical and moral conduct.
- Act transparently and with the honesty in all we do.

### INNOVATION

- Undertake robust and credible research, and embrace a culture of learning, adaptation, and creativity at all times.
- Inspire others to action to create a better future and solve problems in new ways.
  - Renew the implementation of programmes, operations, and projects in a systematic and holistic manner.

### PASSION

- Be committed to the achievement of shared goals in a healthy working environment.
- Be passionate in what we do.

Several policies specific to particular areas of operation have also been developed by Ezemvelo (Appendix 2). These policies have been considered and applied within the plan where relevant. The management team is required to be familiar with them and apply them to managing IGR. This management plan has utilised this body of policies to develop a strategic and operational management framework for Ithala that is consistent with the broad goals and specific policy requirements of Ezemvelo.

### **1.3.3 Institutional framework**

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 (South Africa 1997).

The protected area will be managed per relevant legislation and the management policies of Ezemvelo KZN Wildlife, which includes a commitment to maintaining the site's character and ecological, cultural and aesthetic integrity.

The KwaZulu-Natal Nature Conservation Board will be responsible for reporting on the management of the protected area to the designated KwaZulu-Natal Provincial 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.

## **1.4 BACKGROUND TO ITHALA GAME RESERVE AND ITS CONTEXT**

### **1.4.1 Background, locality and extent of Ithala Game Reserve**

IGR is characterised by a large altitudinal variation, resulting in various environmental niches due to geological and climatic factors. The reserve covers an area of 29 653 ha and lies between the town of Louwsburg and the Phongolo River (*See Map 1*). The two other river systems flowing into the reserve are the Muhulumbela and the Mbizo/Thalu, which flow into the Pongola River. The Reserve is approximately 70 km from Vryheid and 80 km from Pongola, north of the R69 and south of the N2 (no direct link).

Neighbours include commercial and community landowners on the eastern and western boundaries, Traditional Authority areas on the northern boundary, communal property and the town of Louwsburg on the southern boundary.

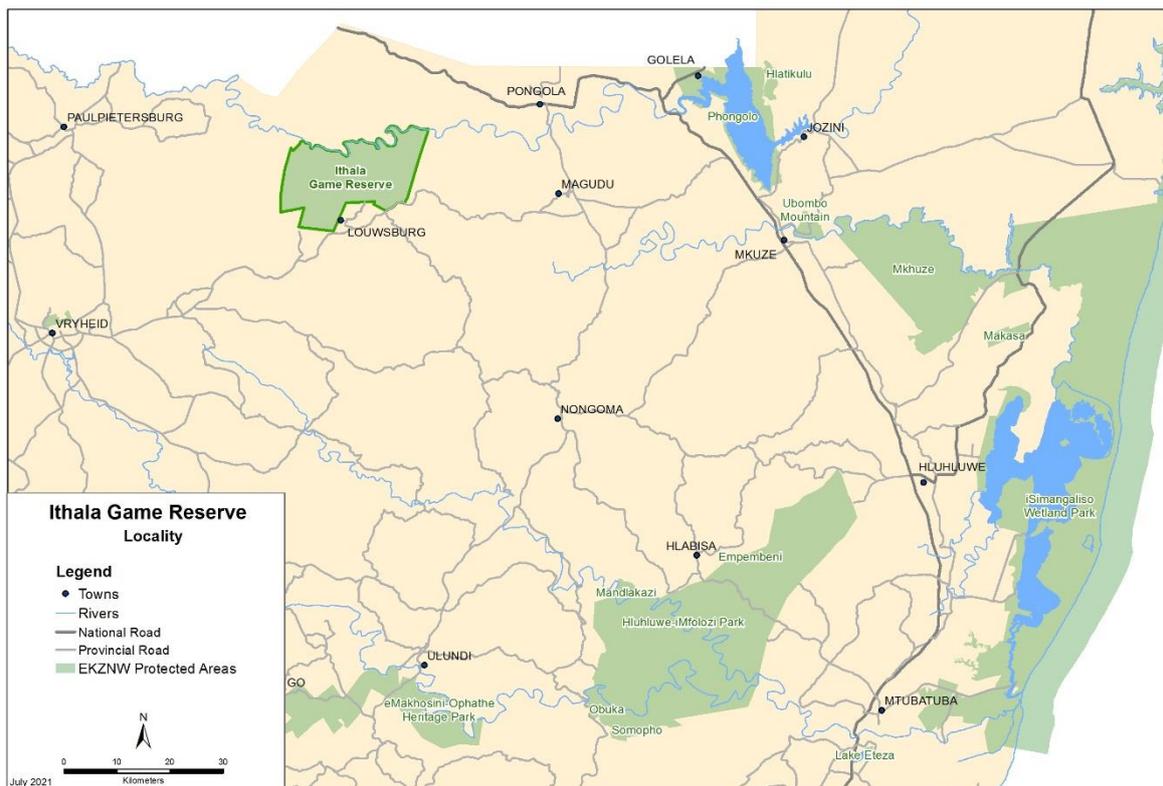
IGR is a core conservation area forming part of the KZN protected area network. As with all Ezemvelo protected areas, the intention is to continually improve the management effectiveness of IGR in line with the national standard determined by the Department of Fisheries, Forestry and the Environment (67%).

In accordance with the Local Government: Municipal Demarcation Act (Act No. 27 of 1998) and the Local Government: Municipal Structures Act (Act No. 117 of 1998), the IGR has been demarcated into the Zululand District Municipality and three Local Municipalities: uPhongolo Local Municipality [KZ262]; Abaqulusi Local Municipality [KZ263]; and eDumbe Local Municipality [KZ261].

The Ithala Game Reserve (IGR) largely encapsulates the area roamed by one of the most productive black rhino populations in southern Africa. Its history with regard to conservation in South Africa is significant. The reasons behind the original proclamation were primarily for the conservation of key species and to retain aesthetic value by restoring detrimental anthropogenic-induced impact. This led to the dispossession of land occupiers' rights, which have been redressed through the Restitution of Land Rights Act (Act No. 22 of 1994).

Full ownership rights have been restored to the claimant communities without occupation rights or changes in the current land use. This aligns with the Cabinet Memo of 2001, stating that "Title to conservation areas can be transferred to claimants in a manner that achieves a win-win situation, for example, where transfer of title is coupled with registered notarial deeds containing conditions of use".

As the management authority appointed by the MEC, Ezemvelo has entered into a co-management agreement with the Buthelezi/Zulu communities as owners for the joint management of the claimed land to achieve maximum compliance with the national and international laws and regulations governing conservation.



**Map 1: Locality of Ithala Game Reserve**

### 1.4.2 Eco-cultural tourism

Ntshondwe Resort in IGR was officially opened on 6 April 1991 by Mr C. van R. Botha, the then-administrator of Natal.

Ithala Game Reserve IGR has a well-developed infrastructure in place. The road network ranges from tar to gravel and includes several 4x4-only tracks. The tourism/visitor offering ranges from several bush camps, the Doornkraal campsite (not electrified), the Ntshondwe Lodge and conference facility, picnic sites, staff accommodation, gates, and management infrastructure.

### 1.4.3 Boundary deviations

There is one boundary deviation at Bobbejaan Gate, on top of Ngotshe Mountain. The Ithala boundary fence was moved approximately 50 m back for approximately 1 km to incorporate an airstrip, which no longer exists.

### 1.4.4 Agreements

This includes any local or other agreements, leases, servitudes, Memorandum of Understanding (MoU) or Memorandum of Agreement (MoA). The following agreements are relevant to the management of Ithala Game Reserve:

- Sentec mast - this structure serves as a mast for radio and security communications and a beacon for the Civil Aviation Authority (CAA). Access is pre-arranged through the Conservation Manager (Potwe gate).
- Eskom powerlines – access to the protected area is provided for maintenance activities. Access in this instance is also pre-arranged with the Conservation Manager.
- Ithala-Madaka – an agreement was drawn up, pre-2005, whereby this private game farm has access to Ithala through the Zondwayo Gate. A payment plan for access is in place, requiring monthly payments to the Ntshondwe camp.

- Vodacom mast- A contract exists for a Vodacom/ MTN mast in Ntshondwe linked to a monthly fee.

#### **1.4.5 History of conservation**

Ithala was established when the then Natal Parks Board started buying up farms to establish this Reserve in 1972. Much of the land had to be rehabilitated due to extensive poor agricultural practices. There were also two gold mines (now decommissioned) in this area. In the late 1800s, this land was given by King Dinizulu to white farmers who farmed and hunted there. These farming activities caused much of the soil erosion, and the properties were used as “labour Farms” under the Apartheid system. Due to their low productivity, landowners sold their farms to the province for the formation of a game reserve. Importantly, the Natal Provincial Administration at the time resolved to establish a game reserve in this northern scenic region of KZN to provide a major wildlife destination for tourists. With the exception of the lion, all the big game species have been reintroduced, and all of the diverse habitats are now well-stocked with appropriate animals. Most of the original species have been re-established.

#### **1.4.6 Proclamation status**

In July 1972, the then Natal Parks Board bought 8 488 ha of land northwest of Louwsburg. This area, consisting of the farms Doornpan, Eldorado, Jammerdal and Doornkraal, was proclaimed as a nature reserve in March 1973 by Proclamation No. 36 of 1973. Over the next few years, five additional areas of land were incorporated, with a consolidated declaration in 2012 (*Appendix 1*):

- Proclamation No. 157 dated 12 September 1974 [Breda No. 261 2815 ha; Wonderfontein No. 486 2986 ha; Vergelegen No. 373 1977 ha; Doornpan No. 117 117 ha],
- Proclamation No. 31 dated 13 March 1975 [Lot 616 Louwsburg Township 223 ha],
- Proclamation No. 61 dated 5 May 1977 [Ongeduld No. 393 1699 ha; Craig Adam No. 534 2852 ha],
- Proclamation No. 158 dated 6 December 1979 [Bergvliet No. 452 1679 ha; Geluk No. 521 1725 ha; Ongegund No. 393 1698 ha],
- Proclamation No. 1982 dated 18 November 1982 [Langverwacht No. 495 ha; Onverwacht No. 395 ha].

#### **1.4.7 Protected area expansion & regional aspects of Ithala Game Reserve**

##### **1.4.7.1 National protected area expansion strategy**

A National Protected Area Expansion Strategy (NPAES) (Department of Environmental Affairs 2008) was developed in 2008 and subsequently updated and approved at a national ministerial level to address a lack of adequate protection and representation of all vegetation types within the protected areas system. The purpose of the NPAES is to provide a national framework for the expansion and consolidation of the protected area system, focusing on priority areas for representation and persistence of biodiversity (Department of Environmental Affairs 2016). This twenty-year strategy aims to ‘achieve cost-effective protected area expansion for improved ecosystem representation, ecological sustainability and resilience to climate change’. Another principle from the NPAES is that the expansion of the protected area network should take place concurrently with efforts to improve the management effectiveness of existing protected areas. In terms of the NPAES, both national and provincial, several areas around the northern boundary of Ithala Game Reserve are identified as priorities for protected area expansion (Department of Environmental Affairs 2016). Based on the NPAES, at a national level, Ithala Game Reserve is a strategically important protected area that forms a critical nodal point for the expansion of protected area efforts.

##### **1.4.7.2 The provincial protected area expansion plan**

The KwaZulu-Natal Protected Area Expansion Plan (KZNPAES) (Carbutt & Escott 2010) identified areas around the borders of Ithala Game 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 Ithala Game Reserve are characterised by high levels of irreplaceability, primarily due to losses of natural habitat within the grassland biome and the individual vegetation types in which they occur. In terms of the KZNPAES, Ithala Game Reserve is deemed significant in terms of its contribution to large, intact and unfragmented areas, macro-ecological corridors and being the northern extremity of Mist-belt Grassland. The selection criteria do not include rhino or elephant conservation aspects central to Ithala's conservation objectives.

Land identified as a priority for protected area expansion may be incorporated into Ithala Game Reserve through land acquisition or stewardship agreements established with individual landowners or communities.

### **1.4.7.3 Local expansion**

During the development of the management plan in 2009, certain areas were identified as potential Community Conservation Areas (CCAs) and additional private areas were identified that border the reserve that could be considered for some form of expansion. This process included extensive input from the first local board. This Board included representation from the current Ithala land-owning community trusts. Subsequently, three private properties that were identified at the time have either entirely changed land use and land ownership, or the management objectives of those properties could not be considered compatible with Ithala's biodiversity objectives. The identified CCAs, which only consisted of contiguous land portions north of the Pongola River under six traditional councils, have, however, remained an area of substantial focus. Given that the 2009 management plan contained the principle of potential expansion of Ithala into the community area, a foundation was provided for negotiations with traditional councils and local communities adjacent to the Pongola River. These negotiations began in 2016 and aimed to erect a two-strand electric fence north of Ithala (SICCP concept). Erecting this fence does not mean the Park has formally expanded, but it will create a more realistic base to upgrade to a game fence of appropriate standard and thereby allow for the establishment of a more formal agreement and potentially be incorporated into Ithala. At the time of writing this plan, negotiations had stalled, but the concept remains sound and must continue to be pursued.

Furthermore, the Zone of Influence (ZoI) developed for this plan has identified natural, unmodified areas adjacent to Ithala that could be considered for expansion in future (section 2.5).

### **1.4.8 Co-management**

Co-management is one of the popular approaches for reconciling land claims and biodiversity conservation in South Africa. (Kepe 2008). A Memorandum of Agreement (signed on 2 May 2007) between the then Ministers of the Department of Environmental Affairs and Tourism and the Department of Land Affairs ensures that land restitution inside a protected area takes place, the owners will not take occupancy, and the land-use shall not be altered, but remain a conservation area in perpetuity under the management of the existing management authority. The Memorandum sets out guidelines for a cooperative national approach to the resolution of land claims in protected areas; it states that:

- where feasible and applicable, the title of the land shall be transferred to claimants without settlement rights and conditions of land use shall be registered against the title deed in respect of restored land,
- all the claimants for a protected area will be required to form one association to ensure representation into management structures appointed by the National minister per the applicable legislation,
- the existing conservation agency shall continue to manage the land situated within the protected area after restitution until the DEAT minister reviews it, and
- beneficiation of the claimants shall be structured so that it may be tangible, realistic and optimal, though not compromising the financial sustainability of the said protected area.

As per the Restitution of Land Rights Act No. 22 (South Africa 1994), claimed land can only be transferred in title to a legal entity representing the originally dispossessed or their direct descendants.

#### **1.4.8.1 Co-management history of Ithala Game Reserve**

The Ithala Game Reserve land claim was settled in terms of Section 42(D) of the Restitution of Land Rights Act, 1994. Two Settlement Agreements were signed with the Ithala Game Reserve Community Trust, representing the land claimants under iNkosi EM Buthelezi and the Mhulumbela Community Trust, representing the land claimants under the late iNkosi BM Zulu.

The settlement agreements were signed in August 2007. As part of the Settlement Agreement, the title deeds of the claimed reserve would be handed to the community trusts, but the land use, i.e., conservation, could not be changed and had to remain in perpetuity. There could be no physical occupation of the claimed land.

The designated state management authority had to enter into a co-management agreement with these Trusts in terms of Section 42 of the National Environmental Management Protected Areas Act 53 of 2003.

This negotiation process culminated in the signing of a co-management agreement in December 2010.

This agreement laid out a position that the Management authority will:

- 1.1. Where possible, feasible and necessary, the Management authority shall utilise game and game products as a conservation management tool for donation to the Trust. This shall be determined by the availability of excess animals declared after the game census, management strategies, and policies.
- 1.2. The Management authority shall set up a skills development fund to invest in local human capital over an initial three years using funds from one key species secured from the auction sales. The express aim and objective of the fund shall be to facilitate training for the Buthelezi and Zulu Communities living adjacent to the Ithala Game Reserve and those who were displaced and are legal beneficiaries living far from the Ithala Game Reserve, in line with the targets set by the Trust and the co-management committee.
- 1.3. The skills development fund shall ensure that the Buthelezi and Zulu Communities living adjacent to the Ithala Game Reserve and those who were displaced and are legal beneficiaries living far from Ithala Game Reserve, receive at least the following:
  - 1.3.1. Provide bursaries for specialised courses,
  - 1.3.2. Offering in-service training,
  - 1.3.3. practical on-the-job training, and
  - 1.3.4. Exposure trips.
- 1.4. Subject to the availability of funds, applicants who meet the qualifying criteria through the selection process determined by the co-management committee shall be eligible to access funds.
- 1.5. Employment of full-time and contract staff shall remain the responsibility of the Management Authority. This responsibility shall be implemented in accordance with existing labour laws.
- 1.6. The procurement of business opportunities within the Protected Area shall be implemented in accordance with the Broad-based Black Economic Empowerment (BBBEE) and all other empowerment legislation.
- 1.7. Access rights to the protected area by the Buthelezi and Zulu Communities shall be subject to existing protected area management procedures to be enforced by the Management Authority. These rights shall include the following:
  - Spiritual and recreational,
  - Sustainable harvesting of natural resources, and
  - Free entry quota for trustees.

Based on this agreement, a proposal was made to allow for the hunting of game to take place within a zoned section of Ithala Game Reserve and that the proceeds of this endeavour, minus the operational costs of annually implementing the activity, be made available as a benefit to the Community trusts and that the co-management committee manage this funding. This proposal was authorised by the Ezemvelo Executive Committee in 2013, and hunting has taken place since 2014, with the benefits accruing to these Trusts.

A co-management committee has been constituted for Ithala Game Reserve, with five members from the Community Trusts and 4 Ezemvelo staff members making up the committee. This committee has been in place since 2013. Recently, a Local Board has also been constituted for community participation in protected area management and planning.

#### **1.4.8.2 Co-management projects in the Ithala Game Reserve**

- Dedicated hunting program where the proceeds (minus cost) go directly to the landowner trust.
- Elephant two-strand fence to protect communities north of the reserve from elephant excursions.
- Medium to long-term economic sustainability programme for the landowner trusts and communities north of the reserve.

### **1.5 ECOLOGICAL CONTEXT**

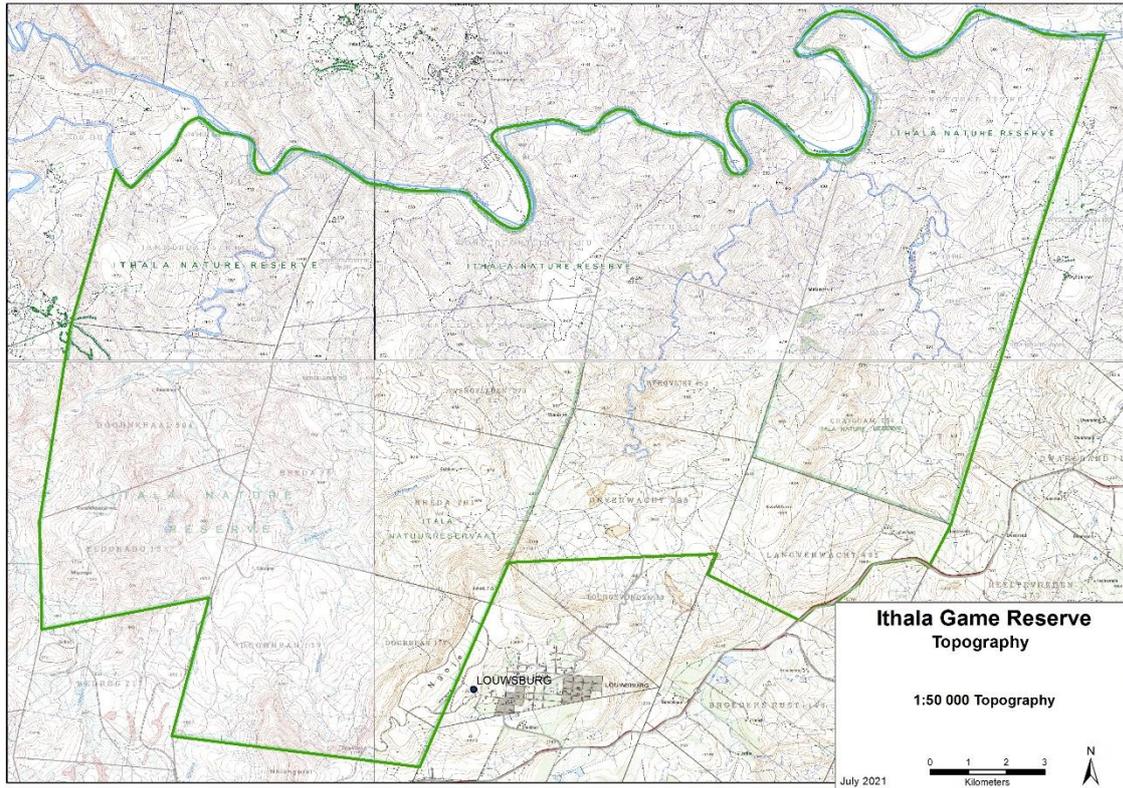
#### **1.5.1 Climate and weather**

The considerable altitudinal variation of the Reserve and local topography create distinctive patterns in the rainfall, with localised rain shadows and areas of increased drainage. The mean annual precipitation of IGR varies from 750 to 850 mm per annum. The area experiences hot summer temperatures with summer rainfall and dry, colder winters, especially at higher altitudes.

#### **1.5.2 Topography**

Situated in a complex landscape, characterised by altitudinal variation, flat plateaus, scarps, cliffs, and deeply incised valleys, IGR's topography, linked to its climate and weather, creates numerous different habitats and environments.

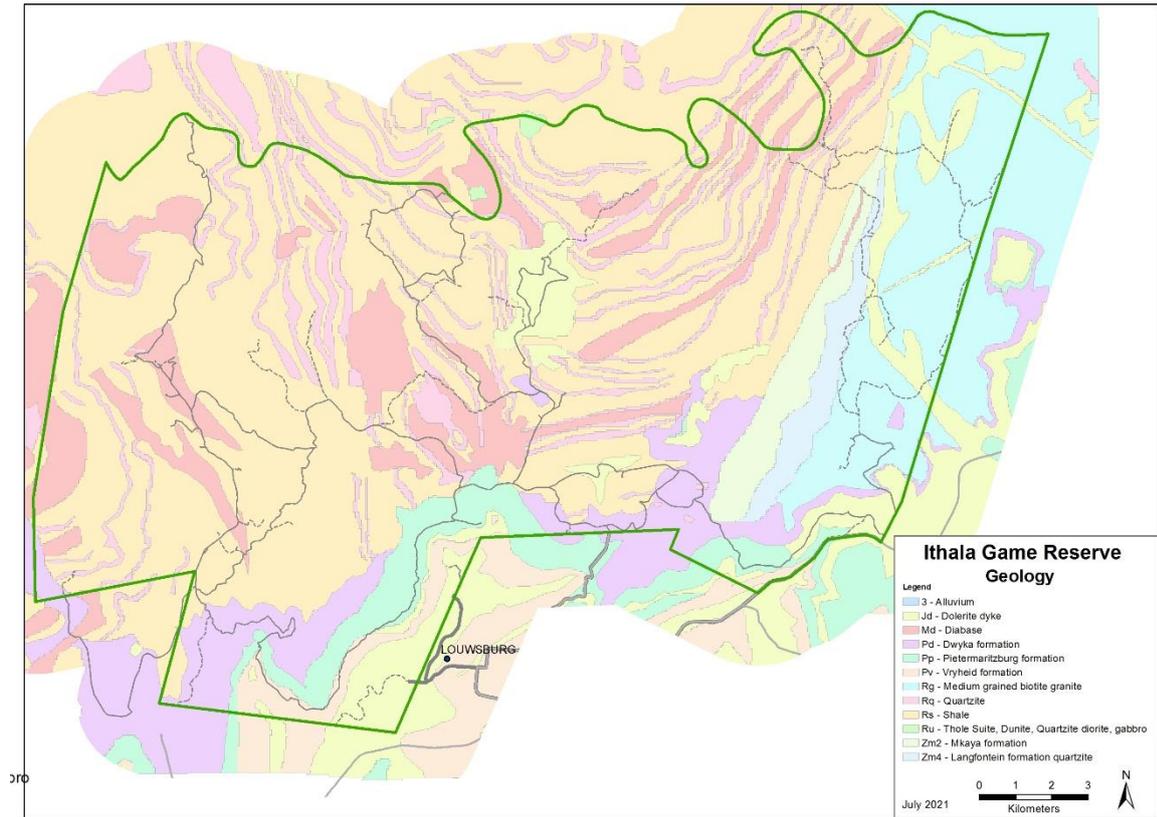
The altitude at the highest point in the southern section of the reserve is 1393 m a.s.l., and at its lowest point along the Pongola River in the north is 407 m a.s.l. The mean distance between these two points is approximately 16 kilometres.



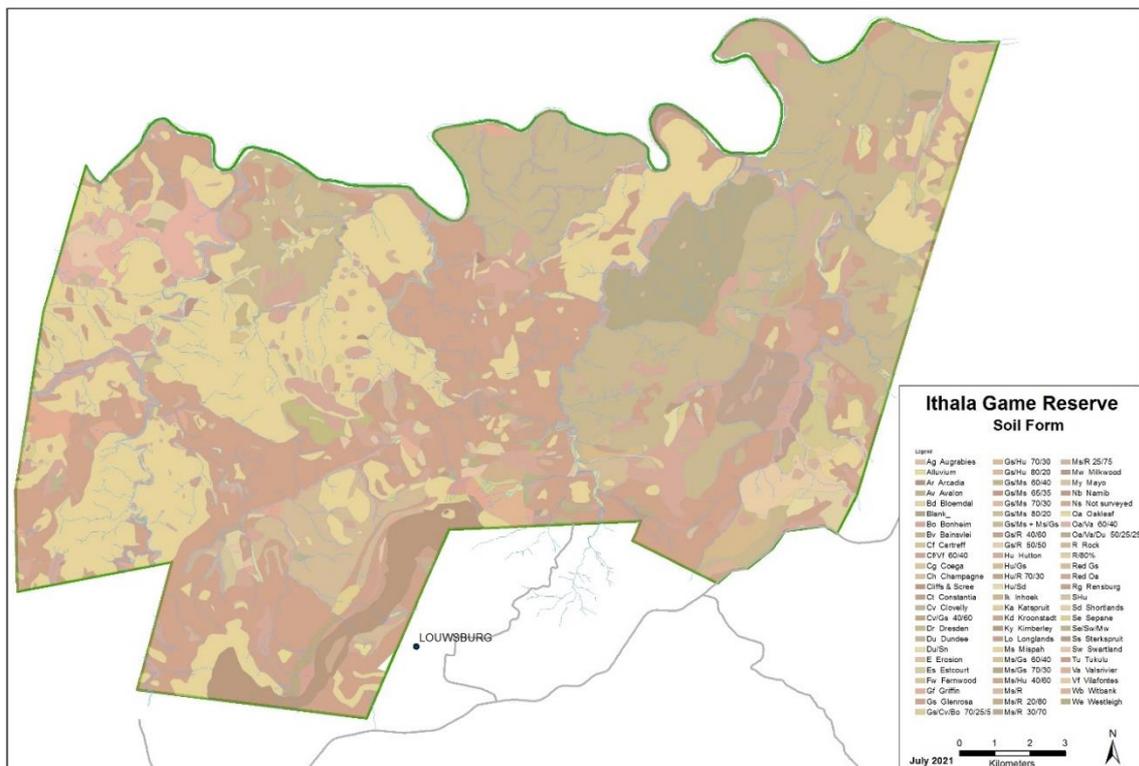
**Map 2: Topography of Ithala Game Reserve**

### 1.5.3 Geology and soils

The area is of exceptional geological importance and value, and has high potential for geo-tourism. IGR contains the ancient Mazaan system, overlain by the most recent Karoo systems with their intrusions of dolerite and granite. The geology of IGR contributes significantly to the biodiversity of the Reserve as a result of the relatively large altitudinal variation, variation in soil depth, clay content, and rainfall (*See Map 4*). The Reserve is dominated by Ngotshe Mountain, which consists of a dolerite cap. Below this cap of rock lie layers of softer, highly erodible soils, resulting in deeply incised valleys. Igneous rock, creating inselbergs and rocky outcrops, dominates the lower layers of the Reserve (*See Map 3*).



Map 3: Geology of Ithala Game Reserve

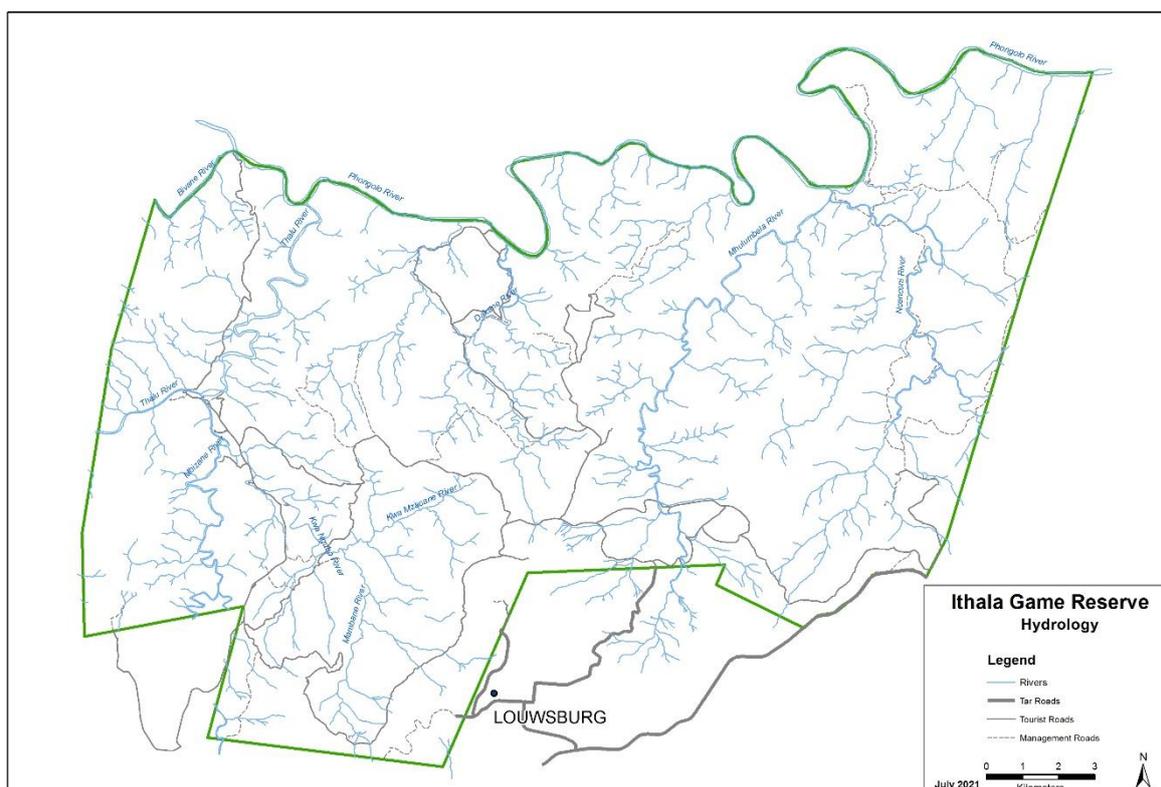


Map 4: Soils of Ithala Game Reserve

### 1.5.4 Hydrology

The Reserve falls into the Bivane / Phongolo catchment system, an important water source for agriculture downstream, the water supply to Mkhuze town and the Pongolapoort Dam. The catchment is characterised by low winter and good summer flows.

The Pongola River, which acts as the northern reserve boundary, is identified in the National Freshwater Ecosystem Priority Areas project (NFEPA)<sup>1</sup> as a strategic spatial priority for conserving South Africa’s freshwater ecosystems and supporting sustainable water resources. The other major perennial rivers are the Thalu, Mbizo, Muhulumbela and Ncncce (*Map 5*).



**Map 5: Hydrology of Ithala Game Reserve**

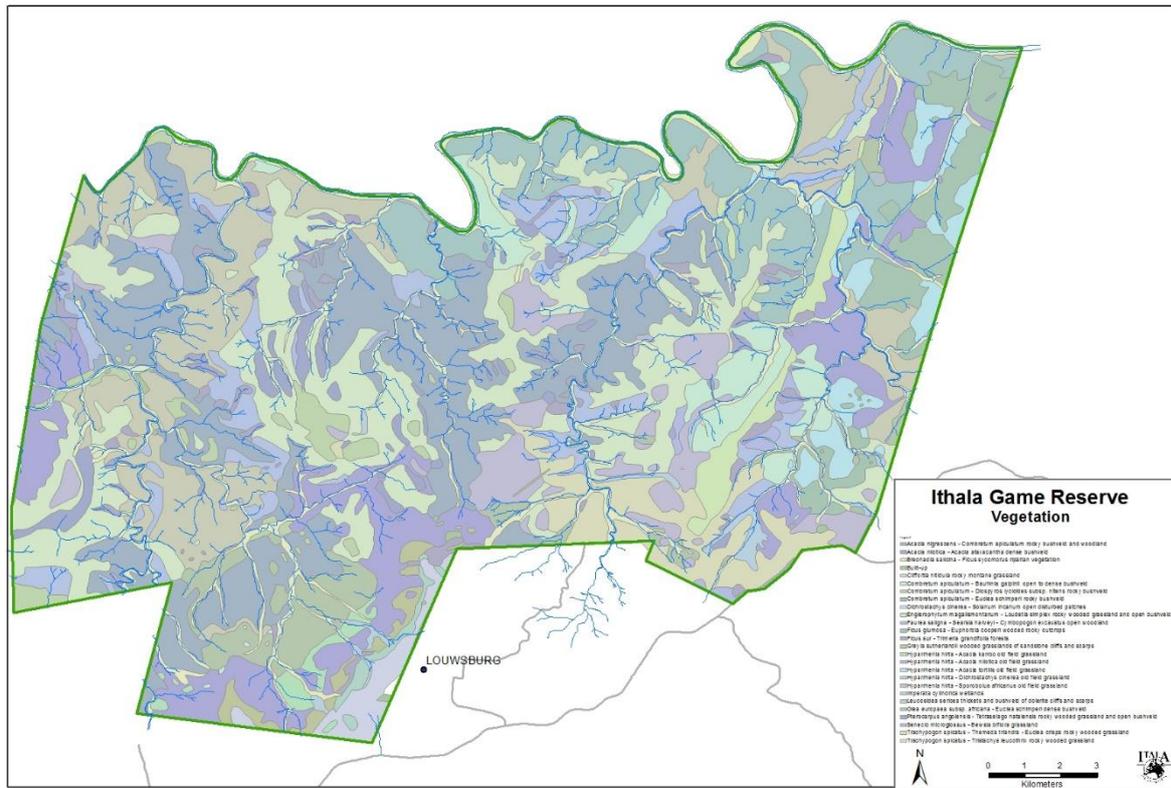
<sup>1</sup> The National Freshwater Ecosystem Priority Areas project (NFEPA) was a three-year partnership project between various organisations (South African Biodiversity Institute, Council for Scientific and Industrial Research, Water Research Commission (WRC), Department of Environmental Affairs (DEA), Department of Water Affairs and Sanitation (DWASA), World Wildlife Fund (WWF), South African Institute of Aquatic Biodiversity (SAIAB) and South African National Parks. This project identified strategic spatial priorities for conserving South Africa’s freshwater ecosystems and supporting the sustainable use of water resources.

### 1.5.5 Vegetation

The following vegetation types are present in IGR (Mucina and Rutherford 2006):

Name	Biome	Conservation status
Zululand Lowveld	Savanna	Vulnerable
Ithala Quartzite Sourveld	Grassland	Least threatened
Northern Zululand Sourveld	Savanna	Least threatened
Swaziland Sour Bushveld	Savanna	Least threatened
Northern Zululand Mistbelt Grassland	Grassland	Vulnerable

Van Rooyen (2010) further classified the vegetation of Ithala into 17 different plant communities (Map 6). The most threatened vegetation type found in IGR is the Northern Zululand Mistbelt Grassland, of which only 0.0662% of the total provincial target is afforded protection by IGR (See Map 6).



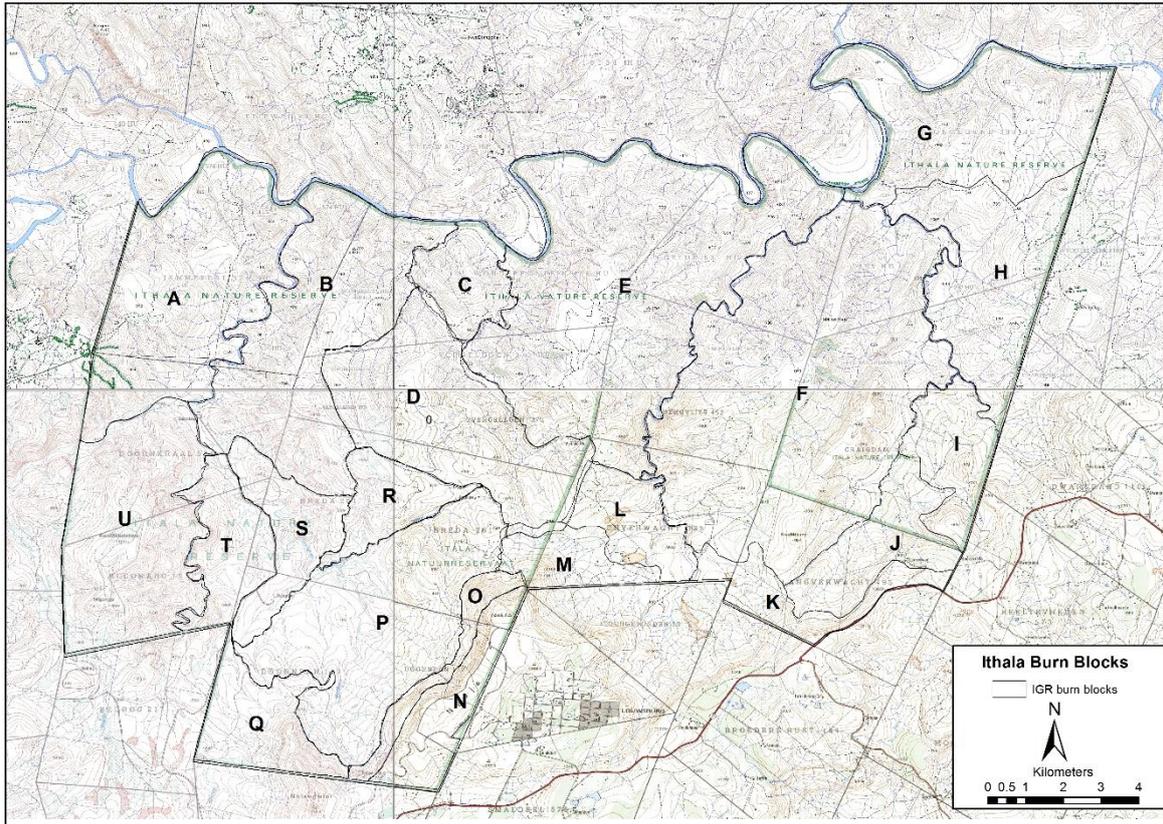
**Map 6: Vegetation of Ithala Game Reserve**

### 1.5.6 Fire Regime

Reserve Management shall convene and chair a fire meeting in May/June each year. This workshop shall include the Ecological Advice staff. At this fire meeting, the burns of the previous fire season (planned and unplanned) will be reviewed and based on the Reserve Fire Management Plan, management units will be scheduled for burns in the upcoming fire season and recorded as the Annual Burning Plan for implementation. In preparation for the fire meeting, all fire returns must be with Ecological Advice by 30 November each year to allow for digital capture and analysis of the data.

The current Fire Management Plan is based on the original fire management plan developed in 1988. That plan was modified in 1997. There are specific fire management objectives that are recorded in these plans, which are guided by 'best practice' linked to scientific understanding, legal context and risk management. However, there is an acknowledgement that the Fire Management Plan requires review and the approach that has been used since the late 80s should be measured against more recent scientific information and analysis to ensure that best practice continues to be implemented (See Map 7).

IGR is obligated in terms of the National Veld and Forest Fire Act to be and is currently a member of the Vryheid Fire Protection Association (FPA).



**Map 7: Fire management blocks of Ithala Game Reserve**

### 1.5.7 Invasive Species

Alien species are regarded as species or genotypes not indigenous to the IGR area, including hybrids and genetically altered organisms. The requirements of NEMBA (Sections 76 and 77) in terms of invasive species and the relevant legal obligations of protected area management authorities must be noted. The following is the IGR strategy to deal with alien and invasive species in the reserve.

#### 1.5.7.1 Invasive flora

Alien plant species have been planted or established within IGR over time. They can, to varying degrees, negatively impact water production, the natural environment, biodiversity, and the natural landscape character of the Reserve. Their control and management are considered a management priority. Wherever possible and appropriate, these plants will be removed from IGR.

The following management guidelines apply:

#### Alien Plant Introductions

Introductions of alien plants to IGR will not take place except for non-invasive vegetables, garden plants, fruit trees, or herbs (for domestic consumption) planted within staff accommodation plots or non-invasive pot plants used indoors for decorative purposes, provided these plants in no way impact negatively on the ecological processes or disrupt normal animal behaviour patterns (e.g. fruit trees and baboons/monkeys). Only plants indigenous to the IGR surroundings will be used outdoors in landscaping projects within the demarcated development zones.

#### Declared Alien Weeds and Invasive Plants

Alien plants declared weeds and invader plants under section 29 of the Conservation of Agricultural Resources Act (No. 43 of 1983) [CARA], or any other legislation, are a severe threat to the ecological functioning of natural

systems, groundwater storage and water production from catchments. They will be controlled in terms of the relevant CARA regulations. An ongoing time-bound programme will be developed to effectively control these alien weeds and invader plants within the IGR and up to 1 km beyond (buffer area) the Reserve boundary in collaboration with neighbours and the relevant municipalities.

Within Ezemvelo KZN Wildlife, there is a dedicated team, Zululand Alien Invasive Species Programme (ZIASP) of staff who manage and implement an ongoing alien plant control programme in IGR since 2006. An alien and Invasive species monitoring and control plan for Ithala Game Reserve will be developed.

### **1.5.7.2 Invasive fauna**

Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of the Reserve and can be vectors for the spread of diseases. Their control and management are considered a management priority. Wherever possible and appropriate, these animals must be removed from the IGR.

Alien birds, alien wild ungulates, hunting dogs and feral species are all potential threats and could be found in the reserve sporadically. They will be destroyed as soon as possible after their presence is detected (humanely as practically possible and with due regard for the tourist experience).

The following management guidelines apply:

#### **Alien Animal Introductions**

Introductions of alien animals to IGR will not take place except:

- For domestic animals kept for official management purposes or privately by staff according to specific rules for IGR.
- Biological control agents of invasive alien plants.

It is critically important that these exceptions do not negatively influence the integrity and sustainability of the Reserve's biodiversity and ecological processes. Management will, therefore, monitor the impact of these animals on the natural systems of IGR.

### **1.5.8 Mammalian Fauna**

The reserve contains populations of elephant, white rhino, black rhino, white-tailed mouse, serval, leopard and reedbuck, which are all classified as priorities for biodiversity conservation. Other large mammals that occur in the Reserve include giraffe, kudu, eland, buffalo, grey duiker, bushbuck, nyala, steenbok, klipspringer, blue wildebeest, impala, zebra, spotted hyena, black-backed jackal, mountain reedbuck and brown hyena.

The IGR checklist notes that 60 mammal species (including 4 Red Data Book species) have been recorded on the reserve. Another six species are listed as near threatened, and four species as vulnerable. Species checklists will be updated as data becomes available.

Appendix 4 indicates the mammal species list for Ithala Game Reserve.

### **1.5.9 Avifauna**

Birdlife International designated the IGR as an Important Bird Area (IBA ZA042). Thus far, more than 300 species of birds have been recorded in IGR, and 23 are listed as Red Data Book species.

This diversity can be attributed to the reserve's ecotonal nature, the variety of habitats it supports, and sound ecological management practices. The riverine forest provides habitat for many more secretive, river-dependent species, such as the White-backed Night Heron and Half-collared Kingfisher. The mountainous cliffs hold a colony of Southern Bald Ibis. Several large raptor species that are rare outside South Africa's large parks occur here, including White-backed Vulture, Lappet-faced Vulture, Martial Eagle and Tawny Eagle. Denham's Bustard

(*Neotis denhami*), White-bellied Bustard (*Eupodotis senegalensis*) and African Grass Owl (*Tyto capensis*) occur in the grassland areas in small numbers. The thicket and forest areas support certain East African Coast species.

Appendix 4 indicates the bird species list for the Ithala Game Reserve.

### 1.5.10 Herpetofauna (reptiles and amphibians)

Reptiles and amphibians form an essential part of the ecosystem, and certain species serve as bioindicators 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.

The Ezemvelo Biological database notes that 83 species are present, of which three are Red Data Book species, including the Near Threatened Striped Harlequin Snake (*Homoroselaps dorsalis*), the Vulnerable KwaZulu-Natal hinge-back tortoise (*Kinixys natalensis*) and the Vulnerable Nile crocodile (*Crocodylus niloticus*). Notable lizards include the KwaZulu-Natal flat lizard (*Platysaurus intermedius natalensis*) and the montane dwarf burrowing skink (*Scelotes mirus*). This list is, however, incomplete and outdated and needs to be updated as data becomes available.

Reptiles and amphibians form an essential part of the ecosystem, and certain species serve as bioindicators 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.

### 1.5.11 Invertebrates

Invertebrate fauna constitutes the greatest component of species diversity in natural systems, but it is often poorly understood, while its 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.

According to the Ezemvelo Biodiversity Database, approximately 268 species of invertebrates have been recorded for IGR, eight of which are endemic to KZN. These are the yellow-legged long-spinneret ground spider (*Prodidomus flavipes*), the Mkuzi wrinkled earthworm (*Geogenia mkuzi*), the minute-bristled stumpy earthworm (*Tritogenia miniseta*), the Ngome stumpy earthworm (*Tritogenia ngomensis*), the Zululand stumpy earthworm (*Tritogenia zuluensis*), the crowned dull keeled millipede (*Phygoxerotes coronatus*), the Hluhluwe slender spined millipede (*Spinotarsus hluhluwensis*), the sickle-shaped black millipede (*Doratogonus falcatus*), bushman hunter snail (*Gulella bushmanensis*), Warren's hunter snail (*Gulella warren*), Uhlig's rove beetle (*Stenus uhligorum*) and the door shield-backed katydid (*Thoracistus thyraeus*). The sickle-shaped black millipede is listed as Near Threatened on the International Union for the Conservation of Nature (IUCN) Red List. Ithala Game Reserve is the only protected area in the world in which the crowned dull keeled millipede and the minute-bristled stumpy earthworm are known to occur, and so this protected area is critical for their long-term survival. Due to the critical role that invertebrates play in ecosystem function, monitoring and surveys will continue.

### 1.5.12 Fish Species

Ithala Game Reserve supports a high biodiversity of freshwater fish species, two of which are classified by the IUCN as threatened species, namely the Southern Barred Minnow (*Opsaridium peringueyi*) and Phongolo Suckermouth (*Chiloglanis ermagenatus*). Other species of conservation importance include the Lowveld Suckermouth (*Chiloglanis swierstrai*), the Bushveld Small-scale Yellow Fish (*Labeobarbus polylepis*), the Incomati Chiselmouth (*Labeobarbus nelspruitensis*), and a non-described subspecies of Chiselmouth endemic to the upper Phongola system. Long-term threats to the status of freshwater fish biodiversity in the protected area include developments outside the Reserve and sedimentation emanating from management tracks and roads.

## 1.6 CULTURAL CONTEXT

Ithala Game Reserve is situated in the area dominated by the Ndwandwe chiefdom at the beginning of the 19th century. Our knowledge of this region in the late 18th and early 19th centuries derives primarily from a corpus of oral traditions recorded a century or more after the events which they purport to describe (Bryant 1965; Webb & Wright 1979). There is comparatively little evidence on the nature of socio-political organisation before the emergence of the Zulu kingdom in the late 1810s and early 1820s. However, some information can be extracted either from the oral traditions or the little existing documentary evidence. There is enough to suggest that in the mid-eighteenth century, the Nguni-speaking farmers of the greater IGR area lived in numerous, small-scale political units which varied in size, population and political structure. At the beginning of the 19th century, they developed from chiefdoms to aggregations of chiefdoms, or paramountcies, in which the dominant chief's power was, to a greater extent, based on the organisation and deployment of physical force. This process of political centralisation started in the region around Magudu, to the immediate east of the IGR, and saw the emergence of an aggressively expanding Ndwandwe chiefdom. It appears that this process was stimulated by the international ivory trade along the east coast of Africa (Wright and Hamilton 1989). By 1810, rivalry started to develop between the Ndwandwe paramountcy and the Mthethwa, another developing political force to their immediate south.

The Ndwandwe started to expand southwards across the Mkhuze towards the Black Mfolozi River, and the Mthethwa pushed inland up the valley of the White Mfolozi. Of the two, the Ndwandwe was the more centralised and militarised state, with its ruling house under Zwide kaLanga, enlarging the territory under its control by means of ferocious conquest (Omer-Cooper 1975). By about 1816, the Mthethwa and Ndwandwe were facing each other across a frontier that stretched from near the mouth of the Mfolozi to the present-day Vryheid area. The following year, the confrontation between them came to a head when the Ndwandwe launched an attack on the Mthethwa, defeated their main army, and captured and killed their king, Dingiswayo. The Ndwandwe were now poised to dominate the whole region from the Phongola to the Thukela. However, in the south, there remained one final obstacle to be overcome. The budding Zulu state, whose chief, Shaka kaSenzangakhona, had come to power with Mthethwa assistance and, as a tributary of Dingiswayo, had been encouraged by the Mthethwa chief to create a firm regional basis of resistance to the Ndwandwe.

In about 1818, the Ndwandwe made their expected attack on the Zulu, Shaka's force, which was strong enough to beat the invaders off. After the withdrawal of the Ndwandwe, the Zulu leadership rapidly increased the size of the army at its disposal and brought it under central control. A second attack by the Ndwandwe on the Zulu was successfully parried, and when, in approximately 1819, Zwide launched a third expedition, the Zulu leadership felt secure enough to meet it head-on. In a pitched battle on the banks of the Mhlathuze River, the result of which could easily have gone the other way, the Ndwandwe were defeated. The Zulu at once counter-attacked, overran the Ndwandwe territory, including the area covered by the present-day Ithala Game Reserve, and drove Zwide and the remnants of his forces north-west over the Phongolo. Overnight, the Zulu had become the predominant power in this region, and the area covered by the present-day Ithala Game Reserve became part of the larger Zulu Kingdom. However, the Ndwandwe continued to view this newly conquered territory as their original homeland. In 1826, two years before the assassination of King Shaka, the Ndwandwe attempted again to invade this area. However, in the ensuing battle, fought at Ndololwane north of the upper Phongolo River, the Ndwandwe were finally routed, and the area remained part of the Zulu Kingdom until the British annexation of the area in 1879 (Omer-Cooper 1975)

Ithala Game Reserve has been relatively well surveyed by archaeologists of the Natal Museum and officials from the KwaZulu-Natal Amafa and Research Institute. In 1989, Gavin Whitelaw and Mike Moon conducted a detailed survey of the IGR (Whitelaw 1989). The Reserve was again visited by Natal Museum staff in 2004 when a team surveyed a San rock art site reported in 1982. Areas adjacent to IGR have also been relatively well surveyed during 1996 and 1997 by Gavin Anderson (Anderson 1996, 1997).

There are 23 sites within the borders of the IGR and 17 sites adjacent to the Game Reserve. (Whitelaw 1989, 1994) The majority of these, i.e. eight within the IGR and three adjacent, belong to historical-era Nguni homesteads. They are usually indicated by stonewalling, potsherd fragments, and the remains of lower and upper grinders. Some livestock pens delineated by the stone walling are rectangular rather than the more traditional circular shape.

Six older, Later Iron Age homestead settlements have also been located. These may belong to the historical Ndwandwe paramountcy that dominated this area in the early 19th century. Interesting is the occurrence of a pre-colonial mine that most probably also belongs to the early nineteenth century. A series of pits about 3-10 m in diameter and approximately 1.5 m deep have been dug along a band of banded ironstone. These pits were most probably mined for iron ore (Whitelaw 1989). Prehistoric iron mines are known from elsewhere in Zululand, but most occur further south. No smelting sites are known.

One Early Stone Age site with tools that belong to the Acheulian period (dated approximately 300 000 – 1.7 million years ago) has been located outside of IGR. These sites typically occur close to water and were probably occupied by early hominins such as *Homo erectus* or *Homo ergaster*. Four Middle Stone Age sites have been recorded inside IGR and six in adjacent areas. Most of these sites are open-air scatters exposed by donga and sheet erosion. Tools consisting of blades, cores, flakes, and sometimes hammer stones are typically made of quartzite and lydianite. Middle Stone Age sites were occupied by the first anatomically modern people (i.e. *Homo sapiens sapiens*) and most probably date back to approximately 40 000 – 200 000 years ago.

Later Stone Age sites, associated with San hunter-gatherers and their immediate ancestors, have also been located inside IGR and adjacent areas (Anderson 1996, 1997, Whitelaw 1989, 1994). These date back to approximately 30 000 years ago. It is not certain when the San left the area. Three Later Stone Age sites have been recorded inside IGR, and three in adjacent areas. Two sites inside the Game Reserve are open-air scatter sites with typical Later Stone Age flakes, cores, scrapes, and blades. Most of these were made from quartz, quartzite and hornfels. The second category of Later Stone Age sites consists of small shelters with cave deposits. These sites are more important from an archaeological perspective as the tools and associated archaeological material may still occur in context and can be dated more accurately.

One Later Stone Age shelter that also contains Bushman (San) rock paintings has been located inside the Reserve, and two in adjacent areas. The iconographic content of the paintings consists of typical fine-line human, antelope, and therianthropic designs. Some finger smears and finger lines have also been observed, but these may have been made by later Bantu-speaking visitors to the shelters. Most of the depictions are painted in red monochrome. None of the rock art has been dated, but they are probably not older than 2 000 years.

There were also two gold mines (now abandoned) in this area. In the late 1800s, this land was given by King Dinizulu to white farmers who farmed and hunted there. These farming activities caused much of the soil erosion, and these properties were used as “labour Farms” under the Apartheid system. Due to their low productivity, landowners sold their farms to the province for the formation of a game reserve.

## **1.7 SOCIO-ECONOMIC CONTEXT**

A low employment rate characterises the local communities, and there appears to be a high level of subsistence agriculture. It is further estimated that only a small percentage of the population in the area is functionally literate. High population growth rates, a shrinking local economy and increasing unemployment trends result in increasing poverty levels. Consequently, the Reserve provides limited permanent and temporary employment opportunities in the conservation and tourism sectors, where employment rates are generally low.

There is a definite trend of encroachment of homesteads onto the reserve boundary because of land claimed properties, especially on the southern boundary. This poses a security risk to the reserve and negatively influences the sense of place through visual pollution and noise. With people settling on the boundary comes livestock, which poses a threat to the reserve in terms of disease and increased human wildlife conflict. It also places greater pressure on the protected area to provide employment opportunities for people, as there is generally an expectation from communities adjacent to the reserve to be given opportunities.

## **1.8 STAFF AND FUNDING**

### **1.8.1 Human resources**

At the end of 2021 the staff contingency for Ithala Conservation was:

- Conservation manager
- Senior admin clerk

- Section Ranger Kwasambane
- Section Ranger Thalu
- Principal Field Ranger Thalu
- Three senior field rangers
- 14 Field rangers
- Labour supervisor Thalu
- Three drivers
- Four maintenance assistants
- Ten general assistants
- Two handymen

### **1.8.2 Financial resources**

The operational budget has declined drastically over the past three years (2022-2024). With the increase in costs due to inflation, the declining budget is compounded.

- 2022/23 – R 1 090764
- 2023/24 – R 709408
- 2024/25 – R 749943

## **1.9 INFRASTRUCTURE**

The existing infrastructure is categorised as follows:

### **Tourism Infrastructure**

- 68 chalets - 166 beds
- Lodge sleeping 6 people
- Camping accommodates a maximum of 20 people
- Three bush camps which accommodate 4, 8 & 10 people respectively
- A conference facility with a setting of up to 120 people with two breakaway rooms accommodating up to 18 people each, depending on the setup.
- Shop
- Children's playground
- A licensed restaurant and a ladies' bar
- A coffee shop
- Three picnic sites equipped with ablution blocks and braai facilities
- Eight viewing sites/lookout points
- Self-guided auto trails
- Entrance gate with fuel pump station

- 2 x 3-bedroom houses at the entrance gate
- One bachelor unit at the entrance gate
- Public ablutions at the entrance gate
- Office at the entrance gate
- Helipad at Ntshondwe resort

### **Management Infrastructure**

Management infrastructure is located at Thalu outpost and KwaSambane outpost

And consists of:

- Two Administration offices
- Two Workshops
- Housekeeping and maintenance
- 3 accommodation units
- Thalu – 4 houses, 4 bachelor units, 9 rondavels and 2 single quarter accommodation blocks
- KwaSambane – 1 house, 2 bachelor units, 1 single quarter accommodation unit and 3 double accommodation units
- 1 House located in Ngubhu Basin, converted into accommodation for visiting researchers.
- 5 Picket camps encompassing 14 accommodation units.
- Thalu meeting room
- 2 squaredavels
- 1 shed at Msinase

### **Bulk Infrastructure**

- Approximately 84 km of roads and one 4x4 guided track of 38 km stretch. Two self-guided 4x4 tracks (14km)
- Two helipads
- Airstrip 1,7 km

### **Conservation Infrastructure**

- 60 km of boundary fence; 2,2 m high with 3-strand electric fence (35 km of which is working)

### **Water Supply Infrastructure**

All water supply infrastructure will be appropriately screened to reduce its detrimental aesthetic impact on the landscape. All water supply infrastructure will be indicated on the reserve map.

### **Sewage**

The existing infrastructure at IGR has septic tank / French drain sewage systems that can possibly contaminate ground and surface water. These systems will be replaced with more environmentally friendly systems available

in the market as funding permits. Septic tank / French drain systems will not be installed at future small developments.

## 1.10 MANAGEMENT EFFECTIVENESS

As with all Ezemvelo protected areas, the intention is to continually improve the management effectiveness of protected areas in line with the levels adopted for all protected areas within the KZN protected area network. In 2010, Ezemvelo KZN Wildlife conducted management effectiveness assessments for all of its protected areas (Carbutt & Goodman 2010). 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 the delivery of protected area objectives. These assessments assist with the following:

- Promote adaptive management,
- Improve project planning, and
- 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. They are not performance assessments of individuals but reflect an organisation’s proficiency in protected area management as a whole. The assessments for Ithala Game Reserve are peer-reviewed and evidence-based.

The general trend in METT scores shows a decline. During the 2019 assessment, Ithala scored 62% and only 55% in 2020. This is mainly due to a lack of funding, the continuous decline in staff, and the general lack of support from support services. In 2024, the Ithala Game Reserve achieved a score of 70%, which is above the national standard of 67%.

## 1.11 RISK ASSESSMENT

A SWOT analysis was done to understand the threats and opportunities relating to the protected area, to establish issues that must be addressed in the management plan. These include any issues that may impact the values, purpose and objectives of the IGR.

*Table 2* summarises 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.

**Table 2: SWOT analysis for Ithala Game Reserve**

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Threatened species and habitats are intact.	Infrequent road and infrastructure maintenance.	Tourism opportunities – to improve and modernise tourism products in and around the Reserve.	Continually declining levels of financial and human resources.
Provision of ecosystem goods and services to surrounding communities.	Incidents of Arson fires.	Utilising cultural heritage sites as an attraction.	Human encroachment on the Reserve boundary.
Protection of cultural heritage sites.	Unfenced northern boundary and access to permanent water supply.	Targeted research opportunities.	Alien plant infestations.
Good tourism infrastructure.	Reserve entrance off the beaten track (although this may also be seen as a strength).	Close to the Zulu cultural heartland.	Increased poaching.
Big-4 game viewing attracts visitors.	Limited financial and human resources.	Reserve expansion opportunities exist.	Community expectations in terms of job creation

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
			and beneficiation are putting more pressure on the reserve.
Sense of place of the Reserve.	Selling very limited tourism products. Game viewing only and no other activities.	Sustainable stakeholder and community beneficiation.	Human-wildlife conflict is creating antagonism against the PA.
Location halfway between Gauteng and Durban.	Lack of awareness programme.	Potential for an environmental and cultural awareness program.	Land use planning outside the Reserve is failing to ensure compatible land-use or to retain existing compatible land-use.
Malaria free area.	Law enforcement competence is lacking or insufficient.		Water use planning outside the PA influences river quality inside the PA.
Staff attitude and warmth in making tourists feel welcome.	Decline of operational infrastructure (buildings, roads, fences).		Illegal mining inside the reserve.
Stable community liaison structures.			
Achievement of biodiversity targets.			

## 2 STRATEGIC MANAGEMENT FRAMEWORK

The following strategic framework has been developed to ensure that Ithala Game Reserve is effectively managed. It aims to provide the strategic basis for the protection, development and operation of the protected area. This section has been prepared collaboratively through a process involving stakeholders within Ezemvelo KZN Wildlife, the communities around the Reserve, local and provincial government departments and other stakeholders.

The vision describes the overall long-term desired state for the operation, protection and development of the protected area. The following objectives are intended to provide the basis for achieving the vision. The objectives are linked in the Annual Operations Plan to goals, actions, responsibilities and budgets.

### 2.1 PURPOSE

Consistent with Section 17 of the Protected Areas Act, the purpose of Ithala Game 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 KwaZulu-Natal's rare or vulnerable species - specifically black rhino (*Diceros bicornis*), white rhino (*Ceratotherium simum*), saddleback sugarbush (*Protea comptonii*), pepper-bark tree (*Warburgia salutaris*), fairy washboard (*Haworthia limifolia*), *Rhus pondoeinsis*, Natal hinged tortoise (*Kinixys natalensis*) and blue crane (*Anthropoides paradiseus*),
- developing and implementing an innovative strategy for the continued management of the elephant population,
- protect an area which is vulnerable or ecologically sensitive,
- assist in ensuring the sustained supply of environmental goods and services,
- create or augment nature-based tourism,
- manage the interrelationship between natural environmental biodiversity, human settlement and economic development in the areas adjacent to the protected area and
- rehabilitate and restore degraded habitats and promote the recovery of endangered and vulnerable species.

### 2.2 VALUES

The values of a place are those remarkable attributes that exemplify it and are primarily the reason that it has been proclaimed as a protected area. The values are essential 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 3: Values of Ithala Game Reserve**

<p><b>Natural values</b></p>	<ul style="list-style-type: none"> <li>▪ Contribute to the protection of important vegetation types (i.e. Zululand Mistbelt Grassland) and associated habitat types and species,</li> <li>▪ Unique biodiversity associated with a huge altitudinal gradient,</li> <li>▪ Highly productive black rhino (<i>Diceros bicornis</i>) habitat,</li> <li>▪ High leopard (<i>Panthera pardus</i>) density,</li> <li>▪ <i>Protea comptonii</i> colonies,</li> <li>▪ Ecosystem goods and services (Resources, water, soil, etc.), and</li> <li>▪ Muhulumbela and Thalu/Mbizo river systems flow into the Phongolo River.</li> </ul>
<p><b>Heritage values</b></p>	<ul style="list-style-type: none"> <li>▪ The presence of a diverse multi-cultural and significant historical heritage associated with the Reserve,</li> <li>▪ The history of the various Traditional Authorities in the area,</li> <li>▪ The settlement history of the area,</li> <li>▪ Stories, myths and legends associated with the area, and</li> <li>▪ Historic grave and burial sites.</li> </ul>
<p><b>Socio-economic values</b></p>	<ul style="list-style-type: none"> <li>▪ Contribute to the local economy through seasonal job opportunities,</li> <li>▪ Financial benefits to landowner trusts through various co-management projects.</li> </ul>

### 2.3 VISION

*To contribute to sound environmental management, biodiversity conservation and cultural heritage protection while providing visitors and neighbours with access to the environment through ecotourism, partnerships and sustainable utilisation; and to form the core of a consolidated conservation area.*

### 2.4 OBJECTIVES

An objective has been identified for each of Ithala Game Reserve's Key Performance Areas, which follow from the management challenges, issues and opportunities and relate to the critical functions and activities necessary to protect, develop and manage it effectively. The objectives of the protected area are translated into site-specific goals and actions, linked to responsibility, timeframes and budgets in the Annual Operations Plan.

**Table 4: Objectives and strategic objectives for Ithala Game Reserve**

<p>Legal Compliance &amp; Law Enforcement</p>	<p>The IGR is to be legally secured and clearly demarcated to support effective conservation and the implementation of legal agreements, with sufficient staff capacity and capability maintained to control lawful access and prevent illegal use of its resources.</p>	<p>OBJ1</p>
<p>Buffering Mechanisms &amp; Regional Management</p>	<p>Biodiversity and cultural assets of IGR are to be protected by promoting compatible land, activity, and water use in surrounding areas, and by incorporating habitats critical to ecological integrity through site expansion and/or the creation of ecological corridors.</p>	<p>OBJ2</p>

Operational Management <sup>2</sup>	Organisational procedures and staff capacity are to support management effectiveness; adequate, suitable equipment and infrastructure are to be maintained for protected area operations; secure and well-managed funding is to be provided for protection, development, and management; and the management plan is to be kept current, with threats mitigated and the AOP aligned to the plan and budget for adaptive management.	OBJ3
Biodiversity Resource Management	Protect the ecological integrity of the IGR through active interventions based on principles of adaptive and ecosystem-based management to contribute to provincial and national biodiversity targets, maintain ecological processes to maximise ecosystem service delivery.	OBJ4
Cultural Heritage Resource Management	Ensure the protection and public appreciation of all cultural and heritage resources within the site in accordance with statutory requirements. Ensure that cultural assets are known, targets are set, processes are established to achieve targets, threats are identified and mitigated, and public access and appreciation of the cultural assets are maintained.	OBJ5
Environmental Interpretation & Awareness	Implement an effective education and awareness approach that reaches a broad range of clearly identified target audiences and focuses on the protected area's values.	OBJ6
Stakeholder Engagement (Socio-Economic)	Focus interaction with communities and consistent stakeholder involvement to ensure positive relations and support for the protected area and to facilitate sustainable economic benefits.	OBJ7
Tourism	Maintain sustainable nature-based tourism to provide a high-quality visitor experience while promoting the natural and cultural values of the protected area. Ensure well-maintained tourism infrastructure that aligns with responsible tourism practices and mitigate potential environmental impacts.	OBJ8
Research, Monitoring & Reporting	Research, monitoring, and reporting systems are to be established and maintained to generate reliable data that informs adaptive management, supports biodiversity conservation, and ensures compliance with national regulations and international commitments.	OBJ9

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<sup>2</sup> Organisational Structure & Procedure, Financial Management & Human Resources, Operational Infrastructure, Equipment & Integrated Planning.

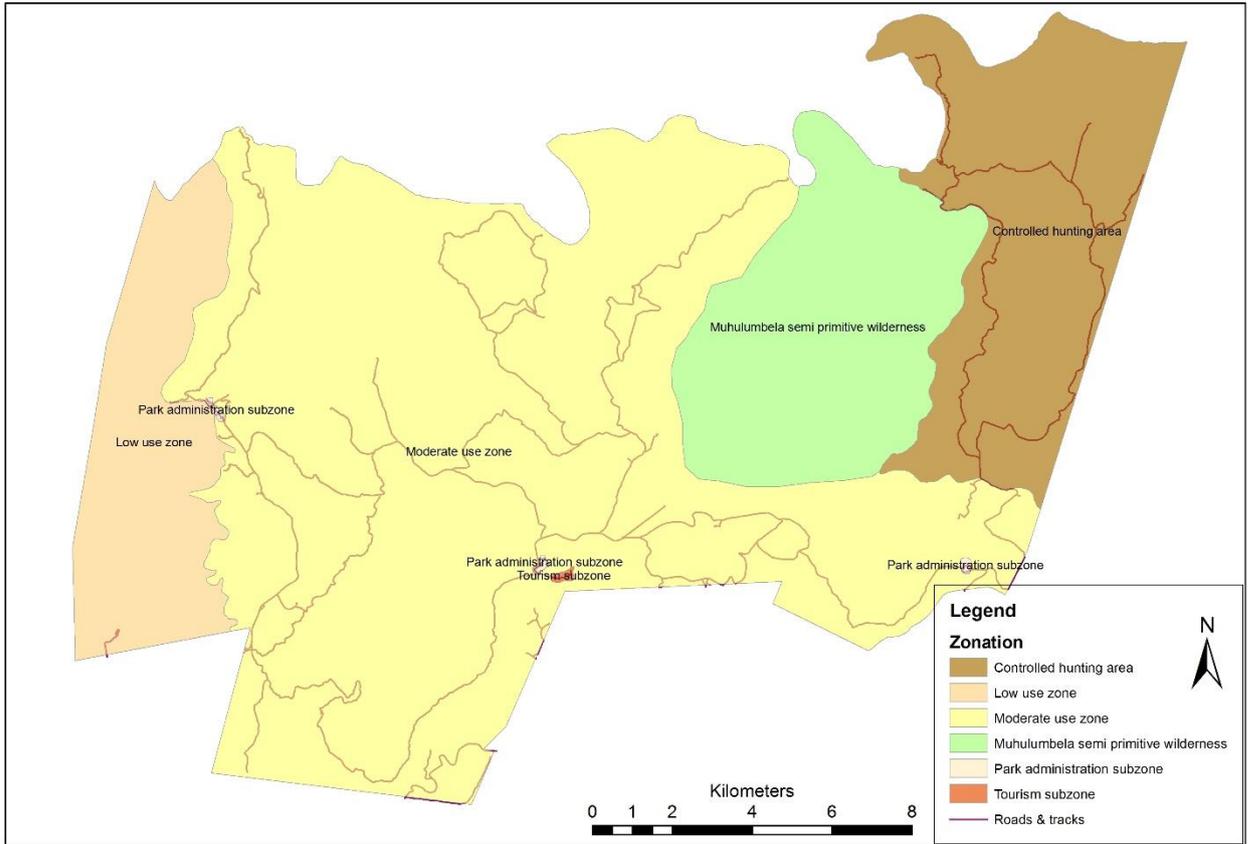
## 2.5 CONSERVATION DEVELOPMENT FRAMEWORK

The purpose of the Concept Development Framework (CDF) and the zonation is to control the intensity and type of use within the Reserve in efforts to ensure the overriding goals of biodiversity conservation are met while 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 to strengthen the protection, e.g. Key Feature Protection Zone.
- A subzone is an area where tourism, management and service infrastructure can be developed, with a specified footprint. In certain circumstances, there may be a need to surgically incise a specific development outside a node based on specific approved (As per deviation process) requirements.
- 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. (Ezemvelo Development Committee [DEVCO] and Operations Committee level).
- Any development/activity and or event request must be assessed for compatibility with the zonation in general and specifically with the conservation objective in the relevant zone.
- Any event request or infrastructure development must be scoped through the internal Ezemvelo DEVCO process.
- All activities and/or developments must be per the legislative framework, Ezemvelo KZN Wildlife policies, norms and standards and the local protected area rules and regulations.
- Zonation must consider:
  - Sensitive features associated with a protected area (i.e. biophysical, cultural and sense of place);
  - Influence of existing and historic facilities, infrastructure and use; and
  - Opportunities and constraints (biophysical, social or managerial constraints) for use.

Zonation (*Map 12*) 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, reflecting and respecting the reserve's broader conservation and eco-cultural tourism objectives.



**Map 8: Zonation of Ithala Game Reserve**

**Table 5: Zonation categories for Ithala Game Reserve**

<b>Wilderness zone</b>	
<b>Description</b>	Areas with an intrinsic wild appearance and character (or capable of being restored to such) which are undeveloped, roadless, without permanent improvement or human habitation. Access may be controlled and is by non-mechanical and non-motorised means only. This zone provides outstanding opportunities for solitude and is characterised by an essentially unmodified natural environment of fairly large size.
<b>Description of subzones</b>	<b>Semi-primitive</b>
<b>Objective</b>	The purpose of the zone is to provide the highest level of protection of the ecological integrity, natural character, and cultural heritage of the area, and to provide opportunities for solitude in an environment free from evidence of modern man.
<b>Activities and infrastructure</b>	<ul style="list-style-type: none"> <li>▪ Management activities using minimum tools to achieve management objectives.</li> <li>▪ Management activities using mechanical tools require prior authorization from the protected area manager’s supervisor.</li> <li>▪ For example, helicopter and fixed-wing access only if minimum tool for monitoring, management and casualty evacuation activities.</li> <li>▪ Research in the wilderness will be discouraged unless it is wilderness dependent, in which case it will be done using the minimum tool principle.</li> <li>▪ If wilderness-dependent, research will require support and recommendation by the Wilderness Steering Committee</li> </ul>
<b>Constraints and implementation</b>	<b>Semi-primitive</b>
<b>Constraints and implementation</b>	<ul style="list-style-type: none"> <li>▪ No development except for formalised trails with hardened surfaces to address environmental damage may be allowed. (Requires support from the Wilderness Steering Committee)</li> <li>▪ No extractive resource use.</li> <li>▪ No motorised access or use of mechanical devices.</li> <li>▪ Generally, no surfacing of paths and no signage.</li> <li>▪ No manipulative experiments and no temporary or permanent marking of individuals or plots.</li> </ul>
<b>Low Use Zone</b>	
<b>Description</b>	An area where there is little evidence of modification of natural processes and landscapes, which is more sensitive than the moderate use zone and where the ecotourism principles of low human impact will prevail. The zone also serves as a buffer to the wilderness zone.

<b>Objective</b>	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.
<b>Activities and infrastructure</b>	<ul style="list-style-type: none"> <li>▪ Facilities of a rustic nature such as small bush camps, rustic overnight hiking huts, hides and trails.</li> <li>▪ Motorised access is low-key and 4 x 2 access is provided to points where trails start or to tourist facilities.</li> <li>▪ 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.</li> <li>▪ Hiking and formalised trails. Management activities must focus on protecting park resources and core values.</li> <li>▪ Limited management roads and tracks.</li> <li>▪ Controlled extractive resource use in line with Ezemvelo KwaZulu-Natal Wildlife policies and norms and standards.</li> </ul>
<b>Constraints and implementation</b>	<ul style="list-style-type: none"> <li>▪ Activities are mostly low impact and low density.</li> <li>▪ No modern facilities such as restaurants and shops are permitted in this zone.</li> <li>▪ Where possible, facilities should be developed on the periphery of the zone towards the less sensitive adjacent zone.</li> </ul>
<b>Moderate Use Zone</b>	
<b>Description</b>	An area where natural processes and the landscape may be altered to support protected area operations. 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.
<b>Objective</b>	To designate a tourism area that is primarily focused on visitor experience while still securing the values of the protected area and an area that serves the operational and support functions of the protected area.
<b>Activities and infrastructure</b>	<ul style="list-style-type: none"> <li>▪ Management roads and tracks.</li> <li>▪ Management activities are directed to maintaining park infrastructure for biodiversity conservation, park operations, equipment and material storage.</li> <li>▪ Controlled extractive resource use.</li> <li>▪ Hiking on formalised trails.</li> <li>▪ Infrastructure is accessible by motorised access.</li> <li>▪ The tourism road network including access roads and game-viewing roads.</li> <li>▪ Traditional game viewing routes with associated more formalised infrastructure.</li> <li>▪ Infrastructure is accessible by motorised access.</li> </ul>
<b>Constraints and implementation</b>	<ul style="list-style-type: none"> <li>▪ Within the moderate use zone, a specific <b>Tourism Subzone</b> will be defined, which could include commercial use areas.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ The subzone 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.</li> <li>▪ This node should be developed in the less sensitive part of the Moderate Use Zone.</li> <li>▪ The Tourism Development Node can only be developed in areas where it does not compromise the values of the protected area.</li> <li>▪ The node must have a specified footprint.</li> <li>▪ Examples of developments in a Tourism development node include picnic areas, camping sites and interpretation centre.</li> <li>▪ <b>Park Administrative Subzone</b> (within the Moderate use zone) caters for facilities such as staff accommodation, administrative offices, other operational required infrastructure, waste handling sites, etc.</li> <li>▪ 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.</li> <li>▪ The node must have a specified area as a footprint.</li> </ul>
<b>Controlled Hunting Area (CHA)</b>	
<b>Description</b>	An area that is designated to optimise the rational use of natural resources of the protected area through controlled hunting without compromising visitor activities.
<b>Objective</b>	To provide an area where sustainable utilisation can take place through controlled hunting to complement already existing game removal operations and provide opportunities for increased revenue generation and tourism experience.
<b>Activities and infrastructure</b>	<ul style="list-style-type: none"> <li>▪ Opportunities for tourism activities may be available outside of the hunting season.</li> <li>▪ Management activities in the zone are focussed on controlled hunting.</li> <li>▪ Infrastructure could include: <ul style="list-style-type: none"> <li>▪ Hunting lodge/camp</li> <li>▪ Staff accommodation</li> <li>▪ Skinning Sheds</li> <li>▪ Management tracks</li> <li>▪ Shooting range</li> </ul> </li> </ul>
<b>Constraints and implementation</b>	<ul style="list-style-type: none"> <li>▪ Sustainable utilisation of nature and natural resources is the overarching principle.</li> <li>▪ Species and number of animals proposed for removal from the CHA will fall within the game removal recommendation as agreed upon at annual management meetings and will be in line with management objectives for the relevant protected area.</li> <li>▪ All activities in the zone must conform to the Ezemvelo policies and Norms and Standards for Hunting.</li> </ul>

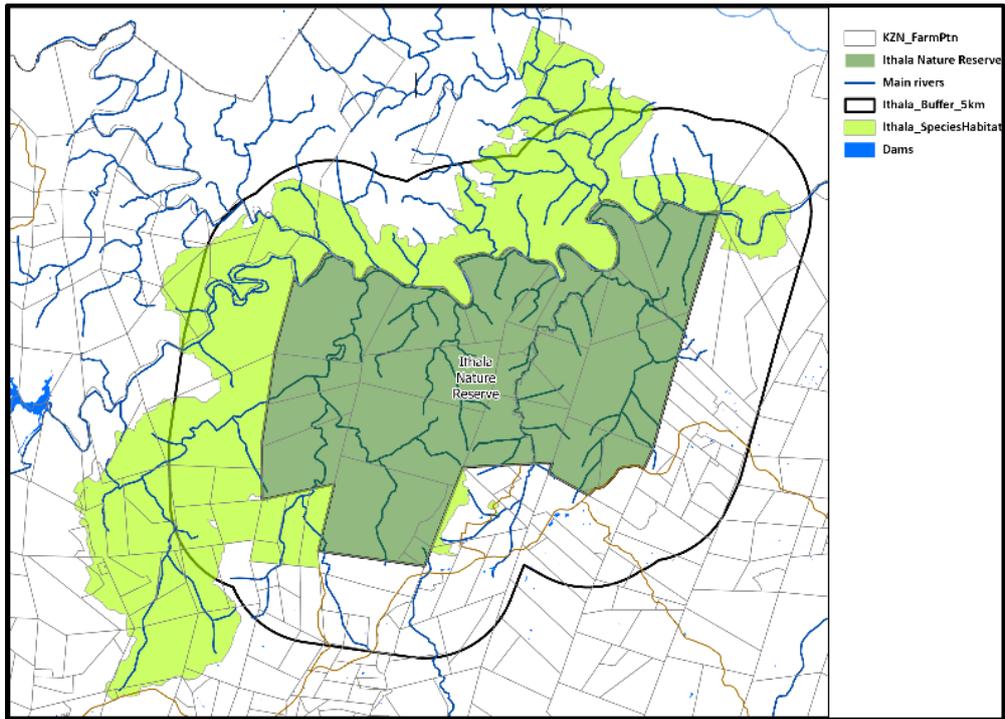
<b>Protected Area Buffer</b>	
<b>Description</b>	An area outside the boundary of the protected area where actions are taken and agreements are made to protect the integrity of the protected area and to enhance the livelihoods of protected area neighbours.
<b>Objective</b>	An area outside the boundary of the protected area where actions are taken and agreements are made to protect the integrity of the protected area and to enhance the livelihoods of protected area neighbours. To influence land use adjacent to the protected area to manage external pressures and threats that may threaten its values and objectives.
<b>Activities and infrastructure</b>	<p>The Park management must define these activities in terms of specific values and objectives and taking into consideration the following:</p> <ul style="list-style-type: none"> <li>▪ Alien and invasive species management</li> <li>▪ Pollution control and prevention</li> <li>▪ Impact on sense of place</li> <li>▪ Habitat fragmentation and isolation</li> <li>▪ Water resource protection</li> <li>▪ Human/ Wildlife conflict</li> <li>▪ Climate change adaptation</li> <li>▪ Compatible land use</li> <li>▪ Priority species management</li> </ul>
<b>Constraints and implementation</b>	<p>The intensity of land use should decrease closer to the protected area. Activities that are not compatible with the adjacent protected area zonation must be discouraged.</p> <p>Management activities will focus on:</p> <ul style="list-style-type: none"> <li>▪ Strategically promoting and monitoring compatible land-use and land-care on adjacent lands and upstream catchments</li> <li>▪ Integrated alien species control</li> <li>▪ Biodiversity stewardship and environmental awareness</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Working collaboratively with neighbours to secure sensitive sites that contribute to the protection of the values and objectives of the protected area.</li> <li>▪ Influencing and input into the municipal and regional planning tools such as Municipal Spatial Development Framework (SDFs), Schemes, Integrated Development Plans (IDPs) and Bioregional Plans.</li> <li>▪ The Buffer should spatially reflect the 5 km border of listed activities as per National Environmental Management Act No. 107 of 1998 Notice 3 of 2010.</li> </ul>
<b>Zone of Influence</b>	
<b>Description</b>	A Zone of Influence is the area outside the boundary of a protected area where activities of people or other influences may have a negative impact on the purpose, values or objectives and/or efficient and effective management of the protected area and/or continued delivery of tourism and other societal benefits <sup>3</sup> from the protected area, and consequently where protected area management seeks to actively engage with stakeholders in order to promote and retain compatible, and prevent or mitigate incompatible, activities and use of land.
<b>Objective</b>	<ul style="list-style-type: none"> <li>• Actively promoting and supporting compatible/complimentary land and water uses and activities. <ul style="list-style-type: none"> <li>▪ Active engagement with relevant stakeholders.</li> <li>▪ Developing a positive working relationship with municipal planners to achieve sustainable development.</li> </ul> </li> <li>• Providing mitigation options for existing incompatible land uses and activities and alternative development options for planned incompatible land uses and activities. <ul style="list-style-type: none"> <li>▪ Active engagement with landowners, developers, industry and municipalities.</li> </ul> </li> <li>• Foster community/neighbour and stakeholder support for the protected area. <ul style="list-style-type: none"> <li>▪ Active awareness, education and promotion of the protected area with the relevant stakeholders.</li> </ul> </li> <li>• Facilitating sustainable benefits to neighbouring communities and landowners. <ul style="list-style-type: none"> <li>▪ Green jobs, eco-tourism and ecosystem services benefits to relevant communities and landowners.</li> </ul> </li> </ul>
<b>Technical delineation</b>	The Zone of Influence has been identified for Ithala Game Reserve. Critical external influences (activities and land use) that may threaten the achievement of the purpose, values and management objectives of Ithala and/or may impact management effectiveness. The Zone of influence for the Ithala Game Reserve, in addition to the above Abaqulusi and uPhongolo Local Municipalities, extends into the eDumbe Local Municipality. ZOI area is

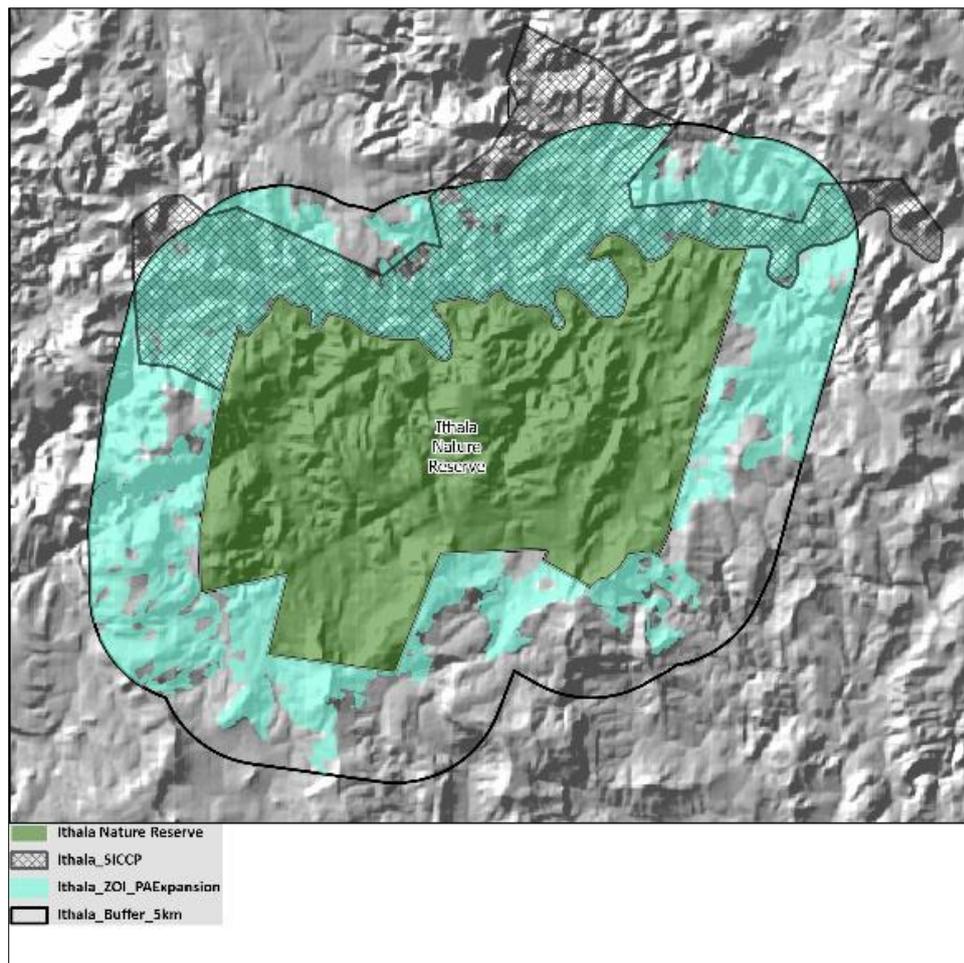
<sup>3</sup> One of the objectives of protected areas, as aligned to government priorities, is to enhance socioeconomic and maintain ecosystem service contribution, particularly for neighbouring communities but to society at large.

	<p>a combination of catchments, species habitat, protected area expansion, alien invasive species, land uses (residential and mining) and operational areas as set out below.</p> <p><b>Site-Specific delineation:</b></p> <p><b><i>Water quality</i></b></p> <p>Catchments which have influence on or are influenced by Ithala GR, via surface water flow were identified as an area that needed to be influenced by the Ithala management. In this regard catchments which feed surface water flow into the GR and catchments which flow out of the GR were identified and mapped.</p> <p><b><i>Species habitat</i></b></p> <p>Combined species habitat coverage was compiled from the Southern Barred Minnow species, 3 plant species, elephant habitat, and Ngotshe Mountain vegetation and plant species.</p> <p><b><i>Protected Area Expansion</i></b></p> <p>Natural vegetation areas within 5km of GR delineated as focus area for possible expansion areas. Protected area expansion can be undertaken through various mechanisms such as stewardship sites, co management, and purchase of land.</p> <p>Existing focus area, SICCP, highlighted in hatched texture.</p>
<p><b>Implementation</b></p>	<ul style="list-style-type: none"> <li>▪ Incorporate Zone of Influence into relevant spatial planning processes.</li> <li>▪ Identify stakeholders and maintain an up-to-date contact list.</li> <li>▪ Print out the map and stakeholder contact details and place them on the office wall.</li> <li>▪ Ongoing proactive engagement with stakeholders (including Biodiversity Stewardship and land use planning).</li> <li>▪ Monitoring land use and activities and providing reactive comments (EIA process)</li> <li>▪ Prepare Standard Operating Procedures for responses to new threats</li> <li>▪ A full Zone of Influence strategy is available on request.</li> </ul>





**Map 11: Zone of influence: Combined species habitat.**

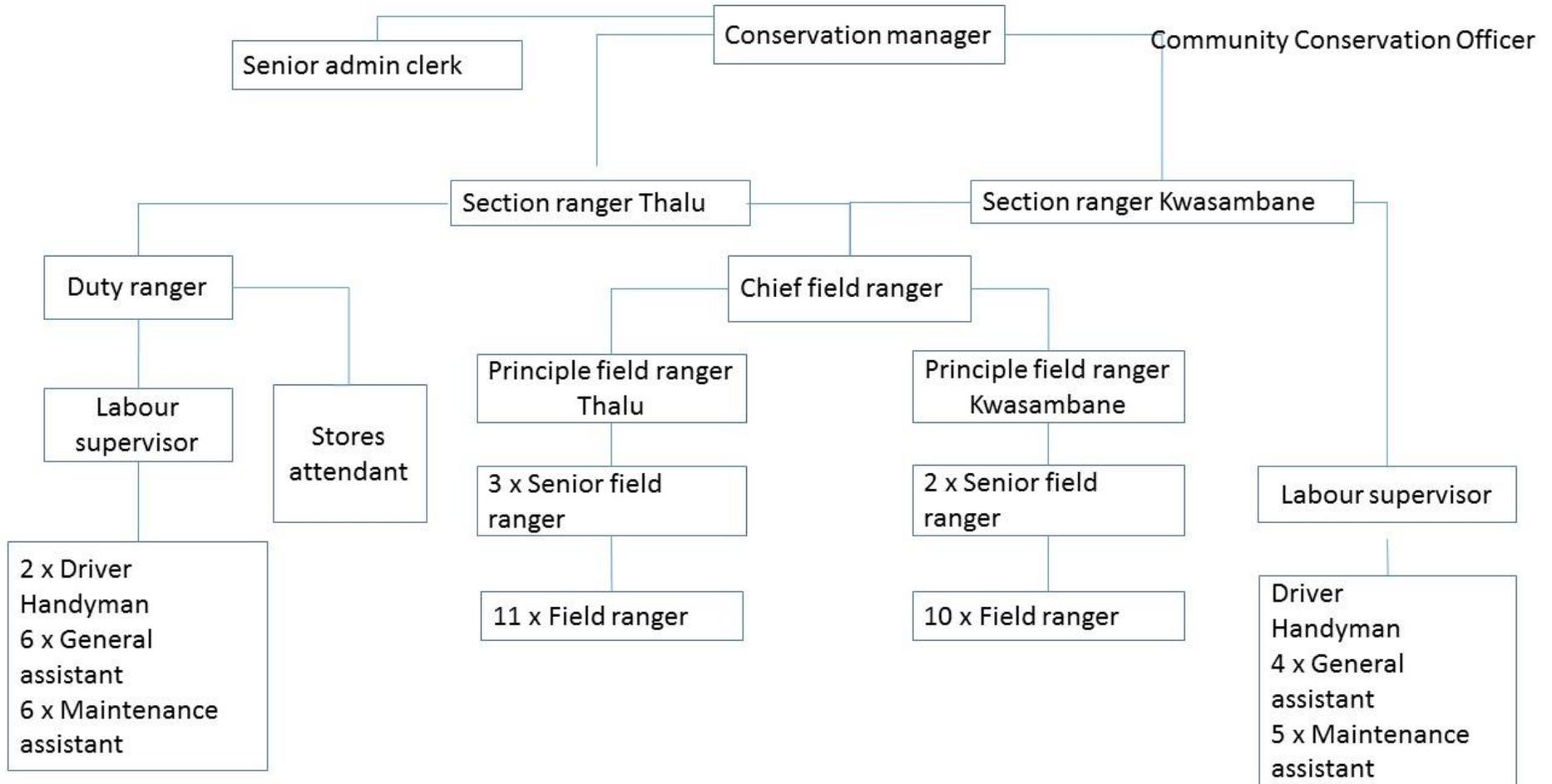


**Map 12: Zone of influence: Protected area expansion.**

## 2.6 ADMINISTRATIVE STRUCTURE

A recommended organisational structure for Ithala Game Reserve is set out in Figure 4. The figure represents the staff complement and positions that are required to enable the effective operation, management and protection of Ithala Game Reserve.

### Ithala Game Reserve Conservation Management



### Ithala Game Reserve Ecological Advice



### Ithala Game Reserve Ntshondwe Resort

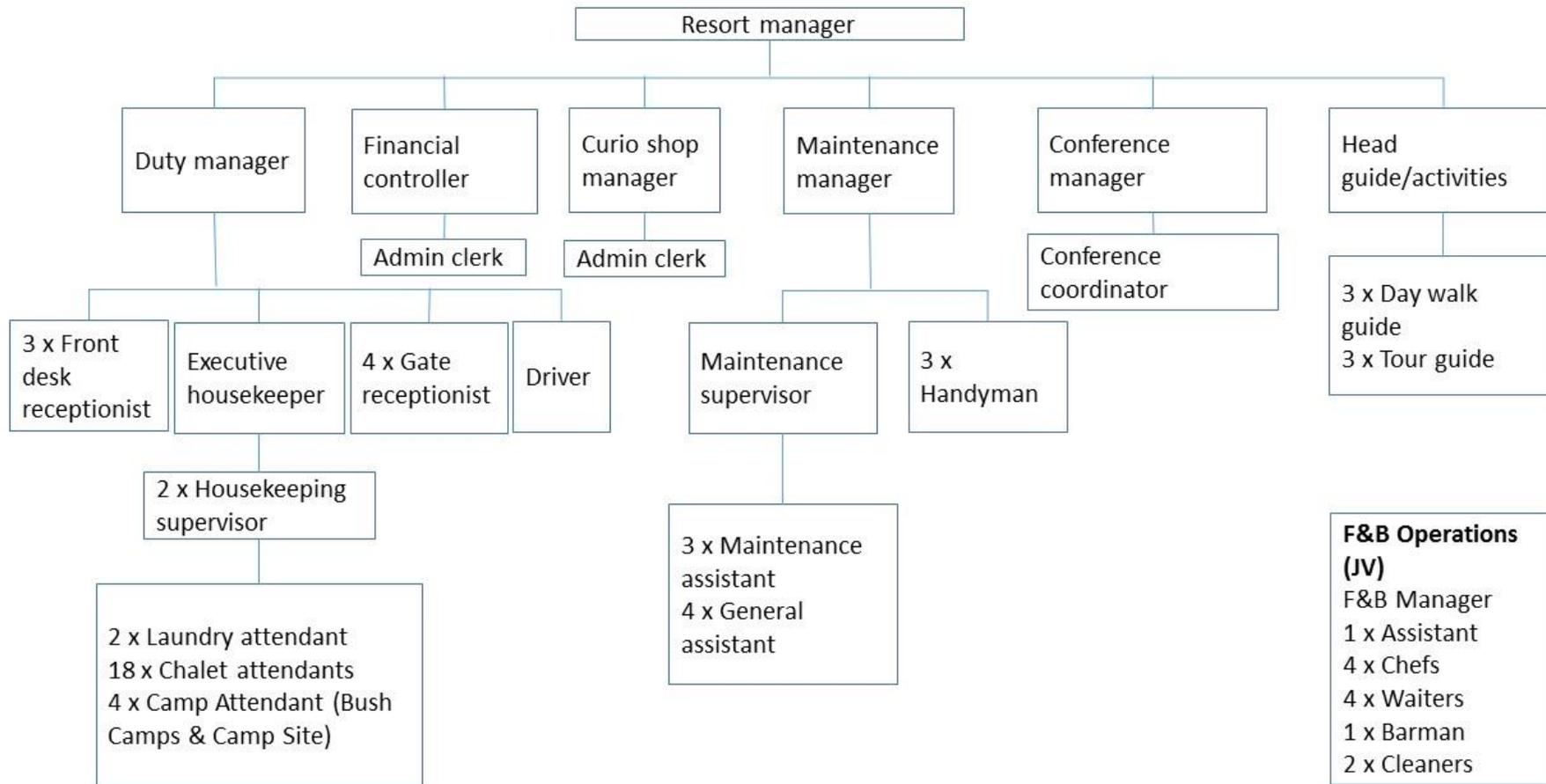


Figure 4: Organisational structure for Ithala Game Reserve

## 2.7 FINANCIAL PLAN

The National Environmental Management: Protected Areas Act (No.57 of 2003) establishes the need for a programme for the implementation and costs to be incorporated in the management plan. The management and effectiveness of protected areas are directly dependent on the availability of financial resources to achieve biodiversity conservation and other objectives. It is recognised that most protected areas do not have adequate financial resources to achieve their vision and stated objectives. The annual operations plan, therefore, provides for prioritisation of goals and actions based on the budget allocated.

This section aims 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 protected area will be carried out as per the Public Finance Management Act (No. 1 of 1999) and Ezemvelo KZN Wildlife policies.

### 2.7.1 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:

- Boundary fence upgrade,
- Capital building maintenance,
- Road maintenance,
- Elephant management (contraception & monitoring),
- Rhino monitoring (notching/dehorning),
- Picnic site and viewpoint upgrade,
- Moveable asset purchase,
- Reserve expansion,
- Alien plant control (Lantana project),
- The long term greater Ithala complex sustainability plan,
- Elephant and rhino habitat plan for the greater Ithala complex,
- Photwe field ranger camp,
- Remove Thalu field rangers from GA accommodation complex,
- Thalu water purification system.

### 2.7.2 Funding required to manage Ithala Game Reserve effectively

**Table 6: Ithala Game Reserve – a Cost Estimate**

GL NAME	RAND VALUE REQUIRED
Inventory - Gas Cylinders	48000,00
Consumption - Gas Cylinders	20700,00
Direct Supplies - Herbicides	60000,00
Direct Supplies - Cleaning Materials	24000,00

<b>GL NAME</b>	<b>RAND VALUE REQUIRED</b>
Direct Supplies - Sanitary Products	1600,00
Direct Supplies - Laundry Materials	2200,00
Direct Supplies - Computer Accessories	2500,00
Direct Supplies - Protective Clothing	60000,00
Direct Supplies - Working Stock	8000,00
Direct Supplies - Consumables	24000,00
Utility Expenses - Electricity	408000,00
Utility Expenses - Electricity - Diesel	69000,00
Utility Expenses - Gas	86400,00
Utility Expenses - Refuse Removal	24000,00
Utility Expenses - Sewerage	12000,00
Other Services - Fire Extinguisher Services	6000,00
Asset Purchase: Plant & Machinery	0,00
Asset Purchase: Furniture & Fixtures	24000,00
Asset Purchase: Tools & Equipment	36000,00
Asset Purchase: Communication Equipment	0,00
Asset Purchase: Firearm & Sighting Equipment	20000,00
Asset Purchase: Vehicles	2900000,00
Asset Purchase: Computer Equipment / Intangibles	36000,00
Payroll Exp Contract - All Short Term	608000,00
Personnel Exp Subsistence Allowance	24000,00
Personnel Exp Standby Allowance	180000,00
Personnel Exp Training	36000,00
Personnel Exp Uniform Expenses	180000,00
Personnel Exp Overtime	135000,00
Personnel Exp Night Shift Allowance	24000,00
Maintenance costs-Buildings & Structures	120000,00
Maintenance - Sewerage & Reticulation	12000,00
Maintenance - Roads	1000000,00

<b>GL NAME</b>	<b>RAND VALUE REQUIRED</b>
Maintenance - Dams, Reservoirs & Boreholes	10000,00
Maintenance - Fencing	120000,00
Maintenance - Tools & Equipment	24000,00
Maintenance - Furniture & Fittings	12000,00
Maintenance - Computer Equipment	2000,00
Maintenance - Communications Equip	10000,00
Maintenance & Repairs - Static Plant	30000,00
Maintenance & Repairs - Vehicles	240000,00
Electronic Media Exp.- Radio Licence Fees	1500,00
Communication- Postage Expense	1200,00
Communication- Cellular Telephone Expense	800,00
Communication- Internet - Data Cards	1200,00
Communication- Telephone- and Data Line Rental	94200,00
Auxiliary Card Costs - Fuel & Oil	31200,00
Auxiliary Card Costs - Maintenance Costs	24000,00
Vehicle Running Costs - Fuel & Oil	480000,00
Vehicle Running Costs - Tyres	120000,00
Vehicle Running Costs - Licences / Registration	9000,00
Plant Running Costs - Fuel & Oil	6000,00
Toll Fees	2160,00
Transport Exp.- MVAS - Running Expenses	54000,00
Admin Exp - Printing, Stationery & Photocopy Expenses	5000,00
Admin Exp - Rental (Office Machines)	21600,00
Charges - First Auto	14400,00
	<b>7 505 660,00</b>

**Tourism:**

<b>Expenses</b>	<b>Cost (R)</b>
Direct Supplies	R350 000.00
Utility Expenses	R1 943 000.00
Other Services	R203 000.00
Maintenance and repairs costs	R870 000.00
Communication costs	R370 500.00
Transport costs	R351 800.00
Administrative expenses	R83 000.00
<b>Total</b>	<b>R4 171 300.00</b>

**Eco-Advice:**

<b>Expenses</b>	<b>Cost (R)</b>
Direct Supplies	19220
Utility Expenses	46520
Other Services	10000
Personnel costs	79500
Maintenance and repairs costs	51000
Communication costs	23400
Transport costs	65100
Administrative expenses	21340
<b>Total</b>	<b>316080</b>

Payroll costs are budgeted for centrally based on the number of filled positions in the protected area at the end of the previous financial year. Project costs are considered and funded depending on their priority. These costs are project-specific and are only valid for one financial year. Additional funding that is obtained externally is allocated to project codes and is not restricted to a given financial year. This, in combination with a zero-based budget, using estimates from 2015, produced an annual cost estimate (with appropriate inflation applied) that illustrates a desired operational budget.

**2.8 CONSERVATION TARGETS**

A key assumption made in the Kwa-Zulu Natal (KZN) Systematic Conservation Plan is that protected areas continue to conserve key species and habitats at the same levels at which they occurred when the plan was developed. Failure of protected areas to conserve these species and habitats will result in an underestimation of conservation requirements outside the protected area network, and hence, the real possibility of provincial conservation objectives and targets not being achieved. It is therefore essential to design and implement management, monitoring and surveillance strategies to ensure that the Park continues to conserve those species and habitats that are important at a provincial level.

Conservation targets for biodiversity are not easily set, and consequently, there can be a reluctance to formalise and agree to targets. Our understanding of 'how much is enough', in what spatial configuration this should be, what the most critical processes are for the maintenance of biodiversity and how one can conserve these is poor. However, management must take place despite these deficiencies, so it is necessary to make the best use of

available information, stating the assumptions and limitations, and to see conservation targets as a set of working hypotheses around which conservation planning, management and evaluation can take place.

The KZN Systematic Conservation Plan [“C-Plan”] identifies that it is essential for the protected areas to conserve specific vegetation types and species (Table 7). Also, there is only a rudimentary understanding of the biology and ecology of many of the species, and it is currently assumed by the park that controlling alien plant invasions, preventing livestock grazing and applying a shifting mosaic of burns (see Fire Management) is the best strategy to maximize the persistence of these species and vegetation types. It is essential to better understand the biology and ecology of these biodiversity features and to design and implement appropriate monitoring programmes.

In addition to the elements of national and provincial importance identified in the KZN Systematic Conservation Plan, there are species of local concern and/or species that have not yet been incorporated into the KZN Systematic Conservation Plan but are known to be of local, provincial or national importance. Specific conservation targets have been set for these species (Table 8) and in most cases, monitoring programmes are implemented to measure status relative to targets and hence audit effectiveness of conservation interventions. Conservation and monitoring strategies must be developed for all these conservation target species.

**Table 7: Conservation targets of Ithala Game Reserve**

Feature	Description	Area within the protected area (ha)	Provincial Target (ha)
<i>Geogenia mkuzi</i>	Annelid	1.00	2
<i>Tritogenia miniseta</i>	Annelid	1.00	1
<i>Tritogenia ngomensis</i>	Annelid	1.00	3
<i>Tritogenia zuluensis</i>	Annelid	1.00	15
<i>Transvaalana draconis</i>	Grasshopper	928.80	32321
<i>Whitea alticeps</i>	Grasshopper	1128.76	43937
<i>Diceros bicornis minor</i>	Mammal	30.88	1000
<i>Ourebia ourebi</i>	Mammal	20.00	2060
<i>Centrobolus rugulosus</i>	Millipede	4.96	24552
<i>Doratogonus falcatus</i>	Millipede	1997.96	13845
<i>Spinotarsus hluluwensis</i>	Millipede	2.00	2
<i>Edouardia conulus</i>	Mollusc	12.56	192855
<i>Gulella bushmanensis</i>	Mollusc	1.00	2
<i>Gulella subkraussi</i>	Mollusc	4.96	576
<i>Gulella warreni</i>	Mollusc	2.00	7
<i>Aloe minima</i>	Plant	1.00	11
<i>Dracosciadium italae</i>	Plant	1.00	5
<i>Encephalartos lebomboensis</i>	Plant	4.00	12
<i>Eugenia simii</i>	Plant	745.28	800
<i>Melanospermum italae</i>	Plant	1.00	2
<i>Scilla natalensis</i>	Plant	2.00	31
<i>Senecio villifructus</i>	Plant	3.00	3
<i>Warburgia salutaris</i>	Plant	4.00	30
Eastern Mistbelt Forests: Ingome/Qudeni	Vegetation Type	4.64	3260
Ithala Quartzite Sourveld	Vegetation Type	16717.88	26082
Northern Zululand Mistbelt Grassland	Vegetation Type	327.20	12328
Northern Zululand Sourveld	Vegetation Type	3507.92	90075
Paulpietersburg Moist Grassland	Vegetation Type	2049.28	83993
Subtropical Alluvial Vegetation	Vegetation Type	12.12	7728
Swaziland Sour Bushveld	Vegetation Type	6235.88	6621

## 2.9 MANAGEMENT OF KEY SPECIES

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

<b>No management</b>
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.
<b>Ecological process management</b>
<ul style="list-style-type: none"> <li>▪ Applies to species in a system where one or more ecological processes are dysfunctional and need to be simulated or re-established to create an equilibrium between the species and its resources. Management interventions include one or a combination of the following</li> <li>▪ Reconfiguring landscape drivers: of population dynamics e.g. artificial water supply, range expansion, corridor development etc.</li> <li>▪ Simulating ecological process e.g. dispersal (via dispersal sinks), predation (via predator simulation removals).</li> <li>▪ Re-establishing ecological process e.g. re-establishing indigenous predators</li> <li>▪ 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.</li> </ul>
<b>Biodiversity management</b>
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 applied 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.
<b>Conservation management</b>
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 the ecological carrying capacity to optimise production.
<b>Sustainable harvest management</b>
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 is restricted to areas zoned for hunting or resource use areas in the PA zonation plan.
<b>Scientific Research</b>
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.

Table 8 indicates the specific management strategies for the protected area.

**Table 8: Management strategies for large herbivores**

Species	Target/carrying capacity	Rationale	Management strategy	Status	Key threats
Black Rhino	Maintain maximum black rhino productivity. Carrying capacity set at 42.	Critically endangered species, black rhino range expansion programme.	Conservation management.	Population fluctuates between 38 and 45 individuals, depending on population productivity and opportunities to relocate excess individuals.	<ul style="list-style-type: none"> <li>▪ Decrease in productivity.</li> <li>▪ Inability to notch as required.</li> <li>▪ Reduction in sighting frequency.</li> <li>▪ Poaching.</li> <li>▪ Increased natural mortality through drought, degraded habitat etc.</li> </ul>
White Rhino	Maintain viable white rhino population. Carrying capacity set at 50.	Threatened, KZN white rhino strategy.	Conservation management.	Population fluctuates between 35 and 40 individuals, depending on population productivity and opportunities to relocate excess individuals.	<ul style="list-style-type: none"> <li>▪ Decrease in productivity.</li> <li>▪ Inability to notch as required.</li> <li>▪ Reduction in sighting frequency.</li> <li>▪ Poaching.</li> <li>▪ Increased natural mortality through drought, degraded habitat etc.</li> </ul>
Elephant	105	See Ithala Elephant Management Plan.	Biodiversity management.	Population is more than double the recommended carrying capacity.	<ul style="list-style-type: none"> <li>▪ Poaching for ivory.</li> <li>▪ Decrease in resources and habitat availability with increasing population size.</li> <li>▪ Impact on vegetation and other species.</li> </ul>

Species	Target/carrying capacity	Rationale	Management strategy	Status	Key threats
					<ul style="list-style-type: none"> <li>Open northern boundary and resultant excursions.</li> </ul>
Buffalo	0	Disease prevention.	Total removal.	There is currently an instruction from the National Department's State Veterinarian to remove all buffalo. However, if a game-proof fence could be erected on the northern boundary, an application for reintroduction could be submitted.	
Eland	50	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Giraffe	90	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Hartebeest, red	80	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Impala	1600	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Kudu	800	Critical ecological processes functional.	Ecological process management.	Keep population at or below carrying capacity	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Nyala	0	Extra limital species which compete directly with bushbuck and other small browsers.	Total removal.	The population number is low and not of any concern yet.	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Ostrich		Critical ecological processes functional.	No management.		<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Reedbuck, common		Critical ecological processes functional.	No management.		<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Reedbuck, mountain		Critical ecological processes functional.	No management.		<ul style="list-style-type: none"> <li>Poaching</li> </ul>

Species	Target/carrying capacity	Rationale	Management strategy	Status	Key threats
Warthog	1500	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Waterbuck	250	Critical ecological processes functional.	No management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Wildebeest, blue	1300	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>
Zebra	1500	Critical ecological processes functional.	Ecological process management.	Keep population at or below CC	<ul style="list-style-type: none"> <li>Poaching</li> </ul>

## 2.10 MONITORING AND REPORTING

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. As per 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 projects or management interventions.

Records should be maintained of all key management interventions and 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.

On this basis, a monitoring schedule for Ithala Game Reserve is set out in *Table 9*.

**Table 9: Annual surveillance and monitoring schedule**

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
	Patrol coverage	Cybertracker/Earthranger analysis	Monthly		Monthly report

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Legal context and compliance	Illegal incidents	Incident report	Per event	Section rangers/ Eco advice	Compliance database & monthly report
Socio-economic (Stakeholders)	Minutes of meetings of the local board	Meeting minutes	Quarterly	Ex-officio member	Local Board Annual report
Conservation beyond boundaries	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
	Land use on the protected area's boundaries.	Written record	To be determined	Conservation Manager	Annual report
Tourism	Visitor statistics	Entry and occupancy record	Ongoing	Resort Manager	Annual report
Biodiversity resource management	Burning of firebreaks as part of fire management	Written record/map/photography	Annually	Conservation Manager	APO report
	Burning of blocks as part of controlled burning		Annually		APO report
	Unplanned wildfires	Written record/map/photography	Per event		APO report
	Annual FPA membership	Paid up membership	Annually	Conservation manager	APO report
	Areas subject to invasive plant control	Clearing plan map, meeting minutes	Annually	Conservation Manager supported by Ecological Advice and ZIASP	Annual report
	State of areas in which invasive plants have been eradicated				
	Records of labour hours/days	Written record	Annually		Annual report
	Herbicide usage	Written record	Annually		Annual report
	Areas subject to erosion control	Ad hoc management	To be determined	Conservation Manager supported by the Ecological Advice Unit	APO report
	State of rehabilitated areas of erosion				APO report
	Incidents related to flagship species	Photographs/written record	Per event	Conservation Manager	Record of event

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
	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
	Extraction of resources from the protected area	Photographs/written records	Per event	Conservation Manager	Annual report
Cultural heritage resource management	School visits	Photographs/written records	Per event	CCO	Record of event
Public education and awareness	Staffing levels	Number of full-time staff vs establishment	Annually	Conservation Manager, Eco Advice and Resort manager	Annual report
Human resource management	State of roads, 4x4 tracks and paths	Monthly report	Quarterly	Conservation Manager	APO report
Operational equipment and infrastructure	State of the boundary fence	Monthly report	Monthly		APO report
	Weather data	Surveillance plan	To be determined	Ecolo Advice	Annual report
	State of facilities and service infrastructure	Monthly report	Monthly	Conservation Manager	APO report
	Pollution events	Photographs/written records	Per event	Conservation Manager	Per event

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 as per 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.

Additionally, in terms of the Regulations for the Proper Administration of Nature Reserves, Government Gazette Notice R.99 of 2012, under NEMPAA, Section 15, Ezemvelo KZN Wildlife must, by the end of June each year, monitor and report by the end of June to the MEC of EDTEA on the status of the management plan's implementation.

## 2.11 GUIDING PRINCIPLES

The guiding principles set out in this section will be employed in managing protected areas. Ezemvelo strives to be a world-renowned leader in biodiversity conservation; as such, in managing the protected areas of KZN and in line with the core values of the organisation, staff must strive to apply best practices to achieve the highest quality and standards at all times. The principles are based on scientific knowledge, best practice, internal policy documents and relevant legislation, norms and standards and policy frameworks. They must be read and implemented with applicable law, Ezemvelo internal policies as listed in *Appendix 2* (current) as well as any protected area-specific subsidiary plans and relevant maintenance management plans.

### 2.11.1 General

Management decisions must have a firm scientific basis or be supported by relevant experience and best practice. Ezemvelo will strive to maintain and strengthen its capacity to learn from experience, to value and build staff expertise and draw on input from other stakeholders to ensure effective management, sustainability and persistence of protected areas for the benefit of future generations and that decisions affecting current generations are socially equitable.

Management of protected areas should be directed to:

- maintain the protected area values and the purpose for which it was assigned, the purpose and values refer to both historical and updated purpose and values as per the management plan.
- conserve the composition, structure, function and evolutionary potential of biodiversity.
- contribute to regional conservation strategies (buffer zones, corridors, stepping stones for migratory species, etc.).
- maintain the diversity of landscapes, habitats, ecosystems and associated species.
- operate under the guidance of a management plan and monitoring and evaluation programme that supports adaptive management.
- provide regulatory ecosystem services, including buffering against the impacts of climate change.
- deliver benefits to residents and local communities consistent with the other objectives of the protected area.
- provide nature- and culture-based tourism and recreational benefits consistent with the other protected area objectives.
- facilitate scientific research and ecological monitoring related to and consistent with the values and objectives of the protected area.
- implement adaptive management strategies to improve the management effectiveness of the protected area over time.
- protect natural and cultural heritage by taking appropriate actions to avert and actively manage emerging threats and risks.
- implement the protected area management plan and direct management to achieve the long-term vision.
- facilitate or provide education and awareness opportunities (including about management approaches).
- strive to build supportive relationships and public support for the protected area.

### 2.11.2 Legal context and compliance

Ezemvelo is mandated to undertake the conservation and management of protected areas in KwaZulu-Natal. Furthermore, management of protected areas must ensure the enforcement of laws governing the use and access of protected areas and the prohibition of particular activities. In fulfilling this role, the following will apply:

- Ensure that the protected areas are appropriately legally protected and appropriately demarcated, and the demarcation must be communicated to surrounding communities and stakeholders.
- Managers must familiarise themselves with all relevant legislation, regulations and any subsequent amendments and legal agreements, and apply them to their management actions.
- Law enforcement capacity, including staff numbers, skills, and equipment, must be sufficient to apply relevant legislation effectively.
- A security strategy must be developed and implemented to ensure efficient law enforcement and protection of natural and cultural heritage. This strategy must address the following:
  - Co-operative structures to enable participation by key security stakeholders such as local communities and the South African Police Service (SAPS) to address offences and breaches of the law and other relevant co-operatives, relevant government departments such as the Department of Water Affairs and Sanitation, KZN Amafa and Research Institute (KZNA&RIA) and others.
  - Safety and security of protected area visitors, staff, concessionaires and public and private property.
  - Regular patrols covering the full extent of the protected area.
- Law enforcement within the protected area must be undertaken through surveillance, monitoring and appropriate reaction in the event of an offence, and be focused on:
  - Prevention of criminal activities through awareness programs, co-operative efforts with security stakeholders such as the South African Police Service (SAPS) and deterrents such as the successful prosecution of crimes.
  - Detection, investigation and prosecution of criminal activities.
  - Enforcement of the internal rules for the protected area as provided in *Appendix 3* and gazetted in 202.
  - If necessary, the manager may display a public notice issued in terms of Regulation 6, read with Regulation 7 of the Regulations for the Proper Administration of Nature Reserves, Government Gazette Notice R.99 [2012] published in terms of Section 86 (1) of the National Environmental Management Protected Areas Act No. 57 of 2003.
  - Access management by either Ezemvelo staff or a company appointed by Ezemvelo must provide for legal access to the protected area according to the standard operating procedure or station standing orders.
  - A register and copies of any legal agreements, servitudes, or MoAs must be kept on station for implementation and enforcement of any conditions therein.

### 2.11.3 Buffering and Regional Management

Protected areas are part of broader ecological, social, cultural and economic landscapes and must be managed in this broader context.

#### 2.11.3.1 Protected area expansion

As the biodiversity conservation authority or KZN, in line with the Ezemvelo Protected Area Expansion Strategy, will promote the expansion of the province's protected area network to:

- ensure representative and viable samples of the province's biodiversity, and particularly those which are considered vulnerable, threatened or critically endangered, are protected and conserved for current and future generations,
- enhance the survival and well-being of species requiring extensive habitats,
- secure critical linkages between protected areas,
- provide for climate change mitigation and adaptation and
- develop and improve the biodiversity economy aimed at strengthening rural economies, livelihoods, and socio-economic development. These initiatives must be supported by research, assessments, databases, and collaboration with the public and other stakeholders.

Although expansion is mostly contiguous with the protected area, areas that are not contiguous can be considered if it makes operational sense and contribute to the long-term protection of biodiversity. If under threat, efforts must be made to formally protect the areas of critical habitat, located outside of the protected area. Management of the protected area must, where appropriate actively identify and pursue opportunities for the expansion of the protected area.

#### 2.11.3.2 Buffer Zone and Zone of Influence

To safeguard the biodiversity within the protected area and to counter any threatening processes or edge effects, appropriate land uses in areas surrounding protected areas must be identified. Necessary actions may be taken to secure these areas through protected area expansion mechanisms and local planning tools.

Ezemvelo KZN Wildlife staff will work with local government authorities, to ensure that land-use planning (e.g. IDPs, SDF's and Land Use Management Schemes (LUMS)), consider the biodiversity conservation imperatives of the protected area.

The tools/mechanisms available to facilitate the above are the Zone of Influence and Buffer Zone. While there are significant areas of overlap between them, the Zone of Influence has a more limited (narrower) definition than that of a 'Buffer Zone', which can be defined as:

"an area, usually peripheral to a protected area, in which activities are implemented, or the area managed to enhance the positive and reduce the negative impacts of conservation on neighbouring communities and neighbouring communities on conservation" (modified from Wild & Mutebi 1997 and Martino 2001).

An additional impact buffer of 5 - 10 km around protected areas is provided through NEMA EIA regulations. The buffer is 5 km for nature reserves areas and 10 km for World Heritage Sites. In terms of these listed activities contained in NEMA, certain activities that may have negative impacts on a protected area, require assessments to be conducted and environmental authorisation to be obtained before being permitted to proceed. These applications are directed to Ezemvelo KZN Wildlife through the Planning Division, and for this buffer to be effective and potential impacts mitigated, reserve management and ecologists need to provide input and local knowledge to any such applications.

#### Buffer Zone

- Threatening processes and edge effects on the protected area's boundary and beyond it must be identified.

- An appropriate public consultation process needs to be followed in the development of a protected area buffer zone.
- Appropriate actions must be taken to manage threatening processes and edge effects on the protected area's boundary and beyond it.
- Relationships with local government and other provincial and national departments will be developed in the spirit of co-operative governance.
- Ezemvelo 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 will endeavour to align its plans and strategies with the programmes of the local and district municipality, where appropriate.

### **Zone of Influence**

The Zone of Influence comprises an area outside the boundary of a protected area where activities of people or other influences may negatively impact the purpose, values or objectives and/or efficient and effective management of the protected area and/or continued delivery of tourism and other societal benefits from the protected area. Protected area management must seek to actively engage with stakeholders to promote and retain compatible, and prevent or mitigate incompatible, activities and use of land.

In developing and implementing the Zone of Influence, the following will apply:

- The Zone of Influence may be used as a key informant in delineating a buffer zone for the protected area.
- When developing the management plan for the protected area, a Zone of Influence delineation must be included.
- The Zone of Influence may be provided as an environmental overlay or protected area zone in LUMS.
- The Zone of Influence must be developed in the framework of the protected area purpose, values and management objectives.
- The Zone of Influence must identify key influences that may threaten the protected area and the achievement of its, purpose, values and objectives.
- As part of the process, managers need to define key stakeholders and maintain an up-to-date contact list of stakeholders.
- The Zone of Influence must be identified in line with the Guideline for the delineation and management of a Zone of Influence for terrestrial Ezemvelo protected areas.

### **2.11.3.3 Stakeholder engagement**

Constructive relationships with adjacent landowners and communities are an essential aspect of the effective conservation of protected areas. Stakeholder engagement must aim to develop a strong sense of partnership between the neighbours and communities around the protected area. The following guiding principles must be adhered to:

- Efforts must be made to ensure that the communities living around the protected area are aware of the role that it fulfils in biodiversity conservation, its value and purpose and the provision of ecosystem services to the region.
- A shared understanding of the issues that affect both the protected area and the surrounding communities must be developed, and efforts to resolve them should be undertaken cooperatively.
- Stakeholder engagement must form part of planning and management practices to ensure sound decision-making, public understanding, and to provide opportunities for stakeholders to contribute their knowledge, expertise and suggestions.

- In order to mitigate the risk of conflict with neighbours regarding inappropriate developments in the surrounding areas that may negatively impact the protected area, protected area staff must actively engage in commenting on such developments.
- Where other appropriate forums do not exist, the protected area manager must facilitate a liaison forum to ensure the provision of accurate, comprehensive and timely information to stakeholders.
- Consultation with stakeholders does not replace the decision-making mandate of Ezemvelo. It will ensure that Ezemvelo has access to a broad range of information about stakeholder needs, concerns, views and options to assist in the decision-making process.

#### **2.11.3.4 Co-management**

Where land claims have been settled in protected areas, the community must be assisted to obtain the capacity to give meaningful input into conservation, tourism and business development (Kepe 2008). The following strategies will ensure active and efficient co-management:

- Bring co-management partners together under one structure as per the co-management agreement.
- Clarify the responsibilities and rights of co-management partners.
- Clarify expectations (vision) and understanding of co-management among co-management partners.
- Build capacity of co-management partners (develop partnerships where necessary to facilitate this).
- Develop a co-management plan (including joint vision) and co-management agreement.
- The manager and other relevant staff of the protected area with a settled land claim must implement the outcomes of the land claims process in line with the Ezemvelo policy on co-management.

#### **2.11.3.5 Public education and awareness**

Environmental education and awareness of the protected area 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 education and awareness programme, the following guiding principles should be adhered to:

- There must 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 programme must be target-specific, objective-oriented and address real issues, including the values and purpose of the protected area and management issues that can potentially affect stakeholders.
- Opportunities to create awareness based on international initiatives such as World Wetland Day, Arbour Day, etc. must be utilised.

#### **2.11.3.6 Tourism**

Ezemvelo KZN Wildlife has to sustainably develop protected areas to fully realise their eco-cultural tourism and associated income-generating potential, within the context of protecting their natural, biodiversity and cultural values. In developing and managing tourism within the protected area, the following must be adhered to:

- Tourism products that are developed within the protected area must be appropriate to the values and purpose of the protected area, and must not threaten the biodiversity, cultural assets or ecological function.

- In developing tourism products, management must adhere to requirements for environmental authorisation and internal approval processes [e.g., Ezemvelo Development Committee (DEVCO)].
- Tourism products must be designed to capitalise on the unique beauty, biodiversity, and cultural features of the protected area.
- Tourism products must be developed in response to tourism market demands and opportunities within the protected area and should be carefully assessed to determine their viability.
- Tourism must, where appropriate, be used as a tool for the generation of economic activity and employment in the communities surrounding the protected area.
- Tourism infrastructure must be maintained to an acceptable standard-based, and infrastructure must be incorporated in the scheduled maintenance programme of the protected area.
- Tourism development must comply with all legal and environmental authorisation requirements, both external as well as the internal DEVCO process.
- When undertaking decisions that may have a consequence for integrity and sustainable use of the protected areas, Ezemvelo will actively and judiciously apply the environmental principles provided in the National Environmental Management Act (No. 107 of 1998).
- The protected area manager must, in line with the Occupational Health and Safety Act, make reasonable efforts to ensure visitor safety and to have an appropriate emergency response system in place.
- Public safety considerations must be built into planning and design processes. Priority is placed on accident prevention, education and information programs designed to protect visitors.
- Based on the carrying capacity of infrastructure and other impacts created by access to protected areas, management may limit the number of entries per day to what is deemed acceptable by Ezemvelo KZN Wildlife as per the gazetted internal rules (See *Appendix 3*)
- Ezemvelo KZN Wildlife recognises that the installation of infrastructure may have direct and indirect negative impacts on the integrity of the protected area, sensitive species and habitats, as well as the sense of place enjoyed by visitors. Non-essential infrastructure must be minimised and, where reasonably possible, located outside of the protected area in appropriate neighbouring areas. All remaining essential infrastructure must be in keeping with the purpose, sense of place of the protected area, and all adverse impacts on the integrity and character of the protected area must be minimised and remediated.
- Access opportunities, where appropriate, will be provided to visitors in order to enhance public understanding, appreciation, enjoyment and protection of the natural and cultural heritage and that is appropriate to the values and purpose of the protected area. Basic essential services are provided while maintaining ecological and integrity and recognising the effects of incremental and cumulative impacts.
- Facilities and access for the public must not compromise ecological integrity and must be consistent with the approved management plan, concept development plan and zonation. They must reflect as far as possible national environmental standards and design, as well as the diversity of markets and equity of access considerations for disabled persons and visitors of various income levels.

### **2.11.3.7 Fire management**

Fire plays an essential role in the ecological dynamics of vegetation 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:

- Fire management must contribute to the achievement of the protected area objectives.
- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape. 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 unburnt 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).
- A monitoring and surveillance programme must be implemented with a mechanism that allows for the adaptive management process.
- 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.

### **2.11.3.8 Invasive species control**

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

- Invasive plant control will require an ongoing programme that prioritises critical infestations along any watercourses, 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 prevent exacerbating the problem.
- Monitoring and surveillance programmes must be implemented to facilitate adaptive management.
- Strategic partnerships and poverty relief programmes such as the Working for Water programme should be utilised in controlling invasive plants.
- Alien and invasive species control plan needs to be developed as per the NEMBA requirements.
- Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of the protected area 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 in the protected area if kept 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).
  - Dog access may be allowed in designated areas in certain instances subject to express permission by management or by protected area notice.

### **2.11.3.9 Soil resource management**

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

- Areas impacted by soil erosion be stabilised and re-vegetated with indigenous plant species to prevent the spread of listed invasive plant species.
- Areas susceptible to soil erosion or where there are 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.
- There should be no use of fertilisers within protected areas.
- The Ezemvelo policy relating to 'Re-establishment and management of vegetation on development sites in Ezemvelo KZN Wildlife's protected areas' must be applied to:
  - minimise disturbance to naturally occurring indigenous vegetation;
  - except at selected feature sites, plant only species indigenous to the site or an equivalent site (altitude, slope, soil) nearby within the protected area;
  - where considered essential at selected feature sites (e.g. reception centres) allow the planting of species not indigenous to the protected area, providing they are indigenous to the bioclimatic region, are demonstrated to be non-evasive, and will not hybridise with species indigenous to the protected area;
  - limit the sourcing of seed or other plant material to the development site itself or an equivalent site within the protected area. Only if this is not possible, may material be sourced elsewhere in the protected area, or within a 50 km radius within the bioclimatic region.
  - not allow the planting of transplanted woody plants more than 2 m in original height: although larger truncheons may be used.
  - attempt to capture the natural character and atmosphere of the site through planting to reflect the species composition, spacing and relative abundance of species characteristic of naturally occurring vegetation on the site or nearby equivalent sites, or at least early succession stages thereof.
- Where required, a maintenance management plan needs to be developed and submitted to the relevant department for adoption.

### **2.11.3.10 Resource utilisation**

It is an accepted tenet of biodiversity conservation in South Africa and KZN 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, cultural heritage 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:

- Any restrictions contained in the management plan and the protected area zonation plan must be applied.
- Providing, where possible, appropriate benefits such as resource use 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 *bona fide* South African research institutions and are undertaken per relevant Ezemvelo KZN Wildlife policies.
- The protected area's manager must have sufficient human resource capacity to control and monitor such resource use effectively.
- All resource use requests must be assessed, responded to, as well as recorded and implementation thereof monitored in line with all relevant Ezemvelo policies and monitoring and surveillance plans.

### **2.11.3.11 Wildlife management**

Management interventions related to indigenous wildlife will be focused on the safeguarding populations of rare and endangered species and to meet set conservation targets for key species. 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.
- Ezemvelo KZN Wildlife will only introduce indigenous animals historically occurring in a particular area after submission through the relevant internal approval process.
- The introduction of indigenous species into the protected area must be undertaken per relevant Ezemvelo 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 per relevant Ezemvelo policies.
- Genetic diversity must be maintained, and genetic pollution of game populations avoided, especially in small protected areas. It is essential to regularly bring 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.
- Maintaining the genetic diversity of populations is essential, especially in the light of climate change 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 through adaptation to the rapidly changing environment.
- The keeping of closely related subspecies in protected areas must be avoided in order to prevent hybridisation between subspecies (e.g. blue wildebeest and black wildebeest) since this could lead to the loss of both subspecies.
- 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, management must develop, where necessary, carrying capacity and management strategies for the management of these populations. The management of protected areas must implement these norms and standards.
- Key wildlife species such as predators, elephants etc., also require specific management interventions and these strategies need to be recorded and monitored in order to facilitate adaptive management, preferably in separate subsidiary management plans.
- No use of destructive and/or disruptive techniques that attempt to produce visuals of wetland birds.
- This includes active flushing with rope dragging and/or loud bangs to cause birds to take flight.
- Support ethical approaches to viewing of all wildlife species.

### **2.11.3.12 Wilderness**

Ezemvelo recognises the rarity, and importance of wilderness areas to:

- protect the wild character of wildlife behaviour;

- protect the wild character of visual and soundscapes for visitors and associated spiritual enrichment and renewal these areas provide;
- serve as reference areas in evaluating the extent of persistent impacts of tourism and other activities on the remainder of the protected area; and
- where reasonably possible, management must establish, expand, restore, maintain, and protect its wilderness areas, promote scientific understanding and inspire public appreciation of the value and the character of its wilderness areas.

Section 26 of the National Environmental Management Act No. 57 of 2003 states that wilderness areas are to:

- Protect the natural environment, biodiversity, associated natural and cultural resources and the provision of environmental goods and services.
- Provide outstanding opportunities for solitude and.
- Control access and access only allowed by non-mechanised means.

The 13 Wilderness Management Principles (Hendee & Dawson 2002) have been demonstrated by South African wilderness managers to be effective. These principles include:

- Manage wilderness as the most pristine extreme on the environmental modification spectrum.
- Manage wilderness holistically and not as separable parts.
- Manage wilderness, and sites within, under a non-degradation concept.
- Manage human influences as this is key to wilderness protection.
- Manage wilderness biocentrically (for its intrinsic value) to produce human values and benefits.
- Favour wilderness-dependent activities while discouraging non-Wilderness-dependent activities.
- Guide Wilderness management using written plans with specific area objectives.
- Set carrying capacities as necessary to prevent unnatural change.
- Focus management on threatened sites and damaging activities.
- Apply only the minimum tools, regulations, or force<sup>4</sup> to achieve Wilderness-area objectives.
- Involve the public as a key to the success of Wilderness management.
- Monitor Wilderness conditions and experience opportunities to guide long-term Wilderness stewardship.
- Manage Wilderness in relation to the management of adjacent lands.

### **2.11.3.13 Sense of place**

Sense of place is a complex ecosystem service that promotes and may be complemented by the character of tourism facilities, an appreciation of the protected area through the rejuvenation of physical, mental and psychological well-being of visitors. This, in turn, has a positive influence on the country's economy, social capital and enhances pro-environmental behaviour, responsible use of natural resources and waste reduction. The sense of place generated by protected areas is a critical asset that needs to be conserved and protected (Wilson 1997; Leather et al. 1998; Pretty & Ward 2001; Derr 2002; Dewa et al. 2004; Lewicka 2005; Eyles & Williams 2008; Cantrill 2011; Schofield & Szymanski 2011; Ramkissoon, Weiler & Smith 2012).

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<sup>4</sup> The minimum tool option is the "softest" option that can be applied, the option that will have the least impact on the environment and on the Wilderness qualities of naturalness and solitude.

## **Protection of viewscales**

Protected areas provide an increasingly rare opportunity for people to experience and enjoy the ambience of undeveloped viewscales. The following should be applied in managing important protected areas viewscales:

- Undeveloped viewscales are fundamental to the sense of place and enjoyment of the wild character of the protected area by visitors, these areas within and adjacent to the protected area, in particular high-lying and ridgetop areas. In protecting important viewscales within and along access routes to protected areas, management must collaborate with stakeholders to actively protect these areas.
- Viewscales are vulnerable and sensitive to development, and management must, in collaboration with relevant stakeholders and government partners, ensure that these areas are protected.
- Where essential infrastructure is required, it must be installed and maintained in a manner that does not degrade the viewscale and the associated sense of place.
- Internal guidelines such as 'Building in the Berg' and staff accommodation guidelines are available to assist staff in retaining the sense of place.

## **Protection of soundscapes**

In order to maintain an acceptable level of sense of place to support tourism functions and biodiversity protection, the soundscapes in protected areas need to be protected. The following principles apply:

- Identify what levels of human-caused sound are acceptable within the protected area.
- Monitor human activities that generate noise that adversely affects the protected area soundscapes, both within and adjacent to the protected area, including noise caused by mechanical or electronic devices.
- Take action to prevent or minimise all noise that, through frequency, magnitude, or duration, adversely affects the natural soundscape or other protected area resources or values, or that exceed levels that have been identified as being acceptable or appropriate for the different management zones.
- Minimise noise from management activities, including those caused by mechanical devices, vehicles and aircraft
- Management activities such as vehicles, chainsaws, brush cutters and shooting are sources of noise that must be carefully managed. Practical considerations include the use of electrically powered vehicles in resorts, battery-powered chainsaws, and considering noise output in the selection and procurement of motor vehicles.
- Staff and visitors will be sensitised to the impact of loud talking and playing of music on visitor enjoyment and wildlife. The protected area's Internal Rules make provision for officers to manage the nuisance impact of noise.
- Prohibit, including through enforcing the provisions of the Internal Rules, the playing of loud music by visitors or staff in any zone of the protected area, and manage the nuisance impact of any music on visitor experience and expectation of natural quiet and wildlife.
- Explicitly consider the generation and impact of noise in scoping reports and Event Management Plans on both visitor experience and biodiversity.
- Large events, such as weddings and races, may, if not carefully managed, create considerable noise. Music concerts create considerable noise and are generally incompatible with protected area objectives. The impacts of noise from such events may lead to inter-user conflict, complaints, and a loss of existing clients and revenue from an established portion of the market that appreciates and pays a premium for the natural soundscapes that protected areas provide.
- In addition to the unacceptable fire risk and the noise they create, fireworks are specifically banned from use in the protected area because of their disruptive noise impact that could cause panicked animals to injure themselves, abandon nests, etc.

- Ensure that comments on proposed or existing activities in the Buffer Zone or Zone of Influence will explicitly consider the impact of those activities on the natural soundscapes of the protected area, including assessing the societal, conservation and economic value of those natural soundscapes.

### **Protection of lightscapes**

Ezemvelo will preserve, to the greatest extent possible, the natural lightscapes of protected areas, which are natural resources and values that exist in the absence of human-caused light. The absence of light in areas such as caves and at the bottom of deep bodies of water influences biological processes and the evolution of species, such as the blind cave fish. The phosphorescence of waves on dark nights helps hatchling sea turtles orientate to the ocean. The stars, planets, and earth's moon that are visible during clear nights influence humans and many other species of animals, such as birds that navigate by the stars or prey animals that reduce their activities during moonlit nights.

Improper outdoor lighting can impede the view and visitor enjoyment of a naturally dark night sky. Recognising the roles that light and dark periods and darkness play in natural resource processes and the evolution of species, Ezemvelo will protect natural darkness and other components of the natural lightscape in protected areas. To prevent the loss of dark conditions and of natural night skies, Ezemvelo will minimise the light that emanates from protected area facilities, and also seek the cooperation of protected area visitors, neighbours, and local government agencies to prevent or minimise the intrusion of artificial light into the night scene of the ecosystems of protected areas. Ezemvelo will not use artificial lighting in areas such as sea turtle nesting locations where the presence of the artificial lighting will disrupt a protected area's dark-dependent natural resource components.

The following principles apply:

- Restrict the use of artificial lighting in protected areas to those areas where security, basic human safety, and specific cultural resource requirements must be met.
- Use minimal-impact lighting techniques.
- Shield the use of artificial lighting where necessary to prevent the disruption of the night sky, natural cave processes, physiological processes of living organisms, and similar natural processes or those that can disrupt or change the feeding behaviour of certain species.

### **2.11.3.14 Light and noise pollution**

- Protected areas provide an increasingly rare opportunity for people to experience and enjoy the ambience of natural soundscapes and star-filled skies. It is further recognised that non-human disturbed light and soundscapes are essential for the health and well-being of wildlife and that communication between animals includes visual and sound communication (transmitted through air, water, or ground) that may be disrupted by human-induced light and noise.
- Where possible, protected area management must:
  - Restore, maintain, and protect the natural soundscapes and naturally dark skies within its protected areas.
  - Promote the scientific understanding and inspire the appreciation of the public of the value and the character of undiminished soundscapes and star-filled skies within its protected areas.
  - Anthropogenic electromagnetic radiation can negatively impact both fauna and flora; this establishes the need to retain areas free of electromagnetic radiation.

### **2.11.3.15 Water management**

The pollution of surface waters and groundwater by both point and nonpoint sources can impair biodiversity, ecosystems, the natural functioning of aquatic and terrestrial ecosystems and secondarily diminish the utility of protected area waters for visitor use and enjoyment. Management must determine the quality of protected area surface and groundwater resources and avoid the pollution of protected area waters by human activities occurring within and outside the protected areas. Protected area management must:

- Work with appropriate governmental bodies and other partners to obtain the highest possible standards.
- Ensure that all visitor and staff infrastructure that may potentially pollute water bodies (including groundwater) is properly maintained and operating to required standards.
- Take all necessary actions to monitor, maintain or restore the quality of surface waters, and groundwater within the protected areas.

A growing economy and climate change are putting extreme pressure on water availability. Protected areas need to manage their water use effectively. Managers need to be conscious of water flows and the impact of on-ground management actions on the hydrology of the area. Measures may be instituted by management at both management and tourism infrastructure to deal with water availability and use during times of drought or water scarcity.

Water saving devices should be installed where possible and staff and visitors should be made aware of the scarcity of the water resource at the staff quarters and lodges.

### **2.11.3.16 Ecological integrity**

Protecting ecological integrity takes precedence in acquiring, managing, and administering protected areas. In every application of policy, this guiding principle is paramount. The integrity of natural and cultural heritage is maintained by ensuring that management decisions are made on sound cultural resource management and ecosystem-based management practices. The following principles will apply:

- It is recognised that protected areas are not islands but are part of larger ecosystems and cultural landscapes, and decision-making must, therefore, be based on an understanding of surrounding environments.
- Protected areas are designated and managed for their biodiversity and cultural values, for a specified purpose, and the benefit of the public. Fostering appreciation and understanding of ecological integrity must be the foundation for public use and enjoyment decision-making.
- The various internal and external factors that threaten protected areas, their value and purpose must be carefully analysed. Protection must be appropriate to the type, significance and sensitivity of the ecosystems and heritage resources involved.
- Because protected areas are influenced by surrounding and adjacent land uses, and, in turn, the management of these areas influences those surrounding areas, co-operative relationships must be sought with relevant stakeholders. The priority in decision-making must be to ensure the long-term ecological integrity of these areas.
- Concerted efforts must be made to encourage compatible external activities and to discourage incompatible ones within the greater ecosystem or cultural landscape setting of a protected area.

### **2.11.3.17 Protected area use**

Access to and use of protected areas must be consistent with the long-term protection of their values, the maintenance of physical and ecological processes and agreed management objectives. The following guiding principles apply:

- The primary use of a protected area is for conservation purposes; there may be other land uses, but in general, management must prevent any practices or activities that may be harmful to the values, purpose and objectives of the protected area.
- Any use activities, resource use and management activities must be monitored and evaluated to support adaptive management. Monitoring must demonstrate that there is a direct benefit to the conservation of natural and cultural assets on the property and that there is no loss of cultural heritage and biodiversity values.
- Tourism or nature and culture-based activities must not compromise the protected area's integrity and must be low-impact and in line with the management and zonation plan for the protected area.

- New applications for use must be tested against the protected area's purpose, values, objectives and the management and zonation plan of the area.
- As far as possible, non-conservation uses should not occupy more than 25% of the protected area. The primary objective should apply to 75% of the protected area – 'the 75 per cent rule' (Dudley 2008).

### **2.11.3.18 Use of air space**

Non-human disturbed airspace above a protected area is fundamental to the health and well-being of wildlife and the enjoyment and benefit of the protected area by people and for security purposes. Save for instances where explicit permission is granted; management must actively safeguard the airspace above its protected areas from low-flying manned and un-manned aircraft and any other unnatural aerial disturbance.

In line with the gazetted internal rules (2020), the following apply:

- The use of aircraft inside the protected area is prohibited, unless these are used for authorised research or official purposes and/or with the prior written approval of and subject to obtaining such permits specified by the Authority.
- An officer may within a protected area seize any aircraft unlawfully used in the protected area.
- An officer may seize any aircraft landing without permission within the protected area unless such landing is considered to be a bona fide emergency to safeguard human life.

### **2.11.3.19 Memorials and plaques**

Ezemvelo recognises that people often form a spiritual bond with the beauty and tranquillity of a protected area or a particular place therein. This appreciation may lead to an occasional request for a memorial in remembrance of the person and their special bond, to be placed in the protected area. Ezemvelo policy is to only consider a small, sensitively and unobtrusively placed plaque of commemoration and prohibits the installation of any other memorials or symbols of remembrance.

The following principles apply:

- The number of memorials will be limited and may not detract from visitors' enjoyment of the protected area, its values or the use of its facilities.
- Types of memorials that will be considered include:
  - benches of wood or crude stone subject to appropriate placement,
  - brass plates with inscriptions,
  - Cultural heritage sites,
  - Historical sites,
  - Land,
  - Visitor units, and
  - Hides, etc.
- In applying to the management authority, a clear strategy for the maintenance and responsibility for maintaining the memorial needs to be outlined.
- No burials or placing of urns will be allowed in protected areas, given that evidence of such activities is not in keeping with the purpose for the establishment of the protected area and may also detract from the sense of place and visitors' enjoyment of this area and its values. Furthermore, such activities may raise an expectation of a right of access by others to the site.
- Existing grave sites must be documented, as there may be existing access agreements. These must also be documented, and related activities controlled within the protected area context.

### **2.11.3.20 Development and maintenance of infrastructure**

In order for the protected area to operate effectively, infrastructure within the protected area must be appropriate and maintained, removed, expanded or developed for conservation management and eco-cultural tourism purposes. All developments must be undertaken cognisant of and as per legal requirements and procedures regarding environmental, planning and cultural resource impacts.

#### **General**

- Proposals for major maintenance projects or the removal, expansion and development of infrastructure must comply with the protected area zonation, and the value and purpose of the protected area.
- The project must be supported by the Officer in Charge, who must recommend the project and follow a critical assessment and approval processes (District Management Committee, Regional Operations Committee and DEVCO).
- Ensure that all developments and activities that take place within Ezemvelo protected areas, as well as developments or activities outside protected areas, follow the correct legal and best practice IEM procedures.
- Some developments/projects/activities may require additional authorisations after DEVCO, such as environmental authorisation, water use authorisations, planning approval, heritage permits, and others. The DEVCO will advise on the required additional authorisations.
- Any commercial infrastructure that is not essential or appropriate to the protected area objectives and management should be discouraged.
- Temporary infrastructure must follow the same internal approval process as proposed permanent infrastructure. The exception is when such infrastructure is for an approved event, in which case the events approval process and requirements must be followed.
- Placing infrastructure outside the boundaries should always be considered as an option, where practical, to reduce the amount of infrastructure within the protected area.
- Where possible and practical all infrastructure that is developed inside the protected area must be sited peripheral.
- Management is responsible for infrastructure within the protected area and must at all times ensure that it is maintained in a safe, sound, clean, serviceable and aesthetically acceptable condition.
- Tourist accommodation, camping-grounds and other facilities must at all times be maintained to appropriate standards regarding safety, appearance, cleanliness and serviceability.
- All structures must as far as possible be harmonised with the surrounding environment and landscape character through appropriate siting, use of colour, building materials, landscaping and screening.
- All structures are fixed assets and must be marked with their unique asset number and must be verified annually. Abandoned or derelict structures must be officially written off from the assets list, demolished and the remains removed from the protected area to a designated disposal site. Infrastructure older than 60 years is considered historic and requires a permit from KZNA&RIA prior to removal.
- Maintain effective systems of control and monitoring to ensure that development within protected areas is appropriate and in keeping with best environmental practice and approved development plans such as Concept Development and Protected Area Management Plans.
- All protected area infrastructure must be maintained to a safe and operational standard through the use of regular scheduled maintenance programmes.

#### **Water and energy supply and efficiency**

- All future electricity supplies must be underground unless technically not possible.

- Existing electricity supplies that have a negative impact on biodiversity or sense of place will be evaluated and replaced with more appropriate infrastructure or placed underground.
- Practical solutions to the provision of electricity to the protected area should be sought at the protected area based on available renewable energy technologies.
- Any new infrastructure must be designed and operated to minimise energy and water requirements.
- Existing incandescent light bulbs should be phased out, and wherever feasible low-flow showerheads and reduced flush toilets will be fitted.
- All water- and energy-efficiency measures will be highlighted to guests, together with suggestions for water and energy saving.
- Staff must be conscious of water and energy use and minimise wastage.

### **Communication**

Long-term exposure of wildlife to electromagnetic radiation from wireless telecommunications towers and other sources poses a significant threat the health and well-being of wildlife by way of reduction of natural defences, general health deterioration, reduced reproduction and reduction of their useful territory as a result in habitat degradation or reduction in prey (Havas 2000; Balmori 2009a; Balmori 2009b; Sarkar 2011; Charu 2012; Sivani & Sudarsanam 2012; Memon 2013; Balmori 2014; Balmori 2015; Lázaro et al. 2016; Sharma & Sinha 2017; Sutherland et al. 2018).

Although cellular communication is essential for the management of protected areas and tourism, this must be considered using the cautious approach.

- Telephone communications via microwave or cellular technology; wherever possible old phone lines should be removed or relocated to reduce visual impact and reduce collision impacts.
- The protected area will not provide/lease sites for public communication structures, where infrastructure already exist in protected areas the footprint and visual impacts of the site may not be increased.
- Given the potential visual and wildlife impact of communication structures, any radio repeater stations or other similar communication towers must be subject to the internal and where required external environmental authorisation process.
- Allow limited installation of cellular masts and the cellular coverage in protected areas, if considered these should be restricted to management and tourism accommodation nodes.
- Limited numbers of additional masts can be considered where such is vital for the security and management of the protected area and shall ensure, where reasonably possible, the protected area is predominately free of telecommunication based electromagnetic radiation.
- The impacts of cell coverage and impacts on sense of place at hides etc – balanced against arguments for safety for tourists.

### **Waste management**

Ezemvelo is subject to the same waste management laws that govern other developments in this province but should strive to be a leader in environmental acceptability and implement responsible waste management systems.

- Protected areas must develop and implement a recycling programme to ensure as far as possible the reduction of waste. This process can be implemented in collaboration with NGO's and community partners where possible.
- All solid waste must be sorted, and recyclable materials must be removed from the protected area to authorised recycling companies and non-recyclable materials to municipal waste management sites. Separation at source (less cross contamination) is usually far more cost effective than separation at the collection point.

- Correct management of the waste stream has financial implications, and an assessment needs to be conducted, and a waste plan must be formulated and implemented for the protected area.
- Existing and future waste management practices must be of an acceptable environmental standard as determined by NEMA waste legislation and regulations.
- Regular monitoring and review of the waste management systems must take place to ensure effective management of unforeseen circumstances.
- The principle of the Best Practicable Environmental Option must be employed in the disposal of protected area wastes. This principle refers to the option that provides the most benefit or results in the least damage to the environment as a whole, at a cost acceptable to society, in both the long and short-term.
- Waste management practices must support sustainable development and the principles set out in the NEMA including concepts of "cradle-to-grave" responsibility, "care of duty", "polluter pays", and "waste avoidance and minimisation" must be applied.
- Use of organic waste for compost purposes may be permitted but will be subject to strict conditions.
- All historical waste sites in the protected area must be appropriately rehabilitated.
- All staff and public waste receptacles must be animal- and, especially, baboon-proof and maintained as such.

#### **Solid wastes**

- All solid waste must be sorted, and recyclable materials must be removed from the protected area to authorised recycling companies and non-recyclable materials to municipal waste management sites. These sites should be registered.
- Hazardous solid wastes must be kept separately and removed to a registered waste disposal facility.
- Waste handling areas must have basic environmental management of potential pollution from the waste in place. This includes a designated waste handling area, controlled access, scavenger prevention, and means of keeping the waste out of the rain and away from surface water. A simple structure with a roof, hardened surface, suitable separation containers and a mesh fence on the sides with a closable gate, well away from watercourses, is a good starting point.
- Waste cannot be disposed of in a protected area nor stored for lengthy periods of time, as this will trigger additional waste management legal requirements. The old practice (especially at outposts) of placing waste in a pit and burning it is illegal and not permitted due to health and environmental impacts.
- Use of organic waste for compost purposes may be permitted but will be subject to strict conditions and with due consideration to potential scavenger impacts.
- All historical waste sites in the protected area must be appropriately rehabilitated.
- All staff and public waste receptacles must be animal- and, especially, baboon-proof and maintained as such. Bins at picnic sites may need to be more robust to discourage larger animals.
- Litter within protected areas must be collected immediately and dealt with through the waste management stream.
- Contractors must be required to remove all excess materials and solid wastes upon completion of contracts.
- Solid wastes originating from veterinary or animal enclosures must be dealt with as per the recommendations of the veterinarian and ecologist.

#### **Liquid wastes**

- All liquid waste must be properly managed according to a plan.

- Sewage waste must be disposed of into conservancy tanks for removal to a treatment works or treated through septic tanks-soakaways or to a designated treatment system/plant. The treated effluent must meet special effluent standards before release to the protected area environment.
- Grey water may be disposed of in soakaways.
- The above systems and structures should all have the required Water Use authorisations.
- Veterinary and abattoir wastes must have a separate waste plan, and the wastes must be managed and disposed of in keeping with health, veterinary and meat regulation requirements.
- No other liquid waste may be disposed of in the protected area.
- Liquid waste (e.g. oils) must be collected, stored securely, and recyclable liquids removed from the protected area to authorised recycling companies. Non-recyclable liquids must be securely transported to appropriate registered waste management sites for disposal.
- Contractors must remove all excess materials and wastes upon completion of contracts (this includes drums of contaminated fuels, bitumen, etc.).
- Hazardous liquid waste must be kept separately and removed to a registered waste disposal facility.
- Liquid waste should be stored well away from water courses and bodies and in such a manner to prevent spills and leaks, in a designated and bunded waste area, with controlled access, scavenger prevention, and means of keeping the waste out of the rain and away from surface water.

#### **Gaseous wastes/ emissions**

- These emissions must be kept to a minimum and should originate only from burning of plant materials and operation of combustion engines.
- All machinery and engines must be properly maintained such that the emissions are within regulation for each engine.

#### **Quarries**

It is acknowledged that gravel from quarries is required in protected areas for road maintenance and construction work. The use of material quarried in protected areas conflicts with biodiversity conservation as well as being unsightly. Hauling gravel when available from quarries outside of protected areas may have significant financial implications and suitable quarry material is often available only in the protected areas. The following principles apply to quarrying in protected areas:

- Only approve the excavation of new quarries or the extension of existing quarries in protected areas when essential and as per mandatory IEM procedures and other appropriate legislation.
- Rehabilitate any quarries or part thereof that are no longer required.
- Manage all operational quarries in terms of an Environmental Management Plan with a specified rehabilitation section.

#### **Landscaping**

Landscaping form an essential part of the sense of place and general impression the public has when entering protected areas, the first point of contact at the entrance gate as well as reception offices and tourism facilities. These areas must be appropriately landscaped where required in line with Ezemvelo policies and the following principles:

- All landscaping around offices, accommodation and tourism facilities must make use of plants indigenous to the area
- Landscaping must be done in such a way so as not to compromise any infrastructure or create erosion or safety concerns around infrastructure.

- Landscaping must comply with internal authorisation (DEVCO) and legislated environmental authorisation processes where required.

### **Roads**

Roads and vehicular tracks and the vehicular use of these, together with bicycle trails and footpaths have the potential to have a significant negative and lasting impact on the integrity of habitats and the behaviour of wildlife; however, these facilities may be both desirable or essential for the management and visitor experience of the protected area. The following principles apply:

- Limit the network and type of roads, vehicular tracks and foot paths in the protected areas to a level and standard that provides appropriate and reasonable access for both the management and visitor needs.
- All established roads, tracks and foot paths that are no longer required must be decommissioned and rehabilitated in line with an approved maintenance management plan.
- All road use must be in line with the gazetted rules and regulations contained in Appendix 4.

### **Events management**

Applications are regularly made to hold events and activities within protected areas. These events differ from ordinary visitor activities in their scale and potential impacts, as well as often requiring additional management or hospitality duties.

- Events must be appropriate to the objectives of the protected area. The appropriateness will be evaluated based on whether the event requires to be held in the specific environment, the scale of the event, proposed event activities, potential risks and impacts, and the objectives and sensitivity of the protected area as well as protected areas rules and the management and zonation plan.
- Applications must be made in good time for due process, consideration and a decision. Applications must follow the approved internal process and requirements to obtain DEVCO approval. An Environmental Management Plan will be required, together with other legislated Events documents, permits and a contract with Ezemvelo should the event be approved.

#### **2.11.3.21 Climate change**

Climate change will affect South Africa's biodiversity in many different ways. Protected areas should be managed to maintain high species diversity, healthy and functioning ecosystems and to reduce the likelihood of species extinction and genetic loss.

In order to address climate change management of protected areas must give due consideration to:

- Understanding fundamental values for protection and their requirements,
- Protecting critical habitat (for example, refugia),
- Maintaining ecological processes and ecological patterning in all native species,
- Ecosystems and ecological communities,
- Managing threats in the landscape,
- Dealing with landscape-scale issues,
- Managers will need to play a critical role in observing and monitoring changes in species, ecosystems and threats across the landscape.

### 2.11.3.22 Research, monitoring and reporting

Research and critical analysis based on scientific principles and best practice generate the evidence underpinning informed and defensible conservation policies, practices and decision-making. Furthermore, research and critical analysis are fundamental to advancing both the province's and South Africa's biodiversity conservation agenda by raising the profile of the economic, social and cultural importance of biodiversity to society. The biodiversity components, the functioning of the ecosystems and the cultural heritage of protected areas are mostly inadequately understood. Long-term research and monitoring are desirable and necessary as a result of the dynamic and stochastic nature of the ecosystem and to ascertain whether management actions have their desired effect in terms of achieving the biodiversity and cultural heritage conservation objectives. The following principles apply:

- Decision-making must be evidence-based and founded on ethical science, heuristic research and best practice.
- Management decisions must be based on the best available knowledge, supported by a wide range of research.
- Priority must be given to research that provides information and understanding that is of direct benefit to the protected area and will guide the management interventions required to achieve the protected area's biodiversity and cultural heritage conservation objectives in the most cost-effective manner. Opportunities will, however, be considered and provided for both applied and theoretical research.
- Partnerships and agreements with relevant academic and research institutions must be promoted to stimulate and encourage the desired research in the protected area.
- Management and scientific staff, as well as external researchers, must identify and prioritise research requirements. This research priority list will then be circulated to tertiary research institutions and made available on the website.
- All baseline abiotic and biotic data collected must be collated and stored in databases as well as GIS data layers to assist researchers in the planning of research projects and interpretation of data.
- Appropriate permanent research facilities must be developed and managed within or bordering the protected area if appropriate in order to facilitate research work.
- A research project registration procedure must be followed for all research undertaken by any party (including Ezemvelo staff) in the protected area, which includes the issuing of permits should these be required.
- Monitoring and surveillance programmes must facilitate adaptive management through the assessment of management interventions and the provision of information for achieving the objectives of the protected area. Long term research and monitoring are desirable and necessary as a result of the dynamic and stochastic nature of the ecosystem and to ascertain whether management actions have their desired effect in terms of achieving the biodiversity and cultural heritage conservation objectives.

Biodiversity Reporting requirements include

- Annual reports on the implementation of species management plans
- Annual State of Biodiversity Report
- Annual CITES reports
- Annual Ramsar site reports
- Reporting to the provincial and national Ministers on the state of the protected area;
- Local reports as required.

### **2.11.3.23 Financial and human resources**

Protected areas 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 is required for the management of the protected area to ensure the protection of its biodiversity and cultural values and the continued provision of its ecosystem services.
- Prioritisation of management action based on available funding must be aligned with priorities as determined by the Annual Operations Plan.
- Commercial operations within the protected area must be self-sufficient and, if profitable, should be used to subsidise its conservation and community programmes.
- Adequate, trained, and experienced staff must be employed at the protected area to undertake the operations required for its effective management.
- Programmes relating to education and awareness of staff as it relates to relevant environmental and conservation aspects must be implemented.

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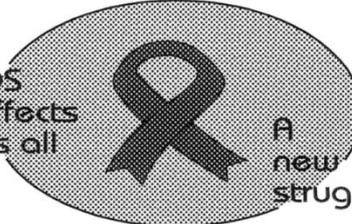
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**Appendix 1: Proclamation of Ithala Game Reserve.**

	<p><b>KWAZULU-NATAL PROVINCE</b>  <b>KWAZULU-NATAL PROVINSIE</b>  <b>ISIFUNDAZWE SAKWAZULU-NATALI</b></p>	
<p align="center"><b>Provincial Gazette • Provinsiale Koerant • Igazethi Yesifundazwe</b>  <b>GAZETTE EXTRAORDINARY—BUITENGEWONE KOERANT—IGAZETHI EYISIPESHELI</b></p> <p align="center"><i>(Registered at the post office as a newspaper) • (As 'n nuusblad by die poskantoor geregistreer)</i>  <i>(Irejistiwee njengephephandaba eposihhovisi)</i></p>		
<p align="center"><b>PIETERMARITZBURG,</b></p>		
<p align="center"><b>Vol. 6</b></p>	<p align="center">30 AUGUST 2012          30 AUGUSTUS 2012          30 kuNCWABA 2012</p>	<p align="center"><b>No. 799</b></p>

<p align="center"><b>We all have the power to prevent AIDS</b></p>	
<p align="center">               AIDS affects us all      A new struggle              Prevention is the cure         </p>	<p align="center"> <b>AIDS              HELPLINE</b>  <b>0800 012 322</b>              DEPARTMENT OF HEALTH         </p>

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**PROVINCIAL NOTICE**


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No. 83

30 August 2012

**DEPARTMENT of AGRICULTURE ENVIRONMENTAL AFFAIRS AND RURAL  
DEVELOPMENT**
**NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS, 2003  
(ACT NO. 57 OF 2003)**
**OFFICE OF THE MEC FOR AGRICULTURE ENVIRONMENTAL AFFAIRS AND RURAL  
DEVELOPMENT**
**DECLARATION OF NATURE RESERVES AND ASSIGN EZEMVELO KZN WILDLIFE AS  
THE MANAGEMENT AUTHORITY IN TERMS OF THE NATIONAL ENVIRONMENTAL  
MANAGEMENT: PROTECTED AREAS ACT, 2003 (ACT NO. 57 OF 2003);**

I, Dr Meshack Radebe, MEC for Agriculture, Environmental Affairs and Rural Development in KwaZulu-Natal, by virtue of the powers vested in me by section 23(1) and section 38(2) of the National Environmental Management: Protected Areas Act No. 57 of 2003 hereby declare that, with effect from the date of publication hereof, Amatikulu Nature Reserve, Blinkwater Nature Reserve, Chelmsford Nature Reserve, Dlinza Forest Nature Reserve, Enseleni Nature Reserve, Hluhluwe-Imfolozi Park, Isandlwana Nature Reserve, Ithala Game Reserve, Karkloof Nature Reserve, Mbumbazi Nature Reserve, Mpenjati Nature Reserve, Ncandu Nature Reserve, Ngoye Forest Reserve, Oribi Gorge Nature Reserve, Pocolan Bush Reserve, Robinsons Bush Reserve, Tembe Elephant Park, uMgeni Vlei Nature Reserve, Umlalazi Nature Reserve, Umtamvuna Nature Reserve as Nature Reserves and assign Ezemvelo KZN Wildlife as the Management Authority. The properties listed in the Schedule constitute the named Nature Reserves.



**Dr Meshack Radebe**  
MEC for Agriculture, Environmental Affairs and Rural Development  
KwaZulu-Natal

**SCHEDULE**
**AMATIKULU NATURE RESERVE**

**Region:** Situated in the province of KwaZulu-Natal, the Uthungulu District Municipality and in the KZ282 Umhlathuze Local Municipalities.

Properties Comprising the Amatikulu Nature Reserve	Surveyor General diagram No.	Extent (ha)
Sub 1 of Matikulu Leper Location No. 16632	604 / 1996	797.2867
Sub 1 of Annexe Reserve No. 8 No. 14264	599 / 1996	12.0485
Portion of Annexe Reserve No. 8 No. 14264	598 / 1996	602.2736
Amatikulu River		88.0026

**ISANDLWANA HERITAGE RESERVE**

**Region:** Situated in the province of KwaZulu-Natal, the Umzinyathi District Municipality and in the Nqutu Local Municipality

Properties Comprising the Isandlwana Heritage Reserve	Surveyor General diagram No.	Extent (ha)
Isandlwana Historical Site No.1 on Reserve No. 18 No 15838	522/1988	2.7999
Isandlwana Historical Site No.1 on Reserve No. 18 No 15838	3440/1987	813.5479

**ITHALA NATURE RESERVE**

**Region:** Situated in the province of KwaZulu-Natal, the Zululand District Municipality and in the KZ262 Uphongolo and KZ263 Abaqulusi Local Municipalities

Properties Comprising the Ithala Nature Reserve	Surveyor General diagram No.	Extent (ha)
Remainder of the farm Ongegund No. 393	S. G. 505 / 1951.	849.498
Sub 1 of the farm Ongegund No. 393	S. G. 506 / 1951.	1699.0021
Sub 2 of the farm Ongegund No. 393	S. G. 507 / 1951.	849.5011
The farm Onverwagt No. 395	VRY 476.	987.0311
Sub 1 of the farm Onverwacht No. 395	S. G. 1059 / 2007	630.2812
The farm Eldorado No. 13	VRY 442.	1429.8474
Remainder of the farm Doornpan No. 177	VRY 143.	2600.3669
Sub 3 of the farm Doornpan No. 177	S. V. 492 F. 33.	136.4065
Sub 4 of the farm Doornpan No. 177	S. G. 1824 / 1947.	41.1135
Erf 616 Louwesburg Township	S. V. 492 F. 3.	223.6042
The farm Vergelegen No. 373	VRY 540.	1977.7624
Remainder of the farm Bergvliet No. 452	VRY 483A.	680.0023
Sub 1 of the farm Bergvliet No. 452	S. V. 717 F. 83.	237.0161
Sub 2 of the farm Bergvliet No. 452	S. G. 5097 / 1965.	341.7271
Sub 3 of the farm Bergvliet No. 452	S. G. 1060 / 2007	5.7953
Sub 4 of the farm Bergvliet No. 452	S. G. 1061 / 2007	38.5517
Sub 5 of the farm Bergvliet No. 452	S. G. 1062 / 2007	376.8268
Remainder of the farm Wonderfontein No. 486	VRY 295.	1460.3432
Sub 1 of the farm Wonderfontein No. 486	S. G. 4680 / 1969.	1526.7779
Remainder of the farm Langverwacht No. 493	VRY 455.	469.4163
Sub 1 of the farm Langverwacht No. 493	S. V. 477 F. 5.	853.7736
Remainder of the farm Doornkraal No. 504	VRY 381.	919.1173
Sub 1 of the farm Doornkraal No. 504	VRY 381F1.	919.1159
Remainder of the farm Geluk No. 521	VRY 294.	612.0660
Sub 1 of the farm Geluk No. 521	S. G. 4529 / 1970.	431.5686
Sub 2 of the farm Geluk No. 521	S. G. 1063 / 2007	682.6400
Remainder of the farm Craig Adam No. 534	VRY 436.	2852.9754
The farm Jammerdal No. 574	VRY 451.	2620.07
The farm Breda No. 17060	VRY 516.	2815.1224
Sub 4 of the farm Tochgevonden No. 33	S. G. 79 / 1988	4.0712

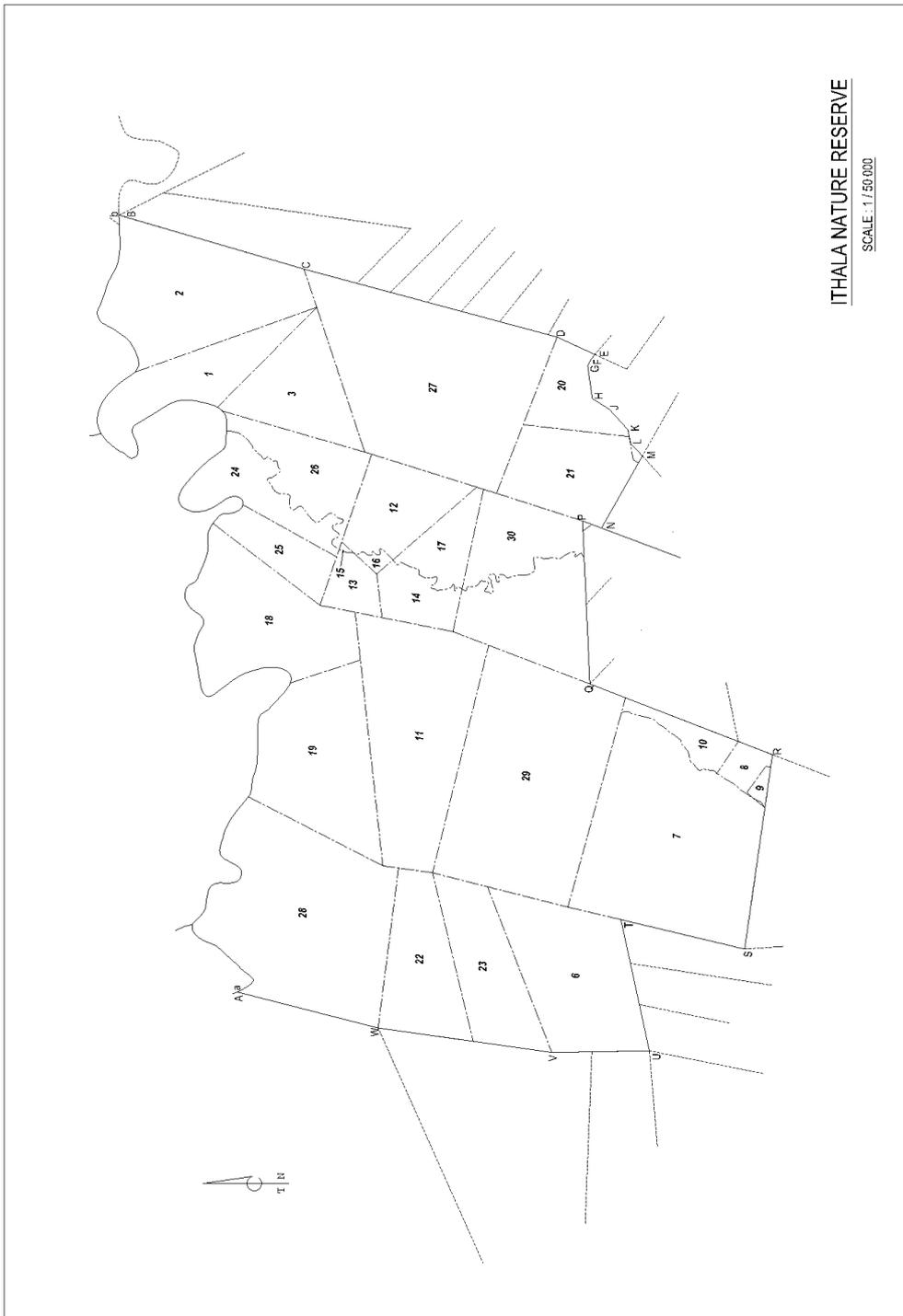
**KARKLOOF NATURE RESERVE**

**Region:** Situated in the province of KwaZulu-Natal, the Umgungundlovu District Municipality and in the KZ223 Mooi Mpofana and KZ222 Umgeni Local Municipalities.

Properties Comprising the Karkloof Nature Reserve	Surveyor General diagram No.	Extent (ha)
The remainder of the farm Dartmoor No. 5093	G. V. 93A F. 4	779.3593
The farm Melmoth No. 7673	G. V. 219 F. 16	790.3846
The remainder of the farm Welgevonden No. 969	G. V. 24 F. 5	291.9670
Nature reserve area no. 1 over the remainder of the farm Spitze Kop No. 970	S. G. No. 2095 / 2010	355.0442
The remainder of portion 1 of the farm Spitze Kop No. 970	S. V. 15 F. 113	432.2363







**ITHALA NATURE RESERVE**

SCALE: 1/50 000

## Appendix 2: List of Ezemvelo KZN Wildlife policies

Listed below are the Ezemvelo KZN Wildlife corporate policies. It is the responsibility of all management and other personnel associated with the 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.

<b>CORPORATE AFFAIRS</b>	
B 1	Commercial Use of Board Transparencies
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 12	Consultation and Communication with Stakeholders and Guidelines
B 13	Mission Statement
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C 4	Fraud Prevention Plan
C 5	Management Control
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<b>Threatened Species and Ecosystems</b>	
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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
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D 1.7	Cycads
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D .11	Trout production
D 1.12	Grass Carp
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D 1.14	Black Wildebeest and Blue Wildebeest Hybridization and Conservation
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<b>Strategic applications</b>	
3.9	Involvement of the KwaZulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme
<b>Conservation management: protected areas management</b>	

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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
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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
	Protected Area Development Policy
<b>Integrated environmental management</b>	
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
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D 2.28	Use of Narcotic Drugs
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D 2.30	Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas
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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
E 18	Administrative and operational policy on Professional hunting in South Africa
E 19	Commercialisation



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**NON-GOVERNMENTAL ORGANIZATION****NO. 43****24 JANUARY 2020****INTERNAL RULES OF PROTECTED AREAS MANAGED BY EZEMVELO KZN WILDLIFE (the KWAZULU-NATAL CONSERVATION BOARD)**

These Internal Rules are as provided for in terms of section 52(1) of the National Environmental Management: Protected Areas Act read with the Proper Administration Regulations and are subject to such legislation and are to be applied in addition thereto

**Definitions**

Words used in these Rules shall have the meanings assigned to them below or as otherwise defined in the Act or its regulations.

**Accommodation Unit:**

Means any Rondavel, Square Davel cottage, lodge, cabin, chalet, hut, hiking hut, bungalow, hotel in a resort or any other built structure intended for permanent or temporary human habitation.

**Act:**

The National Environmental Management: Protected Areas Act, no 57 of 2003 as amended from time to time.

**Adult:**

Means any person over twelve years of age or older.

**Aircraft:**

Means a manned or unmanned machine or equipment used or capable of controlled flight and includes but is not limited to glider, hang glider, paraglider, parawing, helicopter, aeroplane, balloon or remote-controlled drone.

**Authority:**

Means the Board which is the management authority for a Protected Area established by Government and managed by the Board and as defined or contemplated by the WHCA or the Act and which is represented by the employee appointed by the Board to manage the PA in question.

**Board:**

Means the KwaZulu-Natal Nature Conservation Board as defined by the KwaZulu-Natal Nature Conservation Management Act No.9 of 1997 and which operates as Ezemvelo KZN Wildlife and which is represented by its Chief Executive Officer.

**Camping site:**

Means any area in the PA set apart and marked or otherwise indicated as a place in which visitors may camp or take up temporary abode and shall include a cave / overhang designated as temporary, overnight, shelter.

**Cultural Sites:**

Any portion of a PA containing artefacts or evidence of human culture warranting protection in terms of any law generally applicable to the protection of human cultural artefacts or evidence.

**Field Ranger:**

Means any officer duly appointed as a Field Ranger.

**Graffiti:**

Means any unauthorised inscription, word, figure, or design that is marked, etched, scratched, drawn, or painted on any surface within the PA, including but not limited to, buildings, walls, signs, structures or places, rocks, trees, stumps or logs, or other surfaces, regardless of the nature of the surface or its location in the PA.

**Hang glider or Glider:**

Means any craft, machine or device capable of normal controlled flight other than under mechanical power or jet propulsion.

**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 National Environmental Management: Biodiversity Act, No. 10 of 2004 read with the Act.

**Management Unit:**

Means the specific geographic area/sector of the PA. The boundaries of these areas do not necessarily follow original protected area boundaries.

**Officer:**

Means any employee of the Authority, irrespective of rank or office and irrespective of whether or not such employee is on duty or off duty at the time and includes an Honorary Officer.

**Officer-in-Charge:**

Means the senior officer in charge of a PA or a Resort or a section of a PA irrespective of rank that person may hold.

**Paraglider or Parawing** means any equipment or device capable of powered or unpowered flight or gliding by way of a parafoil or parachute and includes 'basejumping' and recreational parachuting.

**Picnic Site:**

An area designated by the Authority where visitors to the PA may alight from their Vehicle for the purposes of using the facilities provided for rest and recreation.

**Proper Administration Regulations:**

Means

- (a) In respect of the UDP WHS: The Regulations for the Proper Administration of Special Nature Reserves, National Parks and World Heritage Sites published under GNR 1061 of 2005 (GG 28181 of 28 October 2005).

- (b) In respect of all other Nature Reserves: Regulations for the Proper Administration of Nature Reserves, 2012 published under GNR 99 of 2012 (GG 35021 of 8 February 2012).

**Protected Area (the PA):**

- (a) Means any area declared or proclaimed as such in terms of section 3 or listed in the Second Schedule to the KwaZulu-Natal Conservation Management Act No.9 of 1997; and / or
- (b) Means any of the protected areas referred to in section 9 of the Act and where such area is or is deemed to be a provincial protected area in terms of the Act;
- and / or
- (c) Means any protected area otherwise declared or deemed to have been declared to be a protected area in terms of the Act.
- and / or
- (d) Means the UDP WHS.

**Resort:**

A Visitor Area provided by the Authority for the use and enjoyment of visitors to a PA.

**UDP WHS:**

Means the uKhahlamba Drakensberg Park which comprise the South African components of the Maloti-Drakensberg Park World Heritage Site as listed under the World Heritage Convention and which are also known as the uKhahlamba-Drakensberg Park World Heritage Site.

**Vehicle:**

Means any vehicle or device in, upon or by any person or goods is or are or may be transported or drawn and includes any combination of vehicles irrespective of power source.

**Viewing Hide:**

Any hide, shelter or designated place where visitors to a Protected Area can alight from their Vehicle for the purpose of viewing wildlife and / or scenery.

**Visitor Area:**

Any reception area, Accommodation Unit, Camping Site, Picnic Site, Viewing Hide or any similar area demarcated for visitors to a PA to alight from a vehicle or otherwise remain.

**WHCA:**

The World Heritage Convention Act, No.49 of 1999 as amended from time to time.

**Wilderness Area:**

Means "an area designated.... 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 in the Act.

**World Heritage Site:**

Means a world heritage site as defined in the WHCA under Chapter 1, section 1 subsection (xxiv).

**Zoning:**

The zoning of the PA as set out in the Management Plan as contemplated in Section 41(2)(g) of the Act and 'Zone' shall refer to a component of the Zoning.

**General Rules**

Application: These Rules apply to all persons in all protected areas in KwaZulu-Natal except those protected areas forming part of the iSimangaliso Wetland Park World Heritage Site and Marine Protected Areas.

Any power or function which may be exercised by an official may be exercised by any senior ranking official which are, in descending order of rank: The Board (i.e. the Chief Executive Officer), Authority (a senior manager having the requisite authority), Officer-in-Charge and Officer / Ranger.

**1. Entering the PA**

No person shall, subject to the provisions of Section 46 of the Act, without special permission of the Authority:

- 1.1. Enter or leave the PA at any other place other than an entrance gate or other place specifically designated by the Authority as a point of entry into or exit from the PA subject to the following conditions:
  - 1.1.1. Where a national, provincial or municipal road pass through the PA as a transit road and not as an internal road then:
    - 1.1.1.1. No permission shall be required to pass through the PA to a destination outside the PA in question on such a road;
    - 1.1.1.2. No person shall be permitted to stop on such a road or to leave such a road or enter into the PA from such a road other than in compliance with section 1.1 above.
  - 1.1.2. Where the Authority permits access to a PA:
    - 1.1.2.1. The Authority may:
      - 1.1.2.1.1. Limit access to specific areas of the PA in question;
      - 1.1.2.1.2. Prohibit access to specific areas of the PA in question;
      - 1.1.2.1.3. Regulate conditions of entry into the PA in question by way of one or more of the following means:
        - Signposts;
        - Verbal notification by an Officer;
        - Written notification;
        - Maps.
    - 1.1.2.2. Limit the number of visitors within a PA or part thereof at any particular time in line with management objectives.

- 1.1.2.3. Any person accessing the PA does so subject to the provisions of the General Indemnification of the Authority against all claims or damages arising from such person's entry or those of any accompanying minors or babies. This indemnification is given in respect of any act or omission of the Authority, its officers, employees or agents and irrespective of whether such act or omission is grossly negligent. Signs, notices or conditions contained elsewhere shall not limit the generality of this indemnification.
- 1.1.2.4. No person may enter or exit the PA except through a designated point but, irrespective of whether or not a designated point is used, the person will be bound by these Rules.
- 1.1.2.5. All persons within a PA must, upon request by an Officer, produce acceptable means of identification and a valid entry permit / voucher.
- 1.1.2.6. Any person who, as pilot or passenger, who uses an aircraft at an altitude of 13,800 feet or less above sea level over ground constituting the UDP WHS will be deemed to have entered the UDP WHS and will be bound by these Rules (to the extent applicable) and by any Protected Airspace Rules of the Authority.

## **2. Times of Entry**

- 2.1. No person shall enter or exit the PA at any time other than the time prescribed by the Authority from time to time. Admission to the PA shall not give any person the right to be outside any resort or visitor area outside the time laid down by the Authority for entry into and exit from such resort or visitor area.
- 2.2. The officer in charge shall have the right to levy an administrative penalty when required to operate outside of normal operating hours.

## **3. Entrance fees payable**

- 3.1. No person may enter a PA and / or a Resort without payment of the required entrance fees determined by the management authority from time to time.
- 3.2. Daily entrance fees (including conservation, rescue and/or community levies etc.) shall be payable for every day / night stayed in the PA.
- 3.3. Any person entering or exiting a PA outside of the stipulated times may be charged a surplus in addition to any other fee payable.
- 3.4. Resort fees are payable in addition to PA entrance fees.
- 3.5. No person may enter a PA without a written permit / voucher issued by the management authority.
- 3.6. No person may knowingly assist or facilitate any other person's entry into the PA without the requisite written permit / voucher.
- 3.7. No person may knowingly assist or facilitate any other person's entry into a Resort or overnighting in a Resort without payment of the requisite fees and / or without a written permit / voucher.

## **4. Weapons may be conveyed into the PA on certain conditions**

- 4.1. A person in possession of a valid licence or otherwise lawfully permitted to carry such weapon in question may convey that weapon into the PA subject to the following rules:

- 4.1.1. No unlawful weapons may be conveyed into the PA.
  - 4.1.2. All weapons and ammunition of whatever nature shall be disclosed at the first checkpoint, whether such checkpoint be an entrance gate, reception, a resort or an office, as the case may be, for the purposes stipulated above.
  - 4.2. The Officer or agent to whom such weapons and ammunition are disclosed shall record the details of such weapon and the amount of ammunition and may require the owner to seal such weapons and ammunition in such a manner that the weapons and ammunition cannot be used without the seals being broken.
  - 4.3. A record of the weapon and ammunition will be issued and must be presented upon demand by any officer or law enforcement official and when exiting the protected area.
  - 4.4. The owner shall ensure that the weapons are not loaded when being sealed.
  - 4.5. When leaving the PA, the weapons and ammunition shall again be presented for inspection by an Officer or agent.
  - 4.6. When required to be sealed: Any person found to be in possession of an unsealed weapon and / or ammunition or, in respect of which the seal is broken or who is unable to account for any weapon or ammunition shall be guilty of an offence and liable to prosecution.
  - 4.7. For the purposes of this provision: weapon shall include any firearm, muzzle loading gun, air rifle, paint ball gun bow, crossbow or other device used for the discharge of any projectile as well as any other dangerous weapon and ammunition shall include the projectile and / or propellant as the case may be.
  - 4.8. The Board may exempt members of a recognised law enforcement agency or other persons engaged on official business in the PA from the requirements of this provision.
  - 4.9. The Board may, by notice make special provisions applicable to hunting and culling operations in protected areas.
- 5. Visitor road access**
- 5.1. No person shall enter any part of the PA closed to the public or drive any vehicle at any place other than on roads designated for visitors.
  - 5.2. No person shall enter or drive on any road within the PA shown by a notice as being closed or obstructed in any manner.
  - 5.3. No person may drive any vehicle off the road without a written permit issued by the Authority or instructed to do so by an officer.
  - 5.4. No person shall, without the permission of an officer, travel upon or use any road or path or any part thereof or enter any area in the PA or resort which is not open to the public unless:
    - 5.4.1. That person has obtained the written permission of the Officer-in-Charge to do so; and
    - 5.4.2. is accompanied by an officer unless specifically exempted by the Officer-in-Charge.

## 6. Cultural Sites

Cultural Sites are symbols of living heritage and must be respected as such. For the purposes of this provision: A Cultural Site extends 50m from the outermost clearly noticeable cultural artefact (e.g. paintings, structures and other physical artefacts holding cultural importance). The following are prohibited at cultural sites:

- 6.1. Touching the rock paintings or the rock surface immediately surrounding any rock paintings;
- 6.2. Leaning anything against the rock paintings or the rock surface immediately surrounding any rock paintings;
- 6.3. Pouring or spraying any liquid (including water) or any other substance onto the rock paintings;
- 6.4. Drawing or scratching on the rock paintings or rock face and decorating or damaging the walls of the site;
- 6.5. Stirring up dust when walking through or visiting the rock art sites;
- 6.6. Removing any artefacts or stone, stone tools or offcuts and shards produced in the making of such;
- 6.7. Defacing or damaging a Cultural Site or any part thereof.
- 6.8. Removing or attempting to remove any substrate on or in which a cultural artefact (including a painting) is located;
- 6.9. Camping or picnicking in or near Cultural Sites;
- 6.10. Littering, making fires or using candles and flame or heat irradiating lamps within or near cultural sites.
- 6.11. Using flash photography or exposing painting to bright or intense lighting.

Any person who contravenes the above will, in addition to contravening this rule, be liable for prosecution under the National Heritage Resources Act No. 25 of 1999 as well as applicable provincial legislation.

## 7. Animals not allowed

- 7.1. Except as provided for below; no person shall bring an animal of whatever nature, including indigenous wild animals, livestock or pets, into a PA.
- 7.2. Notwithstanding any other provision of these Rules: a disabled person who is assisted by a trained working dog may bring such dog into a Visitor Area subject to the following:
  - 7.2.1. No dog may be brought into a Visitor Area located in a PA where lion, leopard, spotted hyena or wild dog are present.
  - 7.2.2. Such dog is to be kept under direct physical control by means of a leash and / or harness at all times.
  - 7.2.3. Such dog is to be vaccinated and must have been dewormed no more than 30 days prior to entering the Visitor Area. Proof of deworming and proof of vaccination against rabies, canine distemper, canine parvo-virus, canine hepatitis, canine para-influenza and leptospirosis must be carried at all times.
  - 7.2.4. Such dog may not leave the Visitor Area.

- 7.2.5. Faeces must be removed by the owner and disposed of.
- 7.2.6. Any dog disturbing wildlife or causing a nuisance to other visitors must be confined or removed from the Visitor Area.
- 7.3. Any other person wishing to bring a wild animal, pet or domestic animal into a PA must obtain written authorisation from the Officer-in-Charge of the PA before attempting to do so. Such authorisation:
- 7.3.1. Is entirely within the discretion of the Officer-in-Charge, and
- 7.3.2. must be presented upon demand.
- 7.3.3. shall be limited to the PA identified
- 7.3.4. is subject to such other terms and conditions which the Officer-in-Charge might specify.
- 7.4. No permission for any species listed in terms of the Alien and Invasive Species Regulations, or proposed to be listed will be granted except to re-stock existing trout dams.
- 7.5. Bringing of any wild animal (indigenous or otherwise) into a PA will be subject such additional permits and authorisations prescribed by law.
- 7.6. Any unauthorised animal found in a PA may be impounded or destroyed by an Officer.
- 7.7. Bring any animal into a PA is entirely at the risk of the person doing so.
- 8. Overnight Accommodation**
- 8.1. No person shall stay or overnight in any part of the PA at any place other than a resort or any other place designated by the Authority for such stay.
- 8.2. Accommodation in the PA may only be occupied from 14h00 on the day of arrival and must be vacated before 10h00 on the day of departure.
- 8.3. No person shall stay or overnight in a resort camp in the PA or any part of the PA without payment of the fees determined by The Authority from time to time.
- 8.4. No person shall stay or overnight in a resort camp in the PA or any part of the PA before having reported to an employee or officer in the reception office of such rest camp in question: Provided that no person shall stay overnight in a resort unless accommodation or a camping site is available for that person.
- 8.5. No smoking is permitted in any Visitor Area unless such area is specifically demarcated for such purpose or such area is both out of doors and removed from other visitors.
- 9. Lighting of fires**
- 9.1. No person shall light or attempt to light a fire outside an officially demarcated fire place or braai area within the PA, without written permission from an Officer.
- 9.2. No fires may be made in any caves or cultural sites
- 9.3. No person may discard any object in any place where it may cause a fire to light.
- 9.4. Any person lighting a fire remains liable for the safe extinguishing of such fire.

**10. Types of vehicles allowed**

- 10.1. No person shall enter into or operate in the PA with any vehicle other than a vehicle that conforms to the dimensions and other requirements prescribed by the Authority from time to time.
- 10.2. Unless otherwise specified a motor vehicle, duly licenced for operation on national roads, shall be permitted for use on designated roads within the PA.
- 10.3. Use of off-road vehicles such as motor cross bikes, quad bikes and dune buggies are generally prohibited but may be used if specifically authorised by an Officer.
- 10.4. Non-motorised vehicles may only be used in demarcated areas or with the written permission of an Officer.

**11. Vehicles to be registered, licensed and roadworthy**

- 11.1. No person shall enter, drive or operate in the PA, a motor vehicle that is not lawfully registered and licensed, in terms of the National Road Traffic Act (Act 93 of 1996).
- 11.2. No person shall enter, drive or operate in the PA, a motor vehicle that is not in a roadworthy condition as is set out in the National Road Traffic Act.
- 11.3. No person shall drive or operate in the PA a motor vehicle, unless that person is in possession of a valid driver's licence for the vehicle in question.
- 11.4. No person shall drive or operate in the PA a motor vehicle, unless such person keeps such valid driver's licence with him or her at all at times whilst driving or operating such vehicle.
- 11.5. Any additional restriction on the use of motor vehicles may be imposed by means of a notice.

**12. Traffic laws to apply**

- 12.1. All laws, ordinances and other statutory enactments applicable to public roads in South Africa apply to roads within the PA subject to express amendment by these Rules.
- 12.2. Despite any other provision of these Rules; any wild animal has right of way on any road and the killing, interfering or injuring of any animal is strictly prohibited.
- 12.3. Despite any other provision of these Rules; bona fide viewing of game, nature or scenery is expressly provided for and such viewing shall not constitute a breach of these Rules except to the extent that such viewing constitutes reckless driving.
- 12.4. No person shall enter a road in the PA unless it can be done in a manner that does not compromise the safety of the driver, any other person or animals on or near the road.
- 12.5. No person or driver of any motor vehicle that has been involved in, or contributed to, an accident in the PA shall remove a vehicle or vehicles from the scene of such accident, except for the purposes of sufficiently allowing the passage of traffic, without the authority of an Officer.
- 12.6. Any driver who negligently, recklessly or deliberately kills or injures any animal shall, in addition to any other law including criminal prosecution, be liable to the Board for the commercial value of such animal.

**13. Prohibited acts – vehicles**

- 13.1. No person driving any vehicle in the PA shall:
- 13.1.1. Drive, park or stop in such a manner that it constitutes a nuisance, disturbance, inconvenience or danger to any other person, causes an obstruction, blocks the pathway of an emergency vehicle or causes damages of any kind including damage to plants.
  - 13.1.2. Park a vehicle in a place other than on a designated road or parking area or in a place specifically designated for that purpose.
  - 13.1.3. Drive anywhere excepting on the road or other specifically permitted place.
  - 13.1.4. Damage or potentially damage any road or property.
  - 13.1.5. Without the special permission of the Authority, in a PA exceed such speed limits as the Authority may from time to time impose and display by means of signage. Unless otherwise indicated the speed limit on all roads shall be 40km/hr
  - 13.1.6. Officers on duty and in demarcated vehicles may exceed the stipulated speed limits and generally operate at 60km/hr where necessary and safe to do so.
  - 13.1.7. Deliberately drive a vehicle close to any game animal with the intention, or where the result is, that the animal in question is disturbed in its natural environment.
  - 13.1.8. No person shall drive a vehicle close to any game animal where, by doing so, they risk damage or injury to any person or property including their own.
  - 13.1.9. Show intolerance or discourtesy to any other road user in the PA.
  - 13.1.10. No person may alight or leave a vehicle for any reason whatsoever except in a visitor area specifically designated for such purpose unless authorised to do so by an Officer.
- 13.2. No person shall without the permission of the Authority, operate any vehicle or combination of vehicles on any road in any the PA if any axle weight thereof exceeds the maximum axle weight determined by the Authority from time to time. Unless otherwise indicated the maximum axle weight permitted in the PA is 8, 164 kg.
- 13.3. No person shall drive any vehicle in the PA in a reckless or negligent manner. Without restricting the ordinary meaning of the word "reckless" a person driving a vehicle will be deemed to have driven the vehicle in a reckless manner if it is driven in deliberate or wilful disregard for the safety of any person, animal, reptile, bird, plant or property of whatever nature or in a manner that unduly disturbs or disrupts third party enjoyment of the PA.
- 13.4. No person shall play music, hoot or excessively rev a motor engine so as to cause a disturbance to the environment and nature.
- 13.5. No person may drive after sunset and before sunrise without the permission of an officer.

**14. Prohibited Acts – Aircraft**

- 14.1. The use of aircraft inside the PA is prohibited, unless these are used for authorised research or official purposes and / or with the prior written approval of and subject to obtaining such permits specified by the Authority.
- 14.2. An officer may within a PA seize any aircraft unlawfully used in the PA.
- 14.3. An officer may seize any aircraft landing without permission within the PA unless such landing is considered to be a bona fide emergency to safeguard human life.
- 14.4. The use of radio or remote controlled toy or model aircraft is prohibited except in specially designated areas. Such toy or models used in violation of this prohibition may be confiscated by an Officer, without warning, and shall only be returned on application to the Authority.
- 14.5. No Officer, Authority and / or the Board or any of their employees or agents shall be liable for any damage arising through any seizure, confiscation or impoundment contemplated above.

**15. Research**

- 15.1. No person may conduct research or monitoring in a PA without having submitted a formal application in the prescribed format and without having obtained written authority from the Authority.
- 15.2. No person may collect a plant or animal specimen for research purposes without the relevant permit having been issued in terms of the Natal Nature Conservation Ordinance, 15 of 1974 and/or NEM: Biodiversity Act, 10 of 2004 or any other applicable legislation.
- 15.3. It is an offence in terms of these rules not to comply with the conditions in the written authorisation for research or with the conditions stipulated on the permit.
- 15.4. No person may bring the propagules or any other living material of any plant that is a declared Alien or Invasive Species, or otherwise which is alien to a PA, into the PA.
- 15.5. No person may bring biological matter into a PA where such matter harbours or may, reasonably possibly harbour, pathogens, invasive species or diseases.

**16. Influence of alcohol or other intoxicating substances**

- 16.1. No person shall in the PA:
  - 16.1.1. drive a vehicle; or
  - 16.1.2. occupy the driver's seat of a motor vehicle the engine of which is running, while under the influence of intoxicating liquor or any other substance that may have a narcotic effect on such person; or
  - 16.1.3. have open alcohol containers in a motor vehicle and the driver of such vehicle shall be liable for any contravention of this provision.
- 16.2. No person shall in the PA:
  - 16.2.1. drive a vehicle; or
  - 16.2.2. occupy the driver's seat of a motor vehicle the engine of which is running, while the concentration of alcohol in any specimen of blood taken from any part of his or her body is not less than 0,05

gram per 100 millilitres, or in the case of a professional driver referred to in section 32, not less than 0,02 gram per 100 millilitres.

- 16.3. If, in any prosecution for an alleged contravention of a provision of subsection 19.2, it is proved that the concentration of alcohol in any specimen of blood taken from any part of the body of the person concerned was not less than 0,05 gram per 100 millilitres at any time within two hours after the alleged contravention, it shall be presumed, in the absence of evidence to the contrary, that such concentration was not less than 0,05 gram per 100 millilitres at the time of the alleged contravention.
- 16.4. Where, in any prosecution in terms of these rules, proof is tendered of the analysis of a specimen of the blood of any person, it shall be presumed, in the absence of evidence to the contrary, that any syringe used for obtaining such specimen and the receptacle in which such specimen was placed for despatch to an analyst, were free from any substance or contamination which could have affected the result of such analysis.
- 16.5. No person shall in the PA:
- 16.5.1. drive a vehicle; or
  - 16.5.2. occupy the driver's seat of a motor vehicle the engine of which is running, while the concentration of alcohol in any specimen of breath exhaled by such person is not less than 0,24 milligrams per 1 000 millilitres.
- 16.6. If, in any prosecution for a contravention of a provision of subsection 19.5, it is proved that the concentration of alcohol in any specimen of breath of the person concerned was not less than 0,24 milligrams per 1 000 millilitres of breath taken at any time within two hours after the alleged contravention, it shall be presumed, in the absence of evidence to the contrary, that such concentration was not less than 0,2 milligrams per 1 000 millilitres at the time of the alleged contravention.
- 16.7. A breath sampling system (as prescribed in terms of the National Road Traffic Act) may be used for determining the concentration of alcohol in any breath specimen.
- 16.8. 16.8. Any person detained for an alleged contravention of any provision of this section shall not-
- 16.8.1. during his or her detention consume any substance that contains alcohol of any nature, except on the instruction of or when administered by a medical practitioner;
  - 16.8.2. during his or her detention smoke until the specimen referred to in subsection 16.3 or 16.6 has been taken, as the case may be.
- 16.9. No person shall refuse that a specimen of blood, or a specimen of breath, be taken of him or her.

#### 17. Restrictions on and concessions to persons within the PA

No person shall, without the special prior written permission of the Authority, within the PA:

- 17.1. Hold or give any public entertainment or collect any money from the public.
- 17.2. Exhibit any advertisement or notice.
- 17.3. Keep any animals, birds or poultry.

- 17.4. Affix to or make on in any manner whatsoever, any tree, rock or any object not belonging to that person any name, letter, figure, symbol, mark, picture or sign or otherwise damage any tree or other object.
- 17.5. Hold any event or entertainment, show or display (any authorisation shall require an approved Event Management Plan).
- 17.6. Conduct any commercial or business activity.

#### 18. Damage and nuisance

- 18.1. No person shall within the PA:
  - 18.1.1. Damage, hurt interfere with or endanger any animal, human being, living plant or property of the Board.
  - 18.1.2. At any time play any radio, recording player, music system, musical instrument or in any way unnecessarily cause any noise in a manner that is likely to disturb any other person.
  - 18.1.3. Discard any article, including cigarette ends, or refuse of whatever nature, except in receptacles and containers provided for this purpose.
  - 18.1.4. Discard any burning object in any place where it may set fire to any other object or otherwise act in a manner likely to cause a fire other than where the making of a fire is specifically permitted.
  - 18.1.5. Cause or allow any person to disfigure, blemish or injure any surface by way of graffiti or any other mechanism.
  - 18.1.6. Be under the influence of alcohol or intoxicating substance (legal or otherwise) so as to cause a nuisance or disturbance to visitors or officers.
- 18.2. Any person who persists in causing a nuisance to any other user of the PA or who persists in disregarding the applicable regulations, rules, notices or lawful instructions of an officer may be instructed to leave the PA by an officer in which case:
  - 18.2.1. such person shall have no claim for a refund of any fee paid to the Authority.
  - 18.2.2. the officer may call upon other officers, third parties or law enforcement officials to remove such person.
  - 18.2.3. Such person may be banned from entering the PA or any other PA operated by the Board.
- 18.3. Any person who causes any damage to any property within the PA or to any animal or plant in the PA shall be liable for the costs or repair or replacement of such property or the costs of treatment of such animal or plant.

#### 19. Harming nature - general prohibitions

Subject to the provisions the Act, no person other than an employee of Board or a person specifically authorised in writing by the Board to do so, may:

- 19.1. convey into the PA or within the PA be in possession of any weapon other than a weapon declared and dealt with and may not be in possession of any explosive, fireworks, trap or poison including substances defined as such in the Hazardous Substances Act, no. 15 of 1973;

- 19.2. hunt or otherwise wilfully or negligently kill or injure any mammal, bird, fish, amphibian or reptile;
- 19.3. wilfully disturb any mammal, bird, fish, amphibian or reptile;
- 19.4. within the PA use any sound recording, lure, bait or scent to attract or catch, view or photograph fauna;
- 19.5. take, damage or destroy any egg or nest of any bird, or take honey from a beehive;
- 19.6. wilfully or negligently cause a fire;
- 19.7. wilfully or negligently cause any damage to any object of geological, archaeological, historical, ethnological, educational or other scientific interest;
- 19.8. cut, damage, remove or destroy any tree or other plant, including collecting and/or removing dry or firewood, grass or other plants;
- 19.9. remove seed or flowers from any tree or other plant; or
- 19.10. remove any animal or part thereof, whether dead or alive;
- 19.11. remove any sand, soil, rock or other mineral material or
- 19.12. feed any animal or leave food where it could reasonably be accessed by animals.

#### 20. Recreational Activities in the UDP WHS

Unless otherwise specified that following recreational activities are only permitted in the UDP WHS and this part does not apply to any other PA unless expressly provided for in a notice displayed at such PA:

- 20.1. Canoeing, paddling or tubing is permitted but only where other users will not be inconvenienced or harmed and the use is strictly at the person's own risk and such person must have the required safety equipment, and be proficient.
- 20.2. Rock climbing is generally permitted with permission from an Officer-in-charge however use of fixed protection and bolting is restricted and may only occur with specific permission and in accordance with official policy and in accordance with the Integrated Management Plan and the Wilderness Management Plan where applicable. The Authority or an Officer may for good reason restrict the areas and times where climbing may take place.
- 20.3. Swimming is generally permitted unless otherwise indicated by the Authority.
- 20.4. The use and enjoyment of water resources is subject to the rights of other users of the PA and its water resources.
- 20.5. Hiking and walking on designated pathways are permitted.
- 20.6. The Authority may impose a surcharge or other conditions on any person insisting on hiking alone.
- 20.7. Any person hiking must complete the hiking register.
- 20.8. Fly-fishing in scheduled trout waters is generally permitted subject any conditions or fees imposed.
- 20.9. Any recreational activity is solely at the risk of the participant and the Board is fully indemnified against any claim arising.

20.10. Any recreational activity may be limited by notice or directive.

#### **21. Hunting and Fishing**

- 21.1. 21.1. The Authority may designate PA's or parts thereof, through suitable zonings, for consumptive use of natural resources including hunting, fishing and harvesting.
- 21.2. 21.2. Where the Authority has elected to do so and where such zonation is recorded in a management plan approved by the Board then the Authority may prescribe rules for such designated area (and matters incidental thereto) to allow for such activity to occur.
- 21.3. 21.3. The rules contemplated above may contradict these Park Rules and will, in the event of conflict, take precedence but only to the limited extent required to permit the consumptive use of natural resources within the designated area.

#### **22. Photography in the PA**

- 22.1. No person shall, except in accordance with the conditions laid down by the Authority from time to time, take any photographs, videos or films or record any images in the PA other than for private purposes.
- 22.2. Any photographs, films, videos or other recordings other than private ones shall be made available to the Authority on demand who shall have all rights to store, copy, edit, distribute, use such as it may in its sole discretion determine.

#### **23. Officers may ask for written authority to be shown**

- 23.1. Any person in the PA shall hand over the written voucher, permit or exemption authorising that person to be within the PA and to perform such activity to an Officer if requested to do so.
- 23.2. Any person failing or refusing to comply with any request to hand over the written voucher authorising that person to be within the PA when requested to do so by an Officer shall, apart from any other liability that person may incur, also be liable for payment of the fees in respect of admission, accommodation or any other service for which fees may be levied by the Authority, even though such fees may already have been paid. Provided that any fees thus paid shall be reclaimable by the person concerned on the submission to the Authority of satisfactory proof that such fees have previously been paid.

#### **24. Complying with instructions**

- 24.1. No person shall fail to comply with a lawful instruction issued by the Authority or an Officer while inside the PA.
- 24.2. The Authority may erect written notices to give effect to the PA Zoning or for any other matter and such notices shall be deemed to be lawful instructions and shall be complied with.
- 24.3. The right of admission to any PA, accommodation unit, viewing hide or picnic site is strictly reserved and any Officer may, in their discretion, require any person to vacate such area on good cause.

#### **25. Special conditions to be observed**

- 25.1. Any person to whom special permission of any nature whatsoever may be granted to enter into or reside in the PA shall, in addition to the provisions of the Act, the regulations and these rules, observe all instructions which the Authority may deem fit to issue in connection with such permission.

- 25.2. Unless otherwise provided for: The Board may exempt any person or group of persons from any rule contained herein in respect of an area or the PA as a whole and for such period as may be determined provided that such exemption may not be granted retrospectively and shall only be granted, in writing and on written motivation, in exceptional circumstances.

#### **26. Offences and penalties**

In addition to any offence in terms of section 89 of the Act, in terms of Regulation 61 read with Regulation 64 of the Proper Administration Regulations any person who contravenes or fails to comply with—

- 26.1. a provision of these internal rules;
- 26.2. a condition mentioned in a permit issued in terms of these internal rules; or
- 26.3. a prohibition, instruction, rule or order imposed, given or issued under these internal rules;

shall be guilty of an offence and is liable on conviction to a fine not exceeding R 5 million or to imprisonment for a period not exceeding five years or to both a fine and such imprisonment and, on second or subsequent conviction; to a fine and or imprisonment not exceeding R10 million or 10 years as the case may be.

## Appendix 4: Species list for Ithala Game Reserve

### Birds

Species	Common name
<i>Anas sparsa</i>	African Black Duck
<i>Anas undulata</i>	Yellow-billed duck
<i>Dendrocygna viduata</i>	White-faced Duck
<i>Plectropterus gambensis</i>	Spur-winged goose
<i>Vanellus coronatus</i>	Crowned Lapwing, Crowned Plover
<i>Vanellus melanopterus</i>	Black-winged Lapwing, Black-winged Plover
<i>Vanellus senegallus</i>	African Wattled Lapwing, Wattled Plover
<i>Ciconia ciconia</i>	White Stork
<i>Ciconia episcopus</i>	Woolly-necked stork
<i>Ciconia nigra</i>	Black Stork
<i>Ephippiorhynchus senegalensis</i>	Saddle-billed stork
<i>Gorsachius leuconotus</i>	White-backed Night-Heron
<i>Ixobrychus sturmii</i>	Dwarf Bittern
<i>Columba arquatrix</i>	African Olive-Pigeon, Rameron Pigeon
<i>Columba guinea</i>	Speckled Pigeon, Rock Pigeon
<i>Falco amurensis</i>	Amur Falcon, Eastern Red-footed Kestrel
<i>Falco biarmicus</i>	Lanner falcon
<i>Falco subbuteo</i>	Eurasian Hobby, Hobby Falcon
<i>Accipiter badius</i>	Shikra, Little Banded Goshawk
<i>Accipiter minullus</i>	Little Sparrowhawk
<i>Accipiter ovampensis</i>	Ovambo Sparrowhawk
<i>Accipiter tachiro</i>	African Goshawk
<i>Circaetus cinereus</i>	Brown Snake-Eagle
<i>Circaetus pectoralis</i>	Black-chested Snake-Eagle, Black-breasted Snake-Eagle
<i>Gyps africanus</i>	White-backed Vulture
<i>Gyps coprotheres</i>	Cape vulture
<i>Polemaetus bellicosus</i>	Martial eagle
<i>Terathopius ecaudatus</i>	Bateleur
<i>Anthropoides paradiseus</i>	Blue Crane
<i>Numida meleagris</i>	Helmeted guineafowl
<i>Neotis denhami</i>	Denham's Bustard, Stanley's Bustard
<i>Sarothrura elegans</i>	Buff-spotted Flufftail
<i>Sarothrura rufa</i>	Red-chested Flufftail
<i>Acrocephalus arundinaceus</i>	Great Reed-Warbler
<i>Acrocephalus baeticatus</i>	African Reed-Warbler, African Marsh Warbler
<i>Acrocephalus gracilirostris</i>	Lesser Swamp-Warbler, Cape Reed Warbler
<i>Acrocephalus palustris</i>	Marsh Warbler, European Marsh Warbler
<i>Actitis hypoleucos</i>	Common Sandpiper
<i>Alcedo semitorquata</i>	Half-collared Kingfisher
<i>Amaurornis flavirostra</i>	Black Crake
<i>Amblyospiza albifrons</i>	Thick-billed Weaver
<i>Anaplectes rubriceps</i>	Redheaded Weaver
<i>Andropadus importunus</i>	Sombre Greenbul, Sombre Bulbul
<i>Anomalospiza imberbis</i>	Cuckoo Finch
<i>Anthoscopus caroli</i>	Grey Penduline-Tit
<i>Anthus caffer</i>	Bushveld Pipit
<i>Anthus cinnamomeus</i>	African Pipit, Grassveld Pipit
<i>Anthus crenatus</i>	African Rock Pipit, Rock Pipit
<i>Anthus leucophrys</i>	Plain-backed Pipit
<i>Anthus lineiventris</i>	Striped Pipit
<i>Anthus similis</i>	Long-billed Pipit

<i>Anthus vaalensis</i>	Buffy Pipit
<i>Apalis flava</i>	Yellow-breasted Apalis
<i>Apalis thoracica</i>	Bar-throated Apalis
<i>Apaloderma narina</i>	Narina Trogon
<i>Apus affinis</i>	Little Swift
<i>Apus barbatus</i>	African Black Swift, Black Swift
<i>Apus caffer</i>	White-rumped Swift
<i>Apus horus</i>	Horus Swift
<i>Aquila rapax</i>	Tawny Eagle
<i>Aquila verreauxii</i>	Verreaux's Eagle, Black Eagle
<i>Ardea cinerea</i>	Grey Heron
<i>Ardea goliath</i>	Goliath Heron
<i>Ardea melanocephala</i>	Black-headed Heron
<i>Ardea purpurea</i>	Purple Heron
<i>Asio capensis</i>	Marsh Owl
<i>Aviceda cuculoides</i>	African Cuckoo Hawk
<i>Batis capensis</i>	Cape Batis
<i>Batis molitor</i>	Chin-spot Batis
<i>Bostrychia hagedash</i>	Hadedda Ibis
<i>Bradypterus baboecala</i>	Little Rush-Warbler, African Sedge Warbler
<i>Bubo africanus</i>	Spotted Eagle-Owl
<i>Bubulcus ibis</i>	Cattle Egret
<i>Bucorvus leadbeateri</i>	Southern Ground-Hornbill, Ground Hornbill
<i>Buphagus erythrorhynchus</i>	Red-billed Oxpecker
<i>Burhinus capensis</i>	Spotted Thick-knee, Spotted Dikkop
<i>Burhinus vermiculatus</i>	Water Thick-knee, Water Dikkop
<i>Buteo buteo</i>	Steppe Buzzard
<i>Buteo rufofuscus</i>	Jackal Buzzard
<i>Bycanistes bucinator</i>	Trumpeter Hornbill
<i>Calandrella cinerea</i>	Red-capped Lark
<i>Camaroptera brachyura</i>	Green-backed Camaroptera, Bleating Warbler
<i>Campephaga flava</i>	Black Cuckooshrike
<i>Campethera abingoni</i>	Golden-tailed Woodpecker
<i>Caprimulgus europaeus</i>	European Nightjar
<i>Caprimulgus fossii</i>	Square-tailed Nightjar, Mozambique Nightjar
<i>Caprimulgus pectoralis</i>	Fiery-necked Nightjar
<i>Caprimulgus tristigma</i>	Freckled Nightjar
<i>Centropus burchellii</i>	Burchell's Coucal
<i>Ceryle rudis</i>	Pied Kingfisher
<i>Charadrius tricollaris</i>	Three-banded Plover
<i>Chrysococcyx caprius</i>	Diederick Cuckoo, Diederik Cuckoo
<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo, Emerald Cuckoo
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo
<i>Cinnyricinclus leucogaster</i>	Violet-backed Starling, Plum-coloured Starling
<i>Circus ranivorus</i>	African Marsh-Harrier
<i>Cisticola aberrans</i>	Lazy Cisticola
<i>Cisticola ayresii</i>	Wing-snapping Cisticola, Ayres' Cisticola
<i>Cisticola chiniana</i>	Rattling Cisticola
<i>Cisticola fulvicapilla</i>	Neddicky
<i>Cisticola juncidis</i>	Zitting Cisticola, Fan-tailed Cisticola
<i>Cisticola lais</i>	Wailing Cisticola
<i>Cisticola natalensis</i>	Croaking Cisticola
<i>Cisticola textrix</i>	Cloud Cisticola
<i>Cisticola tinniens</i>	Levaillant's Cisticola
<i>Clamator jacobinus</i>	Jacobin Cuckoo
<i>Clamator levaillantii</i>	Levaillant's Cuckoo, Striped Cuckoo
<i>Colius striatus</i>	Speckled Mousebird
<i>Coracias garrulus</i>	European Roller

<i>Corvinella melanoleuca</i>	Magpie Shrike, Longtailed Shrike
<i>Corvus albicollis</i>	White-necked Raven
<i>Corvus albus</i>	Pied Crow
<i>Corvus capensis</i>	Cape Crow, Black Crow
<i>Corythaixoides concolor</i>	Grey Go-away-bird, Grey Lourie
<i>Cossypha caffra</i>	Cape Robin-Chat, Cape Robin
<i>Cossypha heuglini</i>	White-browed Robin-Chat, Heuglin's Robin
<i>Cossypha humeralis</i>	White-throated Robin-Chat, White-throated Robin
<i>Cossypha natalensis</i>	Red-capped Robin-Chat, Natal Robin
<i>Coturnix coturnix</i>	Common Quail
<i>Coturnix delegorguei</i>	Harlequin Quail
<i>Crex egregia</i>	African Crake
<i>Cuculus canorus</i>	Common Cuckoo, European Cuckoo
<i>Cuculus clamosus</i>	Black Cuckoo
<i>Cuculus gularis</i>	African Cuckoo
<i>Cuculus solitarius</i>	Red-chested Cuckoo
<i>Cursorius temminckii</i>	Temminck's Courser
<i>Dendropicos fuscescens</i>	Cardinal Woodpecker
<i>Dicrurus adsimilis</i>	Fork-tailed Drongo
<i>Dryoscopus cubla</i>	Black-backed Puffback, Puffback
<i>Egretta alba</i>	Great Egret, Great White Egret
<i>Elanus caeruleus</i>	Black-shouldered Kite
<i>Emberiza capensis</i>	Cape Bunting
<i>Emberiza flaviventris</i>	Golden-breasted Bunting
<i>Emberiza tahapisi</i>	Cinnamon-breasted Bunting, Rock Bunting
<i>Estrilda astrild</i>	Common Waxbill
<i>Euplectes albonotatus</i>	White-winged Widowbird, White-winged Widow
<i>Euplectes ardens</i>	Red-collared Widowbird, Red-Collared Widow
<i>Euplectes axillaris</i>	Fan-tailed Widowbird, Red-shouldered Widow
<i>Euplectes orix</i>	Southern Red Bishop, Red Bishop
<i>Euplectes progne</i>	Long-tailed Widowbird, Long-tailed Widow
<i>Fulica cristata</i>	Red-knobbed Coot
<i>Gallinula chloropus</i>	Common Moorhen
<i>Geocolaptes olivaceus</i>	Ground Woodpecker
<i>Geronticus calvus</i>	Southern Bald Ibis, Bald Ibis
<i>Halcyon albiventris</i>	Brown-hooded Kingfisher
<i>Halcyon chelicuti</i>	Striped Kingfisher
<i>Haliaeetus vocifer</i>	African Fish-Eagle
<i>Hirundo albigularis</i>	White-throated Swallow
<i>Hirundo atrocaerulea</i>	Blue Swallow
<i>Hirundo fuligula</i>	Rock Martin
<i>Hirundo rustica</i>	Barn Swallow, European Swallow
<i>Hirundo smithii</i>	Wire-tailed Swallow
<i>Indicator indicator</i>	Greater Honeyguide
<i>Indicator minor</i>	Lesser Honeyguide
<i>Indicator variegatus</i>	Scaly-throated Honeyguide
<i>Ispidina picta</i>	African Pygmy-Kingfisher, Pygmy Kingfisher
<i>Jynx ruficollis</i>	Red-throated Wryneck
<i>Kaupifalco monogrammicus</i>	Lizard Buzzard
<i>Lagonosticta rhodopareia</i>	Jameson's Firefinch
<i>Lagonosticta rubricata</i>	African Firefinch, Blue-billed Firefinch
<i>Lagonosticta senegala</i>	Red-billed Firefinch
<i>Lamprotonis nitens</i>	Cape Glossy Starling, Glossy Starling
<i>Laniarius ferrugineus</i>	Southern Boubou
<i>Lanius collaris</i>	Fiscal Shrike
<i>Lanius collurio</i>	Red-backed Shrike
<i>Lybius torquatus</i>	Black-collared Barbet
<i>Macronyx capensis</i>	Cape Longclaw, Orange-throated Longclaw

<i>Macronyx croceus</i>	Yellow-throated Longclaw
<i>Malaconotus blanchoti</i>	Grey-headed Bush-Shrike
<i>Megaceryle maxima</i>	Giant Kingfisher
<i>Melaenornis pallidus</i>	Pallid Flycatcher
<i>Melaenornis pammelaina</i>	Southern Black Flycatcher, Black Flycatcher
<i>Merops apiaster</i>	European Bee-eater
<i>Merops bullockoides</i>	White-fronted Bee-eater
<i>Merops pusillus</i>	Little Bee-eater
<i>Milvus migrans</i>	Black Kite, Yellow-billed Kite
<i>Mirafra africana</i>	Rufous-naped Lark
<i>Mirafra rufocinnamomea</i>	Flappet Lark
<i>Monticola explorator</i>	Sentinel Rock-Thrush
<i>Monticola rupestris</i>	Cape Rock-Thrush
<i>Motacilla aguimp</i>	African Pied Wagtail
<i>Motacilla capensis</i>	Cape Wagtail
<i>Motacilla clara</i>	Mountain Wagtail, Long-tailed Wagtail
<i>Muscicapa adusta</i>	African Dusky Flycatcher, Dusky Flycatcher
<i>Muscicapa caerulescens</i>	Ashy Flycatcher, Blue-grey Flycatcher
<i>Muscicapa striata</i>	Spotted Flycatcher
<i>Myioparus plumbeus</i>	Gey Tit-Flycatcher, Fan-tailed Flycatcher
<i>Myrmecocichla formicivora</i>	Ant-eating Chat
<i>Nectarinia famosa</i>	Malachite Sunbird
<i>Nicator gularis</i>	Eastern Nicator, Yellow-spotted Nicator
<i>Nilaus afer</i>	Brubru
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron
<i>Oena capensis</i>	Namaqua Dove
<i>Oenanthe monticola</i>	Mountain Wheatear, Mountain Chat
<i>Onychognathus morio</i>	Red-winged Starling
<i>Oriolus auratus</i>	African Golden Oriole
<i>Oriolus larvatus</i>	Black-headed Oriole
<i>Ortygospiza atricollis</i>	African Quailfinch, Quail Finch
<i>Parus niger</i>	Southern Black Tit
<i>Passer diffusus</i>	Southern Grey-headed Sparrow, Grey-headed Sparrow
<i>Passer domesticus</i>	House Sparrow
<i>Passer melanurus</i>	Cape Sparrow
<i>Phalacrocorax africanus</i>	Reed Cormorant
<i>Phoeniculus purpureus</i>	Green Wood-Hoopoe, Red-billed Woodhoopoe
<i>Phyllastrephus terrestris</i>	Terrestrial Brownbul, Terrestrial Bulbul
<i>Phylloscopus trochilus</i>	Willow Warbler
<i>Ploceus bicolor</i>	Dark-Backed Weaver, Forest Weaver
<i>Ploceus capensis</i>	Cape Weaver
<i>Ploceus cucullatus</i>	Village Weaver, Spotted-backed Weaver
<i>Ploceus intermedius</i>	Lesser Masked-Weaver
<i>Ploceus ocularis</i>	Spectacled Weaver
<i>Ploceus velatus</i>	Southern Masked-Weaver, Masked Weaver
<i>Podica senegalensis</i>	African Finfoot
<i>Pogoniulus pusillus</i>	Red-fronted Tinkerbird, Red-fronted Tinker Barbet
<i>Poicephalus cryptoxanthus</i>	Brown-headed Parrot
<i>Polyboroides typus</i>	African Harrier-Hawk, Gymnogene
<i>Porzana pusilla</i>	Baillon's Crane
<i>Prinia hypoxantha</i>	Drakensberg Prinia
<i>Prinia subflava</i>	Tawny-flanked Prinia
<i>Prionops plumatus</i>	White-crested Helmet-Shrike, White Helmet-Shrike
<i>Prodotiscus regulus</i>	Brown-backed Honeybird, Sharp-billed Honeyguide
<i>Pseudhirundo griseopyga</i>	Grey-rumped Swallow
<i>Pytilia melba</i>	Green-winged Pytilia, Melba Finch
<i>Quelea quelea</i>	Red-billed Quelea
<i>Rhinopomastus cyanomelas</i>	Common Scimitarbill, Scimitar-billed Wood-Hoopoe

<i>Rhinoptilus chalcopterus</i>	Bronze-winged Courser
<i>Riparia cincta</i>	Banded Martin
<i>Sagittarius serpentarius</i>	Secretarybird
<i>Schoenicola brevirostris</i>	Broad-tailed Warbler
<i>Scopus umbretta</i>	Hamerkop
<i>Serinus canicollis</i>	Cape Canary
<i>Sphenoaacus afer</i>	Cape Grassbird, Grassbird
<i>Stenostira scita</i>	Fairy Flycatcher
<i>Stephanoaetus coronatus</i>	African Crowned Eagle
<i>Streptopelia capicola</i>	Cape Turtle-Dove
<i>Streptopelia semitorquata</i>	Red-eyed Dove
<i>Streptopelia senegalensis</i>	Laughing Dove
<i>Strix woodfordii</i>	African Wood-Owl, Wood Owl
<i>Struthio camelus</i>	Common Ostrich, Ostrich
<i>Sylvia borin</i>	Garden Warbler
<i>Sylvietta rufescens</i>	Long-billed Crombec
<i>Tachybaptus ruficollis</i>	Little Grebe, Dabchick
<i>Tauraco porphyreolophus</i>	Purple-crested Turaco, Purple-crested Lourie
<i>Tchagra senegalus</i>	Black-crowned Tchagra
<i>Telophorus zeylonus</i>	Bokmakierie
<i>Terpsiphone viridis</i>	African Paradise-Flycatcher, Paradise Flycatcher
<i>Thamnolaea</i>	Mocking Cliff-Chat, Mocking Chat
<i>cinnamomeiventris</i>	African Sacred Ibis, Sacred Ibis
<i>Threskiornis aethiopicus</i>	Crowned Hornbill
<i>Tockus alboterminatus</i>	Southern Yellow-billed Hornbill
<i>Tockus leucomelas</i>	African Grey Hornbill, Grey Hornbil
<i>Tockus nasutus</i>	Crested Barbet
<i>Trachyphonus vaillantii</i>	Acacia Pied Barbet, Pied Barbet
<i>Tricholaema leucomelas</i>	Arrow-marked Babbler
<i>Turdoides jardineii</i>	Groundscraper Thrush
<i>Turdus litsitsirupa</i>	Olive Thrush
<i>Turdus olivaceus</i>	Emerald-spotted Wood-Dove, Greenspotted Dove
<i>Turtur chalcospilos</i>	Tambourine Dove
<i>Turtur tympanistria</i>	Barn Owl
<i>Tyto alba</i>	African Grass-Owl, Grass Owl
<i>Tyto capensis</i>	Red-faced Mousebird
<i>Urocolius indicus</i>	Dusky Indigobird, Black Widowfinch
<i>Vidua funerea</i>	Pin-tailed Whydah
<i>Vidua macroura</i>	Coqui Francolin
<i>Peliperdix coqui</i>	Crested Francolin
<i>Dendroperdix sephaena</i>	Red-winged Francolin
<i>Scleroptila levaillantii</i>	Shelley's Francolin
<i>Scleroptila shelleyi</i>	Natal Spurfowl, Natal Francolin
<i>Pternistis natalensis</i>	Swainson's Spurfowl, Swainson's Francolin
<i>Pternistis swainsonii</i>	Egyptian Goose
<i>Alopochen aegyptiaca</i>	African Hoopoe, Hoopoe
<i>Upupa africana</i>	Lilac-breasted Roller
<i>Coracias caudatus</i>	Purple Roller
<i>Coracias naevius</i>	Alpine Swift
<i>Tachymarptis melba</i>	African Green-Pigeon, Green Pigeon
<i>Treron calvus</i>	White-bellied Korhaan
<i>Eupodotis senegalensis</i>	Black-bellied Bustard, Black-bellied Korhaan
<i>Lissotis melanogaster</i>	African Hawk-Eagle
<i>Aquila spilogaster</i>	Rock Kestrel
<i>Falco rupicolus</i>	White-breasted Cormorant
<i>Phalacrocorax lucidus</i>	Green-backed Heron
<i>Butorides striata</i>	Gorgeous Bush-Shrike
<i>Telophorus viridis</i>	Common House-Martin, House Martin

<i>Delichon urbicum</i>	Dark-capped Bulbul, Black-eyed Bulbul
<i>Pycnonotus tricolor</i>	Yellow-throated Woodland-Warbler, Yellow-throated Warbler
<i>Phylloscopus ruficapilla</i>	Cape White-eye
<i>Zosterops virens</i>	Sabota Lark
<i>Calendulauda sabota</i>	Kurrichane Thrush
<i>Turdus libonyanus</i>	Bearded Scrub-Robin, Bearded Robin
<i>Cercotrichas quadrivirgata</i>	White-browed Scrub-Robin, White-browed Robin
<i>Cercotrichas leucophrys</i>	African Stonechat, Stonechat
<i>Saxicola torquatus</i>	Amethyst Sunbird, Black Sunbird
<i>Chalcomitra amethystina</i>	Scarlet-chested Sunbird
<i>Chalcomitra senegalensis</i>	Collared Sunbird
<i>Hedydipna collaris</i>	Greater Double-collared Sunbird
<i>Cinnyris afer</i>	White-bellied Sunbird
<i>Cinnyris talatala</i>	Yellow-fronted Canary, Yellow-eyed Canary
<i>Crithagra mozambica</i>	Brimstone Canary, Bully Canary
<i>Crithagra sulphurata</i>	Streaky-headed Seedeater, Streaky-headed Canary
<i>Crithagra gularis</i>	Gabar Goshawk
<i>Melierax gabar</i>	Olive Woodpecker
<i>Dendropicos griseocephalus</i>	Swee Waxbill
<i>Coccyzygia melanotis</i>	Blue Waxbill
<i>Uraeginthus angolensis</i>	Kurrichane Buttonquail
<i>Turnix sylvaticus</i>	Black-rumped Buttonquail
<i>Turnix nanus</i>	African Darter, Darter
<i>Anhinga rufa</i>	Lappet-faced Vulture
<i>Torgos tracheliotus</i>	Lesser Spotted Eagle
<i>Clanga pomarina</i>	Wahlberg's Eagle
<i>Hieraaetus wahlbergi</i>	Bronze Mannikin
<i>Lonchura cucullatus</i>	Orange-breasted Waxbill
<i>Amandava subflava</i>	Lesser Striped Swallow
<i>Cecropis abyssinica</i>	Greater Striped Swallow
<i>Cecropis cucullata</i>	Red-breasted Swallow
<i>Cecropis semirufa</i>	Black Saw-wing, Black Saw-wing Swallow
<i>Psalidoprocne pristoptera</i>	Olive Bush-Shrike
<i>Chlorophoneus olivaceus</i>	Orange-breasted Bush-Shrike
<i>Chlorophoneus sulfureopectus</i>	Buff-streaked Chat
<i>Campicoloides bifasciata</i>	Yellow-throated Petronia, Yellow-throated Sparrow
<i>Gymnoris supercilii</i>	Black-bellied Starling
<i>Notopholia corrusca</i>	Dark-capped Yellow Warbler, Yellow Warbler
<i>Iduna natalensis</i>	Chestnut-vented Tit-Babbler, Tit-Babbler
<i>Sylvia subcaeruleum</i>	Malachite Kingfisher
<i>Corythornis cristatus</i>	Familiar Chat
<i>Oenanthe familiaris</i>	Fiscal Flycatcher
<i>Melaenornis silens</i>	

## Mammals

Species	Common name
<i>Orycteropus afer afer</i>	Aardvark
<i>Proteles cristatus cristatus</i>	Aardwolf
<i>Syncerus caffer caffer</i>	African Buffalo
<i>Felis silvestris cafra</i>	African wild cat
<i>Lycaon pictus pictus</i>	African wild dog
<i>Neoromicia nanus nanus</i>	Banana bat
<i>Mungos mungo taenianotus</i>	Banded mongoose

<i>Diceros bicornis minor</i>	Black rhinoceros
<i>Canis mesomelas mesomelas</i>	Black-backed jackal
<i>Connochaetes taurinus taurinus</i>	Blue wildebeest
<i>Parahyaena brunnea</i>	Brown hyaena
<i>Tragelaphus scriptus</i>	Bushbuck
<i>Potamochoerus larvatus koiropotamus</i>	Bushpig
<i>Aonyx capensis capensis</i>	Cape clawless otter, African clawless otter
<i>Vulpes chama</i>	Cape Fox
<i>Hystrix africaeaustralis</i>	Cape porcupine
<i>Neoromicia capensis capensis</i>	Cape serotine bat
<i>Caracal caracal caracal</i>	Caracal
<i>Papio hamadryas</i>	Chacma baboon
<i>Acinonyx jubatus jubatus</i>	Cheetah
<i>Sylvicapra grimmia</i>	Common duiker, Grey duiker
<i>Phacochoerus africanus</i>	Common warthog
<i>Tragelaphus oryx oryx</i>	Eland
<i>Loxodonta africana africana</i>	Elephant
<i>Giraffa camelopardalis capensis</i>	Giraffe
<i>Tragelaphus strepsiceros strepsiceros</i>	Greater Kudu
<i>Manis temminckii</i>	Ground pangolin
<i>Mellivora capensis capensis</i>	Honey badger, Ratel
<i>Aepyceros melampus melampus</i>	Impala
<i>Oreotragus oreotragus transvaalensis</i>	Klipspringer
<i>Panthera pardus melanotica</i>	Leopard
<i>Redunca fulvorufula fulvorufula</i>	Mountain reedbuck
<i>Tragelaphus angasii</i>	Nyala
<i>Ourebia ourebi ourebi</i>	Oribi
<i>Equus quagga antiquorum</i>	Plains Zebra
<i>Cephalophus natalensis natalensis</i>	Red duiker
<i>Alcelaphus buselaphus caama</i>	Red hartebeest
<i>Procavia capensis capensis</i>	Rock hyrax
<i>Miniopterus schreibersii natalensis</i>	Schreiber's long-fingered bat
<i>Leptailurus serval serval</i>	Serval
<i>Lemniscomys rosalia</i>	Single-striped grass mouse
<i>Galerella sanguinea</i>	Slender mongoose
<i>Genetta tigrina</i>	South African large-spotted genet
<i>Mastomys coucha</i>	Southern multimammate mouse
<i>Redunca arundinum arundinum</i>	Southern reedbuck
<i>Crocuta crocuta</i>	Spotted hyaena
<i>Raphicerus campestris</i>	Steenbok
<i>Myotis tricolor</i>	Temminck's hairy bat
<i>Damaliscus lunatus lunatus</i>	Tsessebe
<i>Otomys irroratus</i>	Vlei rat
<i>Phacochoerus aethiopicus</i>	Warthog
<i>Atilax paludinosus paludinosus</i>	Water mongoose
<i>Kobus ellipsiprymnus ellipsiprymnus</i>	Waterbuck
<i>Ceratotherium simum simum</i>	White rhinoceros
<i>Ichneumia albicauda grandis</i>	White-tailed mongoose
<i>Mystromys albicaudatus</i>	White-tailed mouse
<i>Rhynchogale melleri</i>	Mellers mongoose
<i>Chlorocebus pygerythrus</i>	Vervet monkey