

ITHALA GAME RESERVE MANAGEMENT PLAN



Prepared by

Ezemvelo KZN Wildlife

Ithala Game Reserve Management Committee

Developed 2022/23

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EXECUTIVE SUMMARY

Introduction

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

Neighbours include commercial and community landowners on the eastern and western boundaries, Traditional Authority areas on the northern boundary and 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 large altitudinal variation, resulting in environmental niches due to geological and climatological factors. IGR largely encapsulates the area roamed by one of the most productive black rhino populations in southern Africa. The reasons behind the original proclamation were primarily for conservation of key species, and to restore biodiversity value by reversing detrimental human induced impact. 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, 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.”

The objectives are summarised under the following headings:

1. Stakeholder participation
2. Priority species management
3. Habitat management
4. Minimising future threats
5. Restoring historic human impact
6. Cultural heritage
7. Conservation land use planning
8. Encouraging focused socio-economic sustainability within the constraints of environmental sustainability
9. Acknowledging elephant as a priority species
10. Park tourism to be operated on profitable, sound business principles, within ecological constraints

SWOT Analysis and Risk Assessment

The management team identified an objective for each of Ithala Game Reserve management spheres. 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 management team, together with stakeholders identified the following specific issues:

- Continually declining levels of financial and human resources
- Human encroachment on the park boundary
- Alien plant infestations from surrounding areas
- Increased poaching
- Community expectations
- Damage causing animal control
- Climate variability

Annual Operations Plan

To effectively implement the management plan and address the critical issues identified in it, an Annual Operations Plan (AOP) will be prepared. The AOP is based on the management plan objectives, targets, SWOT analysis and Mett assessment. The Annual Operations Plan will guide the implementation and monitoring of the management plan. It includes a component to record any revisions required to the management plan, to be incorporated in the next management plan revision.

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 triggered.

ABBREVIATIONS

AOP	Annual Operations Plan
CARA	Conservation of Agricultural Resources Act No. 43 of 1983
CCA	Community Conservation Area
CDP	Conservation Development Plan (Component of Ezemvelo KZN Wildlife protected area management plan)
CEO	Chief Executive Officer
CMS	Co-Management Structure
DCO	District Conservation Officer
DEFF	National Department of Environmental Affairs, Forestry & Fisheries
DEVCO	Ezemvelo KZN Wildlife Development Committee
DWAS	Department of Water Affairs and Sanitation
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EIA	Environmental impact assessment
Ezemvelo	Ezemvelo KwaZulu-Natal Wildlife
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EWT	Endangered Wildlife Trust
FP	Financial Plan
FPA	Fire Protection Association
GIS	Geographical Information System
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 Act No. 5 of 2018
KZNCMA	KwaZulu-Natal Nature Conservation Management Act No. 9 of 1997
KZNHRA	KwaZulu-Natal Heritage Resources Act No. 10 of 1997
LUMS	Land Use Management Scheme
MEC	Member of the Executive Council
METT	Management Effectiveness Tracking Tool
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
MP	Management Plan
NEMA	National Environmental Management Act No. 107 of 1998
NEMBA	National Environmental Management: Biodiversity Act No. 10 of 2004

NEMPAA	National Environmental Management: Protected Areas Act No. 57 of 2003
NHRA	National Heritage Resources Act No. 25 of 1999
NPAES	National Protected Area Expansion Strategy
NR	Nature Reserve
NRMC	Nature Reserve Management Committee
PA	Protected Area
PMC	Park Management Committee
PFMA	Public Finance Management Act No. 1 of 1999
SA	South Africa
SAHRA	South African Heritage Resources Agency
SANDF	South African National Defence Force
SAPPI	South African Pulp and Paper Industry
SAPS	South African Police Service
SDF	Municipal Spatial Development Framework
SMME	Small, Micro and Medium Enterprises
SWOT	Strengths, weaknesses, opportunities and threats analysis
TFCA	Transfrontier Conservation Area
TFP	Transfrontier Park
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WWF	World Wildlife Fund
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 and also includes diversity within species, between species, and of ecosystems (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004]).
Bioprospecting	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 protected area that has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the nature reserve.
Co-management	The term ‘Co-management’ must be understood within the context of Section 42 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Eco-cultural tourism:	‘Minimal impact tourism’ or ‘environmentally sound tourism’ that includes responsible travel of tourist, and appreciation of natural and cultural areas; and typically benefits local or hosting communities and increasing conservation awareness for both the tourist and local communities affected.
Ecological Integrity	The sum of the biological, physical and chemical components of an ecosystem and its products, functions and attributes (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem	A dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem services	As defined in Section 1 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as “environmental goods and services” meaning: <ul style="list-style-type: none"> a. Benefits obtained from ecosystems such as food, fuel and fibre and genetic resources. b. Benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification. c. Cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;” For 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	Nature Conservation Service established in terms of the KwaZulu-Natal Nature Conservation Management 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"> a. Threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species. b. May result in economic and environmental harm or harm to human health. (As per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Joint management	The agreed co-ordination of management and/or management actions by landowners and/or mandated managers on their individual or combined properties 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 to evaluate the change in status, distribution or integrity 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. (In the case of uKhahlamba Drakensberg Park and Hluhluwe iMfolozi Park this will

	be the Park Management Committee, alternatively or example, the Blinkwater Nature Reserve Management Committee).
Ramsar convention	Means: “The Convention on Wetlands of International Importance, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.” (The Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and the well-being of human communities.)
Stakeholders/ Interested parties	These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, 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.
World heritage site	Means a World Heritage Site as defined in the World Heritage Convention Act, No. 49 of 1999 under Chapter 1, section 1 subsection (xxiv).
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 MANAGEMENT¹

Biodiversity and Cultural Resource Management and Development:

- Animals Protection Act [No. 71 of 1962]
- Atmospheric Pollution Prevention Act [No. 45 of 1965]
- Conservation of Agricultural Resources Act [No. 43 of 1983]
- Constitution of the Republic of South Africa [No. 108 of 1996]
- Criminal Procedures Act [1977]
- Environment Conservation Act [No. 73 of 1989]
- Forest Act [No. 122 of 1984]
- Hazardous Substances Act [No. 15 of 1973]
- KwaZulu-Natal Amafa and Research Institute Act [No. 5 of 2018]
- KwaZulu Nature Conservation Act [No. 8 of 1975]
- KwaZulu-Natal Heritage Management Act [No. 10 of 1997]
- KwaZulu-Natal Nature Conservation Management Act [No. 9 of 1997]
- Marine Living Resources Act [No. 18 of 1998]
- National Environmental Management Act [No. 107 of 1998]
- National Environmental Management: Biodiversity Act [No. 10 of 2004]
- National Environmental Management Integrated Coastal Management Act [No. 24 of 2008]
- National Environmental Management: Protected Areas Act [No. 57 of 2003]
- National Environmental Management Waste Act [No. 59 of 2008]
- National Forests Act [No. 84 of 1998]
- National Heritage Resources Act [No. 25 of 1999]
- National Water Act [No. 36 of 1998]
- National Water Amendment Act [No. 45 of 1999]
- National Veld and Forest Fire Act [No 101 of 1998]
- Nature Conservation Ordinance [No. 15 of 1974]
- World Heritage Convention Act [No. 49 of 1999]

General Management:

- Development Facilitation Act [No. 67 of 1995]
- Disaster Management Act [No. 57 of 2002]
- Fire Brigade Services Act [No. 99 of 1987]
- KwaZulu-Natal Planning and Development Act [No. 5 of 1998]
- Land Reform Labour Tenant Act [No. 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]

¹ As at [Insert Date], but includes any subsequent amendments and regulations promulgated under these acts.

- Promotion of Access to Information Act [No. 2 of 2000]
- Promotion of Administrative Justice Act [No. 3 of 2000]

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]

1 CONTEXT

1.1 INTRODUCTION TO THE MANAGEMENT PLAN

1.1.1 Purpose of the Management Plan

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

- facilitate compliance with the National Environmental Management: Protected Areas Act No. 57 of 2003 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 to 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 in such a way that its values and the purpose for which it was established are protected.

1.1.2 Structure of the Management Plan

Table 1: Structure of the management plan

CONTEXT (SECTION 1)	
Section 1 deals with contextual issues; it sets the scene for the management plan and deals with the protected area's current status. Any changes to this section can be recorded in the AOP.	
Section 1.1	Introduction to the management plan: This section explains the purpose of the plan, the plan structure, the process followed to develop the management plan, the implementation, monitoring and reporting and review of the management plan.
Section 1.2	Planning approach: This section deals with the primary planning principles that were incorporated into the management plan, and in the management of the protected area and includes the public trust, ecosystem-based management, adaptive management and Collaboration and transparency.
Section 1.3	Protected area management: This section sets out the legislative basis and policy framework for the management of protected areas in KZN; it also includes the institutional framework of the management authority.
Section 1.4	Description of the protected area: This section provides the contextual information relating to the protected area, it includes the background of the protected area, record boundary deviations, proclamations, servitudes and any co-management agreements as well as 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.
STRATEGY (SECTION 2)	
This section provides a framework for the strategic direction of the protected area adopted by the MEC/Minister (Minister in case of world heritage sites). It aims to provide the strategic basis for the protection, development and operation of the protected area. It will be prepared collaboratively by involving stakeholders within Ezemvelo KZN Wildlife, the communities around the protected area, local and provincial government departments and	

other key stakeholders. Should significant changes to this component be required public consultation and adoption by the MEC/Minister will be required	
Section 2.1	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 2.2	In terms of the National Environmental Management: Protected Area Act (NEMPAA), Section 40 prescribes that the protected area must be managed exclusively for the purpose it was declared, per the management plan and other relevant legislation. This section deals explicitly with the purpose of the protected area, and are based on the values of the site.
Section 2.3	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 will provide a road map for managing the protected area.
Section 2.4	Sets out the protected area's strategic objectives that must be achieved to conserve the protected area effectively. These site-specific strategic objectives will contribute to the achievement of the protected area vision. An objective has been identified for each of the protected area management spheres and is based on the critical functions and activities necessary to protect, develop and manage it effectively. The protected area's strategic objectives are translated into site-specific goals, actions, timeframes, responsibility, and budgets in the AOP.
Section 2.5	Conservation 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 contiguous to the protected area.
Section 2.6	The administrative structure describes the staff required to manage the protected area effectively.
Section 2.7	The Financial Section deals with budgets, budget shortfalls and funding requirements of the protected area.
Section 2.8	Biodiversity targets provide for the provincial and national targets towards which the protected area contributes.
GUIDING PRINCIPLES (SECTION 3)	
This section provides the guiding principles based on the policy framework of Ezemvelo KZN Wildlife and best practice that will be used to manage the protected area.	
ANNUAL OPERATIONS PLAN	
The Annual operations plan will be compiled on an annual basis, with quarterly reviews. It will contain specific goals, actions required for the implementation of the management plan. The AOP combines site-specific goal setting, management interventions required to achieve objectives set out in the management plan, and the next steps required to improve the protected area's management effectiveness. It furthermore provides a mechanism to review the management plan, assess the requirement for a full review process should substantial changes be required, and record minor revisions for updating the management plan. See Figure 1.	

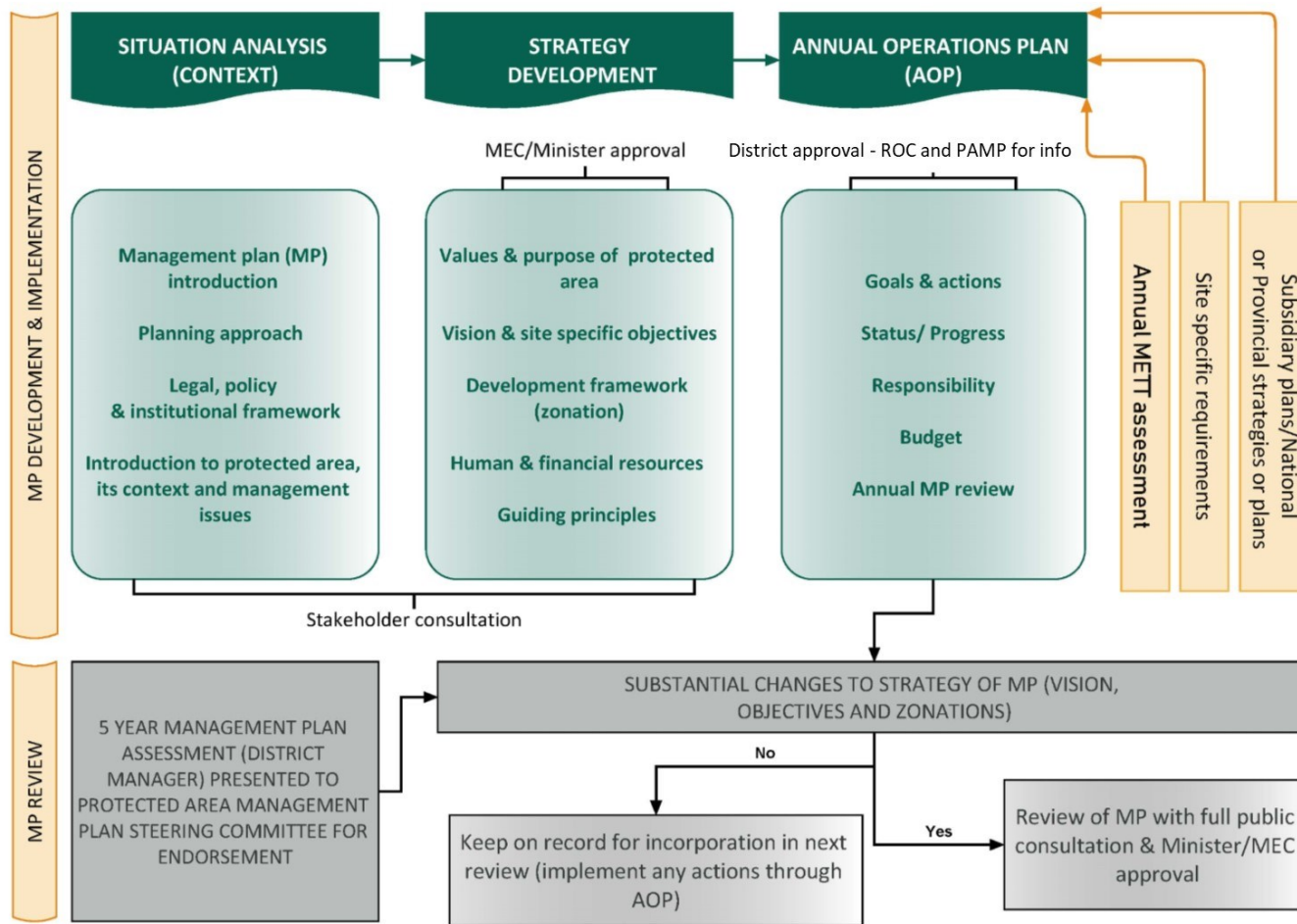


Figure 1: The protected area management planning and implementation process

1.1.3 Management plan development

The development of a management plan consists of three main steps (as indicated in Figure 1 and Table 2):

Table 2: Summary of the process to develop a protected area management plan

Situational analysis	Preparation of draft management plan	Finalisation and adoption of the management plan
Identify stakeholders of the protected area	Develop vision and site-specific objectives	Internal review of the management plan
Information gathering and review – internal and external (usually in the form of a management meeting and a stakeholder workshop that is advertised in provincial and/or local newspapers)	Develop goals and actions linked to the vision, objectives and the management issues identified in the SWOT analysis.	Finalisation of the management plan
Identify key management issues through a SWOT analysis that will need to be addressed in the plan (usually in the form of a management meeting and a stakeholder workshop that is advertised in provincial and/or local newspapers)	Prepare the draft management plan	Submission to internal committees and Board for approval
	Public review of the management plan	Submit to MEC/ Minister for approval
		Make the adopted plan available to stakeholders and the broader public

1.1.4 Management plan implementation

Each year an Annual operations plan (AOP) (to be completed after 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 identified by site management, the 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 that will support the management plan objectives, respond to emerging threats and opportunities, increase management effectiveness, and ensure that financial resources are allocated based on the protected area priorities.

The Nature Reserve 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 set out 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 operational component of the management plan (AOP) will be revised and updated annually by the Nature Reserve Management Committee. Reporting and status updates will be facilitated every quarter to provide for Ezemvelo's high-level reports. A copy of the AOP will be submitted to the Protected Area Management Planning Unit as part of the management plan review assessment and implementation tracking. If a substantial change to the strategic direction of the management plan is required, 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 Nature Reserve 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 substantial 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 Nature Reserve Management Committee will record such minor revisions as required and keep this on record for incorporation upon the next review. Any actions required from the minor revision must be incorporated in the AOP for implementation. This amendment must be copied to the Protected Area Management Planning Unit for recordkeeping purposes;
- the AOP, including the annual review, will be submitted to the Protected Area Management Planning Unit;
- should substantial changes be required, the Protected Area Management Committee must describe these and refer to the Protected Area Management Plan Steering Committee for review prioritisation; and
- 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 in this context obligates the Ezemvelo KZN Wildlife to support the management of all protected areas and the resources therein for the benefit for current and future generations (the beneficiaries of the Public Trust). Thus, it is incumbent on Ezemvelo KZN Wildlife to use all practical means to fulfil its responsibilities as trustee of the protected area for current and succeeding generations[See White Paper on Environmental Management — Policy for South Africa GG 749 of 1998].

1.2.2 Ecosystem-based management

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

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

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

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

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

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

It is recognised that the 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 ensuring that all management decisions take into consideration the complex interactions and dynamic nature of the ecosystems and their limited capacity to withstand and recover from human-induced disturbance.

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

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

1.2.3 Adaptive management

Adaptive management is a structured, iterative process in which decisions are made using the best available information, to obtain better information through monitoring of performance (Figure 2). In this way, decision making is aimed at achieving the best outcome based on current understanding, while accruing the information needed 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.

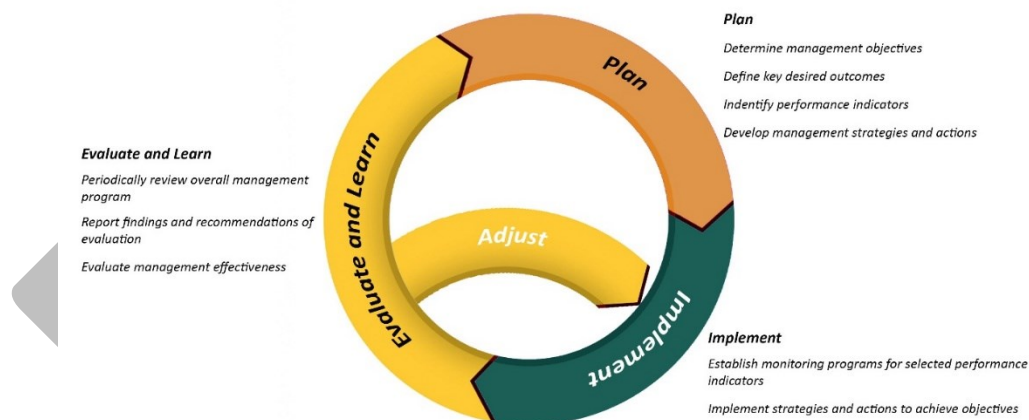


Figure 2: The adaptive management cycle

1.2.4 Collaboration and transparency

Stakeholder involvement and support is an essential aspect of effective protected area management. It is also a requirement in terms of Sections 39(3) and 41(2)(e) of the National Environmental Management: Protected Areas Act No. 57 (Republic of South Africa 2003). Accordingly, the development of this management plan has been undertaken 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

There is a large body of legislation that 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 (Republic of South Africa 2003).

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

In terms of Section 76 of the National Environmental Management: Biodiversity Act No. 10 (Republic of South Africa 2004), the management authority of a protected area must incorporate an invasive species control and eradication strategy in the protected area management plan. An Invasive species monitoring, control and eradication plan must be developed for Ithala Game Reserve.

In terms of the National Environmental Management Act No. 107 (Republic of South Africa 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. The implication of this is that if any of the activities listed are proposed in the protected area, or within five kilometres of it, they will be subject to either a basic assessment or a full scoping and EIA process. 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 1997.
- Bioregional Approach to South Africa’s Protected Areas, 2001/2002.
- Community-Based Natural Resource Management Guidelines, 2003.
- National environmental management principles set out in section 2 of the National Environmental Management Act.

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



This management plan has utilised the abovementioned body of policies and is consistent with the broad goals and specific policy requirements of Ezemvelo KZN Wildlife.

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 (South Africa 1997), was appointed by the KwaZulu-Natal MEC: Agriculture and Environmental Affairs as the management authority for all provincial protected areas in KwaZulu-Natal. The Board’s implementing agency is Ezemvelo KZN Wildlife.

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

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

1.4 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 environmental niches due to geological and climatological factors. The reserve covers an area of 29 653ha and lies between the town of Louwsburg and the Phongolo River. The two other river systems flowing into the reserve are the Muhulumbela and the Mbizo/Thalu, both of which flow into the Pongola River. The Reserve is approximately 70km from Vryheid and 80km from the town of Pongola. The reserve lies 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 and communal property and the town of Louwsburg on the southern boundary.

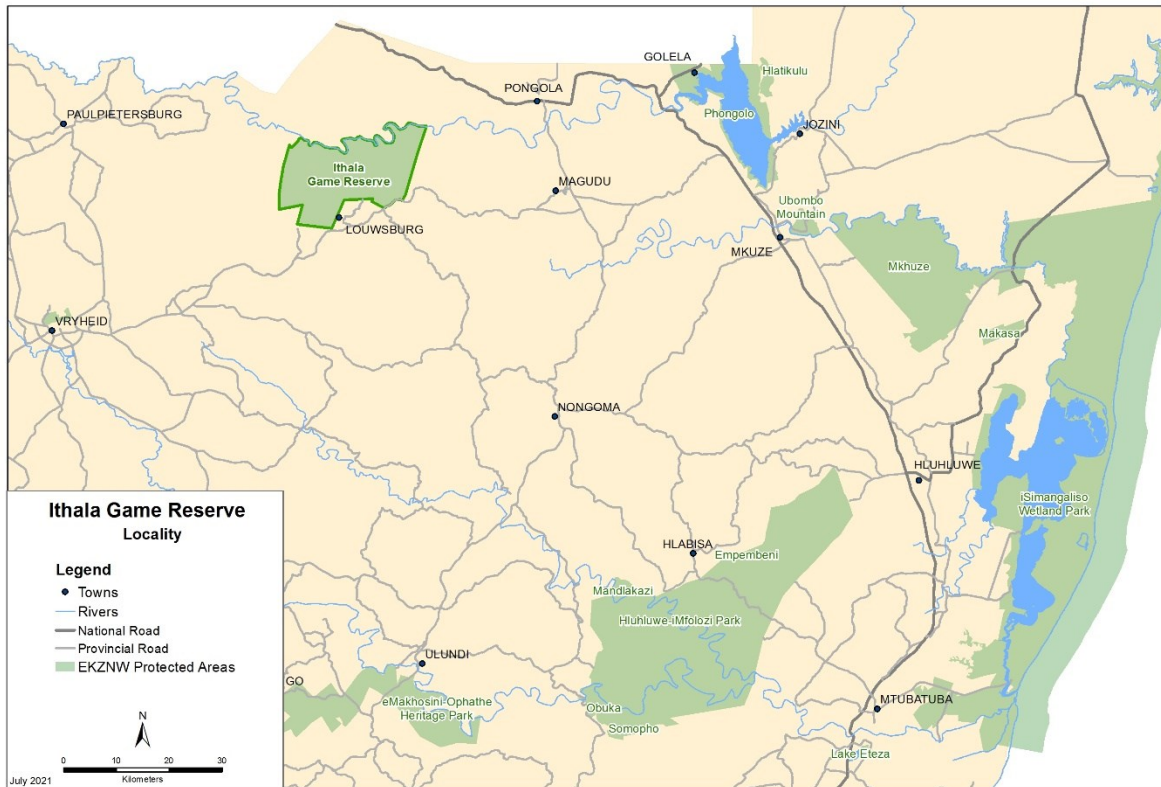
IGR is a core conservation area forming part of the KZN protected area network. As with all EKZNW protected areas, the intention is to continually improve management effectiveness of IGR in line with the levels adopted for all protected area within the EKZNW protected area network.

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, as follows: 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 conservation of key species and to retain aesthetic value by restoring detrimental man induced impact. This led to the dispossession of rights of land occupiers which has, through the Restitution of Land Rights Act (Act No. 22 of 1994) been redressed.

Full ownership rights have been restored to the claimant communities without human residential occupation nor changes in the current land use. This is in line with the Cabinet Memo of 2001 where it is stated 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 competent conservation and tourism authority appointed by the State, Ezemvelo KZN Wildlife (EKZNW) has entered into a separate 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 was officially opened on 6 April 1991 and opened by Mr. C. van R. Botha, the then administrator of Natal.

IGR has a network of roads, ranging from tar to gravel, as well as several small camps, campsite, a lodge, conference facilities, staff accommodation, gates, picnic sites and park management infrastructure. Surrounding the Reserve are tar roads, settlements, towns, mines etc. which could intrude into the Reserve from a tourism experience.

The eastern portion of the Reserve is least developed, while the western portion has extensive tourism and Reserve management infrastructure.

The necessary appropriate standard of infrastructure will be developed and maintained to support the effective management of IGR and promote eco-cultural tourism to the reserve. Future development will be detailed in the IGR Concept Development Plan.

1.4.3 Boundary deviations

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

1.4.4 Local Agreements, Leases, Servitudes, MoU's and MoA's

- Sentec mast - this structure serves as a mast for radio and security communications as well as a beacon for the CAA. They have to enter Potwe gate to access this site. An arrangement exists whereby they have a gate key for Potwe gate, but need to inform the CM of any need to enter that gate and for how long.
- Eskom powerlines – as with all Eskom powerlines, they have the right to access the PA to do checks and undertake maintenance on their lines. They have to arrange this access with the CM.
- Ithala-Madaka – an agreement was drawn up, pre 2005, whereby this private game farm has access to Ithala through the Zondwayo Gate. They pay gate fees as they would were they to use the Reserve's Main Gate and are supposed to pay this at Ntshondwe monthly.
- Vodacom mast- A contract exists for a Vodacom/ MTN mast in Ntshondwe. There is a monthly fee which they pay to have this mast where it is.

1.4.5 History of Conservation

Ithala is one of the youngest game parks in KwaZulu-Natal. 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 abandoned) in this area. In the late 1800's this land was given by King Dinizulu to white farmers who farmed and hunted there. It was these farming activities that 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. Importantly the Natal Provincial Administration at the time resolved to establish a game reserve in this northern scenic region of the province to provide a major wildlife destination for tourists. With the exception of lion, all the big game species have been re-introduced and all of the reserve's 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 north west 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, (Appendix B):

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

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) has been developed 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, focussing on priority areas for representation and persistence of biodiversity.

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

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 (KZNP AES) (Carbutt & Escott 2010) also 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 KZNP AES, Ithala Game Reserve is deemed significant in terms of its contribution to large, intact and un-fragmented areas, macro-ecological corridors and, being the northern extremity of Mist-belt Grassland. The selection criteria do not include aspects of rhino or elephant conservation central to Ithala's conservation objectives.

Land identified as a priority for protected area expansion may be incorporated into Ithala Game Reserve either through land acquisition or through 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 possible CCA's and additional private areas were identified that border on the reserve that could be considered for some form of incorporation. This process included extensive input from the first local board. This board included representation from the current Ithala land owning community trusts. This was completed prior to the establishment of the current co-management committee, but by default, as a consequence of the input of the local board and the representation thereon at the time, the co-management committee has agreed to the principle of expansion. Since that time, the three pockets of private property that were identified then have either entirely changed their land use, land ownership or the management objectives of those properties could not be considered concurrent with Ithala's biodiversity objectives. The identified CCA's which only consisted of continuous land portion north of the Pongola River under six traditional councils have however remained an area of substantial focus. Given the fact that the 2009 management plan contained the concept of potential expansion of Ithala into the potential CCA have set the platform to allow for negotiations to take place with those traditional councils and local communities adjacent to the Pongola River. These negotiations began in 2016 and aims to erect a two-strand electric fence over the entire area. This does not mean that the park has formally expanded, but with the existence of the fence it creates a more realistic base to upgrade the electric fence to a proper game fence and thereby establish a more formal co-management agreement with those communities that would embrace conservation based land-use and therefore creating the necessary conduit to formalise the land use, with agreement, and therefore be potentially incorporated into Ithala. Furthermore, the Zone of Influence has identified natural, unmodified areas adjacent to Ithala that could be considered for expansion in future.

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 co-operative 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 in such a way 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), the 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 and in short, the title deeds of the claimed reserve would be handed to the community trusts, but the land use ie. Conservation could not be changed and had to remain in perpetuity and 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 Trust 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 utilize game and game products, as a conservation management tool for the purposes of donation to the Trust. This shall be determined by the availability of excess animals declared after census and management strategies and policies.
- 1.2. The Management authority shall set up a skills development fund, using funds from one key species secured from the auction sales, over an initial three year period to invest in local human capital. 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 Ithala Game Reserve, in line with the targets set up 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, receives at least the following;
 - 1.3.1. Provide bursaries for specialized courses
 - 1.3.2. Offering in service training on identified field
 - 1.3.3. On job practical training
 - 1.3.4. Exposure trips
- 1.4. Subject to availability of funds, applicants who meet the qualifying criteria through the selection process determined by the co-m committee shall be eligible for accessing 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;
 - 1.7.1. Spiritual and recreational
 - 1.7.2. Sustainable harvesting of natural resources
 - 1.7.3. Free entry quota for trustees

On the basis of this agreement a proposal was made to allow for 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 implementing the activity annually be made available as beneficiation to the Community trusts and that this funding be managed by the co-management committee. This proposal was authorised by the EKZMW Executive Committee in 2013 and hunting has taken place in 2014, 2015 and 2017 with approximately R 600 000 accruing to these Trusts.

In addition with the sale of priority species through the annual EKZMW Game Auction R 250 000 has also been made available in 2014/15, 2016/17 and 2017/18.

A co – management committee has been constituted for Ithala Game Reserve, with five members from the Community Trusts and 4 EKZMW staff members making up the committee.

This committee has been in place since 2013.

1.4.8.2 Co-management projects in Ithala Game Reserve

- Dedicated hunting program where the proceeds (minus cost) goes directly to the landowner trust.
- Elephant two-strand fence to protect communities north of the reserves 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

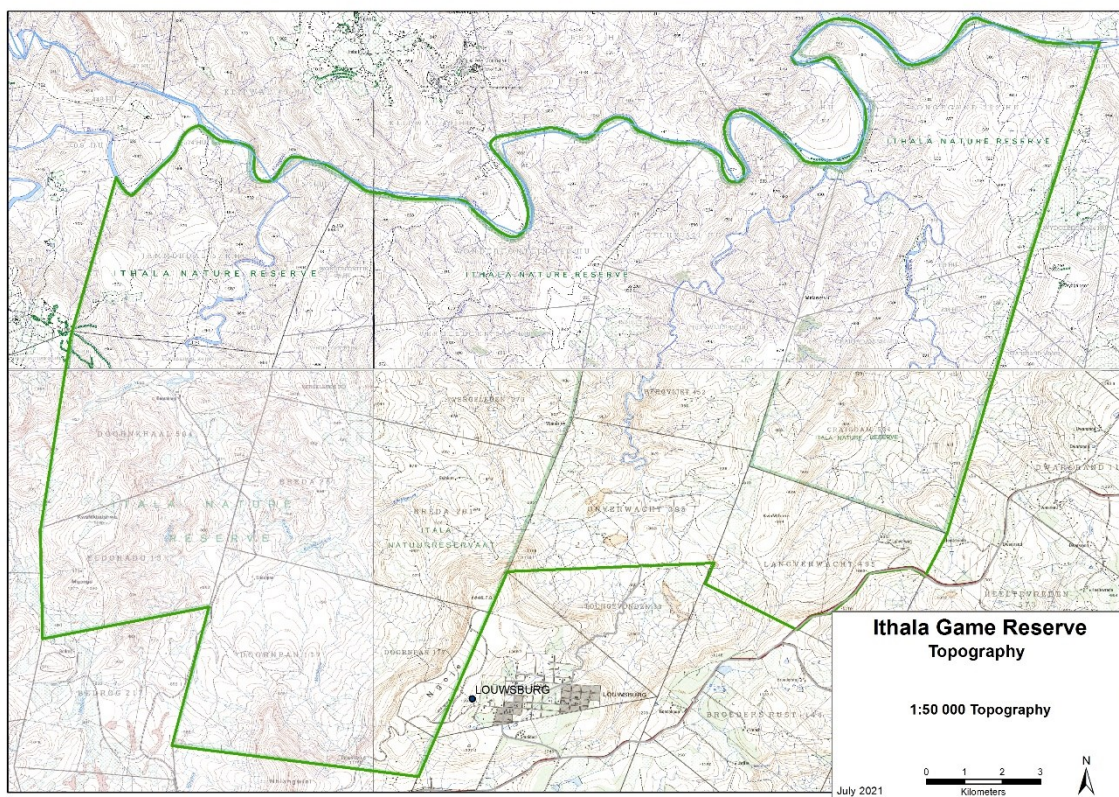
The large altitudinal variation of the Reserve, as well as local topography, creates distinctive patterns in the rainfall, with localised rain shadows, and areas of increased drainage. The mean annual precipitation of IGR varies from 750 to 850mm per annum.

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.

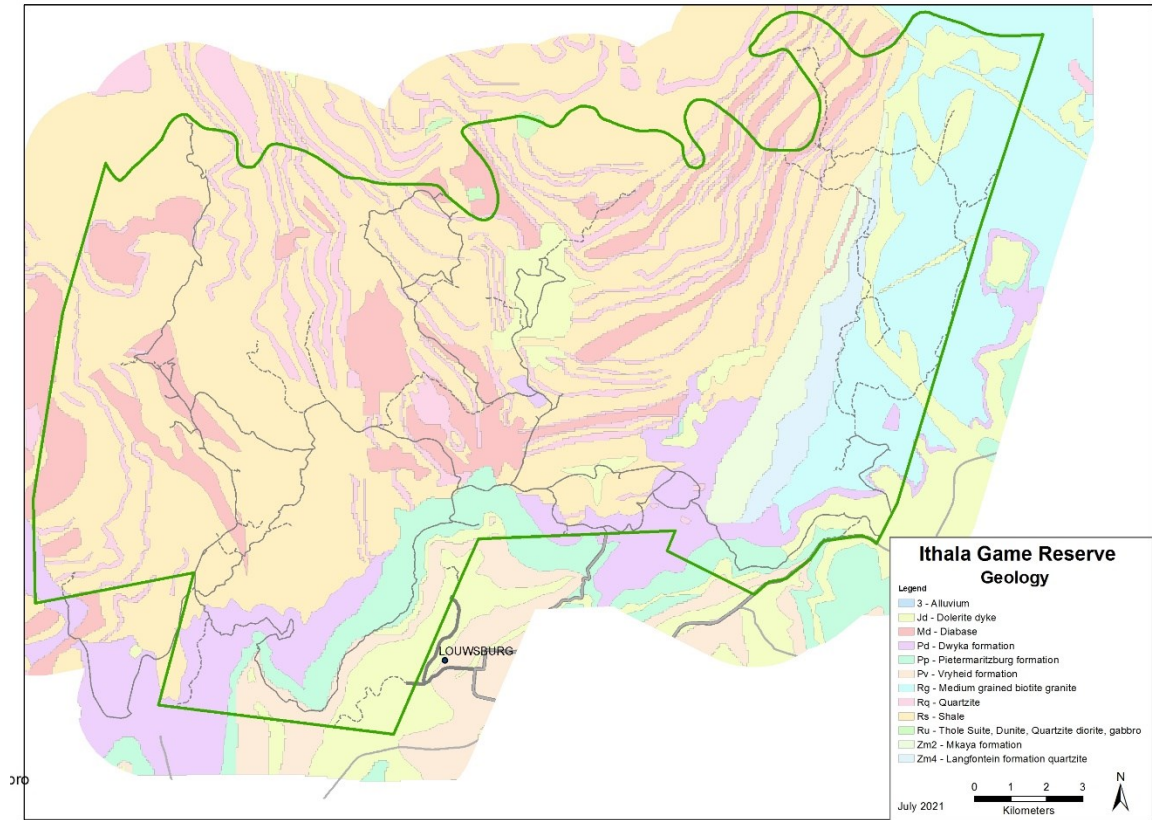
The altitude at the highest point in the southern section of the reserve is 1393m a.s.l and at its lowest point along the Pongola River in the north is 407m a.s.l. The mean distance between these two points is approximately 16 kilometres.



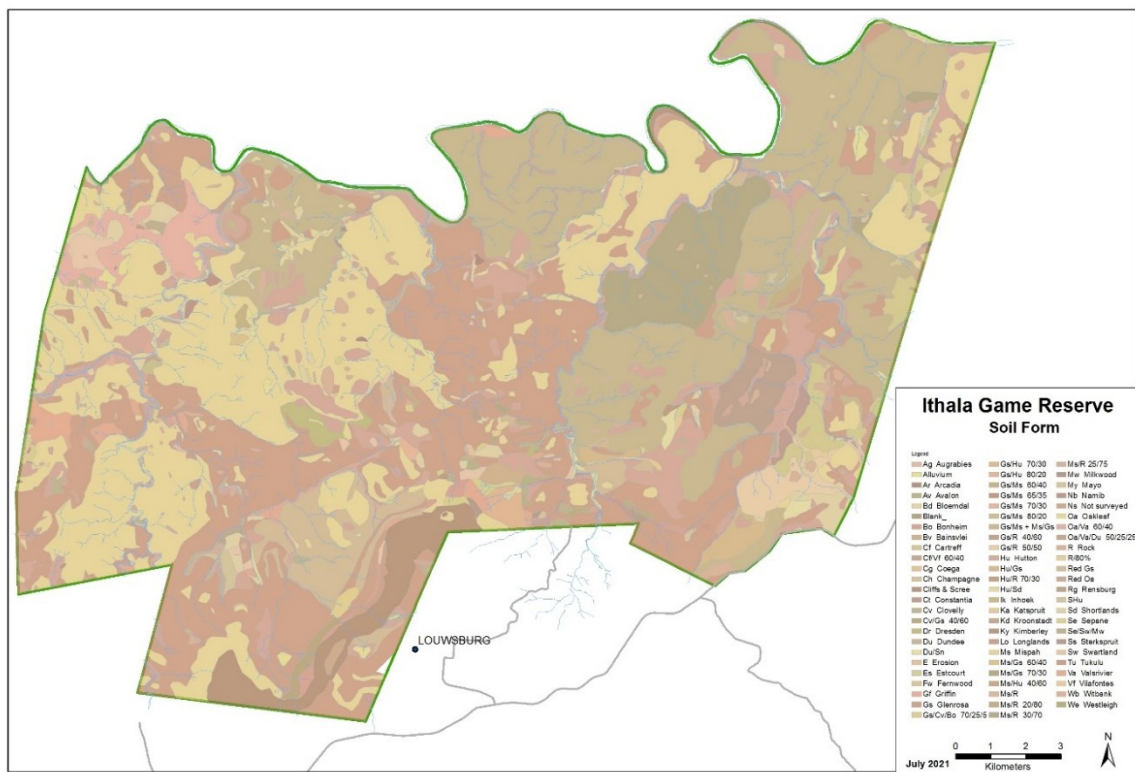
Map 2: Topography

1.5.3 Geology and Soils

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. 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. The lower layers of the Reserve are dominated by igneous rock creating inselbergs and rocky outcrops.



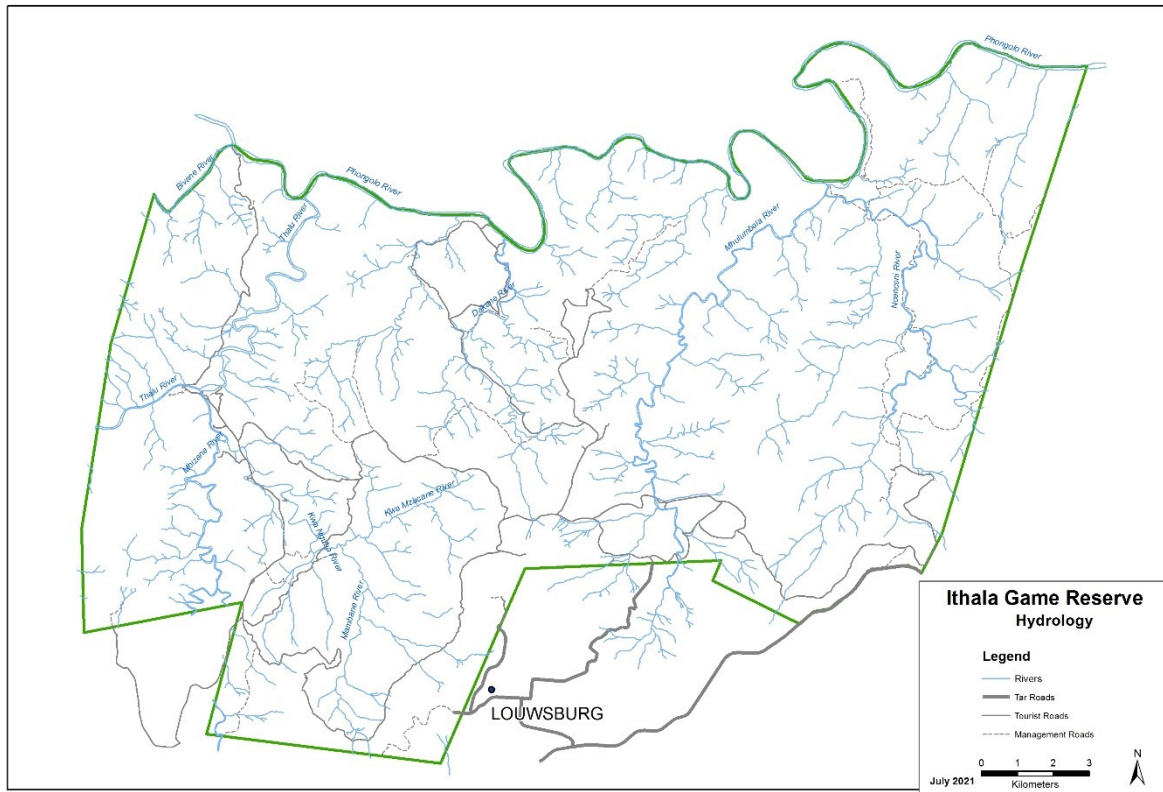
Map 3: Geology of Ithala Game Reserve



Map 4: Soils of Ithala Game Reserve

1.5.4 Hydrology

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



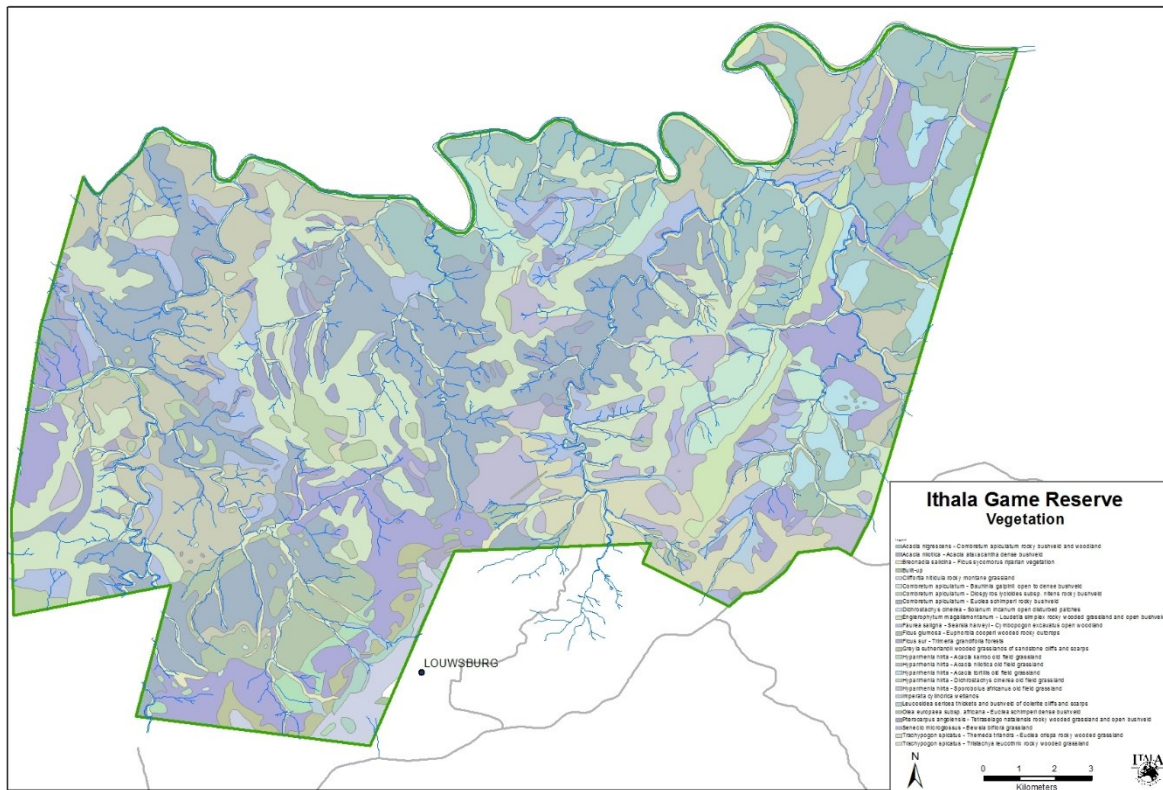
Map 5: Hydrology of Ithala Game Reserve

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 (Map7). 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.



Map 6: Vegetation of Ithala Game Reserve

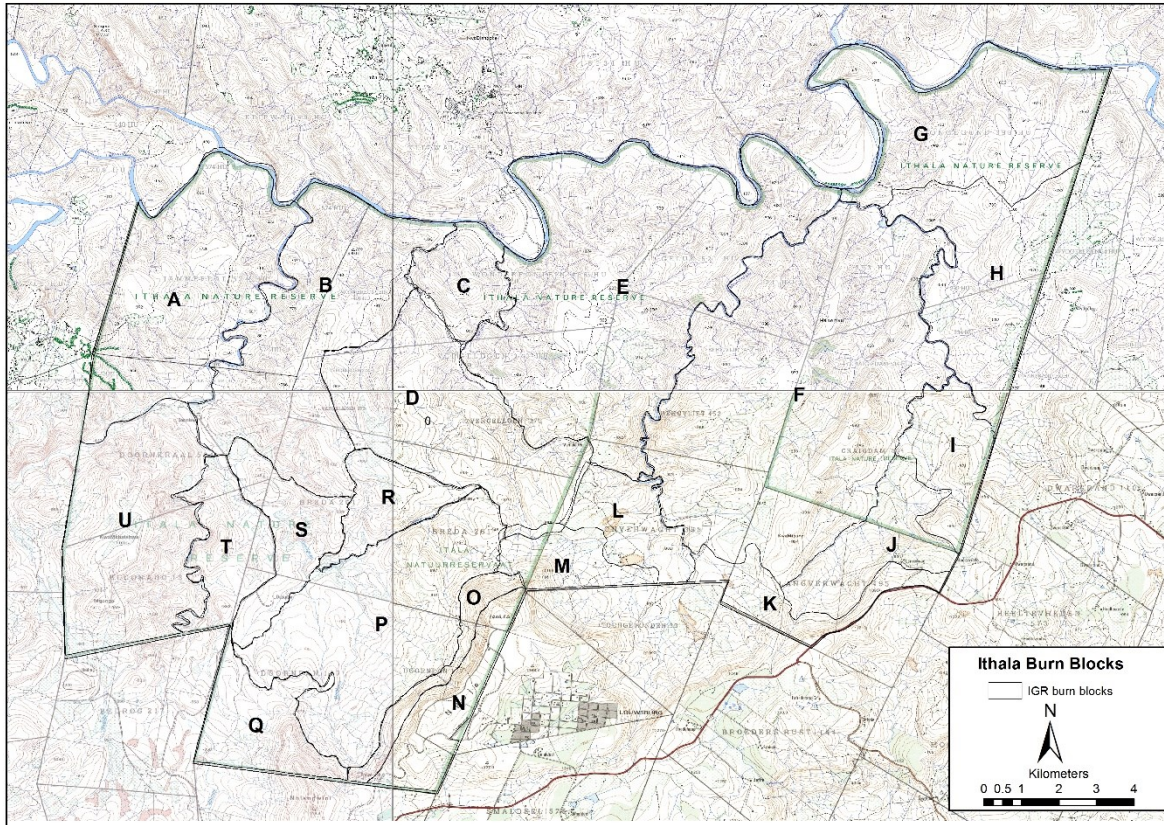
1.5.6 Fire Regime

Reserve Management shall convene and chair a fire meeting in May/June each year. This workshop shall include 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 very specific fire management objectives that are recorded in these documents which are not necessarily driven by IGR management objectives but is guided by ‘best practice’ linked to scientific understanding, legal context and risk management. However, there is an acknowledgement that the document is in need of review and the approach that has been used since the late 80’s should be measured against more recent scientific information and analysis, to ensure that best practice continues to be implemented.

IGR is obligated in terms of the National Veld and Forest Fire Act to be and are 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 that are 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 have established themselves within IGR over time. They can, to varying degrees impact negatively on water production, the natural environment and biodiversity as well as the natural landscape character of the Reserve. Their control and management is 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 surrounds 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 CARA (Act No. 43 1983), or any other legislation are a serious threat to the ecological functioning of natural systems as well as groundwater storage and water production from catchments. They will be controlled in terms of the relevant CARA regulations. An ongoing time-bound programme to effectively control these alien weeds and invader plants within the IGR and up to 1km beyond (buffer area) the Reserve boundary will be developed 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

The IGR is designated as an Important Bird Area (IBA ZA042) by Birdlife International. 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 and the variety of habitats it supports together with sound ecological management practices. The riverine forest provides habitat for many of the more secretive, river-dependent species such as 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, White-bellied Bustard and African Grass Owl occur in the grassland areas in small numbers. The thicket and forest areas support certain East African Coast specials.

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

1.5.10 Herpetofauna (reptiles and amphibians)

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

The EKZNW Biological database notes that 83 species are present of which three are Red Data Book species. This list is however incomplete and outdated, and need to be updated as data becomes available.

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

1.5.11 Invertebrates

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

According to the EKZNW Biodiversity Database approximately 268 species of invertebrates have been recorded for IGR, eight of which are endemic to KZN. 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 *O.peringueyi* and *C.ermaginus*. Long term threats to the status of freshwater fish biodiversity in the protected area include developments outside of the park and sedimentation emanating from management tracks and roads.

1.6 CULTURAL CONTEXT

Ithala Game Reserve is situated in the area that was dominated by the Ndwandwe chiefdom in 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 1810's and early 1820's. However, some information can be extracted either from the oral traditions or from the shreds of documentary evidence which exist. 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, in population and in political structure. In 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 Game Reserve, and saw the emergence of an aggressively expanding Ndwandwe chiefdom. It appears

that this process was stimulated by international ivory trade along the east coast of Africa (Wright and Hamilton 1989). By the 1810's rivalry started to develop between the Ndwandwe paramountcy and another developing political force to their immediate south the Mthethwa.

The Ndwandwe started to expand southwards across the Mkhuzi 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 militarized state, with its ruling house under Zwide kaLanga, enlarging the territory under its control by means of ferocious conquest (Omer-Cooper 1975). By about the 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. This was 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.

When in about 1818, the Ndwandwe made their expected attack on the Zulu Shaka's force was strong enough to beat the invaders off. After the withdrawal of the Ndwandwe, the Zulu leadership rapidly set about increasing the size of the army at its disposal and bringing it under central control. A second attack by the Ndwandwe on the Zulu was successfully parried, and when, in about 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 (ibid).

Ithala Game Reserve has been relatively well surveyed by archaeologists of the Natal Museum and officials from Amafa. In 1989, Gavin Whitelaw and Mike Moon conducted a detailed survey in the Game Reserve and produced a report (Whitelaw 1989). IGR 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 stone walling, and the presence of potsherd fragments and or the remains of lower and upper grinders. Some of the livestock pens delineated by the stone walling are in rectangular shape rather than the more traditional circular shape.

Six older Later Iron Age homestead settlements have also been located. It is possible that these 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 3-10m in diameter and approximately 1.5m deep have been dug along a band of banded iron stone. This was most probably mined for iron ore (Whitelaw 1989). Prehistoric iron mines are known from elsewhere in Zululand but most of these 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 most 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 dates 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 of the 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 site 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 also 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 consist of typical fine line human, antelope, and theriantropic 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 most probably are not older than 2 000 years.

There were also two gold mines (now abandoned) in this area. In the late 1800's this land was given by King Dinizulu to white farmers who farmed and hunted there. It was these farming activities that 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

The local communities are characterised by a low employment rate, 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 are functionally literate. High population growth rates, a shrinking local economy and increasing trends in unemployment result in increasing levels of poverty. Consequently, the reserve provides a limited number of 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, mainly on the southern boundary. This poses a security risk to the reserve, it negatively influences the sense of place and it places greater pressure on the protected area to provide employment opportunities for people.

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

Operational budget has declined drastically over the past three years (2019-2022). With the increase in costs due to inflation the declining budget is compounded.

2019/20 – R1 710 318

2020/21 – R1 386 537

2021/22 – R1 332 467

1.9 INFRASTRUCTURE

The existing infrastructure is categorised as follows:

Eco-cultural Tourism Infrastructure

Eco-cultural tourism infrastructure in the Park consists of:

- 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 break away room accommodating up to 18 people each, depending on the type of set up.
- 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 view sites / look out points.
- Self guided auto trails
- Entrance gate with fuel pump station
- 2 x 3 bedroomed houses at entrance gate
- One bachelor unit at entrance gate
- Public toilets at entrance gate
- Office at 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 Outpost – 4 houses, 4 bachelor units, 9 rondavels & 2 single quarter accommodation blocks
- KwaSambane – 1 house, 2 bachelor units, 1 single quarter accommodation unit & 3 double accommodation units
- 1 House located in Ngubhu Basin which has been converted into accommodation for visiting researchers.
- 5 Picket camps encompassing 14 accommodation units.
- Thalu meeting room
- 2 squaredavels
- 1 shed at Msinase

Bulk Infrastructure

Bulk infrastructure consists of:

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

Conservation Infrastructure

Other conservation infrastructure outside the developed centres consists of:

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

Existing infrastructure at IGR has septic tank / French drain sewage systems that can possibly be contaminating 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) and these assessments have subsequently been done on an annual basis. Management effectiveness assessments consider protected area design, the appropriateness of management systems and processes, and the delivery of protected area objectives. These assessments assist with the following:

- Promote adaptive management
- Improve project planning
- Promote accountability

Such assessments are intended to enable conservation organisations to refine their strategic, system-wide responses to the most pervasive threats and management weaknesses. They are not performance assessments of individuals but serve to reflect an organisation’s proficiency for protected area management as a whole. The assessments for Ithala Game Reserve are peer-reviewed and evidence-based.

The general trend in METT scores show 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 generally increase in the lack of support of our support services.

1.11 RISK ASSESSMENT

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

Table 3 provides a summary of key management issues, strengths, weaknesses, opportunities, and threats which will be addressed through this management based on the descriptions and issues highlighted in the sections above.

Table 3: SWOT analysis for Ithala Game Reserve

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Threatened species and habitats are intact	Dilapidated roads and tourism infrastructure	Eco-tourism opportunities – to improve & modernise tourism products in & around the PA	Continually declining levels of financial and human resources
Provision of ecosystem goods and services to surrounding communities	Incidents of poaching	Utilising cultural-heritage sites as an attraction	Human encroachment on the park boundary
Protection of cultural-heritage sites	Incidents of Arson fires	Targeted research opportunities	Alien plant infestations from surrounding areas

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Good tourism infrastructure	Unfenced northern boundary-access to permanent water supply	Close to Zulu cultural heartland	Increased poaching
Big 3	Reserve entrance off beaten track	Reserve expansion	Community expectations
Sense of place	Limited financial and human resources	Sustainable stakeholder and community Beneficiation	Damage causing animal control
Halfway between Gauteng & Durban	Selling outdated tourism product		Climate variability
Malaria free	Lack of awareness programme		Land use planning outside PA
Staff attitude and warmth	Law enforcement competence		Water use planning influencing PA
stable community Liasion Structures.	Decline of operational infrastructure (buildings, roads, fences)		Alien invasive plants
Achievement of biodiversity targets			Poaching

2 STRATEGIC MANAGEMENT FRAMEWORK

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

The vision describes the overall long-term goal for the operation, protection and development of the protected area. The objectives and strategic outcomes that follow are intended to provide the basis for the achievement of the vision. The objectives are linked in the Annual Operations Plan to Goals, Actions, Responsibility 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, white rhino, *Protea comptonii*, *Warburgia salutaris*, *Haworthia limifolia*, *Rhus pondoensis*, Natal hinged tortoise, blue crane;
- 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.
- 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 largely 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 4: Values of Ithala Game Reserve

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

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 management spheres, 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 5: Objectives and strategic objectives for Ithala Game Reserve

Legal Context	Ensure that the protected area has secure legal status and are appropriately demarcated to facilitate the effective conservation of the area and implementation of any legal agreements.	OBJ1
Conservation Beyond Boundaries	Protect the biodiversity and cultural assets of the protected area by promoting compatible land-use, activities and water-use in areas surrounding the protected area, and by facilitating the inclusion of habitats critical for ecological integrity through site expansion and/or creation of corridors.	OBJ2
Integrated Management Planning	Ensure the approved management plan of the protected area remains up to date, that threats and risks are identified and mitigated and that the AOP is linked to the management plan and available budget in order to facilitate adaptive management.	OBJ3

Organisational Structure and Procedures	Ensure that organisational structure and procedures contribute to the management effectiveness of the area.	OBJ4
Financial Management	Provide adequate, secure, accessible and well-managed funding to enable the effective protection, development and management of the protected area.	OBJ5
Human Resource Management	Ensure that staff capacity, capability and support contribute directly to management effectiveness.	OBJ6
Biodiversity Resource Management	Protect the ecological integrity of the protected area through active interventions based on principles of adaptive and ecosystem-based management, in order to contribute to provincial and national biodiversity targets, maintain ecological process to maximise ecosystem service delivery.	OBJ7
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.	OBJ8
Operational Equipment and Infrastructure	Ensure adequate, suitable and well-maintained equipment and infrastructure to support protected area operations.	OBJ9
Compliance	Ensure that there are sufficient staff capacity and capability to effectively control both legal and illegal access to the protected area and its resources.	OBJ10
Public Education and Awareness	Implement an effective education and awareness approach that reach a broad range of clearly identified target audiences and focus on the values of the protected area.	OBJ11
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.	OBJ12
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 is in line with responsible tourism practices ensure mitigation of potential environmental impacts.	OBJ13

2.5 CONSERVATION DEVELOPMENT FRAMEWORK

The purpose of zonation is to control the intensity and type of use within it, 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:

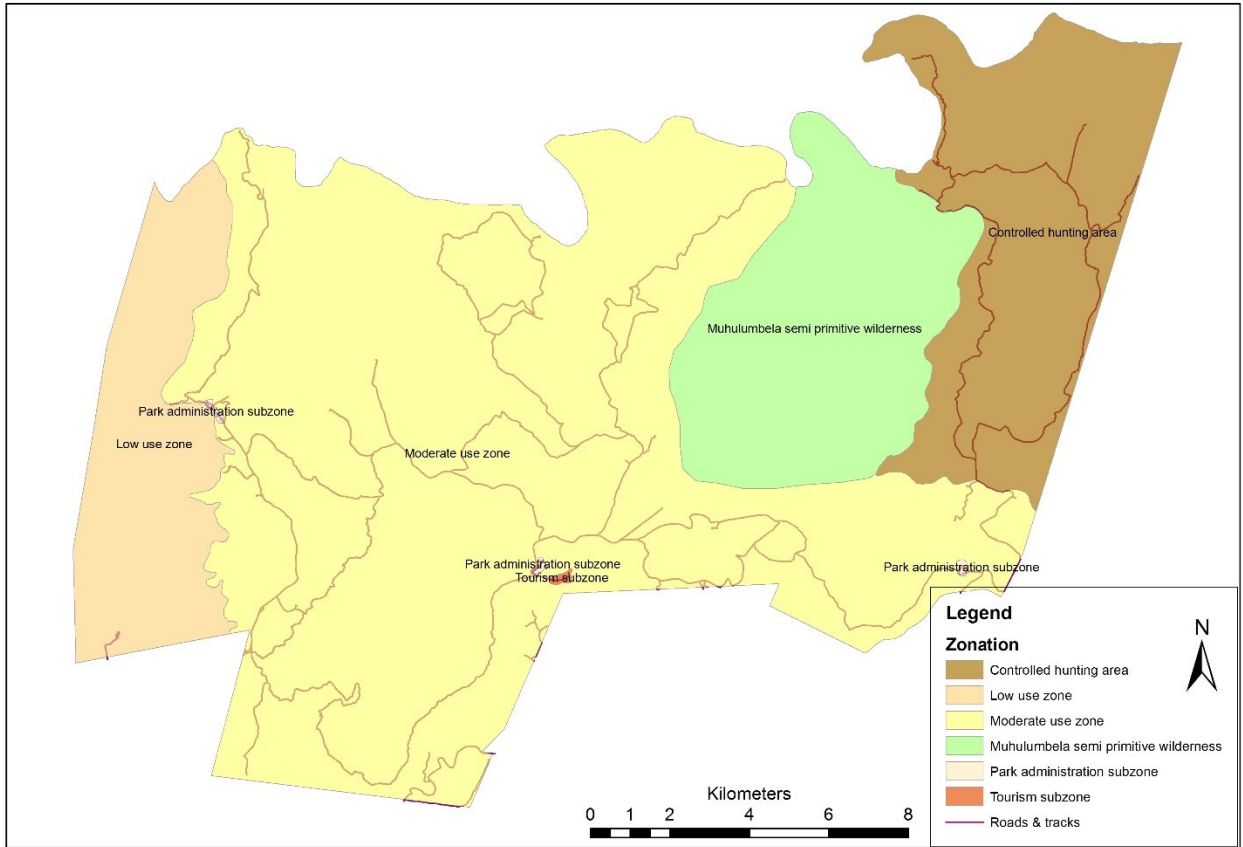
There is a general gradation in the zonation categories ranging from high to low protection;

- 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. (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);
- A general gradation in the zonation categories, in which the subsequent use level provides a buffer to the lower use level;
- 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 2: Zonation of Ithala Game Reserve

Table 6: Zonation categories for Ithala Game Reserve

Wilderness zone	
Description	Areas with an intrinsic wild appearance and character (or capable of being restored to such) which are undeveloped, road-less, without permanent improvement or human habitation. Access may be controlled and is by non-mechanical and non-motorized means only. This zone provides outstanding opportunities for solitude and is characterised by an essentially unmodified natural environment of fairly large size.
Description of subzones	Semi-primitive
Description of subzones	<ul style="list-style-type: none"> ▪ Visual evidence of human presence from outside in the near to middle distance. ▪ Visual impact generally restricted to compatible rural land use and excludes industrial and urban developments. ▪ Natural ambient soundscape dominates the area but with human-caused sounds evident in the zone in the near to middle distance.
Objective	The purpose of the zone is to provide the highest level of protection of the ecological integrity, natural character, cultural heritage of the area, and to provide opportunities for solitude in an environment free from evidence of modern man.
Activities and infrastructure	<ul style="list-style-type: none"> ▪ Management activities using minimum tools to achieve management objectives. ▪ Management activities using mechanical tools require prior authorization from the protected area manager’s supervisor. ▪ For example, helicopter and fixed-wing access only if minimum tool for monitoring, management and casualty evacuation activities. ▪ Research in the wilderness will be discouraged unless it is wilderness dependent, in which case it will be done using the minimum tool principle. ▪ If wilderness dependent, research will require support and recommendation by Wilderness Steering Committee and for the Pristine zone additional approval by the relevant Executive Director.
Constraints and implementation	Semi-primitive
Constraints and implementation	<ul style="list-style-type: none"> ▪ No development except for formalised trails with hardened surfaces to address environmental damage may be allowed. (Requires support from the Wilderness steering committee) ▪ No extractive resource use. ▪ No motorized access or use of mechanical devices. ▪ Generally no surfacing of paths and no signage.

	<ul style="list-style-type: none"> No manipulative experiments and no temporary or permanent marking of individuals or plots.
Low use zone	
Description	An area where there is little evidence of modification of natural processes and landscapes, that is more sensitive than the moderate use zone and where the ecotourism principles of low human impact will prevail. The zone also serves as a buffer to the wilderness zone.
Objective	To designate an area for tourism experiences and management activities that are focused primarily on low impact activities and where general sensitivity requires that management and tourism impacts on the natural landscape should be mitigated.
Activities and infrastructure	<ul style="list-style-type: none"> Facilities of a rustic nature such as small bush camps, rustic overnight hiking huts, hides and trails. Motorized access is low-key and 4 x 2 access is provided to points where trails start or to tourist facilities. 4 x 4 tracks are allowed in this zone (limit to number of tracks and frequency of use) as per site-specific rules and regulations. Hiking and formalised trails. Management activities must focus on protecting park resources and core values. Limited management roads and tracks. Controlled extractive resource use in line with Ezemvelo KwaZulu-Natal Wildlife policies and norms and standards.
Constraints and implementation	<ul style="list-style-type: none"> Activities are mostly low impact and low density. No modern facilities such as restaurants and shops are permissible in this zone. Where possible, facilities should be developed on the periphery of the zone towards the less sensitive adjacent zone.
Moderate use zone	
Description	An area where natural processes and the landscape may be altered to support protected area operations. 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.
Objective	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.
Activities and infrastructure	<ul style="list-style-type: none"> Management roads and tracks. Management activities are directed to maintaining park infrastructure for biodiversity conservation, park operations, equipment and material storage. Controlled extractive resource use. Hiking on formalised trails. Infrastructure is accessible by motorised access.

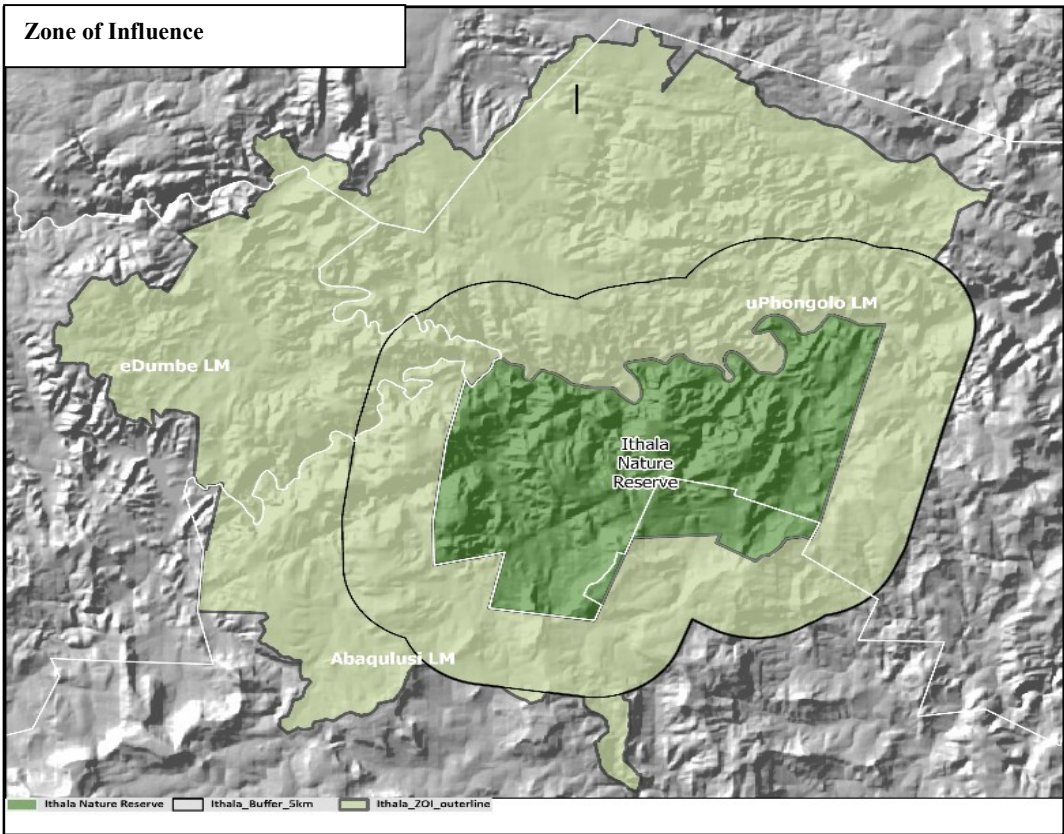
	<ul style="list-style-type: none"> ▪ The tourism road network including access roads and game-viewing roads. ▪ Traditional game viewing routes with associated more formalised infrastructure. ▪ Infrastructure is accessible by motorised access.
Constraints and implementation	<ul style="list-style-type: none"> ▪ Within the moderate use zone, a specific Tourism Subzone will be defined which could include areas of commercial use. ▪ Where possible this node should be outside the protected area. ▪ The node should preferably be on the periphery of the Moderate and Low Use Zones, to ensure a quality visitor experience in the lower use zone but with the bulk of the impact e.g. access roads and services in the higher use zone. ▪ This node should be developed in the less sensitive part of the Moderate Use Zone. ▪ The Tourism Development Node can only be developed in areas where it does not compromise the values of the protected area. ▪ The node must have a specified footprint. ▪ Examples of developments in a Tourism development node include picnic areas, camping sites and interpretation centre. ▪ Park Administrative Subzone (within the Moderate use zone) caters for facilities such as staff accommodation, administrative offices, other operational required infrastructure, waste handling sites, etc. ▪ Wherever possible, facilities and infrastructure related to park operations should be located outside of the protected area. If not possible they will form part of this node. ▪ The node must have a specified area as a footprint.
Controlled Hunting Area	
Description	An area that is designated to optimise the rational use of natural resources of the protected area through controlled hunting without compromising visitor activities.
Objective	To provide an area where sustainable utilization can take place through controlled hunting to complement already existing game removal operations and provide opportunities for increased revenue generation and tourism experience.
Activities and infrastructure	<ul style="list-style-type: none"> ▪ Opportunities for tourism activities may be available outside of the hunting season. ▪ Management activities in the zone are focussed on controlled hunting. ▪ Infrastructure could include: <ul style="list-style-type: none"> ▪ Hunting lodge/camp ▪ Staff accommodation ▪ Skinning Sheds ▪ Management tracks ▪ Shooting range

Constraints and implementation	<ul style="list-style-type: none"> ▪ Sustainable utilization of nature and natural resources is the overarching principle. ▪ Species and number of animals proposed for removal from the CHA will fall within game removal recommendation as agreed upon at annual management meetings and will be in line with management objectives for the relevant protected area. ▪ All activities in the zone must conform to the EKZNW Norms and Standards for Hunting.
Protected Area buffer	
Description	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.
Objective	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.
Activities and infrastructure	<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"> ▪ Alien and invasive species management ▪ Pollution control and prevention ▪ Impact on sense of place ▪ Habitat fragmentation and isolation ▪ Water resource protection ▪ Human/ Wildlife conflict ▪ Climate change adaptation ▪ Compatible land use ▪ Priority species management
Constraints and implementation	<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"> ▪ Strategically promoting and monitoring compatible land-use and land-care on adjacent lands and upstream catchments

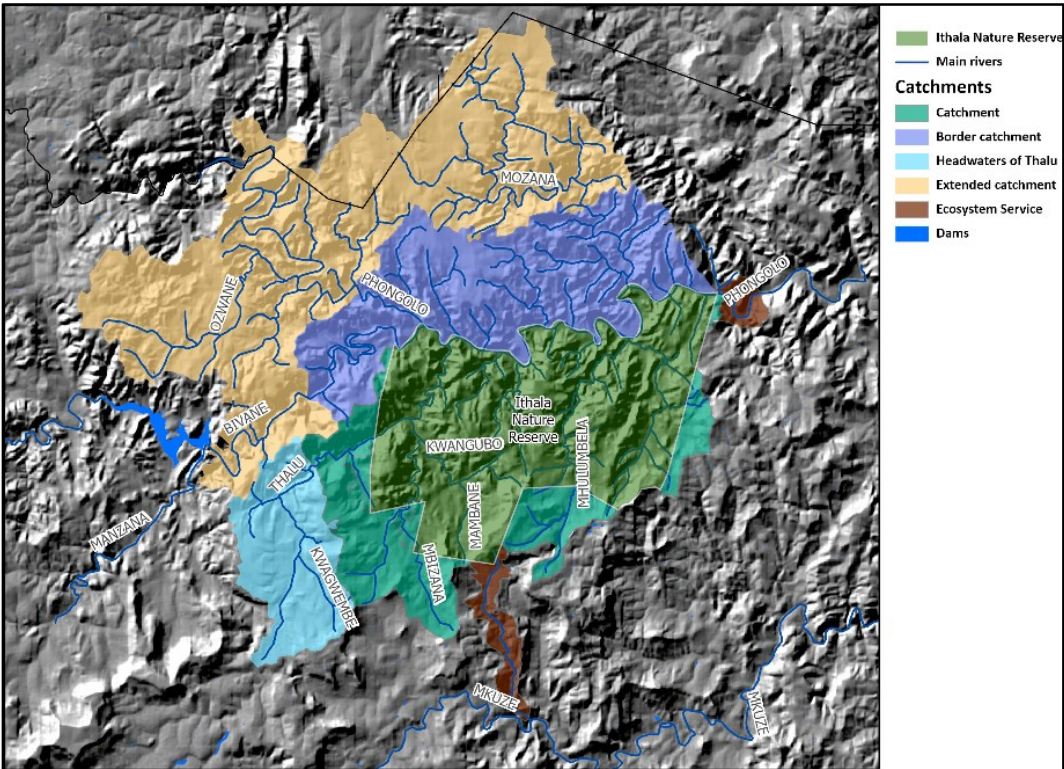
	<ul style="list-style-type: none"> ▪ Integrated alien species control ▪ Biodiversity stewardship and environmental awareness ▪ Working collaboratively with neighbours to secure sensitive sites that contribute to the protection of the values and objectives of the protected area. ▪ Influencing and input into the municipal and regional planning tools such as SDFs, Schemes, IDPs and Bioregional Plans. ▪ 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.
Zone of Influence	
Description	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 ² 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.
Objective	<ul style="list-style-type: none"> • Actively promoting and supporting compatible/complimentary land and water uses and activities <ul style="list-style-type: none"> ▪ active engagement with relevant stakeholders ▪ developing a positive working relationship with municipal planners to achieve sustainable development • 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"> ▪ active engagement with land owners, developers, industry and municipalities • Foster community/neighbour and stakeholder support for the protected area <ul style="list-style-type: none"> ▪ active awareness, education and promotion of the protected area with the relevant stakeholders • Facilitating sustainable benefits to neighbouring communities and landowners <ul style="list-style-type: none"> ▪ green jobs, eco-tourism and ecosystem services benefits to relevant communities and landowners

² 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.

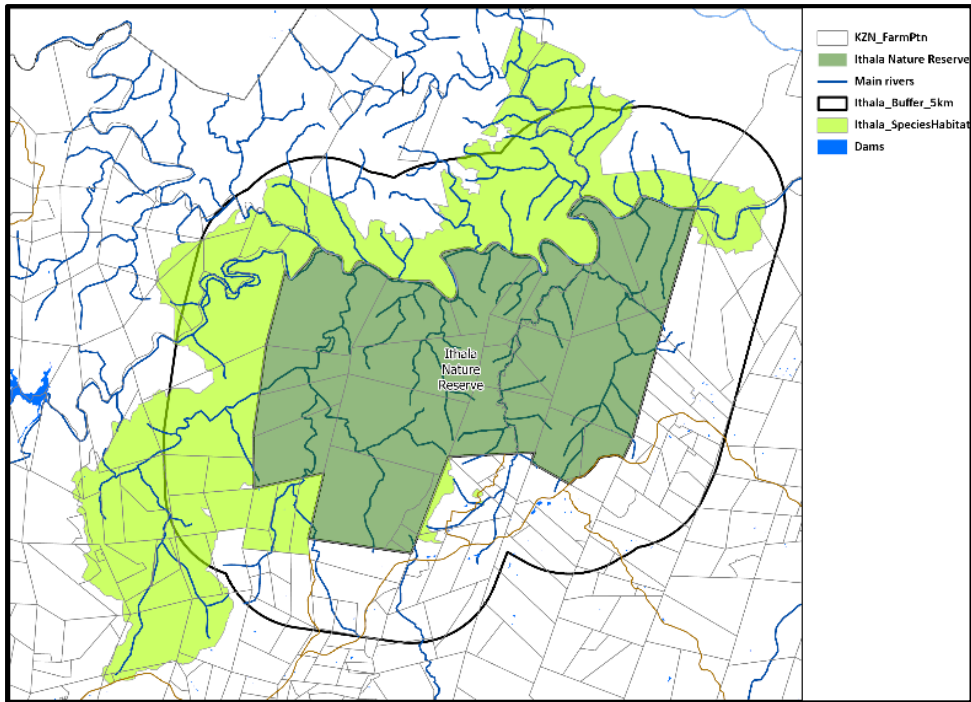
<p>Technical delineation</p>	<p>The Zone of Influence has been identified for Ithala Game Reserve. Critical external influences (activities and land use) that may threaten the achievement of the purpose, values and management objectives of Ithala and/or may impact on management effectiveness. The Zone 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 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>Site-Specific delineation:</p> <p><i>Water quality</i></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><i>Species habitat</i></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><i>Protected Area Expansion</i></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>Implementation</p>	<ul style="list-style-type: none"> ▪ Incorporate Zone of Influence into relevant spatial planning processes ▪ Identify stakeholders and maintain an up-to-date contact list ▪ Print out map and stakeholder contact details and place on office wall ▪ Ongoing proactive engagement with stakeholders (including Biodiversity Stewardship and land use planning) ▪ Monitoring of land use and activities and providing reactive comments (EIA process) ▪ Prepare Standard Operating Procedures for responses to new threats ▪ A full Zone of Influence strategy is available as Appendix



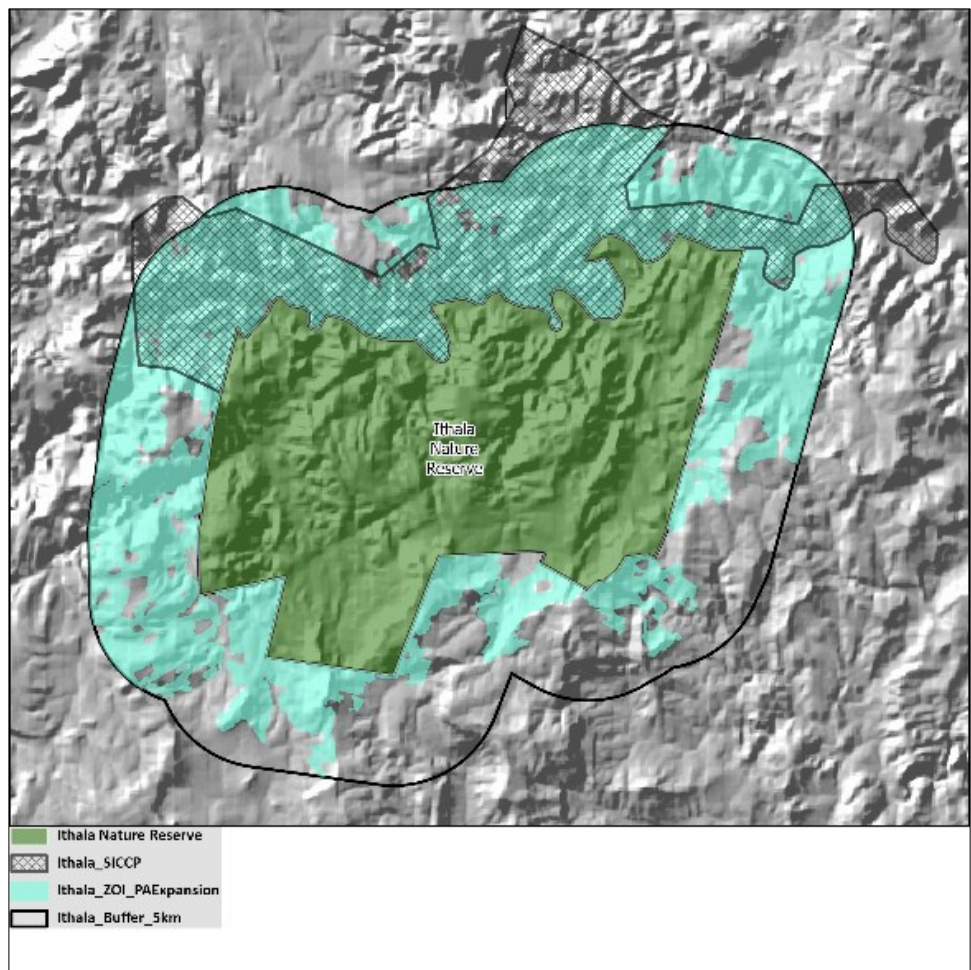
Map 13: Zone of influence combined.



Map 34: Zone of influence: Water quality, quantity & ecosystem service.



Map 45: Zone of influence: Combined species habitat.

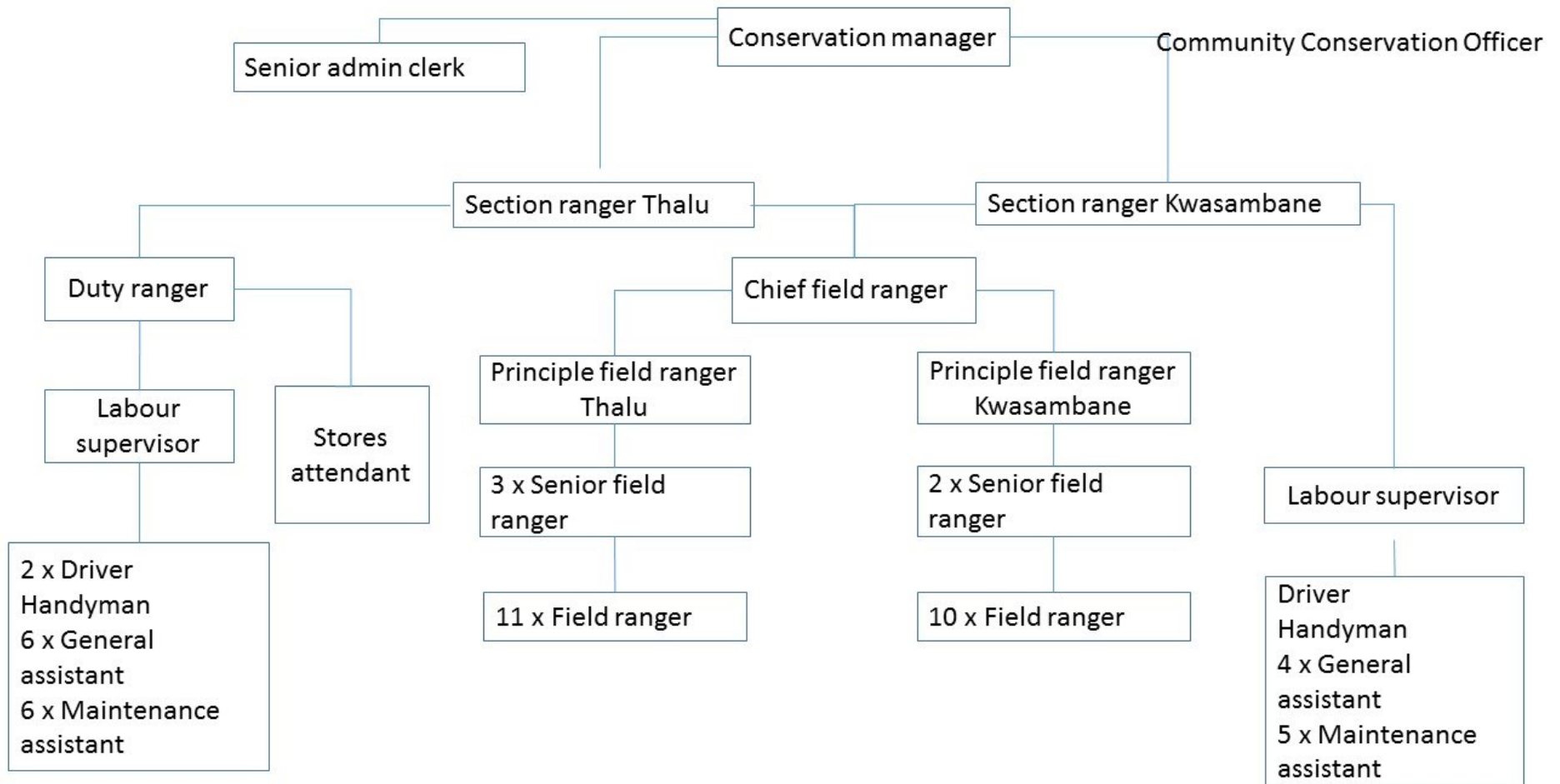


Map 16: Zone of influence: Protected area expansion

2.6 ADMINISTRATIVE STRUCTURE

A recommended organisational structure for Ithala Game Reserve is set out in Figure 6. 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

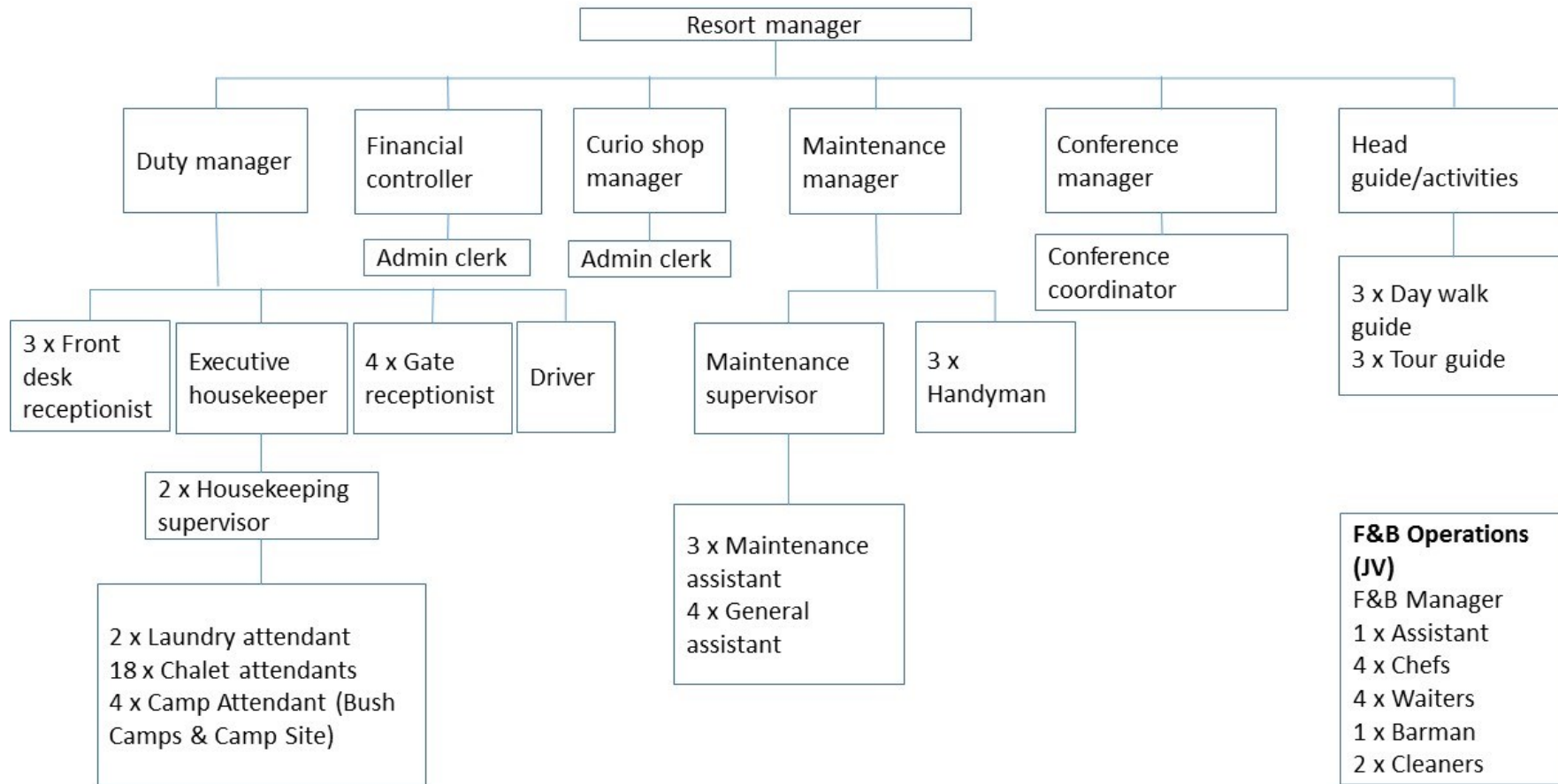


Figure 3: Organisational structure for Ithala Game Reserve

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 a prioritisation of goals and actions based on the budget allocated.

This section aims to provide for 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 done 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 7: Ithala Game Reserve – a Cost Estimate

The annual IGR Conservation operational budget required is:

Expenses	Cost (R)
Direct Supplies	344700
Utility Expenses	1409232
Other Services	259838
Maintenance and repairs costs	1060464
Electronic media costs	224030
Communication costs	54900

Auxillary card costs	6600
Transport costs	237420
Administrative expenses	71400
Total	3 668 584

Tourism:

Expenses	Cost (R)
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
Total	R4 171 300.00

Eco-Advice:

Expenses	Cost (R)
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
Total	316080

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 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) illustrates a desired operational budget.

2.8 CONSERVATION TARGETS

A key assumption made in the 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 underestimate 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 formalize and agree to targets. In reality, 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 has to 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 Park to conserve specific vegetation types and species (Table 8). 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 of these conservation target species.

Table 8: 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>Transvaaliana draconis</i>	Grasshoper	928.80	32321
<i>Whitea alticeps</i>	Grasshoper	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 hluluensis</i>	Millipede	2.00	2
<i>Edouardia conulus</i>	Molusc	12.56	192855
<i>Gulella bushmanensis</i>	Molusc	1.00	2
<i>Gulella subkraussi</i>	Molusc	4.96	576
<i>Gulella warreni</i>	Molusc	2.00	7
<i>Aloe minima</i>	Plant	1.00	11
<i>Dracosciadium italaie</i>	Plant	1.00	5
<i>Encephalartos lebomboensis</i>	Plant	4.00	12
<i>Eugenia simii</i>	Plant	745.28	800
<i>Melanospermum italaie</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 has been extracted from the Ezemvelo KZN Wildlife Norms and Standards for the Management of Large herbivores.

No management
Apply to species in a system that can be allowed to achieve ecological carrying capacity without knowingly endangering other important biodiversity components in the protected area. This management option assumes that the important ecological processes responsible for establishing the equilibrium between the species and its resources are largely intact.
Ecological process management
Applies to species in a system where 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 Reconfiguring landscape drivers: of population dynamics e.g. artificial water supply, range expansion, corridor development etc. Simulating ecological process e.g. dispersal (via dispersal sinks), predation (via predator simulation removals). Re-establishing ecological process e.g. re-establishing indigenous predators Curtailement of population eruption e.g. managing the growth rate and age and sex structure of a population to stay within the ecological or economic carrying capacity – removals, limited duration contraception etc.
Biodiversity management
Management associated with a recognised direct threat to other biodiversity that the species to be managed poses e.g. impacts on resources or competition with threatened or declining species. This management option often entails a fixed upper limit for species and is usually 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.
Conservation management
Management associated with live removal of a proportion of the population explicitly for establishing additional populations within the species natural range e.g. black rhino removal and range expansion programme. Populations may be maintained at ecological carrying capacity to optimise production.
Sustainable harvest management
Population management associated with a predetermined and authorised commitment to harvest one or more animal populations for economic purposes e.g. hunting or live sale. Sustainable harvesting is restricted to areas zoned for hunting or resource use areas in the PA zonation plan.
Scientific Research

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

Table 9 indicates the specific management strategies for the protected area.

Table 9: 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"> ▪ Decrease in productivity ▪ Inability to notch as required ▪ Reduction in sighting frequency ▪ Poaching ▪ Increased natural mortality through drought, degraded habitat etc.
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"> ▪ Decrease in productivity ▪ Inability to notch as required ▪ Reduction in sighting frequency ▪ Poaching ▪ Increased natural mortality through drought, degraded habitat etc.
Elephant	105	See Ithala Elephant Management Plan	Biodiversity management	Population is more than double the recommended carrying capacity	<ul style="list-style-type: none"> ▪ Poaching for ivory ▪ Decrease in resources and habitat availability with increasing population size ▪ Impact on vegetation and other species ▪ Open northern boundary and resultant excursions

Species	Target/carrying capacity	Rationale	Management strategy	Status	Key threats
Buffalo	0	Disease prevention	Total removal	There is currently an instruction from national veterinary to remove all the buffalo. However, if we could erect a game proof fence on the northern boundary then we could apply to re-introduce animals	
Eland	50	Critical ecological processes functional	Ecological process management	Keep population at or below CC	<ul style="list-style-type: none"> ▪ Poaching
Giraffe	90	Critical ecological processes functional	Ecological process management	Keep population at or below CC	<ul style="list-style-type: none"> ▪ Poaching
Hartebeest, red	80	Critical ecological processes functional	Ecological process management	Keep population at or below CC	<ul style="list-style-type: none"> ▪ Poaching
Impala	1600	Critical ecological processes functional	Ecological process management	Keep population at or below CC	<ul style="list-style-type: none"> ▪ Poaching
Kudu	800	Critical ecological processes functional	Ecological process management	Keep population at or below CC	<ul style="list-style-type: none"> ▪ Poaching
Nyala	0	Extra limital species which compete directly with bushbuck and other small browsers	Total removal	Population number is low and not of any concern yet	<ul style="list-style-type: none"> ▪ Poaching
Ostrich		Critical ecological processes functional	No management		<ul style="list-style-type: none"> ▪ Poaching

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

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 intervention.

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 10.

Table 10: Annual surveillance and monitoring schedule

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Legal context and compliance	Patrol coverage	Cybertracker analysis	Monthly	Section rangers/ Eco advice	Monthly report
	Illegal incidents	Incident report	Per event		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

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
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 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
	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

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
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.

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 time. The principles are based on scientific knowledge, best practice, internal policy documents and relevant legislation, norms and standards and policy frameworks. It must be read and implemented with applicable law, Ezemvelo KZN Wildlife internal policies as listed in Appendix 2 (current) or available on the Ezemvelo Intranet, 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 their 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 purpose for which it was assigned, this 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, steppingstones 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 program that supports adaptive management;
- provide regulatory ecosystem services, including buffering against the impacts of climate change;
- deliver benefits to resident and local communities consistent with the other objectives of the protected area;
- provide nature-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;
- use 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.
- facilitate or provide education and awareness opportunities (including about management approaches); and
- strive to build supportive relationships and public support for the protected area.

2.11.2 Legal Context and Compliance

Ezemvelo KZN Wildlife 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 of KZN are appropriately legally protected, and appropriately demarcated, and the demarcation must be communicated to surrounding communities and stakeholders.
- Managers must familiarise them 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, 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 to address offences and breaches of the law and other relevant co-operatives, relevant government departments such as Department of Water Affairs and Sanitation, Amafa 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 focussed 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 2020; if necessary, the manager may display a public notice as per Section 24.2 of the gazetted internal rules to give lawful instruction to any person entering the protected area.
 - 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, MoUs or MoAs must be kept on station for implementation and enforcement of any conditions therein.

2.11.3 Conservation Beyond Boundaries

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 KZN Wildlife 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 that which are considered vulnerable, threatened or critically endangered are protected and conserved for 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 adaption;
- develop and improve the biodiversity economy aimed at strengthening rural economies and 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. Integrated Development Plans (IDPs), Spatial Development Framework's (SDF's) and Land Use Management Schemes (LUMS)), considers 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 reducing 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 km to 10 km around protected areas is provided through NEMA EIA regulations. The buffer is 5km for protected areas and 10km around World Heritage Sites. In terms of these listed activities, certain activities that may have negative impacts on a protected area are required to conduct assessments and obtain environmental authorisation before possibly being permitted to proceed. These applications are directed to Ezemvelo through the Planning section, 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 KZN Wildlife will endeavour to assist the local and district municipality in determining appropriate land uses and development strategies in the areas surrounding the protected area.
- Ezemvelo KZN Wildlife will endeavour to align its plans and strategies with the programmes 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. Where a buffer zone is required incorporation of the buffer zone in the management plan will be subject to public consultation processes have been undertaken.
- The Zone of Influence may be provided as an environmental overlay or protected area zone in Land use management schemes.
- 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 KZN wildlife 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 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 KZN Wildlife. 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 natural and cultural resources will be aimed at creating awareness, understanding and appreciation of its unique cultural heritage, biodiversity and ecological function, and their significance. In developing an environmental 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 Arbor Day must be utilised.

2.11.3.6 Tourism

Ezemvelo KZN Wildlife has to sustainably develop protected areas to fully realise its eco-cultural tourism and associated income-generating potential, within the context of protecting its 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. DEVCO).
- Tourism products must be designed to capitalise on the unique beauty and 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 KZN Wildlife will actively and judiciously apply the environmental principles provided in the National Environmental Management Act 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. 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 Biodiversity Resource and Conservation Management

Fire Management

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

- 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 un-burnt rather than aiming for a complete burn).
- Burning must be undertaken with due consideration to the biodiversity conservation requirements of the protected area and the need to protect rare and endangered species.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act No.101 of 1998.
- 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.

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

Soil Resource Management

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

- Areas impacted by soil erosion should be stabilised and re-vegetated with indigenous plant species to prevent the spread of listed invasive plant species.
- Areas susceptible to soil erosion or 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.
- Policy D2.7 "Re-establishment and management of vegetation on development sites in Ezmevelo KZN Wildlife's protected areas" must be applied:
 - 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-invasive, 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 2,0 metres 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.

Resource Utilisation

It is an accepted tenet of biodiversity conservation in South Africa and KwaZulu-Natal that the sustainable use of natural and biological resources may be undertaken within a protected area, provided that it does not compromise its ecological functioning, 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.
- The benefits that such resource use will provide to the neighbouring communities around the protected area.
- The equitable access of members of the neighbouring communities to such resource use opportunities.
- Whether activities such as the collection of biological materials/samples are for legitimate scientific purposes, are from *bone fide* South African research institutions and are undertaken 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 request must be assessed, responded to as well as recorded and implementation thereof monitored in line with all relevant Ezemvelo KZN Policies.
- Non-extractive resource use such as rock art, or small businesses such as boat trips, could be considered within protected areas if it is in line with the protected area zonation, and have the relevant internal approvals.

Wildlife Management

Management interventions related to indigenous wildlife will be focussed 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.
- The introduction of indigenous species into the protected area must be undertaken per relevant Ezemvelo KZN Wildlife policies.
- Population management of wildlife species may be required to ensure that such species are not causing ecological degradation of the protected area.
- Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour must be managed per relevant Ezemvelo KZN Wildlife 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.

- The keeping of closely related subspecies in protected areas must be avoided in order to prevent hybridisation between subspecies (e.g. blue wildebeest & black wildebeest, etc.) since this could lead to the loss of both subspecies.
- 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.
- 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 economic 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.

Wilderness

Ezemvelo KZN Wildlife 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; 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 biocentrally (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 force³ 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.

2.11.3.8 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 enhancing pro-environmental behaviour, responsible use of natural resources and waste reduction. 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).

2.11.3.9 Protection of Viewscapes

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

- Undeveloped viewscapes 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, are the focus for the placement of tourism, management and other infrastructure. In protecting important viewscapes within and along access routes to protected areas, management must collaborate with stakeholders to actively protect these areas.
- Viewscapes are vulnerable and sensitive to development and management must, in collaboration with relevant stakeholder 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 viewscapes 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.

2.11.3.10 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

³ 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.

- Management activities such as vehicles, chainsaws, brush cutters, shooting and speech 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 also be sensitised to the impact of loud talking, and playing of music on visitor enjoyment and the Park 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.
- Explicitly consider the generation and impact of noise in scoping reports and Events Management Plans
- 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 can injure themselves, abandon nests etc.
- Ensure that comments on proposed or existing activities in the Buffer zone or Zone of Influence will explicitly take into account 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.

2.11.3.11 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 sounds (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 radiations can impact negatively on both fauna and flora; this establishes the need to retain areas free of electromagnetic radiation.

2.11.3.12 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 orient 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 that can disrupt or change feeding behaviour of certain species.

2.11.3.13 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 Eco-Advice 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; and
- 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.

2.11.3.14 Ecological Integrity

Protecting ecological integrity take 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, its 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.

2.11.3.15 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/or management activities must be monitored and evaluated to support adaptive management. Monitoring must demonstrate that there is a direct benefit to the conservation of nature on the property and that there is no loss of biodiversity values.
- Eco-tourism or nature-based activities must not compromise the protected area 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 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 per cent of the protected area – 'the 75 per cent rule' (Dudley 2008).

2.11.3.16 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.

Use of Airspace in Nature Reserves

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.
- The use of radio- or remote-controlled toy or model aircraft is prohibited except in specially designated areas. An Officer may confiscate such toy or models used in violation of this prohibition.

2.11.3.17 Memorials and Plaques

Ezemvelo KZN Wildlife 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 KZN Wildlife's policy 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 visitor's 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 visitor's enjoyment of this area and its values. Furthermore, such activity may raise an expectation of a right of access by others to the site of burial.
- Existing gravesites must be documented as there may be existing access agreements. These must also be documented, and related activities controlled within the protected area context.

2.11.3.18 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, the value and purpose of the protected area.
- The project must also have support from the Management Committee must also recommend the project and follow critical assessment and approval processes (Park Management Committee/ Nature Reserve Management Committee and approved by the Regional Operations Committee and Ezemvelo's Board's Development Committee (DEVCO).
- Ensure that all developments that take place within Ezemvelo protected areas, as well as developments or activities outside protected areas, follow the correct legal and best practice Integrated Environmental Management procedures.
- Some developments/projects 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 and demolished and the remains removed from the protected area to a designated disposal site.
- Where funding and functionality allow protected areas must install environmentally sensitive infrastructure.
- Ensure that all developments that take place within Ezemvelo protected areas, as well as developments or activities outside protected areas, follow the correct legal and best practice Integrated Environmental Management procedures.
- 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; and
- 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.
- Satellite dishes
- Also 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 (BPEO) 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 National Environmental Management Act 107 of 1998 (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 wastes 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 meshed in 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.
- 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 at 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 wastes must be disposed of in 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 managed and disposed of in keeping with health, veterinary and meat regulations requirements.
- No other liquid wastes may be disposed of in the protected area.
- Liquid wastes (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 be required to remove all excess materials and wastes upon completion of contracts (this include drums of contaminated fuels, bitumen, etc).
- Hazardous liquid wastes must be kept separately and removed to a registered wastes disposal facility.
- Liquid wastes 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, as well.

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 integrated Environmental Management procedures and other appropriate legislation.
- Rehabilitate any quarries or part thereof no longer required.
- Manage all operational quarries in terms of an environmental management programme which must be part of the protected area management plan.

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; but accepts that these facilities may be both desirable or essential for the management and visitor experience of the protected area.

- Limit the network and type of roads, vehicular tracks and trail paths in its 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 trail paths that are no longer required must be decommissioned and rehabilitate in line with an approved maintenance management plan.
- Beach driving by members of the public may only take place with the required permits and controls as per legislation. Generally, no recreational beach driving is permitted on South African beaches. However, a permit to use a vehicle may be issued by the Department of Environmental Affairs (DEA) under specific circumstances, such as sport fishing competitions, research or a physically challenged person requiring vehicle access. In addition, Internal Reserve Rules apply to beach driving.
- All road use must be in line with the gazetted rules and regulations contained in Appendix 3.

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 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.

2.11.3.19 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
- 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.

2.11.3.20 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.

- 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 web site;
- 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; and
- Appropriate permanent research facilities must be developed and managed within or bordering the protected area if appropriate in order to facilitate research work.
- 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
- Reporting to the provincial and national Minister on the state of the protected area;
- Local reports as required.

2.11.3.21 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.

3 APPENDICES

Appendix 1: Proclamation of Ithala Game Reserve

Appendix 2: List of policies, servitudes, unpublished documents and supporting subsidiary plans

Copies available from [reserve management or regional ecologist](#)

Additional documents:

1. Ezemvelo KZN Wildlife Corporate Strategic Plan and Performance Plan for 2015 - 2020
2. Ezemvelo KZN Wildlife Corporate Policies and Procedures (Norms & Standards) listed in the table below
3. Ezemvelo KZN Wildlife Biodiversity Database Checklists
4. Proclamations
5. Public Participation Report
6. [Memorandum of Understanding between AMAFA and Ezemvelo KZN Wildlife](#)
7. [Memorandum of Agreement between AMAFA, Ezemvelo KZN Wildlife and Mangwebuthanani Community](#)
8. [Management Guidelines for the Isandlwana Battlefield Site](#)

Add to this list to include any documents/servitudes/agreements relevant to the site.

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

CORPORATE AFFAIRS	
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
B 14	Access to Information
INTERNAL AUDIT	
C 1	Internal Audit Charter
C 4	Fraud Prevention Plan
C 5	Management Control
BIODIVERSITY CONSERVATION OPERATIONS	
NATURAL RESOURCE SUSTAINABILITY	
Threatened Species and Ecosystems	
D 1.1	Disposal of Black Rhino
D 1.2	Disposal of Surplus White Rhino
D 1.3	Strategy for the Management of Southern White Rhino in KwaZulu-Natal
D 1.4	Strategy for the Biological Management of Black Rhino in KwaZulu-Natal
D 1.5	Rhinoceros Products
D 1.6	Crocodylians

D 1.7	Cycads
D 1.8	Disposal of Threatened Species
Exotic and Invasive species	
D 1.9	Release of Alien Species
D 1.10	Control Measures for Red-billed Quelea
D .11	Trout production
D 1.12	Grass Carp
D 1.13	Establishment of Alien Plantations
Migratory Species	
D 1.14	Black Wildebeest and Blue Wildebeest Hybridization and Conservation
D 1.15	Permit authorising the collection of Biological Material within Board Areas
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D 2.5	Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board
D 2.6	Quarries in KZN Protected Areas
D 2.7	Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas
D 2.8	Ecotourism and Protected Areas
D 2.9	Solid Waste Management within Protected Areas
D 2.10	State Security Service Activities within Board Areas
D 2.11	Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas
Integrated environmental management	
D 2.12	Integrated Environmental Management - incorporating the procedure for the assessment of the impact of proposed development projects on nature conservation concerns.
D 2.13	Precautionary Principle
D 2.14	Shark Net Installations
D 2.15	Bioprospecting in KwaZulu-Natal
D 2.17	Use of Pesticides by the Ezemvelo KZN Wildlife: Safety to Humans and the Environment
D 2.18	Interference with the Mouth of a Lagoon or River (Breaching)
Ex Situ Wild Animal Management	
D 2.21	Re-establishment of Terrestrial Mammals in Board Areas
D 2.22	Translocation of Animals
D 2.25	Elephant Introductions and Elephant in Enclosures
D 2.27	Introduction and Keeping of Large Predators in Enclosures in KZN
D 2.28	Use of Narcotic Drugs
D 2.29	Falconry
Human Animal Conflict - Inside and Outside Protected Areas	
D 2.30	Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas

D 2.31	Problem Animal Control
D 2.32	Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops
D 2.33	Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board
Environmental Awareness	
D 2.34	Environmental Education Policy
BIODIVERSITY PROTECTION	
Co-management	
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D 3.2	Establishment and Management of Community Conservation Reserves (CCR)
D 3.4	Community Conservation Programmes
D 3.5	Neighbours' Access to Board Protected Areas
D 3.6	Relationship with Local Boards
D 3.7	Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners
D 3.8	Community Trust
D 3.9	Community Levy Policy and Guidelines
D 3.10	Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal
D 3.11	Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal
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D 3.14	Freshwater Angling
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D 3.16	Use of plant resources from protected areas
D 3.17	Use of doomed biological material
D 3.19	Provision of hunting by Ezemvelo KZN Wildlife
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D 4.3	Data Access
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E 7	Allocation of Sites in terms of the Joint Venture Scheme
E 8	Access to Protected Areas through Unofficial Entry Points
E 9	Visitor Facilities Management by Ezemvelo KZN Wildlife.
E 10	Lease of Lakeshore at State Dam Protected Areas
E 11	Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife)
E 12	Private Sector Reservations Policy
E 13	Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas

E 14	Discounting of Tariffs for Walk-in Guests
E 15	Ecotourism Discounting Strategy
E 16	Travel Trade Commissions: Tour Operator/ Travel Agency
E 17	Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements
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

Insert PA species list (at least mammals, birds and plants if possible) If this makes the plan too lengthy restrict to mammals and birds and potentially trees – use discretion

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 flavida</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>Sphenoecus 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 chalcospilus</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>Treeron 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>Coccygia 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 pristopectera</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 superciliaris</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>Procapra 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

Appendix 5: Annual operations plan for Ithala Game Reserve [Insert Date]

