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WEENEN GAME RESERVE

Protected Area

MANAGEMENT PLAN

BirdLife IBA IMPORTANT BIRD AREA

WEENEN NATURE RESERVE

KwaZulu-Natal
South Africa

Protected Area Management Plan
Developed: 2013

Prepared by
Ezemvelo KwaZulu-Natal Wildlife Protected Area Management Planning Unit and the Weenen Nature Reserve Planning Committee

Citation
Weenen Nature Reserve: Management Plan. Version 1.0 (2013), Ezemvelo KZN Wildlife, Pietermaritzburg.

AUTHORISATION

This Protected Area Management Plan for Weenen Nature Reserve is recommended by the Weenen Nature Reserve Planning Committee (NRPC), a multi-disciplinary team consisting of:

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This Protected Area Management Plan for Weenen Nature Reserve is approved:

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PREFACE

This Protected Area Management Plan for Weenen Nature Reserve is its primary and overarching management document. It forms the framework within which the nature reserve will be managed and developed towards the achievement of its management objectives, derived in collaboration with the protected area's stakeholders during July to October 2013.

The protected area management planning process has been designed to meet the statutory requirements of the National Environmental Management: Protected Areas Act and other relevant legislation.

The protected area management planning process requires participation from the protected area's stakeholders, the general public and specialists during the various stages of plan development and implementation. Although the management plan and its sub-components are framework planning documents, an annual review process will ensure an active adaptive management planning approach.

A long-term business approach has also been introduced that ensures that the protected area's management objectives are operationalised and reflected through a Financial Plan that will, at the same time, actively pursue additional and improved funding and income towards the achievement of the natural and cultural heritage conservation objectives of the nature reserve.

Ezemvelo KwaZulu-Natal Wildlife, as the appointed Management Authority for Weenen Nature Reserve, hereby commits itself to the implementation of this plan.

Dr. Bandile Mkhize

EXECUTIVE SUMMARY

Introduction

Weenen Nature Reserve is a situated south of the R74 provincial road, approximately eight km west of Weenen and 28 km from the town of Estcourt; within the Uthukela District Municipality and the Umtshezi Local Municipality region.

The reserve consists of 4185.64 hectare and was initially proclaimed on 1 April 1975. It is bordered by Weenen Townlands and surrounding land consists mostly of agricultural land uses and communal grazing areas.

The Bushman's River, which is a tributary of the Tukhela River, runs through the southern section of the reserve. The reserve is ideally situated close to major towns such as Pietermaritzburg, Ladysmith, and Estcourt and is ideal for visitors who want to enjoy eco-tourism activities.

Weenen Nature Reserve is a key component of the protected area system in the region and provides an important anchor for connectivity in the protected area system of KwaZulu-Natal. It is recognised by Birdlife South Africa as an Important Bird Area with Cape Vulture (*Gyps coprotheros*) and grassland birds such as Ground Hornbill (*Bucorvus leadbeaterrii*) present in the reserve. The reserve provides wintering ground for many species of Highveld birds which migrate to avoid the extreme cold temperatures.

Weenen Nature Reserve protects important vegetation types including KwaZulu-Natal Highveld Thornveld, Thukela Thornveld and Thukela Valley Bushveld. Plant species of importance include Green's Barleria (*Barleria greenii)* and *Barleria argillicola.*

The reserve contains a small population of the Endangered Black Rhino (*Diceros bicornis*) and a medium population of the Near Threatened White Rhino (*Ceratotherium simum*). These animals provide a regular supply of animals for auction to seed and support other populations. The maintenance and security of these populations is a priority.

Management issues, challenges and opportunities at Weenen Nature Reserve

The Weenen Nature Reserve is divided by the P 13 district road between Estcourt and the town of Weenen. The public traverses this road daily and many road accidents take place, especially at night time when game crossing the road cannot be seen clearly. Poaching in the reserve is at unacceptable levels and this takes place mainly along the P 13 district road and in areas that are inaccessible and not easily patrolled. Access control is not sufficiently effective to prevent people entering the reserve legally from taking part in illegal activities once they are inside the nature reserve. The fence line in the south-eastern section of the reserve is absent due to stealing and vandalising which presents a further threat to the security of biodiversity in the reserve. The full extent and beyond the nature reserve is claimed by the Izigwoza Community, although settlement has been reached post settlement planning has not been completed yet. On the north west of the reserve is the Community Conservation Areas Umsuluzi as well as Umthontwane, the latter could potentially be

incorporated into the reserve subject to the resolution of certain settlement and operational challenges, these include game ownership and tenants living on the land.

Infrastructure maintenance is a great concern and tourist roads have deteriorated to such a level that some have become dangerous or unusable to visitors to the reserve. Tourism infrastructure needs urgent attention to promote tourism activities and encourage return visits to the reserve.

Managing the issues, challenges and opportunities at Weenen Nature Reserve

To address the issues identified by the nature reserve planning committee as well as the stakeholders both human and financial resources will be required. Infrastructure maintenance specifically will require project funding and a costing for this is included in *Appendix H.*

The Isiqoza land claim across the full extent and beyond Weenen Nature Reserve provides opportunity for expansion of the reserve; this could potentially support expansion of Black and White Rhino range. The process is hindered by key post settlement planning issues that remains unresolved. The resolution of these issues is important, not only for capatilizing on protected area expansion opportunities but also in building trust and maintaining good relationships with land owners and neighbouring communities.

Further more the security of public traversing the reserve between Weenen and Estcourt needs to be improved by providing signboards indicating entrance into the reserve at an appropriate distance to facilitate speed reduction. Law enforcement in terms of road safety should also be encouraged through the relevant road management authority.

Annual Plan of Operation

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

Records of recommendations for update/changes to the plan should be kept so that when the plan is revised, these recommendations can be assessed and included where necessary. This should be undertaken in the form of a running list, which is updated in each annual report so that the final annual report before the review of the management plan contains the complete list of recommendations. Any proposed significant changes to the management plan that are likely to result in amendment to the vision, objectives and zonation must be supported by the Regional Operations Committee and the Operations Committee (OPSCOM) before being subjected to the appropriate stakeholder participation process and before OPSCOM recommends that the proposed amended protected area management plan be submitted for authorisation to the Ezemvelo KZN Wildlife Board and to the MEC.

ABBREVIATIONS

AMAFA	Amafa aKwaZulu-Natali (KwaZulu-Natal Provincial Heritage Agency)
A.S.L.	Above sea level
APO	Annual Plan of Operation
CCA	Community Conservation Area
CDP	Concept Development Plan (Component of Ezemvelo KZN Wildlife protected area management planning process)
CEO	Chief Executive Officer
CRMP	Cultural Resource Management Plan
CMS	Co-management Structure
DAE	KwaZulu-Natal Provincial Department of Agriculture and Environmental Affairs
DCO	District Conservation Officer
DEA	National Department of Environmental Affairs
DWA	National Department of Water 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 in terms of the National Veld and Forest Fire Act (No.1 of 1998)
GDP	Gross Domestic Product
GKLM	Greater Kokstad Local Municipality
GIS	Geographical Information System
IDP	Municipal Integrated Development Plan
IUCN	International Union for the Conservation of Nature
MEC	Member of the Executive Council
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEMA	National Environmental Management Act
NPAES	National Protected Area Expansion Strategy
NR	Nature Reserve
NRPC	Nature Reserve Planning Committee
NSBA	National Spatial Biodiversity Assessment
OiC	Officer in Charge
PA	Protected Area
SAHRA	South African Heritage Resources Agency
SAPPI	South African Pulp and Paper Industry
SDF	Municipal Spatial Development Framework
SMME	Small, Micro and Medium Enterprises
SWOT	Strengths, weaknesses, opportunities and threats analysis
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WNR	Weenen Nature Reserve
WWF	Word Wildlife Fund

1) BACKGROUND

1.1 Purpose of the plan

The Protected Area Management Plan is a high-level, strategic document that provides the direction for the development and operation of protected areas. It informs management at all levels, from the staff on-site through to the CEO, the Board and the MEC. The purpose of the management plan is to:

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

1.2 Structure of the plan

See Figure 1.1 – Structure of the Protected Area Management Plan

Section 1:	Provides an introduction and background to the management plan and Weenen Nature Reserve.
Section 2:	Establishes the context of the nature reserve, providing the basis for the strategic and operational management frameworks that follow.
Section 3:	Sets out the vision and objectives that must be achieved in efforts to effectively conserve the nature reserve.
Section 4:	Sets out the zonation of the nature reserve, outlining the permissible land uses in particular zones.
Section 5:	Describes the administrative structure required to effectively manage Weenen Nature Reserve.
Section 6:	Sets out the detailed management targets that must be achieved in managing the nature reserve.
Section 7:	Sets out the monitoring measures required to determine if management targets are being met and the requirements for reporting on performance in implementing the plan.

Section 8:	Describes the components that must be included in the annual plan of operation.

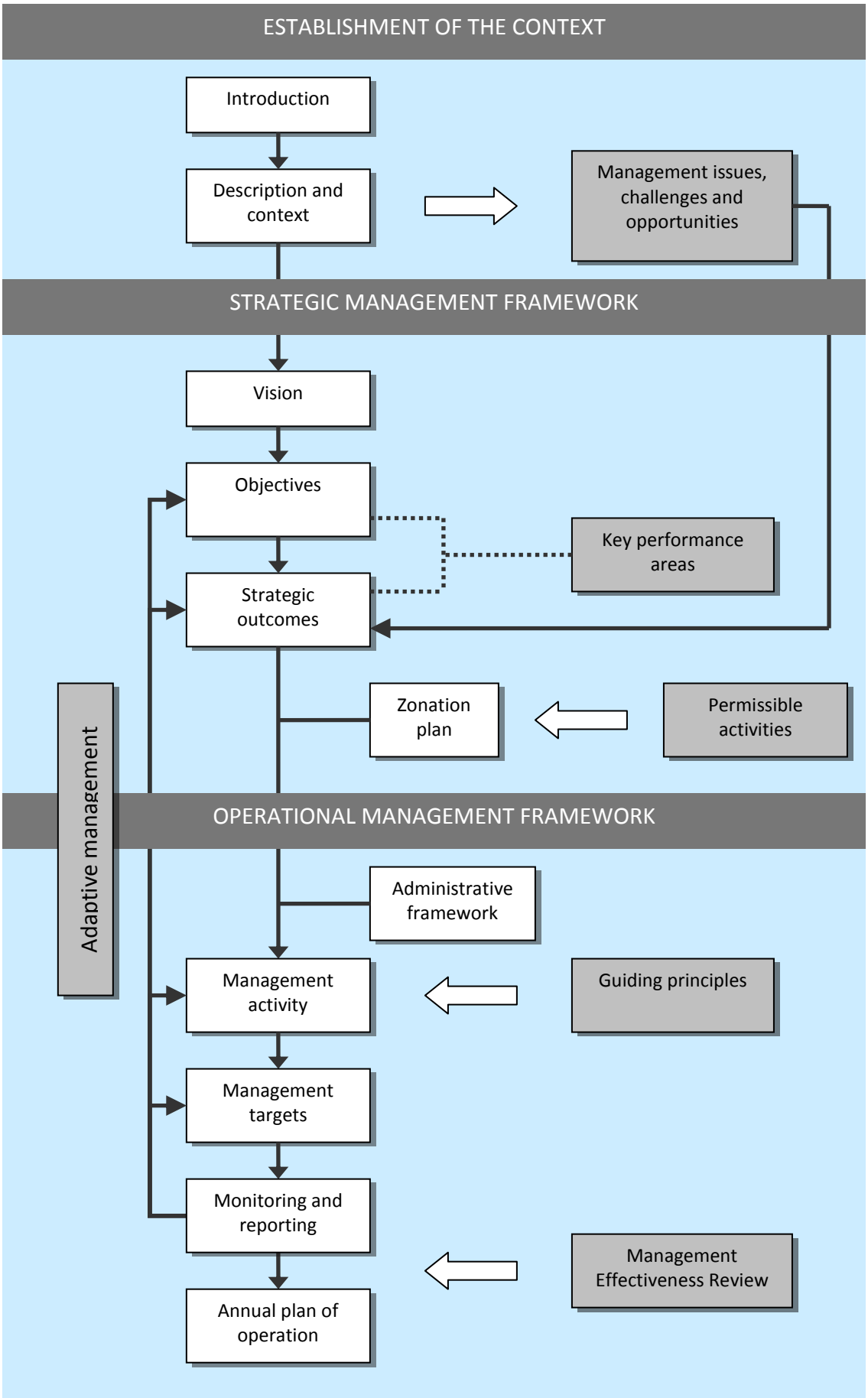

Figure 1.1 Structure of the Protected Area Management Plan

1.3 Introduction

Weenen Nature Reserve is situated on the Draycott Plain in the centre of KwaZulu-Natal Province of the Republic of South Africa. The protected area lies south of the R74 provincial road, approximately eight km west of Weenen and 28 km from the town of Estcourt *(Map A – Location of Weenen Nature Reserve)*; within the Uthukela District Municipality and the Umtshezi Local Municipality region.

The reserve is located approximately 30 km north east of Wagendrift Nature Reserve and approximately 45 km south east of Spioenkop Nature Reserve. The Bushman's River, which is a tributary of the Tugela River, runs through the southern section of the reserve.

Weenen was proclaimed a nature reserve on 1 April 1975, in subsequent years additional land, south of the Bushman's River, was added to the protected area, increasing its size to 4185.64 hectare. The protected area extends from 28° 49' 48" S to 28° 55' 48" S and from 29° 57' 36" E to 30° 03' 00" E and, it is more or less triangular in shape and has a maximum length of 11.65 km and breadth of 7.82 km. The altitude of the area ranges from 900 m to 1311 m a.s.l. The section of the protected area south of the Bushman's River is not accessible from the northern section due to difficult terrain, but is accessible from the south via the private farm Selbourne 1311. The reserve is bordered on the north east by Weenen Townlands, whilst the remaining surrounding land consists mostly of agricultural land uses and communal grazing areas.

The reserve is ideally situated close to major towns such as Pietermaritzburg, Ladysmith and Estcourt and is ideal for tourists and people of the district who are fond of wildlife.

Weenen Nature Reserve is a key component of the protected area system in the region of KwaZulu-Natal. It is an Important Bird Area with Cape vulture (*Gyps coprotheros*) and grassland birds such as Ground hornbill (*Bucorvus leadbeaterrii*) present in the reserve. It is also the wintering ground of many species of Highveld birds which migrate to avoid the extreme temperature.

The reserve contains a small population of the Endangered Black rhino (*Diceros bicornis)* and a medium population of the Near Threatened White rhino *(Ceratotherium simum*). These animals provide a regular supply of animals for auction to seed and support other populations. The maintenance and security of these species is a priority. The reserve protects important vegetation types including KwaZulu-Natal Highveld Thornveld, Thukela Thornveld and Thukela Valley Bushveld. Plant species of importance include *Barleria greenii* and *Barleria argillicola*.

The full extent of the nature reserve and surrounding areas is claimed by the Izigwoza Community and even though settlement has been reached post settlement planning has not been completed yet.

Also bordering the reserve on the south westis the Community Conservation Areas Umsuluzi and Umthontwane which could potentially be incorporated into the reserve subject to the resolution of certain settlement and operational challenges, these include game ownership (Umthontwane) and tenants living on the land.

1.4 The values of Weenen Nature Reserve

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

Natural values	▪ An area of unique natural beauty and a relatively untransformed landscape. ▪ The area is an Important Bird Area (IBA) contributing to the conservation of various species [Weenen Nature Reserve IBA (Sa 068)]. The reserve provides habitats for important, threatened and protected species including the Cape Vulture and Blue Cranes. ▪ Successful rehabilitation of the land and re-colonisation of animals after a devastating erosion issue due to over-farming as far back as 1850. ▪ Protection of the portion of the Bushman's River running through the reserve. ▪ Provide protection for threatened and endangered species of plants and animals and their habitats including White - and Black Rhino, *Barleria greenii* and *B argillicola.*
Ecosystem service values	▪ Provides important ecosystem services especially in terms of water services provided by the Bushman's River to downstream agricultural users. ▪ The reserve delivers a range of ecosystem services to the broader community which include natural and cultural heritage, knowledge generation, water services and local sacred sites.
Eco-tourism values	▪ Provides recreation opportunities for visitors to the area.

Cultural and historic values	▪ The traditional vacant and inhabited Zulu homesteads, some of which are stone built. The stone structures constitute a record of conservative rural change in South Africa around the time of the Second World War. The structures date from 150 to 60 years back; it forms part of the Colonial Archeology and have high research value. ▪ The history of Weenen Nature Reserve is linked with the cycle of labour tenant occupation, environmental degradation, expropriation, soil conservation and nature conservation. The later vacant homesteads are the most enduring sign of the labour farm period and can therefore be seen as part of the reserve's history, despite the fact that they are relatively recent.
Social values	▪ The reserve provides both permanent and temporary job opportunities. ▪ Provides opportunities for environmental education, awareness and research.

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

- protect ecologically viable representative portions of KwaZulu-Natal Highveld Thornveld, Thukela Thornveld and Thukela Valley Bushveld;
- preserve the ecological integrity of the area;
- conserve the important biodiversity in WNR;
- protect areas representative of ecosystems, habitats and species naturally occurring in WNR;
- protect WNR's endangered and vulnerable species;
- assist in ensuring the sustained supply of environmental goods and services specifically relating to water provision;
- create or augment destinations for nature-based tourism in the region;
- manage the interrelationship between natural environment, biodiversity, human settlement and economic development;

1.5 Planning approach

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

1.5.1 Adaptive management

Adaptive management is a structured, iterative process in which decisions are made using the best available information, with the aim of obtaining better information through monitoring of performance *(Figure 1.2 – The adaptive management cycle.)*. In this way, decision making is aimed at achieving the best outcome based on current understanding, whilst acquiring the information needed to improve future management. Adaptive management can lead to revision of a part or if necessary the whole management plan.

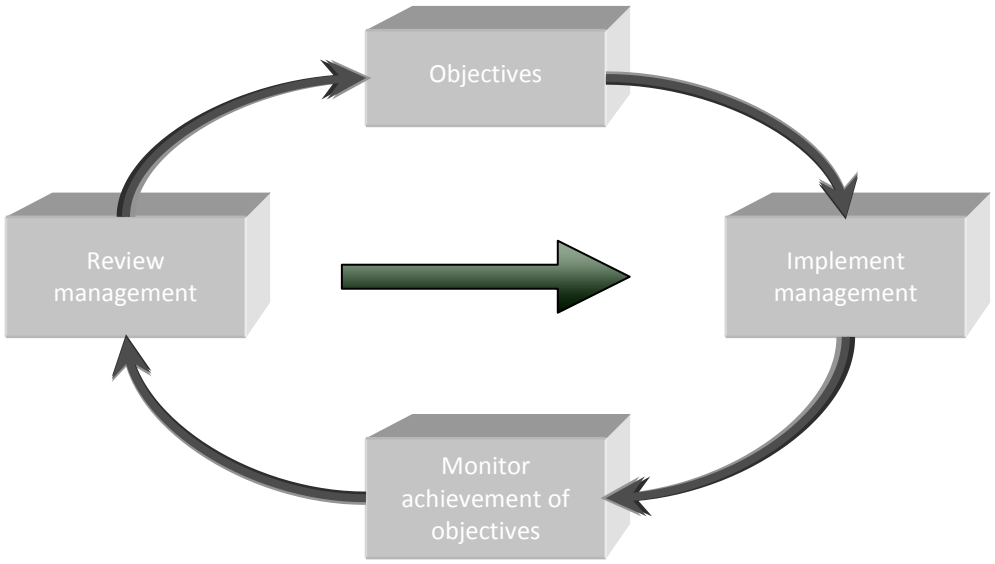

Figure 1.2 The adaptive management cycle

Adaptive management enables protected area managers to:

i) Learn through experience.

ii) Take account of, and respond to, changing factors that affect the protected area.

iii) Continually develop or refine management processes.

iv) Adopt best practices and new innovations in biodiversity conservation management.

v) Demonstrate that management is appropriate and effective.

1.5.2 Collaboration and transparency

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

Public consultation has been undertaken through a series of meetings and discussions with key stakeholders culminating in a key stakeholder workshop,

held on the 2nd of July 2013 and October 2013. Furthermore, the draft management plan has been made available for public review and comment in September 2013 prior to its finalisation. This process has ensured a great deal of valuable input into the development of the management plan, the outcomes of which have been incorporated into it. A detailed public participation report is available upon request from the WNR management.

2) DESCRIPTION OF WEENEN NATURE RESERVE AND ITS CONTEXT

2.1 Institutional and administrative framework for the management of WNR

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

Management of WNR will be undertaken in accordance with relevant legislation and the management policies of Ezemvelo, which includes a commitment to maintain the character and ecological, cultural and aesthetic integrity of the site.

The KwaZulu-Natal Nature Conservation Board will be responsible for reporting on the management of WNR 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 nature reserve through the relevant provincial departments, district and local municipalities.

2.2 The legislative basis for the management of Weenen Nature Reserve

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

The Protected Areas 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". The Act sets out the mechanisms for the declaration of protected areas and the requirements for their management.

A detailed list of relevant legislation is provided in *Appendix B – List of statutes to which the WNR is subject*. Managers are required to familiarise themselves with the purpose and contents of the statutes and their subsequent amendments and regulations.

2.2.1 Proclamation status of Weenen Nature Reserve

Weenen Nature Reserve, consisting then of the Remainder of the farm Boesmansrivierpoort No. 1386 (547.9448 ha) and the Remainder of the farm

Onverwacht No. 911 (2 381.0440 ha) was first established through Government Notice No. 116 of 1975.

In Government Notice 85 of 1981 the following farms were added to the Weenen Nature Reserve and proclaimed as such:

- Lot 225 Weenen Township (1,5563 ha)
- Lot 226 Weenen Township (1,3582 ha)
- Lot 227 Weenen Township (1,0858 ha)
- Lot 379 Weenen Township (660,1598 ha)
- Sub 2 of Farm Mona No. 2023 (60.2352 ha)
- Sub 1 of Farm Correction No. 7949 (7,3126 ha)

In 1982 in Government Notice 52 the Subdivision 2 of Bosman Rivier's Poort No. 1386 (487, 2419 ha) was added to the Weenen Nature Reserve and in Government Notice 31 of 1985 Sub3 of the farm Onverwacht No.911 (22,0628 ha) and Sub 4 (of (1) of the farm Onverwacht No. 911 (15,6419 ha) was proclaimed as part of the Weenen Nature Reserve.

The final consolidation took place in Government Notice 56 of 1986 when the Sub 4 of 1 of Bosmans Riviers Poort No. 1386 (735, 7595 ha) and Sub 9 of Vrisgewaagd No. 1238 (31, 5604 ha) was proclaimed as a nature reserve and formed the consolidated Weenen Nature Reserve. *See Appendix C – Proclamation of Weenen Rature Reserve.* In terms of Section 12 of the Protected Areas Act, protected areas that were protected in terms of provincial legislation, prior to the commencement of the Protected Areas Act, which would be eligible to be declared as nature reserves in terms of the Act, must be regarded to be a nature reserve for the purposes of the Protected Areas Act. The implication of this is that Weenen Nature Reserve is legally considered to be a proclaimed nature reserve in terms of the Protected Areas Act.

2.2.2 Invasive species control in terms of the Biodiversity Act

In terms of Section 76 of the National Environmental Management: Biodiversity Act (No.10 of 2004), the management authority of a protected area must incorporate an invasive species control plan in the protected area management plan. This is addressed in *Section 3.*

2.3 The policy framework guiding the management of Weenen Nature Reserve

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

i) The White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997.

ii) The Bioregional Approach to South Africa's Protected Areas, 2001/2002.

iii) Community Based Natural Resource Management Guidelines, 2003.

iv) National environmental management principles set out in section 2 of the National Environmental Management Act.

v) Relevant norms and standards set by the Minister and MEC in terms of the Protected Areas and Biodiversity Acts.

Within the province, Ezemvelo has adopted a Five Year Strategic Plan and Performance Plan for 2009-2014, which has developed the following corporate strategic profile:

VISION

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

MISSION STATEMENT

"To ensure effective conservation and sustainable use of KwaZulu-Natal's biodiversity in collaboration with stakeholders for the benefit of present and future generations."

STRATEGIC GOALS

i) To conserve indigenous biodiversity in KwaZulu-Natal both within and outside of protected areas.

ii) To be a sustainable, well-resourced and capacitated biodiversity conservation and ecotourism organisation.

iii) To foster the value of biodiversity conservation with stakeholders.

iv) To be an efficient, effective and compliant organisation with good governance.

v) To effectively promote the mandate of the organisation to stakeholders.

CORE VALUES	
Integrity	At all times we act morally, ethically and with honesty.
Respect	We treat stakeholders with patience, politeness and acknowledge and value their right and those of the environment.
Accountability	We involve stakeholders in the organisation's activities with a culture of openness and are answerable for the outcome of our actions and activities.
Team work	Working together to achieve our vision through goals.
Innovation	An adaptable organisation that embraces the culture of creativity and learning.
Excellence	We are a progressive organisation applying best practices to achieve the highest quality and standards.
Commitment	At all times we undertake our activities with passion, loyalty and dedication.
Productivity	We undertake to produce results timeously, efficiently and effectively.

A number of policies, specific to particular areas of operation, have also been developed by Ezemvelo KZN Wildlife *(Appendix D – List of policies, unpublished documents and supporting documents)*. These policies have been considered and applied within the plan, where relevant. The nature reserve's managers are required to be familiar with them and to apply them in managing Weenen Nature Reserve.

The management plan has utilised this body of policies to develop a strategic and operational management framework for Weenen Nature Reserve that is consistent with the broad goals and specific policy requirements of Ezemvelo KZN Wildlife.

2.4 The regional and local planning context of Weenen Nature Reserve

2.4.1 The National Protected Area Expansion Strategy

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

In terms of the NPAES, the areas around the southern, south west and north western boundary of Weenen Nature Reserve are identified as priorities for protected area expansion. The nature reserve falls within Region 37 of the National Protected Area Expansion Strategy focus areas, the Thukela Focus Area in KwaZulu-Natal.

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

2.4.2 The Provincial Protected Area Expansion Plan

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

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

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

In order to capatalize on these opportunities it is of great importance to resolve all issues regarding the settlement of the land claim and co-management of the area.

2.4.3 EIA Regulations in terms of NEMA

In terms of the National Environmental Management Act (No.107 of 1998) environmental impact assessment (EIA) Regulations, various activities require environmental authorisation before they may commence. In addition, in terms of Regulation RN.546, Listing Notice No.3, there are a number of activities that require environmental approval specifically as a result of their proximity to a protected area. The implication of this is that if any of the activities listed in *Appendix E - Listed activities Regulation R.546, Listing Notice No. 3*, are proposed in the nature reserve, or within five kilometres of it, they will be subject to either a basic assessment or a full scoping and EIA process. A number of general activities and those proposed for either tourism development or operational management within the nature reserve or its buffer areas will thus also require environmental authorisation.

2.5 The history of Weenen Nature Reserve

2.5.1 Origins of the name of Weenen Nature Reserve

The name "Weenen" originates from the town that is situated approximately 8 km from the protected area. The name is of Dutch origin and means "to weep" by the European settlers which established the town.

2.5.2 History of conservation in Weenen Nature Reserve

Records of private ownership of the two adjoining farms Onverwacht and Bosmans Rivier Poort date from 1830 and 1856 respectively. Prominent people such as Andries Pretorius and Sir Theolphilus Shepstone are linked with its early title deeds. However, on 18 March 1948 (Deed of transfer No. 2350), the State expropriated the two areas. The expropriation was deemed necessary as a result of serious erosion caused by uncontrolled settlement of indigenous people and attendant stock when the areas were used as "labour tenant farms". The area was then taken over by the Director of Soil Conservation with a view to research and demonstrating of methods for combating soil erosion.

This continued for 25 years until on the 1st of April 1975 when the area was handed over to the Natal Parks Board and promulgated as Weenen Nature Reserve in Proclamation Notice 116 of 1975.

The then Natal Parks Board (now Ezemvelo KZN Wildlife) made representation for the control of the farm Onverwacht 911 and in 1973 it was decided at a meeting of the local farmers and other interested bodies that the farm together with certain other lands including proposed portion of the Town commonage should be acquired by the Natal Provincial Administration and controlled as a nature reserve by the Natal Parks Board.

A report of the reclamation work that has commenced in 1950 was prepared by the then Chief Technician Mr. C.W.T. Apsey. The Department of Agriculture had spent enormous sums of money on reclamation and they wanted to ensure that the results of their efforts would not be wasted.

The Department of Agriculture Credit and Land Tenure entrusted the land to the Natal Provincial Administration under the following conditions:

- That the land shall be reserves and not transferred to the Natal Provincial Administration;
- That the land shall be used solely for the purpose of establishing a nature reserve and public pleasure resort;
- That the use to which the land is placed, such as the introduction of game etc., remain subject to the approval of the Minister of Agriculture;

- That should the land at any time not be required by the Natal Provincial Administration, the control thereof will reinvest in the Department of Agriculture Credit and Land Tenure.

Apparently from the early 1900's until 1944, both farms had been used as "labour farms". The consequent damage due to an overpopulation of people and their domestic stock on the areas became so serious by 1944 that the State intervened and served expropriation notices, firstly on Onverwacht on 8 December and then Bosman's Poort Rivier on 27 June 1945. The State finally took possession of the land on 23 December 1947 by Deed of Transfer No. 2350 dated 18 March 1948.

The land was handed over to the Director of Soil Conservation for research and demonstration of methods of combating soil erosion. Reclamation work was carried out between 1950 and 1971 when the Department of Agriculture Credit and Land Tenure was approached through the Natal Provincial Administration to acquire the land to develop a nature reserve. This had the backing of the Weenen Town Board, the Farmers Association and the Soil Conservation Committee. Protracted negotiations followed for several years culminating in the proclamation of the reserve by the Administrator of Natal in Proclamation 116 of 1975 with effect from 1 April 1975.

Mention was made in the inspection report of 1959 of the Weenen Wildlife Reserve (June 1956) situated in the lower regions of the Tygerkloof valley. This reserve is now incorporated in the Weenen Nature Reserve.

A narrow gauge railway line linking Estcourt and Weenen traversed the reserve historically but this is no longer in use; the remnants of Mona Station can still be seenand the route of the railway line is used as part of the 4x4 route.

2.5.3 History of eco-tourism in Weenen Nature Reserve

Weenen Nature reserve is open to day visitors and there is also a camping siteand a single self-catering cottage in the reserve. The road network makes provision for game drives with viewpoints and picnic sites along the route. A rustic tented camp was built for environmental education purposes with money received from the Joint Services Board, but is seldom if ever used for this purpose anymore and is in need of serious maintenance.

2.6 Ecological context of Weenen Nature Reserve

2.6.1 Climate and weather

Weenen Nature Reserve is situated in the summer rainfall region, receiving most of its rain between November and March, with a peak in January. Its mean annual precipitation is 714 mm according to the readings taken from a rain gauge on station.

The mean annual temperature of the area is 17˚C, with mean summer (January) minimum and maximum temperatures of 15.7˚C and 27.7˚C and mean winter (July) minimum and maximum temperatures of 2.5˚C and 19.4˚C recorded in the nearby town of Estcourt. Frost is common from June to July. According to Breebaart *et al*. (2001) a cool to cold winter extends from June to September. No records of snow exist for the area; however, hail has been recorded at the nearby Estcourt Town.

2.6.2 Topography

The protected area comprises undulating topography in the northern and central sections, while the southern and eastern sections are characterized by steep, rocky slopes (Breebaart *et al.*, 2001). The Bushman's River Valley is almost sheer with a drop of about 300 m and the prominent dolerite hill in the south is incised by numerous, mostly seasonal, streams (Hughes, 1989). This protected area has generally been classified as stony land, steep land, land with very shallow soils and / or land that has been denuded of soil by gully and sheet erosion. Only a small part of the reserve has not been eroded.

2.6.3 Geology and Soils

The geology of the protected area is predominantly Shale, but also comprises Mudstone and Sandstone of the Beaufort Series (i.e. Estcourt and Adelaide Formations). Dolerite outcrops also occur throughout the protected area (Hughes, 1989; Breebaart et al., 2001).

Weenen is dominated by shallow soils (< 300 mm deep) which are susceptible to erosion. During the 1950s this area was so heavily degraded, through overgrazing and poor cultivation practices, that many areas were stripped of their subsoil and the underlying shale and sandstone were exposed (Camp, 2001).

The protected area consists of 18 soil forms (Hughes, 1989) that include Mispah, Glenrosa (i.e. soils with grey/brown topsoils), Milkwood, Mayo (i.e. black topsoils), Shortlands (i.e. soils with red topsoils), Avalon, Westleigh, Glencoe (i.e. soils with plinthic horizons), Estcourt, Swartland, Sterkspruit, Valsrivier (i.e. soils with marked textural differentiation between topsoil and subsoil = duplex soils), Boheim (i.e. soils with black, structured subsoils) and Rensburg, Dundee, Katspruit, Oakleaf and Champagne (i.e. soils of valley sites [generally poorly drained]).

The Mispah soil form that is by far the most common in the protected area is found in association with rocky outcrops and these soils are always < 300 mm deep. Shortlands soils are found throughout the protected area and are probably the second most widespread soil after Mispah. Although isolated patches of deeper Shortlands do occur, almost all of the areas of Shortlands soils are very shallow and interspersed with dolerite outcrops.

The Glenrosa soil form is found mainly in the western part of the protected area over Beaufort shale and is generally between 300 mm and 600 mm deep. The Milkwood soil form occurs in isolated patches across the protected area, usually where dolerite is the parent rock. Avalon soils are most common on the flatter areas in the western part of the protected area and these soils are somewhat deeper than the other soils. The Oakleaf soil form is of alluvial origin and is found along river banks and on river terraces throughout the protected area. These can be quite deep soils, ranging from 400 – 1000 mm in depth. Mayo is not a very common form but occurs on steep northern slopes of the Bushman's River Valley, where dolerite boulders occur as well as on the north-western part of the protected area. The Champagne soil form was found in a single area adjacent to the dam near the campsite.

2.6.4 Geomorphology

The protected area's geomorphology is characterized by a dolerite hill in the south and south-east, which is incised by numerous, mostly seasonal, streams. In the west, the protected area is bounded by a more precipitous escarpment. It comprises gentle, undulating landscape in the interior, with few gentle hills but also consists of steep slopes along stream and river valleys in places.

2.6.5 Hydrology

Weenen Nature Reserve is traversed by three rivers, the Bushman's, Nyandu and uNothongo. All three rivers flow into the uThukela River (Breebaart *et al.*, 2001). The largest of the three rivers is the Bushman's. The protected area is also traversed by a network of seasonal streams which are a useful source of water when they are not dry. The Bushman's River flows through a steep valley in the south of the protected area and the valleys are almost sheer with a drop of about 300 m (Hughes, 1989). The Bushman's River is the only perennial, whereas the other rivers are seasonal. The dolerite hill in the south is incised by numerous, mostly seasonal, streams that flow into the Bushman's River. These streams are an important water source, especially for oribi, which reside south of the Bushman's river, thus relieving them of the burden of walking into the deep valley of the Bushman's River in search of water. A series of earth dams have been created in the protected area, both for water provision but mainly as sediment traps for soil erosion control purposes. Most of the dams have filled up with sediments as planned and they have done an outstanding job with soil erosion control.

2.6.6 Vegetation

See Map D – Vegetation of Weenen Nature Reserve and Appendix F1 – Plant species of Weenen Nature Reserve.

Weenen Nature Reserve comprises three vegetation types, the Thukela Thornveld (vegetation type SVs 2), Thukela Valley Bushveld (vegetation type

SVs 1) and the KwaZulu-Natal Highland Thornveld (vegetation type Gs 6) [Muchina and Rutherford, 2006]. The protected area used to have more aloes than there are nowadays and it is suspected their decline may be due to browsing by eland. The old lands are dominated, predominantly, by tall thatch grass species such as *Hyparrhenia hirta* and *Hyparrhenia aucta* but are also invaded by *Acacia* trees. One of the old lands, situated on dolerite east of the bird hide, has a lot more *Acacia sieberiana* compared to the other old lands.

Only 0.7% of the Thukela Thornveld is under conservation, with Weenen and Isandlwana being the only formal protected areas conserving this vegetation type and its conservation target is 25%. Weenen Nature Reserve is the only protected area which protects the Thukela Valley Bushveld, however, the protected area protects only 0.5% of this vegetation type and its conservation target is 25% (Muchina and Rutherford, 2006). The proportion of the KwaZulu-Natal Highland Thornveld under conservation amounts to just 1.6%, with only 0.4% protected within Weenen Nature Reserve and its conservation target is 23%. The remaining 1.2% is conserved across Spioenkop, Ntinini, Wagendrift and Tugela Drift Nature Reserves.

The Thukela Thornveld occurs on valley slopes to undulating hills of the upper Thukela River basin in KwaZulu-Natal and fringes on the Thukela Valley Bushveld. Its vegetation is bushveld dominated by Acacia trees of variable density, ranging from wooded grassland to dense thickets with dense grassy undergrowth (Muchina and Rutherford, 2006). Grass species include: weeping love grass (*Eragrostis curvula*), common thatching grass (*Hyparrhenia hirta*), Natal red top (*Melinis repens*), guinea grass (*Panicum maximum*), red grass (*Themeda triandra*), hairy trident grass (*Tristachya leucothrix*), tassel three-awn (*Aristida congesta*), Smut's finger grass (*Digitaria erintha eriantha*), wire lemon grass (*Elionurus muticus*), curly leaf (*Eragrostis chloromelas*), sawtooth love grass (*Eragrostis superba*), spear grass (*Heteropogon contortus*), common bristle grass (*Setaria sphacelata*) and catstail dropseed (*Sporobolus pyramidalis*). The endemic cycad, *Encephalartos msinganus*, occurs in this vegetation type.

The Thukela Valley Bushveld vegetation type typically occurs in hot valleys of large rivers in KwaZulu-Natal, often on rocky rugged slopes and terraces mainly with deciduous trees of short to medium height, which include umbrella thorn (*Acacia tortilis*), scented thorn (*A. nilotica*), *A. natalitia* and prominent evergreen species such as wild olive (*Olea europaea subsp. africana*), shepherd's tree (*Boscia albitrunca*) and blue guarri (*Euclea crispa*) as well as succulents dominated by Euphorbia and Aloes species on shallow and eroded soils. In Weenen Nature Reserve the Thukela Valley Bushveld occurs along the valleys of the Bushman's River. Relatively few areas are dominated by succulents such as rubber euphorbia (*E. tirucalli*) and common tree euphorbia (*E. ingens*) [Muchina and Rutherford, 2006; Hurt and Camp, 1999b]. Endemic species occurring in this vegetation type include: *Encephalartos cerinus*, *Gymnosporia macrocarpa*, *Blapharis natalensis*, *Barleria argillicola*, *Euphorbia pseudocactus*, *Gasteria tukhelensis* and

Ceropegia cycniflora. The *B. greenii* and *B. Argillicola* which are both KZN endemics and known to occur only in the Weenen Game Reserve area and surroundings are listed as Vulnerable (VU) and Critically Endangered (CR) respectively on the IUCN Red List (Makholela *et al.* 2003).
The KwaZulu-Natal Highland Thornveld occurs on both moist hilly, undulating landscapes and dry broad valleys of KwaZulu-Natal. This vegetation type is characterized by tall tussock grasses, usually dominated by common thatching grass (*Hyparrhenia hirta*). Occasionally, savannoid woodland elements creep in with scattered paperbark thorn (*Acacia sieberiana var. woodii*) and small pockets of sweet thorn (*Acacia karroo*) and scented thorn (*Acacia nilotica*) establishing. The occurrence of the Endangered and endemic shrub, Barleria greenii as well as endemic succulents such as *Aloe gerstneri* and *A. incospicua* has been noted in this vegetation type.

The grazing capacity for game in this area has been set at 6 hectare per animal unit (AU) [Rowe-Rowe, 1987].

2.6.7 Fire regime

See also *Section 6.6.1 – Fire management*. Fire is a key driver of ecological dynamics in southern African systems, which are largely driven by patterns of disturbance. Fire contributes to patterns of disturbance by removing the vegetative growth of plants, and in contrast to grazing it does this non-selectively, which reduces the competitive advantages of species adapted to grazing.

A number of plant species in areas that are prone to frequent intense fires, such as the Drakensberg and most of the humid grassland regions of KwaZulu-Natal, appear to have evolved adaptations in response to fire, indicating its historical evolutionary role (Hilliard and Burtt 1987; Trollope 1999, O'Connor 2005).

Conservation management is centered on the manipulation of fire and grazing, the key ecological processes influencing the biodiversity and ecosystem processes in the protected area. There is a poor understanding of what the "natural" (historic) fire and herbivory regimes would have been and it is not practical to apply these given the relatively small size of the protected area and surrounding land-use. Management instead aims to promote a shifting mosaic of patches of different age and size - thereby creating a diversity of habitats. This approach will satisfy the known requirements for key species (e.g. black rhino and oribi) while also providing the best insurance policy for the majority of organisms whose habitat requirements and response to fire and herbivory are unknown.

2.6.8 Alien and Invasive species

An invasive species means any species, in terms of section 70 of the National Environmental Management: Biodiversity Act (No. 10 of 2004), who's establishment and spread occurs outside of its natural distribution range. Alien plant species have been planted or have established themselves within

the protected area 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 protected area. Their control and management is considered a management priority. Wherever possible and appropriate these plants should be removed from the protected area.

An ongoing time-bound programme to effectively control these alien weeds and invader plants within the protected area and 1km (buffer area) of the protected area boundary must be developed. State poverty relief programs such as 'Landcare', 'Working for Water', ''Working on Fire' and 'Working for Wetlands" should be used to full effect to complement the protected area budget for this management task.

Prior to 1998 the following species have been identified in Weenen Nature Reserve:

- Weeping Willow (*Salix babylonica*)
- Mauritius Thorn (*Caesalpinia decapetala*)
- Sisal (*Agave sisalana*)
- Red Sesbania (*Sesbania punicea*)
- Syringa (*Melia azedarach*)
- Wattle spp

During this time an invasive species control program aimed to control these species was in place but very little work was done between 1998 and 2010 due to lack of funding. In February 2011 the alien aand invasive species program was re-introduced, the following species covering an area of approximately 339 hectare concentrated along the Bushsman's River was added to the list:

- *Opuntia* spp
- Common Lantana (*Lantana camara*)
- Black Wattle (*Acacia mearnsii*)
- Jacaranda (*Jacaranda mimosifolia*)
- Bugweed (*Solanum mauritianum*)
- *Populus* spp

At this time during the site visit there was no indication that the Weeping Willow (*Salix babylonica*), Mauritius Thorn (*Caesalpinia decapetala*), Sisal (*Agave sisalana*) and Red Sesbania (*Sesbania punicea*) are still present in the area.

The 339 hectare was split into two priority areas and an annual plan was drafted and implemented in 2011 and 2012. During this time two bio-control agents was released on the *Opuntia* spp namely the Cactus Moth (*Cactoblastis cactorum*) and the Cochineal Bug (*Dactylopius* spp).

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. Their control and management are considered a management priority. Wherever possible and appropriate these animals must be removed from the protected area.

Alien animals that are present and are a threat / potential threat to the ecological processes / tourism experience in the protected area will be dealt with will be dealt with according to a control program/policies or the National Environmental Management: Biodiversity Act Alien Species Regulations.

Mallard ducks, alien wild ungulates, "domesticated" guinea fowl and feral species are all potential threats and may be found in the protected area sporadically.

2.6.9 Mammalian fauna

See Appendix F - Species list for WNR. The protected area has been surveyed for faunal diversity by Ezemvelo staff and a species list has been produced, but needs to be updated *(Appendix F2)*. A protocol for compiling and updating species checklists is in place and needs to be followed.

Twelve families of mammals, represented by 29 genera and 36 species, have been recorded in Weenen Nature Reserve. Subsequent to the proclamation of Weenen as a protected area in 1975, antelope such as Mountain Reedbuck (*Redunca fulvorufula fulvorufula*), Steenbok (*Raphicerus campestris*), Bushbuck (*Tragelaphus scriptus*) and Common Duiker (*Sylvicapra grimmia*) were reported to occur naturally at Weenen by the former senior ranger, Mr. M. H. Astrup.

Nine Oribi (*Ourebia ourebi*) were also sighted later on the newly acquired land south of the Bushman's River in 1988. Considering that the oribi are classified as an Endangered (Friedmann and Daly, 2004), the existence of this population is important to the conservation of oribi despite small population size. There is an estimated 600 oribi individuals left in the wild and the conservation target is 3000 individuals (Marchant *et al.*, 2005), which makes even small populations critical to the survival of the species. While oribi (*Ourebia ourebi*) have been known to occur in the protected area, their current status is unknown. Given their endangered status (Friedmann and Daly, 2004) and the potential to maintain a population within the protected area, specific management interventions need to be considered to maximise the population within acceptable limits of the behavioural ecology of the species. Translocations and introductions must be in line with the Oribi Conservation Plan (Marchant *et al*. 2005). Hunting with dogs poses a key threat to the oribi population in the protected area and needs to be addressed.

Since the land on which Weenen Nature Reserve is situated had been mismanaged in the past, avoidance of hindering or reversing the recovery of

the veld was the primary consideration in deciding what large herbivores might be introduced. The other consideration was to limit the introductions to only the species indigenous to the area. The species that were known or suspected to have occurred in the Weenen area included Black Rhino (*Diceros bicornis minor*), Buffalo (*Syncerus caffer caffer*), Common Reedbuck (*Redunca arundinum arundinum*), Eland (*Tragelaphus oryx oryx*), Kudu (*Tragelaphus strepsiceros strepsiceros*), Oribi (*Ourebia ourebi*), Red Hartebeest (*Alcelaphus buselaphus caama*), and Plains Zebra (*Equus quagga antiquorum*).

The abovementioned species except oribi, were locally extinct when Weenen was proclaimed as a protected area but they were subsequently reintroduced (*Table 2.6.1*). White Rhino (*Ceratotherium simum simum*), Blue Wildebeest (*Connochaetes taurinus*), Giraffe (*Giraffa camelopardalis*), Roan (*Hippotragus equinus equinus*) and Bushbuck (*Tragelaphus scriptus*) were also introduced.

Table 2.6.1: Large herbivore introduction into WNR

Year	Species	Number	August 2007 Population Numbers
1978	Kudu	55	185
1979	Eland	12	36
1979	Bushbuck	6	Not counted
1979	Reedbuck, Common	24	Not counted
1979	Rhino, White		
1979	Wildebeest, Blue	8	Removed
1980	Giraffe	4	32
1980	Hartebeest, Red	14	190
1980	Zebra	17	286
1983	Rhino, Black		
1983	Buffalo	8	Removed
1985	Serval	1	Not counted
1988	Roan	9	Removed
1989	Ostrich	4	42
1990	Klipspringer	11	Not counted
1993	Waterbuck	24	108
2006	Dassie, Rock	30	Not counted

The presence of species such as Nyala (*Trageluphus angasii*), Impala (*Aepyceros melampus melampus*) and Warthog (*Phacochoerus africanus*) is a result of immigration from neighbouring game farms. Due to the detrimental effects of the feeding bahaviour of these species on the veld, they are regarded as undesirable and a management decision has been taken to eliminate them from the protected area. The Roan (*Hippotragus equinus equinus*), which were introduced out of their natural geographical range of distribution, did not perform well and were eventually removed in 1998.

Blue Wildebeest (*Connochaetes taurinus*) [8 animals] were accidentally introduced from Midmar and had to be removed almost immediately after they were released (Physick, *pers. comm.*). According to Physick (*pers. comm*.) it was because of the threat of a viral disease, Bovine Malignant Catarrhal Fever commonly known as "Snotsiekte", which the wildebeest could potentially transmit to cattle on adjacent farms that there was never any formal approval for the introduction. African Buffalo (*Syncerus caffer caffer*) performed very well, with an annual growth rate of 11.7%, but had to be removed in 1998 due to the outbreak of Corridor disease (*Theileria parva lawrencei*). *T. parva lawrencei* is a protozoal parasite which is carried, particularly, by the brown ear-tick (*Rhipicephalus appendiculatus* and the Zambezi brown ear-tick (*Rhipicephalus zambesiensis*). The last remaining buffalo in Weenen was removed on 12 September 2000 and the quarantine period imposed by the State Veterinarian was lifted in October 2002.

Subsequent to the expiry of the quarantine period a probe release (*i.e.* introduction of few individuals of susceptible species to a particular disease into an area to investigate the presence and/or absence of such a disease in that particular area) of eight Nguni cattle, donated by the Department of Agriculture, was done to test for the presence of the Corridor disease in Weenen Nature Reserve. Instead of the 60 days that the cattle were initially scheduled to stay in the protected area, they stayed for an extended period of 81 days following consultation with the local State Veterinarian. There were no cattle mortalities and, resultantly, the State Veterinarian declared Weenen Nature Reserve free of Corridor disease. Nevertheless, the scarcity and high costs of disease-free Buffalo have delayed the reintroduction of buffalo to Weenen.

Although at less of a risk than the Black Rhino, the White Rhino (*Ceratotherium simum*) is still Near Threatened. Weenen Nature Reserve maintains a moderate sized population that provides a regular supply of animals for auction to seed and support other populations. The maintenance and security of this species is a priority.
White rhino (*Ceratotherium simum simum*) is also performing fairly well and they are presently growing at a rate of 11.3% per annum.

Black Rhino (*Diceros bicornis*) are an Endangered species with a current estimate of 1258 animals world wide that is less than half the 3900 animals believed to be needed to sustain this species (Goodman *et al.* 2008). All available black rhino habitat needs to be used to achieve this target of 3900 animals. Thus, although Weenen Game Reserve is currently too small to maintain the minimum viable population number of 20 animals (which would require at least 8000ha), the protected area is nonetheless still making a significant contribution to the conservation of this species. Given the small size of its population from a founder population of only four animals however, this species needs to be actively managed as a metapopulation to remain viable. It is also critical that the success of this population be closely monitored to allow for informed management decisions and timely interventions to be made.

There is the potential to connect Weenen Nature Reserve to surrounding protected areas to secure sufficient land to maintain a viable population of this vulnerable species.

Other Red Data Book species occurring in Weenen Nature Reserve include Serval (*Leptailurus serval*), Greater Red Musk Shrew (*Crocidura flavescens*), Least Dwarf Shrew (*Suncus infinitesimus chriseos*), Lesser Dwarf Shrew (*Suncus varilla orangiae*) and Single-Striped Mouse (*Lemniscomys rosalia spinalis*).

Weenen Nature Reserve lies within the home range of the Critically Endangered Rough-Haired Golden Mole (*Chrysospalax villosus*) however the presence of this species has not been confirmed in the protected area. While there are no other management interventions other than securing its habitat at the interface of grassy and wetland vegetation, it is important for the conservation of this species to know how well represented it is.

During the time of intense soil erosion mammalian fauna were drastically depleted due to habitat deterioration and excessive hunting.

After the erosion issue had been dealt with, several animals naturally recolonized the area. These included Grey Duiker (*Sylvicapra grimmia*), Bushbuck (*Tragelaphus scriptus*), Steenbuck (*Raphicerus campestris*), Black-Backed Jackal (*Canis mesomelas*), Cape Clawless Otter (*Aonyx capensis*), Slender Mongoose (*Herpestes sanguineus*), Rock Hyrax (*Procavia johnstoni*), Mountain Reedbuck (*Redunca fulvorufula*), Scrub Hare (*Lepus saxatilis*), Porcupine (Hystrix africaeaustralis), Aardwolf (*Proteles cristatus*) and Large Spotted Genet (*Genetta tigrina*).

2.6.10 Avifauna

Weenen Nature Reserve is an Important Bird Area and provides a variety of habitat for birds. A vulture feeding restaurant is in operation in Weenen Nature Reserve where Zebra are utilised, as part of predator simulation, to provide carcasses mainly for Cape Vulture that regularly visits the protected area. Sixty five families, 157 genera and 246 species of birds have been recorded at Weenen Nature Reserve. Nine species are classified as Vulnerable including, Blue Crane (*Anthropoides paradiseus*), Whitebellied Korhaan (*Eupoditis cafra*), African Grass Owl (*Tyto alba*), Southern Ground-Hornbill (*Bucorvus leadbeateri*), Tawny Eagle (*Aquila rapax*), African Marsh-Harrier (*Circus ranivorus*), Cape Vulture (*Gyps coprotheres*), Martial Eagle (*Polemaetus bellicosus*) and Southern Bald Ibis (*Geronticus calvus*). The remaining eight Red Data Book species are either classified as Lower Risk or Data Deficient.

2.6.11 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. See *Appendix F – Species List for WNR.* Among the amphibians, the raucous toad (*Bufo rangeri*) is endemic to southern Africa. Reptiles including the Natal hinged tortoise (*Kinixys natalensis*) and Southern African Python (*Python sebae*) are Red Data Book species (Branch, 1988). The Natal Hinged Tortoise is classified as Rare and it is also a southern African endemic and near endemic to KwaZulu-Natal, whereas the southern African Python is classified as Vulnerable. The Common Slug-Eater (*Duberria lutrix lutrix*), which is endemic to southern Africa, has also been recorded at Weenen and, according to Marais (2004) it prefers damp localities and only feeds on slugs and snails.

2.6.12 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. *See Appendix F1 – Species List of WNR.*

2.6.13 Fish

Two families, four genera and five species of fish have been recorded at Weenen Nature Reserve. One of the fish species; KwaZulu-Natal Yellowfish (*Labeo natalensis*) is endemic to KwaZulu-Natal Province.

2.7 Cultural context of Weenen Nature Reserve

Dr. T. Maggs from the Natal Museum indicated in an undated unpublished report that there are several sites of recently occupied homesteads which followed a traditional Zulu settlement pattern; with the huts being the traditional pole and thatch beehives that are fairly rare today. Based on examination of various sets of aerial photographs he also identified several earlier homesteads where there was no indication of recent settlement. Both these settlement types contained prominent features such as cattle pens and outer surrounding walls.

The report indicated that Weenen Nature Reserve is rich in archaeological remains and makes reference to two rockpainting sites, there could be numerous Stone Age and Iron Age sites and that there is a need for a full assessment of the cultural sites of Weenen NR. There are also several grave sites with the grave of a Zulu prince located close to the main gate.

The Maggs report indicated that significant damage is done to archaeological sites when stone walls are robbed to provide building material. He indicated that although some of the stone structures are relatively recent they:

"Constitute a record of conservative rural settlement pattern during a period of rapid socio-economic change in South Africa around the time of the Second World War. Furthermore the history of the Weenen Nature Reserve will always be linked with the cycle of labour farm, environmental degradation, expropriation, soil conservation and nature conservation. The later homesteads are the most enduring sign of the labour farm period and can therefore be seen as an important part of the Reserve's history."

It is recognised that there is a need for a full assessment, mapping and value statement for the Weenen Nature Reserve cultural sites. This will then assist in a standard operating procedure for the various sites and also the feasibility of potential tourism activities linked to these sites.

The initial assessment by AMAFA (Rossouw, 2013) indicated that there are two grave sites of importance in the Weenen NR. The first is the grave of chief Nduma (died 1964), who was a descendant of King Mpande. The fence around the headstone is made of dolerite rock while the headstone is made of bricks and cement, plastered and painted. The Daughter's grave consists of a shale wall with a Buffalo Thorn Tree in the middle and there is no headstone present.

The graves are of local value since chief Nduna was a descendant of King Mpande and the graves are known to local communities and are visited by the communities for spiritual reasons.

There is also a historical homestead which consists of a complex settlement with ruins, an ash-pit and grave. This settlement pattern is of high research value and physical features are characteristic of traditional Zulu settlement patterns. Some of the buildings were inhabited by white settlers or Zulu farm laborers who had enough contact with European settlers to borrow cultural trademarks and building techniques. The site could be a multi-cultural site but the real significance could only be confirmed with further archaeological excavations. The settlement patterns on labor farms represent a specialist field of historical archaeology, dealing with the contact phase between Zulu indigenous people and European settlers. This site could potentially be of provincial importance but this could only be established through further excavations.

The second historical settlement homestead site is possibly of European origin, but was used afterwards by Zulu laborers. This can be seen by the small circular areas that were possibly used as a goat kraal or as a space to store grain.

There are two known rock art sites with the first the Onverwacht 911 engraving site a flat rock on top of a mountain with various paintings. The

second rock art site consists of a variety of paintings of humans and various animal species.

The second rock art site is of high significance as the Roan Antelope painting is rare and paintings of baboons could have spiritual meanings.

In general the diverse cultural heritage sites of Weenen Nature Reserve are currently only accessible to local communities on request.

2.8 Socio-economic context

The Weenen Nature Reserve falls within the Uthukela District Municipality and the Umtshezi Local Municipality. The following information have been summarised from the uMtshezi Municipality IDP 2011/2012:

The region consists mostly of farmlands and rural settlements; the economy is based on manufacturing and trade including tourism and agriculture. The area forms part of the Tugela River Catchments that extends from the Drakensberg Mountains and the Freestate to the Indian Ocean in the East.

In 2008 the Umtshezi Municipality and the Bushman's River Tourism Association developed a tourism route through the area which is known as "The Drakensberg Experience". The municipality recognised that uncontrolled development can lead to adverse effects on natural habitats, cultural landscapes and air and water quality. They also highlighted the need for directional tourism signage to support the tourism products in the area.

The Umtshezi Municipality incorporated the Ezemvelo KZN Wildlife Conservation Plan into their Spatial Development Framework. The municipality use this this tool to identify areas that are high in biodiversity that needs to be protected from negative impacts of inappropriate developments.

The Uthukela District Municipality have as part of their vision the principle to enhance the tourism sector. This vision is supported by specific objectives to enhance tourism linkages along the uKhahlamba Drakensberg Park World Heritage Site and Battlefield routes. They also highlight the need to improve access roads to tourism centres as well as improved tourism signage. The Uthukela Tourism Strategy 2012 provides opportunities for collaboration in terms of tourism requirements.

The total population of the Uthukela District Municipality based on the 2011 Census is 66 848 and a large proportion of these people are living with insufficient services. A large portion of the population is under the age of 15 and unemployment levels are high.

These factors contribute to increase poaching and or illegal natural resource harvesting which present an increasing threat to biodiversity.

2.9 Operational management within Weenen Nature Reserve

2.9.1 Infrastructure

Infrastructure located in WNR is indicated on *Map E – Infrastructure in Weenen Nature Reserve.*

Management Infrastructure:

- Office
- Reception office
- Squaredavel
- Workshop
- Storeroom x 2
- Shed x 3
- Stable
- Field Ranger outpost
- Fencing 36 km
- Roads – gravel 25 km

Staff accommodation:

- Communal kitchen/ bathroom x 2
- Bachelor Flat x 9
- House x 4

Tourism Infrastructure:

- Picnic Site with ablutions
- Camp site and one ablution block
- Squaredavel
- Cottage

2.9.2 Staffing establishment

Currently there are 22 permanent employees based at WNR and temporary workers are occasionally employed as required.

The permanent staff compliment consists of:

- Officer in Charge
- Front Desk Manager
- Admin Clerk
- Principal Field Ranger
- Field Ranger X 9

- Tractor Driver
- Heavy Duty Driver
- Camp Attendant
- Supervisor (Vacant)
- General Assistant X 6

See also *Section 5 – Administrative structure for the proposed staffing establishment for WNR*.

Carbutt and Goodman (2010) reflect the staffing level of WNR as 0.0045 per hectare. Even though this compare fairly good with other protected areas of similar size there are still key positions required to effectively manage WNR as per *Figure 5.1*.

2.9.3 Funding levels at Weenen Nature Reserve

Carbutt and Goodman (2010) indicated the funding levels at WNR for the operational budget as R 96.89 per hectare and a total budget of R 124.25 per hectare. Although this compares favourable with other protected areas of similar size there is an urgent need for capital investment in the reserve to specifically maintain and upgrade roads, fences and tourism infrastructure.

2.9.4 Management effectiveness in Weenen Nature Reserve

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

- Promote adaptive management
- Improve project planning
- Promote accountability

Such assessments are intended to enable conservation organisations to refine their conservation strategies, re-allocate budget expenditures, and develop strategic, system-wide responses to the most pervasive threats and management weaknesses (Carbutt and Goodman, 2010). They are not performance assessments of individuals but serve to reflect an organisation's proficiency for protected area management as a whole.

During the 2010 assessment the following Pressures and Threats have been identified:

Pressures:

- Climate change (droughts, flooding, habitat alteration);
- Bush encroachment;
- Disease (exotic);
- Erosion (man-induced);
- PA isolation;
- Siltation;
- Transportation and service corridors;
- Alien animals.

Threats:

- Climate change (droughts, flooding, habitat alteration);
- Poaching;
- Bush encroachment;
- Alien animals;
- Disease (exotic);
- Erosion (man-induced);
- Land invasion and disturbance;
- Siltation;
- Alien plants;
- Dam building and/or water abstraction; transportation and service corridors; unsustainable tourism.

The following issues have been raised during the 2012/2013 Management Effectiveness assessment for Weenen Nature Reserve:

- Information Management systems are poor and limit management effectiveness.
- Maintenance of infrastructure and fleet is taking place on an ad hoc base.
- There is limited ad hoc environmental awareness taking place but no formal, planned programs.

The overall score for Weenen NR for the 2012/2013 assessment was 66.24% which is slightly below the national minimum requirement of 67%.

2.10 Summary of management issues, challenges and opportunities

Table 2.10.1 Management challenges and issues

Key performance area	Issue that must be addressed
Legal compliance and	▪ Security concerns relating to the P 13 district road that traverses the reserve include the risk to human life due to accidents involving animals.

law enforcement	▪ Poaching in areas that are inaccessible as well as in areas where access control is difficult.
	▪ Stealing and vandalising of the fence on the south-eastern section of the reserve.
	▪ Land claim settlement process.
	▪ Signage warning the public that they are entering the reserve and should adapt their speed for safety purposes should be set up at the entrance of the reserve from the Weenen and Estcourt side.
Stakeholder engagement	▪ There is a need to improve relationships with communities; improve interaction with local, district municipalities and key stakeholders in general.
	▪ Local community access to the reserve needs to improve to facilitate an understanding and appreciation of the values of the reserve.
Buffer zone protection and regional management	▪ The requirements for the protection of the reserve values must be integrated in municipal planning documents.
	▪ Address service provision, access signage and marketing of the reserve as part of the greater landscape in collaboration with relevant municipalities.
Eco – tourism and Environmental Awareness	▪ Tourism infrastructure should be regularly maintained to ensure acceptable standards for roads, buildings and service infrastructure.
	▪ The reserve is not marketed sufficiently and this should be facilitated through collaboration with stakeholders.
	▪ Facilities for environmental awareness exist but are not regularly maintained and not often used.
	▪ A programme for bringing school children to the reserve needs to be implemented in collaboration with stakeholders.
Cultural Conservation Management	▪ A cultural assessment in collaboration with AMAFA to document and describe the cultural assets of the reserve needs to be done, including the rock art site present along the Bushmans Valley. As part of this assessment, the feasibility of a cultural trail should be investigated.
Conservation management	▪ Bush Encroachment
	▪ Control of areas of accelerated soil erosion.
	▪ Implementation of procedures for Natural Resource Use.
	▪ Implementation of procedures for Human/Wildlife conflict.

	▪ Implementation of the annual fire management plan to facilitate compliance with the National Veld and Forest Fire Act and to achieve ecological objectives.
	▪ Management of threatened and protected species.
Operational management	▪ Sufficient and consistent funding to implement the management plan for Weenen Nature Reserve.
	▪ Sufficient human resources.
	▪ The infrastructure in Weenen needs to be maintained regularly according to a maintenance schedule.
	▪ The current state of tourism roads is not acceptable and visitors cannot access all tourist areas in a safe manner. Roads need to be upgraded and thereafter regularly maintained.
	▪ The Bush camp has previously been used extensively for environmental awareness groups but is currently in need of an upgrade followed by regular maintenance.
	▪ Water supply and reticulation to both management and tourism infrastructure is not at an acceptable level with water shortage and quality concerns.
	▪ State of the boundary fence is not at an acceptable level and there is no fence in the south-eastern section of the reserve.

3) STRATEGIC MANAGEMENT FRAMEWORK

In an effort to ensure that WNR 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 nature reserve over the next five years and has been prepared collaboratively through a process involving stakeholders within Ezemvelo KZN Wildlife, the communities around the nature reserve, local and provincial government departments and other stakeholders.

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

3.1 Weenen Nature Reserve vision

To protect the biodiversity and cultural assets of Weenen Nature Reserve in collaboration with stakeholders

To achieve the vision and objectives of WNR and to manage the reserve effectively, adequate human and financial resources are critical issues that need to be addressed.

3.2 Objectives and strategic outcomes

An objective has been identified for each of WNR key performance areas, which follow from the management challenges, issues and opportunities, and relate to the important functions and activities necessary to protect, develop and manage it effectively. The objectives have then been translated into strategic outcomes, which form the basis for the management activities and targets set out in the operational management framework, described in *Section 6* below. *Table 3.1* sets out the key performance areas, the objective for each key performance area and the strategic outcomes, required to realise the objectives.

Table 3.1 Objectives and strategic outcomes for Weenen Nature Reserve

Key performance area	Objective	Strategic outcome
Legal compliance and law enforcement	Comply with and enforce legislation pertaining to the protection, development and management of WNR.	▪ Ensure that there is adequate law enforcement within the nature reserve. ▪ Collaborate with district, local municipalities and relevant government departments to ensure that public can safely traverse the reserve to and from Weenen town. ▪ Implement the outcome of the land claim settlement process.
Stakeholder engagement	Enable and maintain effective stakeholder relations through communication and collaboration.	▪ Constructive community involvement in the nature reserve's management through an effectively functioning liaison forum. ▪ Promote an understanding of the nature reserve values, importance and ecosystem goods and services.
Buffer zone protection and regional management	Protect the biodiversity and cultural assets of WNR by promoting compatible land-use and activities in areas surrounding the nature reserve.	▪ Determination and prioritisation of the buffer zone requirements around the nature reserve. ▪ Facilitate the expansion of the reserve through the incorporation of key areas around WNR. ▪ Capture the buffer zone considerations in municipal IDP's and SDF's.
Eco- tourism and Environmental awareness	Maintain sustainable eco- tourism in WNR to provide a high quality visitor experience whilst promoting the natural and cultural values of the reserve.	▪ Enhance the eco-tourism facilities of the reserve to a standard that it can be marketed as a provincial and national destination. ▪ Collaborate with district and local municipality to link Weenen NR with the regional tourism initiatives.

		▪ Develop and implement in collaboration with stakeholders an environmental interpretation and awareness programme.
Cultural heritage management	Ensure the protection and public appreciation of all cultural and heritage resources within the nature reserve in accordance with statutory regulations.	▪ Ensure the protection and the improved awareness of the cultural heritage values and Living heritage of WNR.
Conservation management	Protect the ecological integrity and cultural assets of WNR through active interventions based on principles of adaptive management.	▪ Develop and implement a comprehensive fire management plan for the nature reserve. ▪ Adequate fire safety within the nature reserve is ensured. ▪ Develop and implement on-going time-bound program to effectively control declared alien plants, alien weeds and invader plants (especially *Opuntia* spp.) within the protected area and 1 km (buffer area) of the protected area boundary. ▪ Implementation of procedures to identify, rehabilitate and manage areas that have been significantly impacted by accelerated soil erosion. ▪ Implementation of procedures to manage alien animals found within the nature reserve. ▪ Ensure that if extractive resource use is undertaken, it is done legally, is sustainable and conforms to Ezemvelo KZN Wildlife Norms and Standards. ▪ Ensure that if bioprospecting is undertaken, it is done legally and conforms to national legislation (NEMBA Act No 10 of 2004 Chapter 6).

		▪ Development and implementation of a strategy for the introduction and management of wildlife into the nature reserve in accordance with Ezemvelo KZN Wildlife Norms and Standards. ▪ Development and implementation of measures for human/wildlife conflict based on Ezemvelo KZN Wildlife policy. ▪ Processes are established to determine the success of management interventions in protecting the ecosystems, communities and species of the nature reserve. ▪ Rare and endangered species management is undertaken using the best available scientific knowledge. ▪ Ensure the protection and the improved awareness of the cultural heritage values of WNR.
Operational management	Provide adequate human resources, equipment, infrastructure and funding to enable the effective protection, development and management of Weenen Nature Reserve.	▪ Development and implementation of a five-year financial plan that identifies the resource needs to achieve the objectives for the nature reserve. ▪ Ensure that the nature reserve is adequately staffed for its effective management and operation. ▪ Ensure that all facilities and infrastructure in the nature reserve are adequately maintained.

4) ZONATION PLAN

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

4.1 Zonation of Weenen Nature Reserve

A standardised zonation system has been developed for all of Ezemvelo KZN Wildlife's protected areas (Goosen, 2011). This system enables a protected area to be zoned according to six categories, which are spread along a continuum, from pristine wilderness to higher intensity nature-based uses. The zonation system recognises and reflects:

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

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

General principles of zonation

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

- Any activities permitted in a category of higher protection are also permitted in a category of lower protection, e.g. activities permitted in the Low Use Zone can also be permitted in the Moderate Use Zone.
- All activities will take place in accordance with the local protected area rules and regulations.

Any application for activities that are not recommended for a specific zone will have to be approved by the Operations Committee: West and if necessary would be referred to the Executive Director Operations. The criteria used to determine each zone are described as:

Key feature protection overlay	▪ An area that is vulnerable or scientifically important where specific additional controls are imposed in order to prevent undesirable impacts. ▪ This zone overlay other zones instituting site specific rules and regulations in addition to the restrictions of the underlying zone.
Low use zone	▪ An area where the ecotourism principles of low human impact will prevail. ▪ This area is characterised by facilities of a rustic nature such as overnight hiking huts. ▪ Motorised access is low key and there are limited management roads and tracks.
Moderate use zone	▪ This is also an area in which the ecotourism principles of low human impact will prevail, but higher levels of usage are permitted. ▪ This area includes the main tourism road network, including access and game viewing roads. ▪ Infrastructure is accessible by motorised access in this area.
Tourism development node	▪ This is a node within the moderate use zone, which includes commercial tourism developments such as lodges, picnic and camping sites.
Park management node	▪ This is a node within the moderate use zone, which includes facilities for staff accommodation, administrative offices and operational infrastructure.
Preliminary buffer zone	▪ This is outside of a protected area, where actions and agreements are

	taken to protect its integrity. ▪ It is an area in which the protected area managers work collaboratively with neighbours and municipalities to try to ensure land uses that are compatible with the protected area.

4.2 Concept development guidelines

The purpose of the zonation of WNR is to control the intensity and type of use within it, in efforts to ensure the overriding goals of biodiversity conservation are met whilst enabling acceptable levels of eco-cultural tourism and other resource use. On this basis, within some zones, the permissible intensity of use will be relatively higher than in others. See *Map F – Zonation of WNR.*

4.2.1 Key Feature Protection Overlay

Description:

An area that is vulnerable and or scientifically important where specific additional controls are imposed in order to prevent undesirable impacts on identified sensitive or threatened species, habitats, ecosystems, bio-control release sites, research sites, archaeological, living heritage and paleontological sites.

Objective:

This zone is for permanent, temporary or seasonal protection of important core protected area values*. It aims to provide additional protection for the integrity of key areas.*

Permissible activities: (Activities that could be allowed subject to the management unit standard rules and regulation in terms of authorisation)

1. The zone may overlay other zones so a range of infrastructure may already exist.

2. In addition to restrictions of the underlying zone site specific rules and regulations will apply.

Constraints and implementation:

- This is a protection zone and would only allow for access and development under site specific constraints. (Does not cater for further developments or resource utilization)
- This zone provides a higher level of protection than the underlying zone.
- Could be permanent, temporary or seasonal overlay.
- Changes to this overlay can be implemented through the Park planning committee and the annual management meeting and recorded as such.

The Key Feature Protection Overlay in *Map F – Zonation of WNR* indicates areas of erosion in various stages of rehabilitation. Any activities taking place in this area needs to be assessed in terms of its potential impact on these areas.

There is currently a process in partnership with AMAFA to identify, map and describe all the cultural sites in Weenen NR and once those have been identify they should also be zoned as a Key Feature under this category.

4.2.2 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.

Permissible activities: (Activities that could be allowed subject to the management unit standard rules and regulation in terms of authorisation)

- 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:

- 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.

4.2.3 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.

Permissible activities: (Activities that could be allowed subject to the management unit standard rules and regulation in terms of authorisation)

- 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.
- The tourism road network including access roads and game viewing roads.
- Traditional game viewing routes with associated more formalised infrastructure.
- Infrastructure is accessible by motorised access.

Constraints and implementation:

- Within the moderate use zone a specific ***Tourism Development Node*** will be defined which could include areas of commercial use.
- Where possible this node should be outside the protected area.
- The node should preferably be on the periphery of the Moderate and Low Use Zones, to ensure a quality visitor experience in the lower use zone but with the bulk of the impact *e.g.* access roads and services in the higher use zone.
- This node should be developed in the less sensitive part of the Moderate Use Zone.
- The Tourism Development Node can only be developed in areas where it does not compromise the values of the protected area.
- The node must have a specified footprint.
- Examples of developments in a Tourism development node include:
  - Picnic Areas
  - Camping sites
  - Interpretation centre.

Park Administrative Node (within the Moderate use zone) cater 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.

4.2.4 Protected Area Buffer Zone

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.

Permissible activities:

The Park management must define these activities in terms of its specific values and objectives and taking into consideration the following:

- 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:

- It is desirable for the intensity of land use to decrease closer to the nature reserve.
- Discourage activities that are not compatible with the adjacent reserve zonation.

Management activities will focus on:

- Strategically promoting and monitoring compatible land-use and land-care on adjacent lands and upstream catchments
- Integrated alien species control
- Biodiversity stewardship and environmental awareness

- Working collaboratively with neighbours to secure sensitive sites that contribute to the protection of 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.

5) ADMINISTRATIVE STRUCTURE

A recommended organisational structure for WNR is set out in *Figure 5.1.* The figure represents the staff complement and positions that are required to enable the effective operation, management and protection of WNR. Subsequent to the development of this structure a critical need for an additional Second-in-charge position has been identified and will be pursued. *See Figure 5.1 – Recommended Organational Structure.*

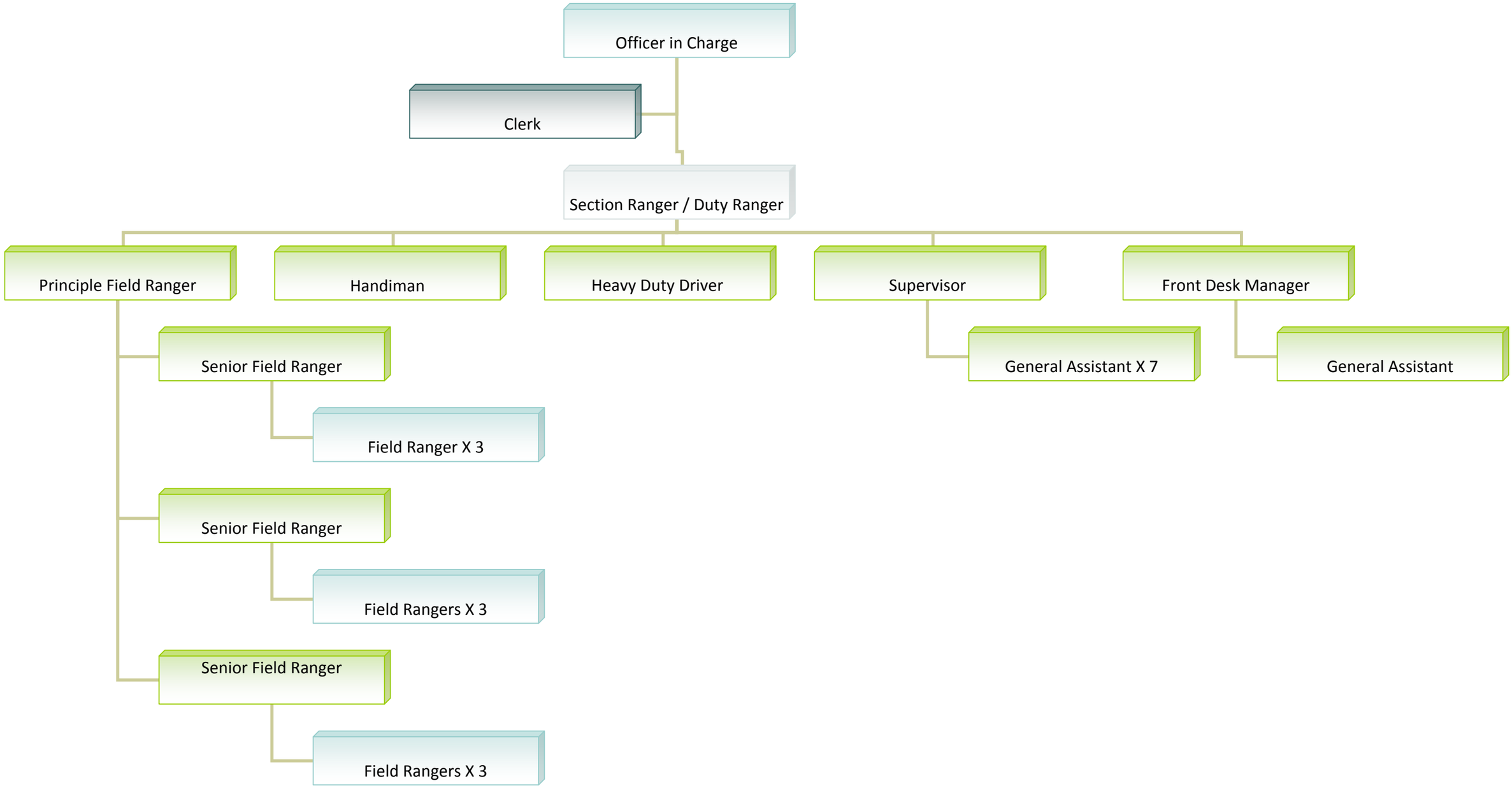

Figure 5.1 Recommended organisational structure for Weenen Nature Reserve

6) OPERATIONAL MANAGEMENT FRAMEWORK

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

6.1 Determination of priorities for strategic outcomes

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

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

The priorities are presented in the tables below using the colour system above, which depicts the level of priority shown for the particular management target. In addition, a date is indicated in the priorities column, which is intended to convey the end date by which the management target must have been achieved.

6.2 Legal compliance and law enforcement

Through its mandate to undertake the conservation and management of protected areas in KwaZulu-Natal, Ezemvelo KZN Wildlife must ensure that the province's protected areas are appropriately legally protected and that the laws governing the use of protected areas and the prohibition of particular activities are enforced. Illegal activities within the protected area and illegal utilization of the protected area's natural resources are realities that are present, but not well quantified (e.g. illegal hunting along the national road). It must be assumed that these threats have the potential to increase significantly.

In fulfilling this role, the managers of WNR will adhere to the following guiding principles:

- All reasonable efforts must be made to ensure the effective conservation of biodiversity within and on the boundaries of the nature reserve.
- Cooperative structures should be established to enable participation by key stakeholders such as local communities and the South African Police Service in addressing offences and breaches of the law.
- Law enforcement within the nature reserve will be undertaken through surveillance, monitoring and appropriate reaction in the event of an offence.
- The main effort towards resolving illegal utilization of natural resources by neighbouring communities for purposes of subsistence will be to create understanding and awareness through pro-active education amongst these communities. Management will however take strong legal action against with those that illegally utilize natural resources for commercial or other purposes.

6.3 Stakeholder engagement

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

- Efforts should be made to ensure that the communities living around the nature reserve are aware of the role that it fulfils in biodiversity protection and the provision of ecosystem services to the region.
- Stakeholder engagement should be undertaken to engender a sense of ownership of the nature reserve, within the communities, and support for its biodiversity conservation objectives.

- A common understanding of the issues that affect both the nature reserve and the surrounding communities should be developed and efforts to resolve them should be undertaken cooperatively.

The operational requirements for legal compliance and enforcement, and stakeholder engagement are set out in Table 6.1 below.

Table 6.1 Framework for legal compliance, law enforcement and stakeholder engagement

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
LAW ENFORCEMENT					
Ensure there is adequate law enforcement within the nature reserve.	▪ Develop an integrated security strategy for the nature reserve, which ensures collaboration with all relevant institutions.	▪ Creation of cooperative structures with local communities and law enforcement officials.	▪ Frequent recovery of snares. ▪ Arson fires. ▪ Recorded losses of game species. ▪ Recorded losses of known rare and endangered plant species.	***Year 1***	Officer in Charge
	▪ Develop and implement an effective access control Standard Operating Procedure that will ensure the declaration of fire arms and prevent the illegal use of fire arms including darting equipment in the reserve. ▪ Ensure that staff are equipped and trained to undertake patrols within the nature reserve for law enforcement purposes. ▪ Implement a programme of patrols of the nature reserve and its boundaries, with specific focus on poaching hotspots. ▪ Ensure security of infrastructure and equipment by incorporating them into the programme patrol. ▪ Ensure security of visitors to the reserve by maintaining effective law enforcement and access	▪ Regular patrols covering the full extent of the nature reserve. ▪ Prosecution of any offender caught committing an offence.		***On-going***	Officer in Charge

	control.				
Collaborate with district, local municipalities and relevant government departments to ensure that public can safely traverse the reserve to Weenen town.	▪ Ensure sufficient signage warning public traversing the P13 road to Weenen in time that they are entering a nature reserve and of relevant speed limits.	▪ Appropriate signage before entering the reserve.	▪ Increasing incidents of risk to human life and property.	***Year 1***	Officer in Charge
	▪ Collaborate with metro-police to facilitate special enforcement operations during peak seasons / time to ensure adherence and human safety.	▪ Regular enforcement operations as per targets set in the annual plan of operation.		***On-going***	Officer in Charge
Implement the outcome of the land claim settlement process.	▪ Liaise with the regional Lands Claims Commissioner (RLCC) to assist in resolving the land claim. (The authority for this lies with the RLCC and Ezemvelo can only assist where required) ▪ Regular engagement with the land owners (once the claims are resolved) on all relevant management issues.	▪ Co-management and potential expansion of WNR.	▪ Not resolving the land claim in an acceptable time frame. ▪ Lack of effective communication with landowners.	***Upon settlement***	Officer in Charge and Community Conservation
STAKEHOLDER ENGAGEMENT					
Constructive community involvement in the nature reserve's management through an effectively functioning liaison forum.	Ensure open lines of communication through the implementation of an effective Stakeholder Liaison forum that maintains regular meetings.	▪ Annual meetings of the Stakeholder Liaison forum.	▪ Lack of regular meetings and community/ stakeholder dissatisfaction with the nature reserve.	***Year 1 and then on-going***	Officer in Charge
Promote an understanding of the nature reserve	▪ Include the value and importance as per the management plan and the 2009 Ezemvelo KZN Wildlife Protected Area's Ecosystem Service report	▪ Minutes of stakeholder	▪ Lack of understanding of the importance	***On-going***	Officer in Charge and

values, importance and ecosystem goods and services.	into the Environmental awareness programme as well as meetings with stakeholders.	meetings. ▪ Records of Environmental Awareness.	of conserving the Weenen NR		Community Conservation

6.4 Buffer zone protection and regional management

6.4.1 Protected area expansion and buffer zone management

In terms of Ezemvelo KZN Wildlife's protected area expansion strategy, it has identified a number of areas as priorities for protected area expansion around the nature reserve. In order to safeguard the biodiversity within the nature reserve and to counter any threatening processes or edge effects, suitable buffer zones and appropriate land uses in these zones should be identified. Appropriate actions may then be taken to secure these buffer zones through protected area expansion mechanisms and local planning tools, as described in Section 6.4.2 below. In ensuring the protection of its biodiversity, the following guiding principles will be adopted in terms of protected area expansion and buffer zone management:

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

6.4.2 Local and regional planning

It is important, in managing the buffer areas around the nature reserve, that Ezemvelo KZN Wildlife work with local government authorities to ensure that their land use planning considers the biodiversity conservation imperatives of WNR. In this regard it is necessary to ensure that buffer zone considerations are captured in planning tools such as IDPs and SDFs. In developing relationships with the local and district municipality, Ezemvelo KZN Wildlife will adhere to the following guiding principles:

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

The detailed operational requirements for buffer zone protection and regional management are set out in Table 6.2 below.

Table 6.2 Framework for buffer zone protection and regional management

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
PROTECTED AREA EXPANSION					
Determination and prioritisation of the buffer zone requirements around the nature reserve.	▪ Determine the ecological impacts and edge effects influencing the biodiversity of the nature reserve on its boundary and negotiate (mitigate and formalise) these with stakeholders.	▪ Identification of key threatening processes on the nature reserve's boundary.	▪ Edge effects such as invasive plant encroachment along the nature reserve's boundary.	***Year 1***	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge
	▪ Keep Stewardship and Protected Area Expansion Unit informed of any opportunities for expansion.	▪ Report to relevant units identifying expansion opportunities.	▪ Not capitalizing on opportunities for expansion.	***On-going***	Officer-in Charge and Ecological Advice Unit
Facilitate the expansion of the reserve through the incorporation of key areas around WNR.	▪ Identify and address with stakeholders key issues that will enable incorporation of Umthontwane into the Weenen Nature Reserve. (issues include Farm tenants, game ownership and co-management agreements)	▪ Co-management agreement for the Umthontwane area and Weenen Nature Reserve	▪ Loss of opportunity to protect key buffer areas around Weenen NR	***Year 1***	Community Conservation and Senior Conservation Manager

LOCAL AND REGIONAL PLANNING					
Capture the buffer zone considerations in municipal IDP's and SDF's.	▪ Make inputs into the development of local and district municipality IDPs and SDFs in an effort to avoid environmentally harmful land uses in WNR's buffer zones.	▪ Adoption of environmentally appropriate land uses in IDPs and SDFs in the areas immediately surrounding the nature reserve. ▪ Retention of existing benign land uses in the areas immediately surrounding the nature reserve.	▪ Identification/approval of environmentally harmful land uses on the boundaries of the nature reserve.	***Annually***	Ezemvelo KZN Wildlife Planning Unit, Officer in Charge and Ecological Advice Unit

6.5 Eco-tourism and Environmental awareness

6.5.1 Eco-tourism management

Ezemvelo KZN Wildlife has the mandate to sustainably develop and manage WNR to fully realise its eco-cultural tourism and associated income-generating potential, within the context of protecting its biodiversity and cultural values. In further developing tourism within the nature reserve, the following guiding principles should be adhered to:

- Tourism products developed within the nature reserve must be appropriate to the values and purpose for which the nature reserve has been proclaimed and must not threaten its biodiversity, cultural heritage or ecological function.
- In managing and developing tourism products, requirements for environmental authorisation must be considered and adhered to.
- Tourism products should be designed to capitalise on the unique beauty and biodiversity features of the nature reserve.
- Tourism products should be developed in response to tourism market demands and opportunities within the nature reserve and should be carefully assessed to determine their viability.
- The development of tourism products within the nature reserve must be integrated with tourism strategies and plans in the region.
- Tourism should be used as a tool for the generation of economic activity and employment in the communities surrounding the nature reserve.

6.5.2 Environmental awareness

Environmental awareness of WNR will be aimed at creating awareness, understanding and appreciation of its biodiversity, cultural heritage and ecological function, and their significance. In developing an environmental interpretation and education programme, the following guiding principles should be adhered to:

- There should be a strong focus on neighbouring communities, in efforts to engage, inform and benefit them.
- Wherever possible, local community members should be trained to assist and operate environmental interpretation and education tours.

The detailed operational requirements for eco-cultural tourism development and environmental interpretation and education are set out in Table 6.3 below.

Table 6.3 Framework for eco-tourism and Environmental awareness

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
TOURISM					
Enhance the eco-tourism facilities of the reserve to a standard that it can be marketed as a provincial and national destination.	▪ Update the old information brochure that will serve to inform and direct tourist.	▪ An updated brochure providing information on the reserve, its values and activities.	▪ Out-dated or lack of relevant information for tourist.	***Year 2***	Officer in Charge
	▪ Develop and install directional and interpretive signage for visitors.	▪ Improved visitor orientation and disseminate important information.	▪ Lack of tourist orientation and awareness.	***Year 1***	Officer in Charge
	▪ Develop and implement a maintenance schedule for all tourism facilities.	▪ Regular Inspection and maintenance reports. ▪ Well maintained and safe tourism facilities.	▪ Dilapidated and unsafe tourism infrastructure.	***On-going***	Officer in Charge
	▪ Investigate in collaboration with AMAFA the establishment of a cultural heritage trail in the reserve.	▪ Feasibility study indicating the potential to establish the trail.	▪ Lack of controlled access to cultural heritage resources. (Access will create a better understanding of these resources)	***Year 3***	Officer in Charge with AMAFA
Collaborate with district and local municipality to link Weenen NR with the regional tourism initiatives.	▪ Directional signage from major towns to Weenen NR. ▪ Incorporate the Weenen Nature reserve information into municipal tourism marketing initiatives.	▪ Increased tourism market share through increased awareness of the Weenen Nature Reserve.	▪ Visitors to the area are not aware of the Weenen Nature Reserve.	***Year 2***	Officer in Charge in collaboration with municipalities

ENVIRONMENTAL INTERPRETATION AND AWARENESS					
Develop and implementing collaboration with stakeholders an environmental interpretation and awareness programme.	▪ Evaluate and do a need assessment for the environmental awareness programme of the reserve. ▪ Collaborate with municipal and other partners to increase the numbers of local school children that are exposed to the reserve environment.	▪ Report indicating requirements for the environmental awareness programme ▪ Number of school groups per year visiting the reserve and taken through an environmental awareness program.	▪ Lack of understanding of the reserve, its values and general environmental issues.	***Year 1***	Officer in Charge and Community Conservation Officer
	▪ Establish an environmental interpretation and awareness program in the reserve.	▪ Planned programme for Environmental awareness.		***Year 2***	

6.6 Conservation management

Weenen Nature Reserve conserves key examples of the three vegetation types within its boundaries that are poorly or not represented elsewhere in protected areas. In addition, the protected area contains populations of numerous Endangered and Endemic animal and plant species, some of which are not formally conserved elsewhere. Management of these habitats and species is strongly influenced by the disturbance history of this protected area and the need to promote its continuing reclamation.

Conservation management is conducted in an active-adaptive manner. This includes identifying conservation targets, implementing best management practice, monitoring the progress towards addressing these targets, and adapting the management strategy accordingly. This is done using a participatory, team approach and making use of the best scientific understanding in collaboration with partners and stakeholders.

Conservation management is centred on the manipulation of fire and grazing, the key ecological processes influencing the biodiversity and ecosystem processes in the protected area. There is a poor understanding of what the "natural" (historic) fire and herbivory regimes would have been and it is not practical to apply these given the relatively small size of the protected area and surrounding land-use. Management instead aims to promote a shifting mosaic of patches of different age and size - thereby creating a diversity of habitats. This approach will satisfy the known requirements for key species (e.g. black rhino and oribi) while also providing the best insurance policy for the majority of organisms whose habitat requirements and response to fire and herbivory are unknown.

The other key interventions required to conserve biodiversity are the control of invasive species and man-induced soil erosion, as well as minimising illegal activities (e.g. illegal hunting and plant collecting).

Weenen Nature Reserve has a good legacy of research publications and has been used as a demonstration site for numerous student practical's, especially to illustrate soil conservation measures. The vegetation types and their associated faunas are poorly represented outside of the protected area making Weenen Nature Reserve an ideal environment for their study. Furthermore, the protected area houses a representative suite of large mammals and is home to a number of endemic and endangered species whose biology is poorly understood. These research opportunities need to be further investigated and presented to local tertiary institutions.

6.6.1 Fire management

See also 2.6.7 - Fire Regime of Weenen Nature Reserve.

Fire plays an important role in the ecological dynamics of grasslands and wetlands, and has important effects on vegetation composition, primary productivity and nutrient cycling. In developing burning and fire

management strategies for the nature reserve, the following guiding principles should be adhered to:

- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape.
- 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 nature reserve and the need to protect rare and endangered species.
- The extent and nature of both planned and unplanned fires must be reported by protected area management to Eco Advice using the official format as part of their Monthly Biological Returns, with all submission for the year due by the end of November that year.
- The protected area is obligated in terms of the National Veld and Forest Fire Act 101 of 1998 to be a member of the local Fire Protection Association (FPA). In this regard protected area Management will actively champion the maintenance of an FPA, should one start up in the area, to gain the full legal advantages of being a member of the FPA. Management should use the FPA to influence fire management regimes in the lands surrounding the protected area to promote the conservation of biodiversity and ecological processes.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act (No.101 of 1998).

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

- The budgeting process should reflect that adequate resources to address fire management requirements in the protected area have been considered.
- The need to maintain a system of firebreaks to enable the management of controlled burns and to effectively fight wildfires.
- The size of the nature reserve and the requirements necessary to access different areas in the event of a wildfire. This relates to both roads and vehicles.
- The number of personnel necessary to effectively fight wildfires.
- The equipment necessary to effectively fight wildfires. This would include:

- Water tankers and pressure pumps mounted on or pulled behind tractors.
- Fire fighting equipment mounted on the backs of vehicles.
- Backpack sprayers.
- Beaters.
- Safety equipment for personnel involved in fire fighting.

The detailed operational requirements for fire management are set out in Table 6.4 below.

Table 6.4 Framework for conservation management – fire management

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
FIRE MANAGEMENT					
Develop and implement a comprehensive fire management plan for the nature reserve.	▪ Develop a Fire Management Plan for the protected area to outline: fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required. ▪ Protected area Management will conduct a pre-burn field inspection with Eco Advice to agree upon the areas that are to be scheduled for burning each year. This inspection must occur by the end of May each year, prior to the establishment of trace-lines and fire breaks, and be based on at least the last three years fire history and the Fire Management Plan for the protected area. Any changes to this fire program for the year need to be agreed upon by both the management and Eco Advice.	▪ Burning according to annual planning and compliant with National Veld and Forest Fires Act.	▪ Burning regimes that result in ecological degradation of the nature reserve or unplanned fires.	***Year 1 and then on-going***	Officer in Charge and Ecological Advice Unit
Adequate fire safety within the nature reserve is ensured.	▪ Maintain a system of firebreaks within the nature reserve that are of adequate extent, which are prepared at the correct time of the year under the appropriate weather conditions. ▪ Ensure that staff is trained and that adequate fire fighting equipment is available within the nature reserve. ▪ Maintain membership of the relevant Fire	▪ Compliance with the National Veld and Forest Fires Act.	▪ Inadequate personnel, equipment or an inability to communicate effectively in fighting fires. ▪ Wildfires spreading from	***On-going***	Officer in Charge

	Protection Association.		the nature reserve to neighbouring properties.		
	▪ Address the need for improved fire management in the surrounding community conservation areas (i.e. Mthontwane and uMsuluzi) through co-operative management agreements.	▪ Co-operative management agreements with surrounding community conservation areas.	▪ Negative impact on biodiversity and ecological processes in areas surrounding the protected area	***Year 1***	Officer in Charge and Ecological Advice Unit

6.6.2 Alien and Invasive plant control

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

- Invasive plant control will require an on-going programme that prioritises key infestations along water courses, drainage lines and upper catchment areas.
- Initial clearing efforts should focus on containing infestations that are most likely to spread into new areas.
- All follow-up requirements must be strictly adhered to otherwise the problem will be exacerbated.
- Strategic partnerships and poverty relief programmes such as the Working for Water programme should be utilised in controlling invasive plants.

6.6.3 Soil erosion control

The protected area has been severely eroded in the past and has a legacy of effective erosion control measures and other appropriate management interventions that need to be maintained and promoted. In addressing soil erosion, the following guiding principles should be adhered to:

- Areas impacted by soil erosion should be stabilised and re-vegetated with indigenous plant species to prevent the spread of listed invasive plant species.
- In all instances, infrastructure (e.g. roads) or human activities that are increasing the natural rate of soil loss from the protected area need to be prioritised for attention.
- Similarly, fire and wildlife population management should take its potential impacts on accelerated soil loss into consideration (e.g. the protected area should not be overstocked with concentrate grazers such as impala [*Aepyceros melampus*]).
- Areas susceptible to soil erosion, or showing early signs of soil erosion such as loss of vegetation cover, must be managed to prevent soil erosion.

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

The detailed operational requirements for invasive plant and soil erosion control are set out in Table 6.5 below.

Table 6.5 Framework for conservation management – Alien and invasive plant control and soil erosion control

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
INVASIVE PLANT CONTROL					
Develop and implement on-going time-bound program to effectively control declared alien plants, alien weeds and invader plants (especially *Opuntia* spp.) within the protected area and 1 km (buffer area) of the protected area boundary.	▪ Develop a phased five year plan to address the existing alien and invasive plants in the protected area. The plan must also address follow-up operations after the initial clearing. ▪ Implement the control plan in collaboration with Invasive Alien Species Program for the nature reserve. ▪ Implement concerted, sustained control efforts in identified areas of heavy invasive plant infestation. ▪ Undertake suitable rehabilitation measures, including re-vegetation using indigenous plant species, to prevent soil erosion, following clearing of invasive plant species. ▪ Maintain vigilance for any emerging invasive and alien species.	▪ Achieve maintenance level within 5 years for all listed invasive species.	▪ Emerging weeds establishing in the reserve. ▪ Increased levels of invasive species in the reserve.	***Year 1 and then on-going***	Ezemvelo KZN Wildlife Alien Plant Control Unit and Officer in Charge
SOIL EROSION CONTROL					
Implementation of procedures to identify, rehabilitate and manage areas that have been significantly impacted by accelerated soil erosion.	▪ Undertake a detailed survey of the nature reserve to identify the extent and severity of soil erosion. ▪ Identify the causes of soil erosion and the requirements needed for rehabilitation within the nature reserve. ▪ Implement soil erosion control and rehabilitation measures, focussing strategically	▪ A detailed map depicting areas of soil erosion within the nature reserve. ▪ Implementation of soil erosion control measures in areas in which plant cover is low, which are susceptible to	▪ Further erosion of impacted areas. ▪ Sedimentation impacts in watercourses and wetland areas.	***Year 4***	Officer in Charge and Ecological Advice Unit

	on key areas such as those impacting on watercourses or that are growing larger. ▪ Undertake preventative measures in areas with low plant cover that may be at risk of soil erosion.	erosion.			

6.6.4 Alien animal control

Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of WNR 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 nature reserve 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 nature reserve for official purposes such as patrolling. It is critically important that these exceptions do not negatively influence the integrity and sustainability of the protected area's biodiversity and ecological processes.
- Feral animal species that pose a threat to indigenous species will be destroyed (as humanely and practicably possible with due regard to the tourist experience).
- Species that have not historically occurred / are not on a approved introduction list should be removed from the reserve.

6.6.5 Resource utilisation

It is an accepted tenet of biodiversity conservation in South Africa and KwaZulu-Natal that the sustainable use of natural and biological resources may be undertaken within a protected area, provided that it does not compromise its ecological functioning or biodiversity conservation imperatives.

Protected area Management, in conjunction with Eco Advice and the Resource Use Ecologist, will consider requests for extractive use of plant and animal resources provided that the biodiversity objectives are not compromised, and there is no long term detrimental effect on the ecological and managerial functioning of the protected area.

Accordingly, applications for the extractive use of resources within the nature reserve will be considered, based on the following guiding principles:

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

Furthermore, extractive resource use applications must be considered within the framework of Ezemvelo KZN Wildlife policies:

- Precautionary principle (July 1999, corporate policy 3.06)
- Sustainable use of wildlife resources (April 1997, corporate policy 3.13)
- Freshwater species utilization (February 2000, corporate policy 3.23)
- Use of plant resources from protected areas (January 2001, corporate policy 3.27)
- Use of doomed biological material (February 2000, corporate policy 3.5)

Applications must be evaluated according to accepted guidelines that ensure:

- Sustainable and wise use of the resource
- Ecological and social acceptability
- Benefit to neighbouring communities
- Equitable access to the resource
- That the transaction is within the PFMA framework
- That the harvesting operations are effectively controlled and monitored
- A written agreement stipulating resource price and conditions of harvest
- Due consideration of alternatives.

The detailed operational requirements for alien animal control and resource utilisation are set out in Table 6.6 below.

Table 6.6 Framework for conservation management – alien animal control and resource utilisation

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
ALIEN ANIMAL CONTROL					
Implementation of procedures to manage alien animals found within the nature reserve.	▪ Develop a new, equitable policy for keeping personal and official domestic animals and livestock in the protected area that includes procedures for dealing in a consistent manner with alien animals that stray into the protected area. This policy must, inter alia clearly address: ▪ Threats to biodiversity conservation as a priority ▪ Reducing the numbers of such animals to an absolute minimum ▪ Designating areas where these animals must be kept and may be taken (e.g. where people may walk their dogs) ▪ The proper and hygienic care of these animals ▪ Minimum standards (aesthetic acceptability, sizes, neatness and cleanliness) of facilities housing these animals (e.g. stables, camps, cages) ▪ Disciplinary measures for staff transgressing these regulations ▪ Develop a control program for alien animals present in or entering into the protected area	▪ Control of any alien animals found within the nature reserve.	▪ Uncontrolled access of domestic animals or livestock within the nature reserve.	***On-going***	Officer in Charge

RESOURCE UTILISATION					
Ensure that if extractive resource use is undertaken, it is done legally, sustainably and conforms to Ezemvelo KZN Wildlife Norms and Standards.	▪ Develop and implement a Natural Resource Use Plan for WNR. ▪ Consider, with relevant scientific and management staff, requests for extractive use in accordance with accepted norms and standards and resource use guidelines. ▪ If extractive use is approved, agree on the approach to sustainably extract resources from nature reserve with applicants. ▪ Ensure that any approved extractive resource use is managed, monitored and reported on. ▪ Ensure that any approved extractive resource use is in line with the concept development guidelines and zonation of the reserve.	▪ An agreed upon approach to any extractive resource use. ▪ Approved extractive resource use is managed, monitored and reported on.	▪ Uncontrolled or unsustainable resource extraction	***Year 2 thereafter on-going***	Officer in Charge, Ecological Advice Unit and Resource Use Ecologist
Ensure that if bioprospecting is undertaken, it is done legally and conforms to national legislation (NEMBA Act No 10 of 2004 Chapter 6).	▪ Only allow the collection of biological materials or samples if the appropriate written permission has been given in accordance with national legislation (NEMBA Act No. 10 of 2004, Chapter 6) and appropriate permit/s issued by Ezemvelo KZN Wildlife.	▪ No illegal collection of biological material or samples.	▪ Illegal collection of biological material or samples.	***If required***	Officer in Charge, Ecological Advice Unit and Resource Use Ecologist

6.6.6 Wildlife management

Past environmental degradation through heavy browsing and grazing and the need to control bush thickening has made wildlife management a priority in this protected area. Wildlife would have previously roamed over a far greater area, interacting with other populations, promoting genetic diversity and reducing local browsing and grazing pressure on the vegetation.

The limited extent of the protected area and history of degradation necessitate that herbivore populations be intensively managed to maintain the appropriate densities and proportionate representation of different feeding guilds that maximise population growth while not posing a threat to the biodiversity, browsing/grazing capacity or rehabilitation process.

In particular, the immigration of impala (*Aepyceros melampus*), nyala (*Tragelaphus angasii*) and warthog (*Phacochoerus aethiopica*) from neighbouring properties is undesirable. The selective feeding habits of these species, their being extra-limital to the area, and the potential competitive effects they may exert on resident, desirable species requires that their numbers be kept in check as best possible. It may also be necessary, from time-to-time, to introduce appropriate new genetic stock (i.e. genetically pure animals from the same sub-population).

Other than the re-introduction of buffalo (*Syncerus caffer*) and manipulation of the oribi and rhinoceros populations according to their metapopulation strategies, there is little call for new introductions. Nevertheless, if other species are to be considered, their introduction should be in line with the Ezemvelo KZN Wildlife policy on the "Re-establishment of terrestrial mammals in Board Areas" (March 1998, corporate policy 3.18), and take into account their natural distribution range, genetic compatibility, social behaviour characteristics, impacts on existing populations, habitat requirements, practical management and possible interaction with human communities adjacent to the protected area. This will also be subject to the Minister of Agriculture approval based on the initial agreement of land transfer between the then Department of Agriculture Credit and Land Tenure and the Natal Provincial Administration. (See Section 2.5.2)

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

- Wildlife management must be focussed primarily on protecting the ecological functioning of the nature reserve and meeting set provincial conservation targets for species and vegetation types.
- The introduction of indigenous species into the nature reserve must be undertaken in accordance with relevant Ezemvelo KZN Wildlife policies.

- Population management of wildlife species may be required to ensure that such species are not causing ecological degradation of the nature reserve.
- Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour must be managed in accordance with relevant Ezemvelo KZN Wildlife policies.

- To minimize the need to control such problem animals, pro-active and preventative measures (e.g. appropriate fencing) should be considered a priority, while affected public or neighbours need to be informed appropriately regarding the relevant animal behaviour and / or dangers. Where the only solution to the problem lies in destroying or capturing animals, the methods decided upon must be applied with due regard for animal welfare and possible public criticism.

- Control of problem animals in and on the boundaries of the protected area needs to be in line with any EKZNW Problem Animal Management Manual that is developed and take into consideration the National Policy and Strategy for Problem Animal Control in South Africa (January 1998).

6.6.7 Conservation targets

The EKZNW (2010) Terrestrial Systematic Conservation Plan identifies the provincial conservation targets referred to in Section 6.6.6, above. Vegetation type targets are based on Scott-Shaw & Escott (2011). The conservation of WNR contributes towards the achievement of a portion of some of these targets. Targets will continue to be updated as knowledge develops about the ecology of areas, connectivity between them, and other process requirements for ecosystems, communities and species. On this basis, the conservation targets should be viewed as a set of working hypotheses around which conservation planning and evaluation can take place. An advantage of developing strategies around targets is that this process highlights critical knowledge deficits thus guiding future research.

Table 6.7 Systematic biodiversity planning conservation targets to which Weenen contributes

Feature	Description	Percentage of target located within Weenen Nature Reserve	Notes
Thukela Valley Bushveld	Vegetation Type	1.86	LT
Thukela Thornveld	Vegetation Type	2.49	LT
KwaZulu-Natal Highland Thornveld	Vegetation Type	1.84	LT
Bradypodion thamnobates	Reptile	21.36	

Barleria greenii	Plant	103.43	EN
Gulella orientalis	Mollusc	22.97	
Cochlitoma simplex	Mollusc	50.72	
Zinophora thukela	Millipede	66.67	
Zinophora mudenensis	Millipede	9.46	
Doratogonus falcatus	Millipede	32.95	
Whitea alticeps	Grasshopper	3.53	
Tritogenia zuluensis	Annelid	20	
Proandricus ortyi	Annelid	20	

The detailed operational requirements for wildlife management and the achievement of conservation targets are set out in Table 6.8 below.

Table 6.8 Framework for conservation management – wildlife management and conservation targets

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
WILDLIFE MANAGEMENT					
Development and implementation of a strategy for the introduction and management of wildlife into the nature reserve in accordance with Ezemvelo KZN Wildlife Norms and Standards.	▪ Ensure that any proposals for the introduction of wildlife species conform to Ezemvelo KZN Wildlife Norms and Standards. ▪ For future introductions only species known to have historically occurred in the nature reserve will be considered. ▪ Ensure that species introductions are adequately documented. ▪ Continue to motivate and prepare for (e.g. maintain appropriate fencing) the re-introduction of buffalo (*Syncerus caffer*) to the protected area, subject to the availability of suitable disease-free animals and means to acquire them.	▪ An agreed upon approach to future wildlife species introductions.	▪ *Ad hoc* introductions of species, particularly those that may not have historically occurred in the nature reserve.	***On-going***	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge
	▪ An annual game census is to be conducted by the protected area Management in September of each year and the results submitted to Eco Advice prior to the annual Animal Population Control workshop. These figures will be added to and used with the historical game count data to advise planned game removals.	▪ Game census data and report to inform population management decisions.	▪ Lack of information to inform management decisions.	***Annually***	
	▪ To monitor game populations, introductions, mortalities and removals are to be reported by protected area Management to Eco Advice using the official format as part their Monthly	▪ Up to date monthly biological returns.	▪ Lack of information to inform management decisions.	***Monthly***	Officer in Charge

	Biological Returns.				
	▪ Ensure that adequate population control measures are included in the strategy for the management of wildlife in the nature reserve.	▪ Control of population numbers of species that are exceeding identified carrying capacities.	▪ Ecological degradation as a result of over-stocking of wildlife species	***On-going***	
	▪ Update animal species list of Weenen Nature Reserve in the Biodiversity Database.	▪ Updated information available for decision-making.	▪ Lack of information to base management decisions on.	***Year 1***	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge
Development and implementation of measures for human/wildlife conflict based on Ezemvelo KZN Wildlife policy.	▪ Communicate the Standard Operating Procedures for human/wildlife conflict to reserve neighbours and stakeholders. ▪ Provide advice and assistance to reserve stakeholders and neighbours to deal with human/wildlife conflict. ▪ Apply appropriate humane methods, if animals must be destroyed or captured.	▪ Effective procedures and relationships with neighbours in dealing with human/wildlife conflict.	▪ Frequent complaints from neighbours with no clear response.	***Year 1 and then On-going***	Officer in Charge and District Conservation Officer
CONSERVATION TARGETS					
Processes are established to determine the success of management interventions in protecting the ecosystems, communities and	▪ Develop surveillance and monitoring plans for key management interventions in accordance with the Ezemvelo KZN Wildlife policies and norms and standards.	▪ Surveillance and monitoring plans for key threatening processes. ▪ Monitoring plans for key rare and endangered species.	▪ Lack of awareness of the status of key threatening processes including infestations of invasive plant species and severity and	***Year 3***	Ezemvelo KZN Wildlife Ecological advice unit

species of the nature reserve.			extent of soil erosion.		
Rare and endangered species management is undertaken using the best available scientific knowledge.	▪ Adopt procedures for the management of rare and endangered species within the nature reserve, particularly those for which specific conservation targets have been set, based on available literature and known best practices. ▪ Ear-notch and take tissue and blood samples from all unmarked adult white rhino females for DNA testing to determine population lineage and genetic diversity. ▪ Ear-notch and take tissue and blood samples from all unmarked black rhino individuals for DNA tests to establish their relatedness as well as their genetic diversity. ▪ Establish whether the rough-haired golden mole (*Chrysospalax villosus*) occurs in Weenen Nature Reserve. ▪ Develop an oribi management program for the protected area based on the Oribi Conservation Plan.	▪ Maintenance of optimum population numbers of rare and endangered species within the nature reserve. ▪ Improved understanding of biodiversity research and monitoring requirements.	▪ Declining numbers of rare and endangered species that occur within the nature reserve.	***On-going***	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge
	▪ Undertake active monitoring of key, rare and endangered species as per Ezemvelo KZN Wildlife guidelines	▪ Monitoring of flagship species.	▪ Lack of understanding of the status of flagship species.	***Annually***	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge

6.6.8 Cultural heritage management

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

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

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

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

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

The detailed operational requirements for wildlife management and the achievement of conservation targets are set out in Table 6.9 below.

Table 6.9 Framework for conservation management – Cultural heritage management

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
CULTURAL HERITAGE MANAGEMENT					
Ensure the protection and the improved awareness of the cultural heritage values of WNR.	▪ Facilitate in partnership with AMAFA the identification and recording of all cultural heritage sites within the WNR.	▪ Photographic and descriptive records of heritage sites.	▪ Cultural heritage sites not known and therefore not protected.	***Year 1***	Officer in Charge with AMAFA
	▪ Develop site specific management plans for all cultural heritage sites in Weenen NR.	▪ Recorded procedure of management requirements.	▪ Vandalism or damage to heritage sites due to inappropriate tourism or management activities.	***Year 2***	Officer in Charge with Amafa
	▪ Include the cultural values of the reserve in interpretation, awareness and marketing material.	▪ Increased awareness of cultural values.	▪ Lack of understanding of the importance of the reserve cultural heritage values.	***Year 2***	Officer in Charge Community Conservation Officer
	▪ Identify research priorities and encourage tertiary students to address these priorities in the protected area.	▪ Prioritised research list that are communicated to the relevant tertiary institutions.	▪ Ad hoc research that is not relevant to the management of the reserve‘s cultural assets.	***On-going***	Park Management Committee

6.7 Operational management

6.7.1 Financial and human resources

WNR cannot be effectively managed without adequate sustained funding and sufficient human resources. In addressing the financial and human resource needs of the nature reserve, the following guiding principles should be adhered to:

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

Management Effectiveness of protected areas relates directly to the availability of financial resources to achieve biodiversity conservation objectives. It is recognised that most protected areas do not have adequate financial resources to achieve their vision and stated objectives. The IUCN Best Practice Protected Area Guideline Series No 5: Financing Protected Areas; define a financial plan as a tool to determine the protected area's funding requirement and to match that with appropriate income sources.

"Ensuring effective management and securing sufficient financial resources are vital if protected areas are to continue to provide benefits and fulfil their role in biodiversity conservation."

The guidelines also indicate that the Financial Plan should be developed in the context of the management plan and should be tied in with management priorities.

The Department of Environmental Affairs' Guidelines for the Development of a Management Plan for Protected Areas in terms of the National Environmental Management: Protected Areas Act requires the costing of the plan to reflect capital cost, operational cost as well as financial resources and shortfalls that needs to be addressed.

Current income generating activities include:

- Camp site
- Game sales
- Day visitor site
- Self-catering facility

- Bush Camp

6.7.2 Facilities and infrastructure

In order for WNR to operate appropriately, adequate facilities and infrastructure need to be developed and maintained both for management and eco-cultural tourism purposes. In addressing facilities and infrastructure needs in the nature reserve, the following guiding principles will be adhered to:

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

The detailed operational requirements for financial and human resource, and facilities and infrastructure development and management are set out in Table 6.10 below.

Table 6.10 Framework for operational management – financial, human resources and facilities and infrastructure

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
FINANCIAL RESOURCES					
Development and implementation of a five-year financial plan that identifies the resource needs to achieve the objectives for the nature reserve.	▪ Undertake an assessment of past income and expenditure trends in the nature reserve. ▪ Develop a five-year projection of income and expenditure targets that will allow for the effective achievement of the nature reserve's objectives.	▪ Adequate funding to achieve the objectives of the nature reserve.	▪ Inadequate funding to effectively protect and operate the nature reserve.	***Year 1 and then on-going***	Ezemvelo KZN Wildlife Regional Management Unit
HUMAN RESOURCES					
Ensure that the nature reserve is adequately staffed for its effective management and operation.	▪ Employ sufficient, appropriately skilled staff to meet the management and operational requirements of the nature reserve. ▪ Undertake regular training and skills development to ensure that staff is able to effectively complete their duties.	▪ Appointment of staff in all positions in the nature reserve.	▪ Inadequate staff numbers or skills for the effective management of the nature reserve.	***Year 2***	Ezemvelo KZN Wildlife Regional Management Unit and Officer in Charge
FACILITIES AND INFRASTRUCTURE					
Ensure that all facilities and infrastructure in the nature reserve are adequately maintained.	▪ Develop and implement a schedule maintenance programme to maintain facilities and infrastructure in a condition that meets relevant environmental, health and safety requirements.	▪ Regular scheduled maintenance of all facilities and infrastructure.	▪ Environmental, health or safety incidents associated with inadequately maintained facilities and infrastructure.	***On-going***	Officer in Charge

7) MONITORING AND REPORTING

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

7.1 Annual monitoring

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

- An objective, target or desired state of the attribute or resource (as described in the management targets in Section 6 above).
- Being part of a formalised adaptive management cycle.
- Establishing and repeatedly evaluating the measures of success of conservation project or management intervention.

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

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

On this basis, a monitoring schedule for WNR is set out in Table 7.1.

Table 7.1 Annual surveillance and monitoring schedule for Weenen Nature Reserve

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Law enforcement	Schedule of patrols	Written record	Weekly	Officer in Charge	Annual report
	Recovery of snares	Photographs/written record	Weekly		Annual report
	Illegal incidents	Photographs/written record	Per event		Record of event
Stakeholder engagement	Minutes of meetings of the liaison forum	Written record	Bi-annually	Officer in Charge	Annual report
Buffer zone management	Influx of listed invasive vegetation on the nature reserve's boundaries.	Surveillance plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
Local and regional planning	Land uses that are approved in the areas around the nature reserve in local and regional IDPs and SDFs	Written record	Annually	Regional Management Level	Annual report
Eco- tourism	Visitor statistics	Completion of questionnaire/entry form	On-going	Officer in Charge	Annual report
Fire management	Burning of firebreaks as part of fire management	Written record/map/photography	Annually	Officer in Charge	Annual report
	Burning of blocks as part of controlled burning		Annually		Annual report
	Unplanned wildfires	Written record/map/photography	Per event		Record of event
Invasive plant control	Areas subject to invasive plant control	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
	State of areas in which invasive plants have been eradicated				
	Records of labour hours/days	Written record	Annually		Annual report
	Herbicide usage	Written record	Annually		Annual report

Table 7.1 (cont.)

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Soil erosion control	Areas subject to erosion control	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
	State of rehabilitated areas of erosion				Annual report
Conservation targets	Incidents related to flagship species	Photographs/written record	Per event	Officer in Charge	Record of event
	Status of key rare and endangered species, particularly those for which conservation targets have been set	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
Resource utilisation	Extraction of resources from the nature reserve	Photographs/written records	Per event	Officer in Charge	Annual report
Human resources	Staffing levels	Number of full-time staff	Annually	Officer in Charge	Annual report
Facilities and infrastructure	State of roads, 4x4 tracks and paths	Photographs/written records	Quarterly	Officer in Charge	Annual report
	State of facilities and service infrastructure	Maintenance schedule/written records	Monthly		Annual report
	Pollution events	Photographs/written records	Per event	Officer in Charge	Record of event
Cultural heritage management	Vandalism and fire hazards or other potential threatening processes.	Photographs/written records	Annually	Officer in Charge	Annual report

As set out in Table 7.1 the following issues require a surveillance plan:

- The influx of listed invasive vegetation on the nature reserve's boundaries.

In addition, the following issues require a monitoring plan:

- Measures taken to control invasive plant species.
- Measures taken to control soil erosion.
- Measures taken to control bush encroachment.
- Measures taken to manage rare and endangered species, particularly Oribi and Bearded Vulture and those for which conservation targets have been set.

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

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

7.2 Annual protected area management plan implementation review

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

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

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

- Any recommended minor amendments to the management plan that do not affect the substance of the vision, objectives or zonation.

- The results of an evaluation of the management effectiveness achieved for the protected area, calculated using the WWF and World Bank Protected Area Management Effectiveness Tool (Stolton *et al*. 2007).

Any proposed significant changes to the management plan that are likely to result in amendment to the vision, objectives and zonation must be supported by the Regional Operations Committee and the Operations Committee (OPSCOM) before being subjected to the appropriate stakeholder participation process and before OPSCOM recommends that the proposed amended protected area management plan be submitted for authorisation to the Ezemvelo KZN Wildlife Board and to the MEC.

8) WEENEN NATURE RESERVE ANNUAL PLAN OF OPERATION

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

8.1 Implementation of the protected area management plan

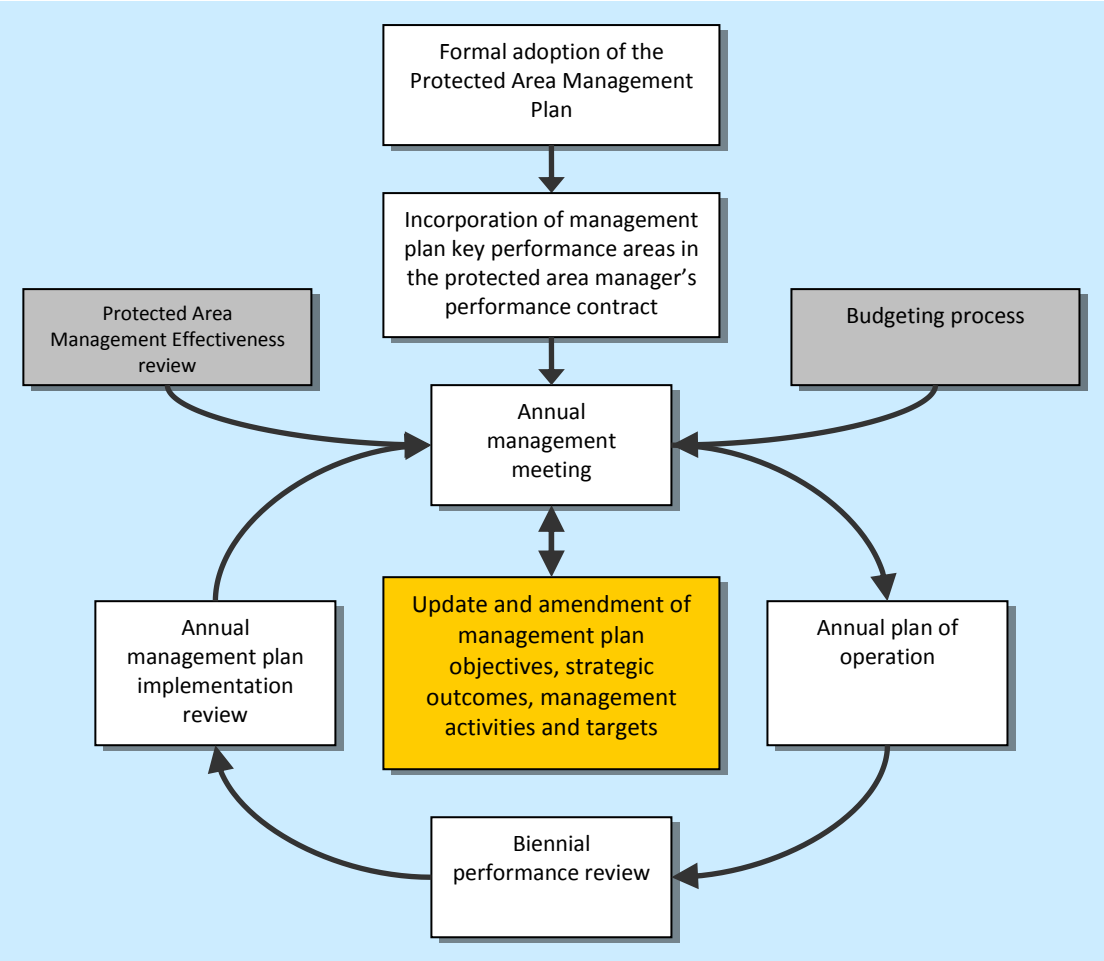

Figure 8.1 Process for the implementation of Protected Area Management Plans

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

- Finalise the annual report, as part of the annual protected area management plan implementation review described in Section 7.2 above.

- As part of the annual performance review, determine the need to modify or change any of the management plans objectives, strategic outcomes, management activities or targets.
- Determine management activities for the coming year and to set goals for the year, based on the key performance areas set out in the management plan, in accordance with the WNR manager's performance contract.
- Determine how budgets will be spent in an effort to achieve the goals for each of the quarters of the coming year.

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

8.2 Responsibilities in implementing the protected area management plan

In the tables in the operational management framework, the responsibilities for the completion of management activities are identified. In many cases the people responsible for implementing the activities will be in attendance at the annual management meeting and the requirements for the achievement of the management activities can be discussed and agreed to at the meeting. In some cases, however, the management activities may be required to be referred to the Operations Committee: West and the Operations Committee (OPSCOM) in order to assign responsibility for the completion of the management activity. In this instance an action of the annual management meeting would be to refer this management activity to the OPSCOM so that the correct unit can be assigned responsibility to complete the management activity.

8.3 Weenen Nature Reserve resource requirements

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

8.3.1 Staff and equipment

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

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

8.3.2 Projects

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

- Upgrade of all building infrastructure (management and tourism)
- Repair of roads.
- Replace and maintain the WNR fence to secure the boundary of the protected area.
- Installation of signage directing tourists to the nature reserve.
- Installation of directional and interpretive signage within the nature reserve.
- The re-introduction of game species into the nature reserve (especially Buffalo).

8.4 Annual financial plan

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

8.5 Financial accounting system

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

8.6 Financial reporting

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

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DEFINITIONS OF TERMS

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

	Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem services	As defined in Section 1 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as "environmental goods and services" meaning: a. Benefits obtained from ecosystems such as food, fuel and fibre and genetic resources. b. Benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification. c. Cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;" For the purposes of this IMP, sustainable water production is also specifically included under this definition.
Environmental degradation	The deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the loss of species or undesirable reduction of species population numbers from a specific area from an environmental health perspective
Ezemvelo KZN Wildlife	Nature Conservation Service as established in terms of the KwaZulu-Natal Nature Conservation Management Act No. 9 of 1997.
Indigenous species	In relation to a specific protected area, means a species that occurs, or has historically occurred, naturally in a free state of nature within that specific protected area, but excludes a species introduced in that protected area as a result of human activity (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Invasive species	Means any species whose establishment and spread outside of its natural distribution range – a. Threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species. b. May result in economic and environmental harm or harm to human health. (As per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003 and NEMBA regulation]).
Joint management	The agreed co-ordination of management and/or management actions by landowners and/or mandated managers on their individual or combined properties in order to achieve common management objectives.
Local community	Any community of people living or having rights or interests in a distinct geographical area (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Management	In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community-based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act (as per the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

Management authority	In relation to a protected area, means the organ of state or other institution or person in which the authority to manage the protected area is vested (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Monitoring	The collection and analysis of repeated observations or measurements to evaluate change in status, distribution or integrity in order to track the impacts of directed management implemented to achieve a stated management objective.
Nature conservation	The conservation of naturally occurring ecological systems, the sustainable utilisation of indigenous plants and animals therein, and the promotion and maintenance of biological diversity (as per the KwaZulu-Natal Nature Conservation Management Act, 1997 [Act No.9 of 1997]).
Neighbouring community	The communities and people permanently living in the local municipal area/s bordering onto the Nature Reserve.
Natural heritage	As defined in Article 2 of the World Heritage Convention (UNESCO) 1972 'natural heritage' is as: "natural features consisting of physical and biological formations or groups of such formations, which are of (…) value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of (…) value from the point of view of science or conservation, natural sites or precisely delineated natural areas of (…) value from the point of view of science, conservation or natural beauty." For the purposes of this IMP, this would include the required ecological integrity of the protected area for the production of ecosystem services.
Partnerships	A co-operative and / or collaborative arrangement between the Game Reserve management / Ezemvelo and a third party that supports the achievement of the Game Reserve management objectives.
Protected areas	• Means any area declared or proclaimed as such in terms of section 3 or listed in the Second Schedule to the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997); or • Means any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Protected area management committee	Is the management body that deals with the day-to-day management of the protected area and is chaired by the OIC.
Ramsar Convention	Means: "The Convention on Wetlands of International Importance, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources." (There are presently 158 Contracting Parties to the Convention, the Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.)

Stakeholders/ interested parties	These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups and the general public. According to the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), "stakeholder" means a person, an organ of state or a community contemplated in section 82 (1) (a), or an indigenous community contemplated in section 82(1) (b).
Surveillance	The collection and analysis of single or repeated measurements to establish status or distribution or integrity at a point in time in the absence of a specific management context or objective.
Sustainable	In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
Wilderness area	Means an area designated in terms of section 22 or 26 for the purpose of retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless, without permanent improvements or human habitation (as defined by the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
World heritage site	Means a World Heritage Site as defined in the World Heritage Convention Act, No. 49 of 1999 under Chapter 1, section 1 subsection (xxiv).

LIST OF STATUTES TO WHICH THE WEENEN NATURE RESERVE IS SUBJECT

Biodiversity and Cultural Resource Management and Development:

- Animals Protection Act [No. 71 of 1962]
- Atmospheric Pollution Prevention Act [No. 45 of 1965]
- Conservation of Agricultural Resources Act [No. 43 of 1983]
- Constitution of the Republic of South Africa [No. 108 of 1996]
- Criminal Procedures Act [1977]
- Environment Conservation Act [No. 73 of 1989]
- Forest Act [No. 122 of 1984]
- Hazardous Substances Act [No. 15 of 1973]
- KwaZulu Nature Conservation Act [No. 8 of 1975]
- KwaZulu-Natal Heritage Management Act [No. 10 of 1997]
- KwaZulu-Natal Nature Conservation Management Act [No. 9 of 1997]
- National Environmental Management Act [No. 107 of 1998]
- National Environmental Management: Biodiversity Act [No. 10 of 2004]
- National Environmental Management: Protected Areas Act [No. 57 of 2003]
- National 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]

General Management:

- Development Facilitation Act [No. 67 of 1995]
- Disaster Management Act [No. 57 of 2002]
- Fire Brigade Services Act [No. 99 of 1987]
- 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]
- KwaZulu-Natal Planning and Development Act [No. 5 of 1998]
- Water Services Act [No. 108 of 1997]

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]
- Occupational Health and Safety Act [No. 85 of 1993]
- 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]

WEENEN NATURE RESERVE PROCLAMATION

†*No. 116, 1975.

[*Engelse teks deur die Administrateur onderteken.*]

PROKLAMASIE

van die Administrateur van die provinsie Natal

KRAGTENS my bevoegdhede ingevolge artikel 2 van die Ordonnansie op Natuurbewaring (Ordonnansie No. 15 van 1974), proklameer, verklaar en maak ek hierby op raad en met die toestemming van die Uitvoerende Komitee van die provinsie Natal, bekend dat die grond wat bekend staan as die restant van die plaas Boesmansrivierpoort No. 1386 groot 547,9448 hektaar en die restant van die plaas Onverwacht No. 911 groot 2381,0440 hektaar, albei geleë in die County Weenen, Provinsie Natal, vanaf die 1ste April, 1975 'n natuurtuin uitmaak en bekend staan as die Natuurtuin Weenen.

Gegee onder my handtekening te Pietermaritzburg, Natal, op hede die 18de dag van Julie eenduisend negehonderd vyf-en-sewentig.

W. W. B. HAVEMANN,
Administrateur.

†*No. 116, 1975.

[*English text signed by the Administrator.*]

PROCLAMATION

by the Administrator of Natal

UNDER the powers vested in me by Section 2 of the Nature Conservation Ordinance (Ordinance No. 15 of 1974), I, acting on the advice and with the consent of the Executive Committee of the Province of Natal, do hereby proclaim, declare and make known that the land known as the Remainder of the farm Boesmansrivierpoort No. 1386 in extent 547,9448 hectares and the Remainder of the farm Onverwacht No. 911 in extent 2381,0440 hectares, both situate in the County of Weenen, Province of Natal, shall be a Nature Reserve and shall be known as the Weenen Nature Reserve with effect from the 1st April, 1975.

Given under my hand at Pietermaritzburg, Natal, this 18th day of July, One Thousand Nine Hundred and Seventy-five.

W. W. B. HAVEMANN,
Administrator.

547 4448
2381 0440

GAZETTE No. 4240.

*No. 85, 1981

[*English text signed by the Administrator*]

PROCLAMATION

by the Administrator of the Province of Natal

UNDER the powers vested in me by section 2 (1) of the Nature Conservation Ordinance 1974 (Ordinance No. 15 of 1974), I do hereby proclaim, declare and make known that, with effect from the date of publication hereof, the properties described as—

Lot 225 Weenen Township, in extent 1,556 3 ha,
Lot 226 Weenen Township, in extent 1,358 2 ha,
Lot 227 Weenen Township, in extent 1,085 8 ha,
Lot 379 Weenen Township, in extent 660,159 8 ha,
Sub 2 of Farm Mona No. 2023, in extent 60,235 2 ha,
Sub 1 of Farm Correction No. 7949, in extent 7,312 6 ha,

all situate in the County of Weenen, shall be a nature reserve and shall form part of the Weenen Nature Reserve.

Given under my hand at Pietermaritzburg, Natal this 18th day of May, one thousand nine hundred and eighty-one.

J. C. G. BOTHA
Administrator

*No. 85, 1981

[*Engelse teks deur die Administrateur onderteken*]

PROKLAMASIE

van die Administrateur van die Provinsie Natal

KRAGTENS die bevoegdhede aan my verleen by artikel 2 (1) van die Ordonnansie op Natuurbewaring, 1974 (Ordonnansie No. 15 van 1974), proklameer, verklaar en maak ek hierby bekend dat die eiendomme omskrywe as—

Lot 225 Dorp Weenen, groot 1,556 3 ha,
Lot 226 Dorp Weenen, groot 1,358 2 ha,
Lot 227 Dorp Weenen, groot 1,085 8 ha,
Lot 379 Dorp Weenen, groot 660,159 8 ha,
Ond 2 van die plaas Mona No. 2023, groot 60,235 2 ha, en
Ond 1 van die plaas Correction No. 7949, groot 7,312 6 ha,

ahaal geleë in die County Weenen, met ingang van die publikasiedatum hiervan 'n natuurtuin is en deel uitmaak van die Natuurtuin Weenen.

Gegee onder my handtekening te Pietermaritzburg, Natal, op hede die 18de dag van Mei eenduisend negehonderd een-en-tagtig.

J. C. G. BOTHA
Administrateur

Administrator
PTB/R 18816

*No. 51, 1982

[*English text signed by the Administrator*]

PROCLAMATION

by the Administrator of the Province of Natal

UNDER the powers vested in me by section 2 (1) of the Nature Conservation Ordinance, 1974 (Ordinance No. 15 of 1974), I do hereby proclaim, declare and make known that with effect from the date of publication hereof, the property described as Subdivision 2 of the farm Bosman Rivier's Poort No. 1386, situate in the County of Weenen, Province of Natal, in extent 487,2419 ha, shall be a nature reserve and shall form part of the Weenen Nature Reserve.

Given under my hand at Pietermaritzburg, Natal, this 18th day of March, one thousand nine hundred and eighty-two.

J. C. G. BOTHA
Administrator

Administra
GAZETTE No. 4291 of 1/4/82. PTB/R 181

*No. 51, 1982

[*Engelse teks deur die Administrateur onderteken*]

PROKLAMASIE

van die Administrateur van die Provinsie Natal

KRAGTENS die bevoegdhede aan my verleen by artikel 2 (1) van die Ordonnansie op Natuurbewaring, 1974 (Ordonnansie No. 15 van 1974), proklameer, verklaar en maak ek hierby bekend dat die eiendom omskryf as Onderverdeling 2 van die plaas Bosman Rivier's Poort No. 1386, geleë in die County Weenen, Provinsie Natal, 487,2419 ha groot, met ingang van die publikasiedatum hiervan 'n natuurtuin is en deel uitmaak van die Natuurtuin Weenen.

Gegee onder my handtekening te Pietermaritzburg, Natal, op hede die 18de dag van Maart eenduisend negehonderd twee-en-tagtig.

J. C. G. BOTHA
Administrateur

*No. 31, 1985

[Afrikaans text signed by the Administrator]

PROCLAMATION

by the Administrator of the Province of Natal

IN terms of section 2(1) of the Nature Conservation Ordinance, 1974 (Ordinance 15 of 1974) —

(i) the property described as Sub 3 of the farm Onverwacht No. 911 situate in the Administrative District of Natal measuring twenty two comma nil six two eight (22,0628) hectares shall cease to be a nature reserve; and

(ii) the property described as Sub 4 (of 1) of the farm Onverwacht No. 911 situate in the Administrative District of Natal, measuring fifteen comma six four one nine (15,6419) hectares shall be a nature reserve and shall form part of the Weenen Nature Reserve.

Signed at Pietermaritzburg, Natal this 27th day of June one thousand nine hundred and eighty-five.

R. M. CADMAN
Administrator

*No. 56, 1986

[Afrikaans text signed by the Administrator]

PROCLAMATION

by the Administrator of the Province of Natal

UNDER the powers vested in me by Section 2(1) of the Nature Conservation Ordinance 1974 (Ordinance No. 15 of 1974), I do hereby proclaim, declare and make known that, with effect from the date of publication hereof, the properties described as: —

(a) Sub 4 of 1 of Bosmans Riviers Poort No. 1386 situate in the Administrative District of Natal in extent 735,7595 hectares,

(b) Sub 9 of Vrisgewaagd No. 1238 situate in the Administrative District of Natal, in extent 31,5604 hectares

shall be a nature reserve and shall form part of the Weenen Nature Reserve.

Given under my hand at Pietermaritzburg, Natal this 2nd day of September one thousand nine hundred and eighty six.

R. M. CADMAN
Administrator

*No. 59,1986

[English text signed by the Administrator]

PROCLAMATION

by the Administrator of the Province of Natal

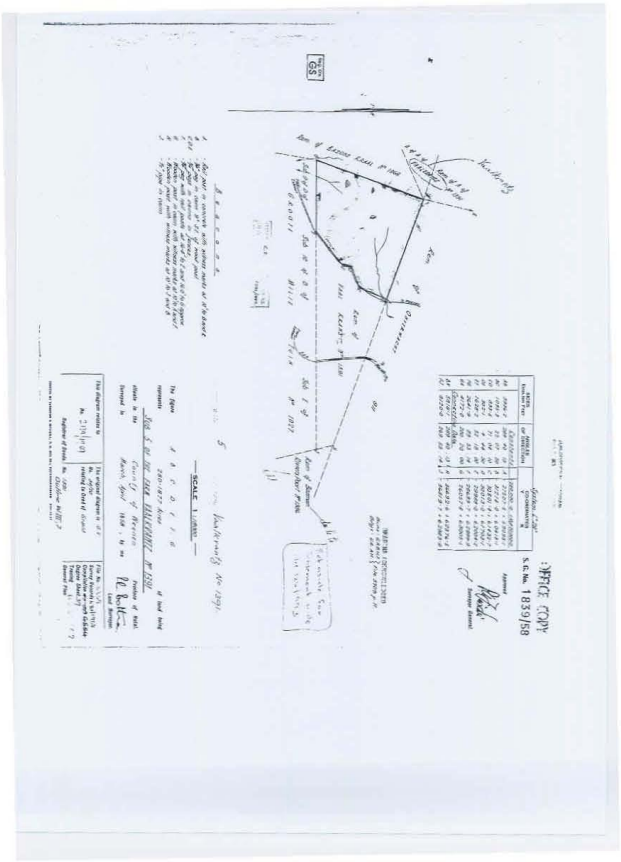
UNDER the powers vested in me by —

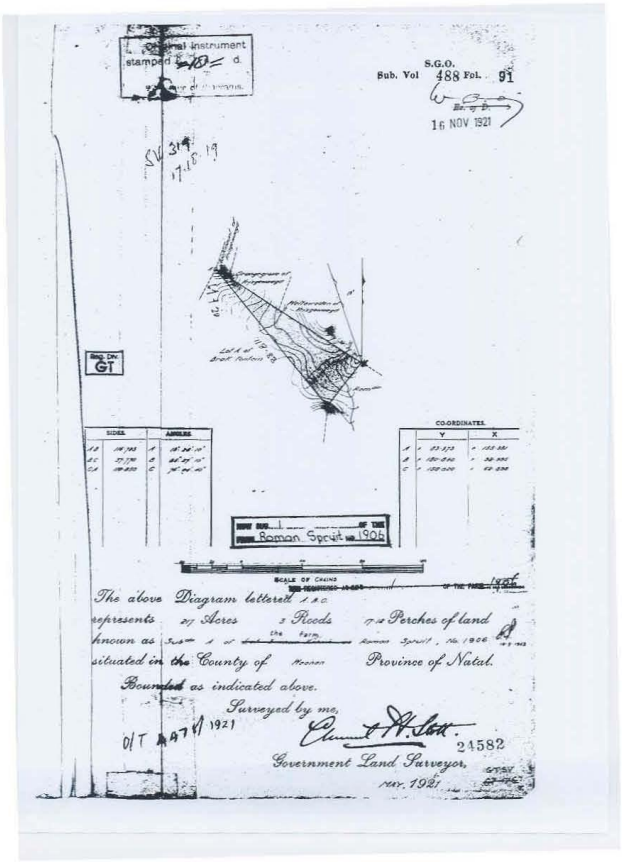
(a) section 90 of the Provincial Government Act, 1961 (Act 32 of 1961), as read with section 21(2) of the Provincial Government Act, 1986 (Act 69 of 1986), I hereby proclaim, declare and make known that the State President-in-Cabinet has assented to the Road Traffic Second Amendment Ordinance, 1986 (Ordinance 15 of 1986), and I promulgate the said ordinance for general information, and

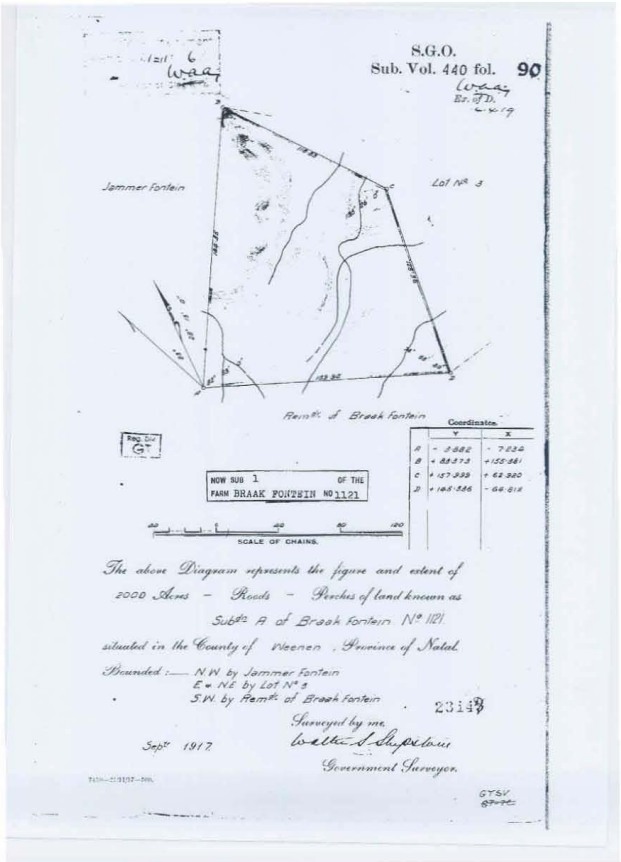
(b) section 8 of the Road Traffic Second Amendment Ordinance, 1986 (Ordinance 15 of 1986), I hereby declare that the said ordinance shall come into operation on the 1st day of October, 1986.

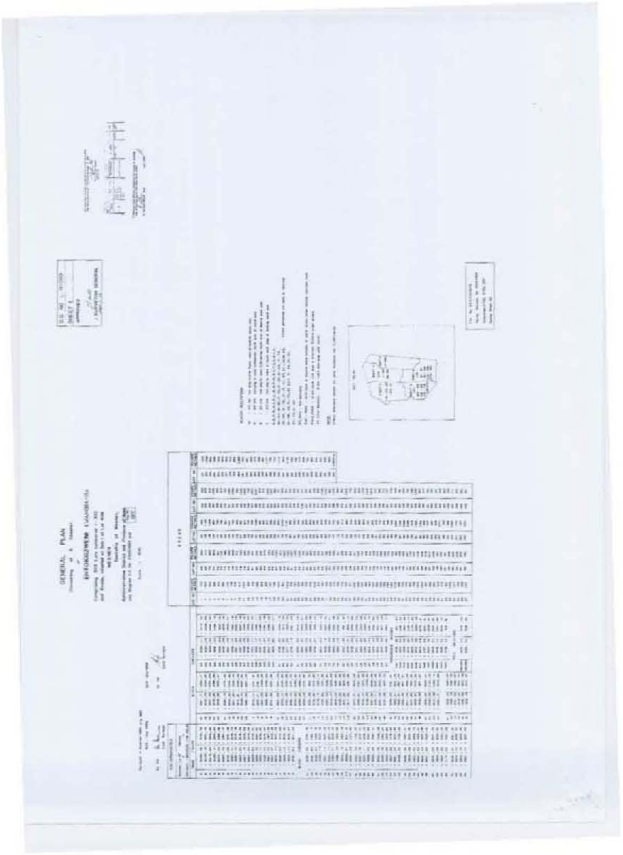
Given under my hand at Pietermaritzburg on this 10th day of September 1986.

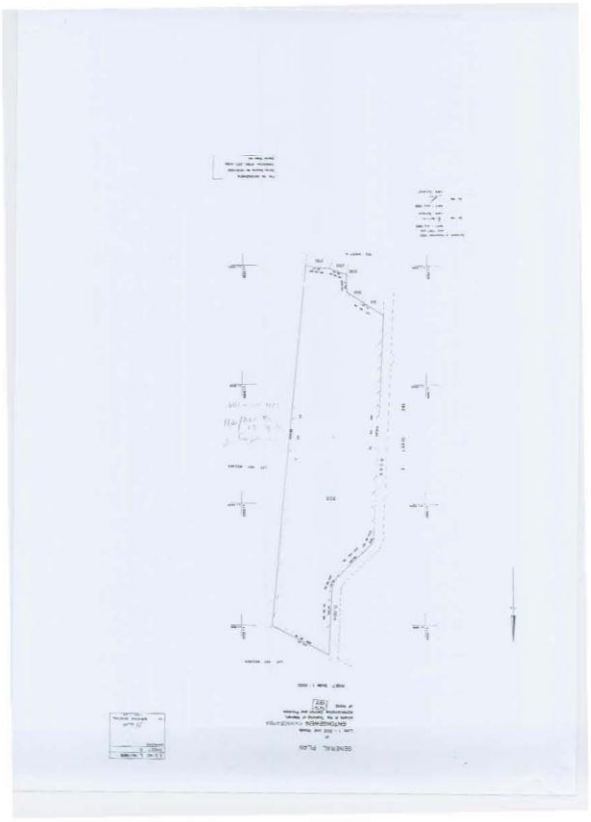
R. M. CADMAN
Administrator

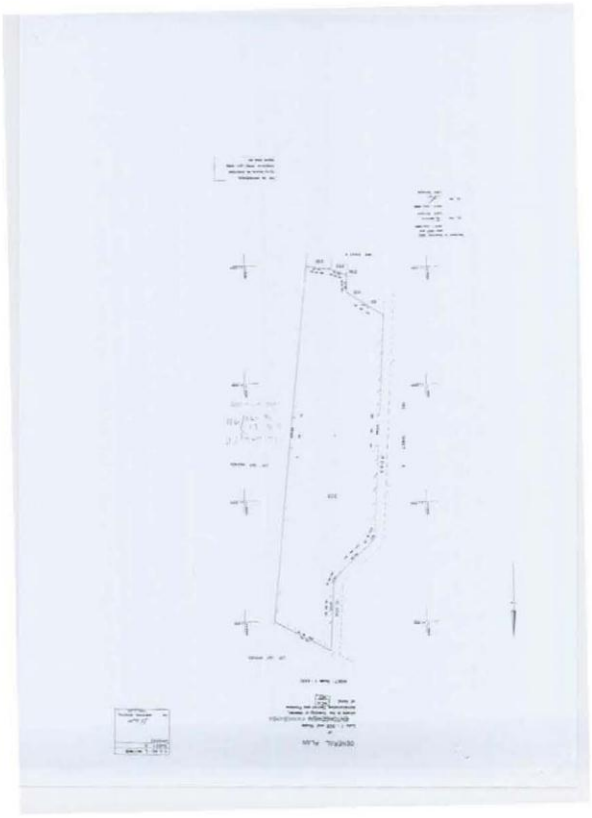


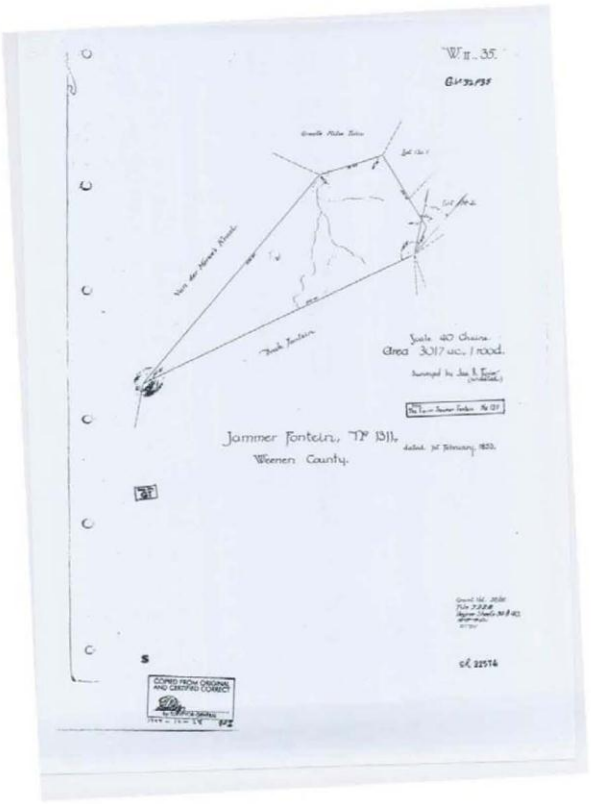

S.G.O.
Sub. Vol 488 Fol. 91
16 NOV 1921
Roman Spruit No 1906
The above Diagram lettered A B C
represents 29 Acres 2 Roods 17 Perches of land
known as
situated in the County of Province of Natal.
Bounded as indicated above.
Surveyed by me,
24582
Government Land Surveyor,

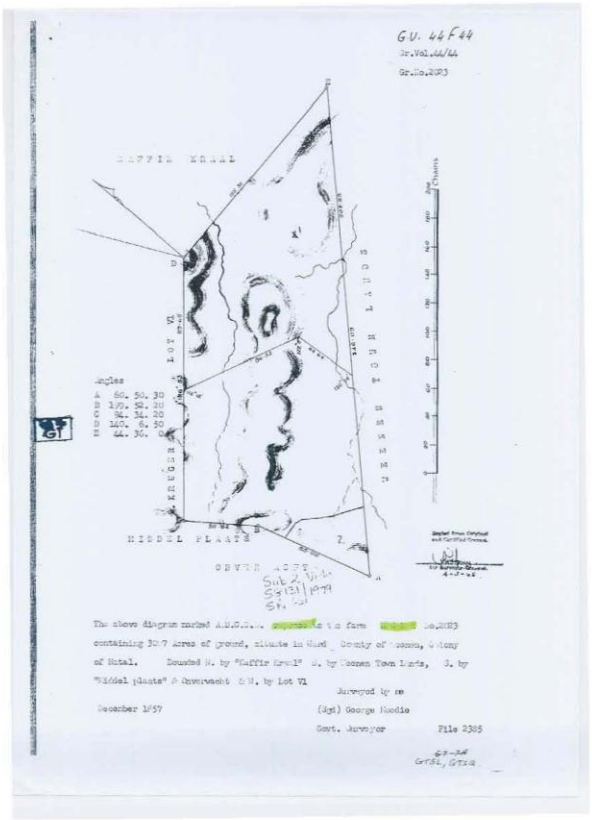

S.G.
Sub. Vol. 440 fol. 90
Jammer Fontein
Lot No 3
Rem^r of Braak Fontein
NOW SUB 1 OF THE
FARM BRAAK FONTEIN No 1121
SCALE OF CHAINS.
The above Diagram represents the figure and extent of
2000 Acres – Roods – Perches of land known as
Sub^d A of Braak Fontein No 1121
situated in the County of Weenen, Province of Natal.
Bounded :— N.W. by Jammer Fontein
E. & N.E. by Lot No 3
S.W. by Rem^r of Braak Fontein
Surveyed by me
Sept 1917
Government Surveyor.

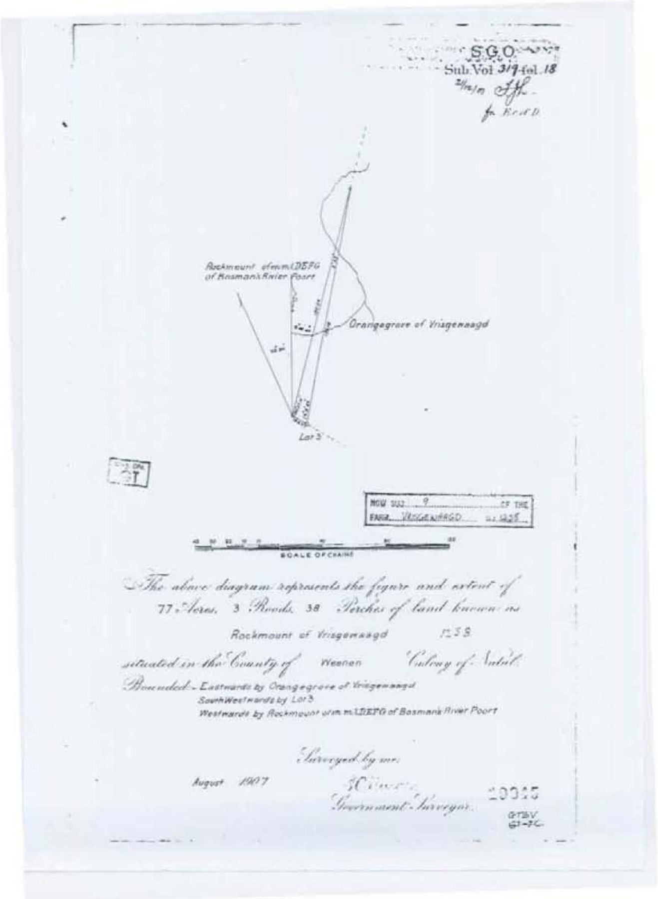







W II 35.
Scale 40 Chains.
Area 3017 ac. 1 rood.
Jammer Fontein, 7F 1311,
Weenen County.
COPIED FROM ORIGINAL AND CERTIFIED CORRECT


G.U. 44 F 44
KAFFIR KRAAL
SOUTH HOLE ESTATE
MIDDEL PLAATS
Angles
A 60. 30. 30
B 139. 52. 20
C 94. 34. 20
D 145. 6. 50
44. 36. 0
Surveyed by me
(Sgd) George Noddie
Govt. Surveyor
December 1/57
File 2385



The above diagram represents the figure and extent of 77 Acres, 3 Roods, 38 Perches of land known as

Rockmount of Vrisgewaagd 1238

situated in the County of Weenen Colony of Natal.

Bounded – Eastwards by Orangegrove of Vrisgewaagd
SouthWestwards by Lot 3
Westwards by Rockmount of nm.I.DEFG of Bosmans River Poort

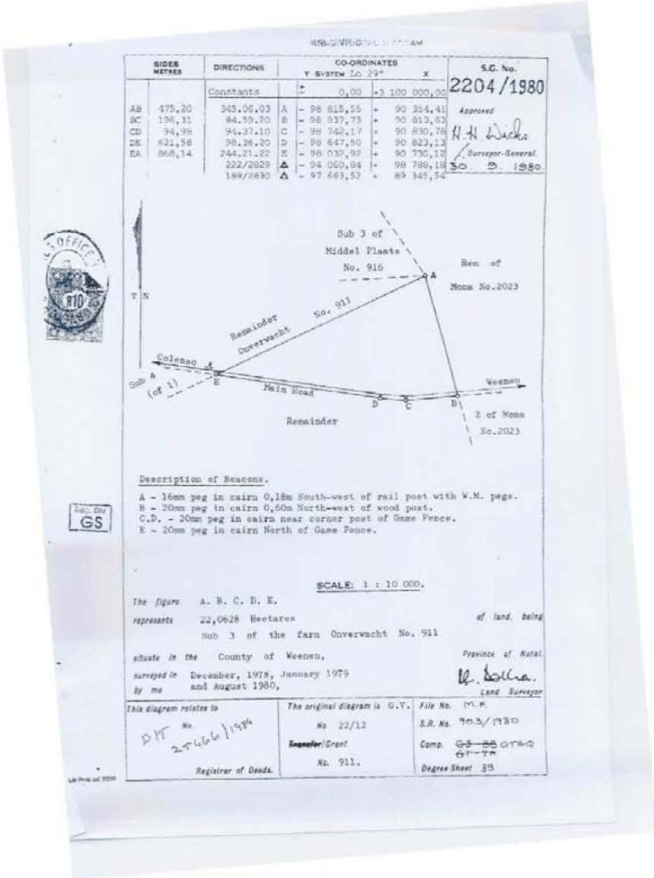
Surveyed by me.

August 1907

Government Surveyor.

19945

GT3V
GT-7C



SUB-DIVISIONAL DIAGRAM

SIDES METRES		DIRECTIONS	CO-ORDINATES Y System Lo 29°		X	S.C. No.
		Constants		± 0,00	+3 100 000,00	2204/1980
AB	475,20	345.06.03	A	− 98 815,55	+ 90 354,41	Approved
BC	196,31	84.39.20	B	− 98 937,73	+ 90 813,63	H.H. Wicks
CD	94,98	94.37.10	C	− 98 742,17	+ 90 830,78	Surveyor-General.
DE	621,58	98.26.20	D	− 98 647,80	+ 90 823,13	30. 9. 1980
EA	868,14	244.21.22	E	− 98 032,92	+ 90 730,12	
		222/2829	△	− 94 060,84	+ 98 789,18	
		189/2830	△	− 97 663,52	+ 89 345,54	

Description of Beacons.

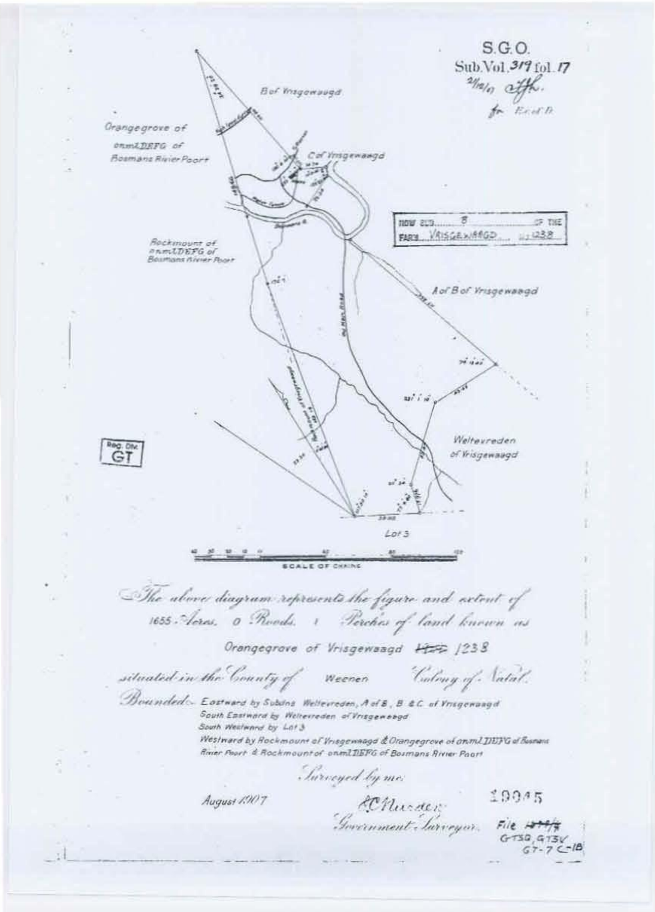
A – 16mm peg in cairn 0,18m South-west of rail post with W.M. pegs.
B – 20mm peg in cairn 0,60m North-west of wood post.
C.D. – 20mm peg in cairn near corner post of Game Fence.
E – 20mm peg in cairn North of Game Fence.

SCALE: 1 : 10 000.

The figure A. B. C. D. E. represents 22,0628 Hectares of land, being Sub 3 of the farm Onverwacht No. 911 situate in the County of Weenen, Province of Natal surveyed in December, 1978, January 1979 and August 1980, by me

Land Surveyor

This diagram relates to	The original diagram is G.V.	File No. M.F.
D/T No 25466/1984	No 22/12	S.R. No. 903/1980
	Transfer/Grant	Comp. GS-8B GT4Q GT-7A
Registrar of Deeds.	No. 911.	Degree Sheet 39



The above diagram represents the figure and extent of 1655 Acres, 0 Roods, 1 Perches of land known as

Orangegrove of Vrisgewaagd ~~No.~~ 1238

situated in the County of Weenen Colony of Natal.

Bounded – Eastward by Subdns Weltevreden, A of B, B & C of Vrisgewaagd
South Eastward by Weltevreden of Vrisgewaagd
South Westward by Lot 3
Westward by Rockmount of Vrisgewaagd & Orangegrove of onm.I.DEFG of Bosmans Rivier Poort & Rockmount of onm.I.DEFG of Bosmans Rivier Poort

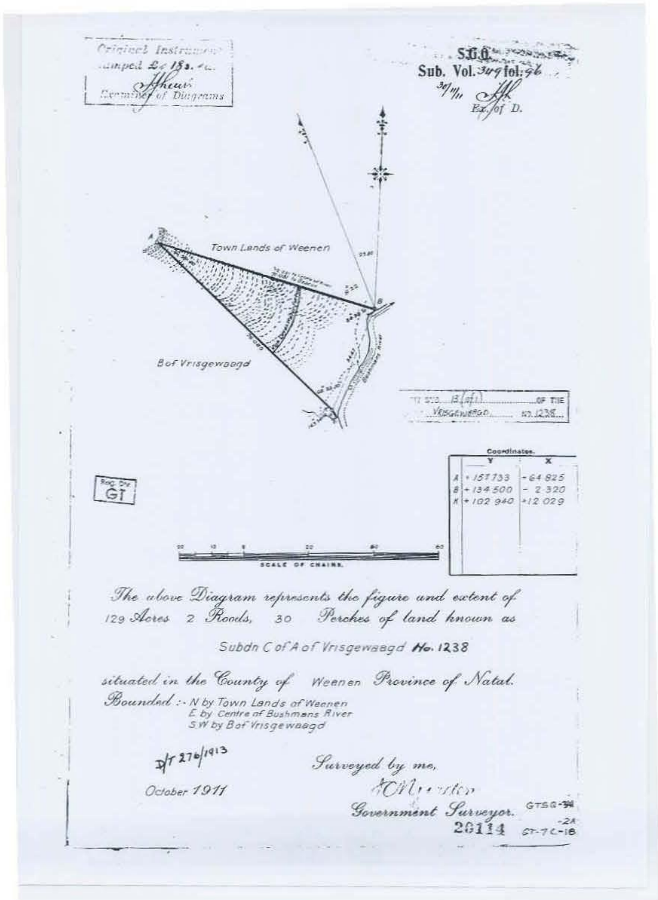
Surveyed by me.

August 1907

Government Surveyor.

19945

File GT3Q, GT3V
GT-7 C-18



	Coordinates Y	X
A	+ 151 733	− 64 825
B	+ 134 500	− 2 320
K	+ 102 940	+ 12 029

The above Diagram represents the figure and extent of 129 Acres 2 Roods, 30 Perches of land known as

Subdn C of A of Vrisgewaagd No. 1238

situated in the County of Weenen Province of Natal.

Bounded :- N by Town Lands of Weenen
E by Centre of Bushmans River
S.W by B of Vrisgewaagd

D/T 276/1913

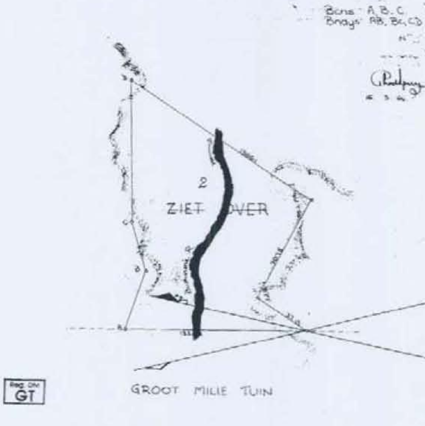
Surveyed by me,

October 1911

Government Surveyor.

20114

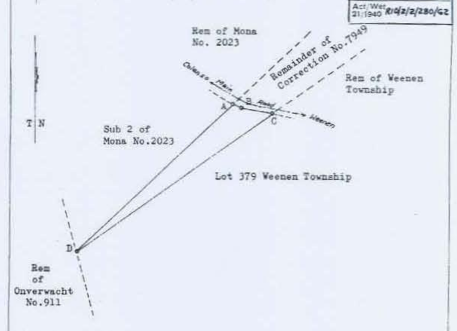
GTSQ-3/4 -2A
GT-7 C-18



2 ... Bosman Riviersport No1384

The above diagram represents a portion of the farm Bosman Riviersport, containing 1204 Acres of ground. It is situated on the county of Weenen Colony of Natal. Bounded by Grootmillietuin and on the other sides by the Remainder of Bosmanriviersport.

Subdivided by me,
(sgd) George Moodie,
Gov^t Surveyor.
Nov^r 22^nd 1860.
File 1679/1
GS-BB- G46U, G53Z, GT30, GT31/
GT 70-78.



SUB-DIVISIONAL DIAGRAM

SIDES METRES		DIRECTIONS	CO-ORDINATES Y SYSTEM Lo 29°	Y	X
		Constants		± 0,00	+ 3 100 000,0
AB	37,56	293.44.50	A	- 99 960,12	+ 91 352,29
BC	141,11	282.27.00	B	- 99 994,50	+ 91 367,42
CD	1073,36	54.25.04	C	- 100 132,29	+ 91 397,84
DA	969,59	226.16.54	D	- 99 259,35	+ 92 022,39
		189/2830	Δ	- 97 663,52	+ 89 345,54
		263/2830	Δ	- 106 271,53	+ 91 740,54

S.G. No. 132/1979
Approved
H.H. Wicks.
Surveyor-General.
G. G. 1979
Act/Wet 21/1940 R10/2/2/280/G2

Description of Beacons.
A.C - 20mm peg in cairn.
B - 13mm peg in cairn.
D - not beaconed.

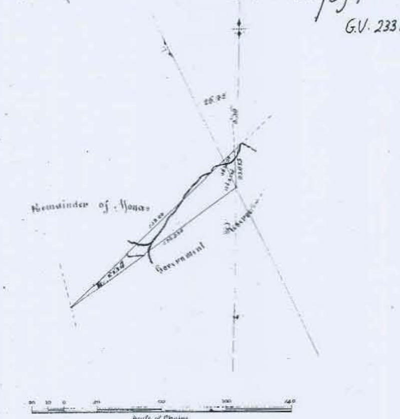
SCALE: 1 : 12 500

The figure represents A.B.C.D. 7,3126 Hectares of land, being Sub 1 of the farm Correction No. 7949 situate in the County of Weenen, Province of Natal.

surveyed in by me: February, May & December 1978 and January 1979

Land Surveyor

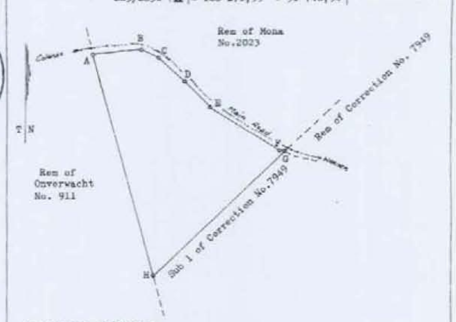
This diagram relates to D/T No. 5954/80
The original diagram is G.V. No 233/52
Transfer/Grant No. 7949
Registrar of Deeds.
File No. /2
S.R. No. 64/1979
Comp. GT-7A GT50
Degree Sheet 40



The above diagram represents the figure and extent of 122 Acres 1 Roods and 24 Perches of land situate and being the farm called Correction No 7849 in the Division of Weenen County of Weenen Colony of NATAL.
Bounded N.W. by Remainder of Mona & otherwise by Government Reserve

GT

Surveyed by me
Govt. Land Surveyor.
June 1896
File 2365
GT5Q



SUB-DIVISIONAL DIAGRAM

SIDES METRES		DIRECTIONS	CO-ORDINATES Y SYSTEM Lo 29°	Y	X
		Constants		± 0,00	+ 3 100 000,0
AB	259,70	264.59.20	A	- 98 937,75	+ 90 813,63
BC	98,40	293.10.40	B	- 99 196,46	+ 90 790,94
CD	189,33	313.43.00	C	- 99 286,92	+ 90 829,67
DE	203,21	316.00.50	D	- 99 423,76	+ 90 960,51
EF	436,31	302.23.50	E	- 99 564,89	+ 91 106,72
FG	29,31	293.44.50	F	- 99 933,29	+ 91 340,49
GH	969,59	46.16.54	G	- 99 960,12	+ 91 352,29
HA	1250,81	165.06.05	H	- 99 259,35	+ 92 022,39
		189/2830	Δ	- 97 663,52	+ 89 345,54
		263/2830	Δ	- 106 271,53	+ 91 740,54

S.G. No. 131/1979
Approved
H.H. Wicks.
Surveyor-General.
G. G. 1979
Act/Wet 21/1940 R10/2/2/280/G2

Description of Beacons.
A - 20mm peg in cairn 0,60m North West of wood post.
B.C.D.E.F.G - 20mm peg in cairn.
H - not beaconed.

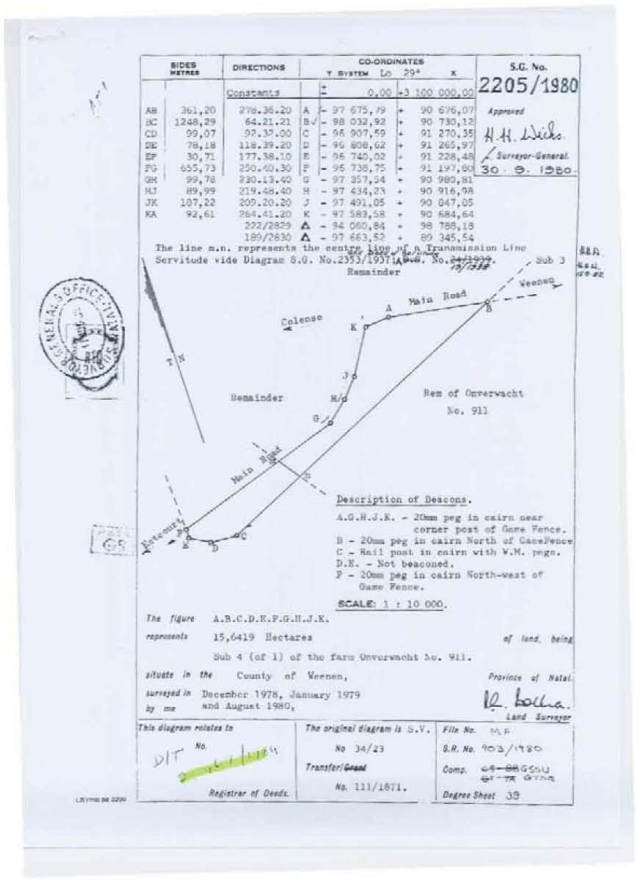
SCALE: 1 : 15 000

The figure represents A.B.C.D.E.F.G.H. 60,2352 Hectares of land, being Sub 2 of the farm Mona No. 2023 situate in the County of Weenen, Province of Natal.

surveyed in by me: February, May & December 1978 and January 1979

Land Surveyor

This diagram relates to D/T No. 5954/80
The original diagram is G.V. No 44/49
Transfer/Grant No. 2023
Registrar of Deeds.
File No. /2
S.R. No. 64/1979
Comp. GT-7A GT5L, GT5Q
Degree Sheet 40



SIDES METRES		DIRECTIONS		CO-ORDINATES Y SYSTEM Lo 29° X		
		Constants		+ 0,00	+3 100 000,00	
AB	361,20	278.36.20	A	- 97 675,79	+ 90 676,07	
BC	1248,29	64.21.21	B	- 98 032,92	+ 90 730,12	
CD	99,07	92.37.00	C	- 96 907,59	+ 91 270,35	
DE	78,18	118.39.20	D	- 96 808,62	+ 91 265,97	
EF	30,71	177.38.10	E	- 96 740,02	+ 91 228,48	
FG	655,73	250.40.30	F	- 96 738,75	+ 91 197,81	
GH	99,78	230.13.40	G	- 97 357,54	+ 90 980,81	
HJ	89,99	219.48.40	H	- 97 434,23	+ 90 916,98	
JK	107,22	209.20.20	J	- 97 491,05	+ 90 047,05	
KA	92,61	264.41.20	K	- 97 583,58	+ 90 684,64	
		222/2829	A	- 96 060,84	+ 98 788,18	
		189/2830	A	- 97 663,52	+ 89 345,54	

S.G. No. 2205/1980

Approved H.H. Wicks Surveyor-General 30. 9. 1980.

The line m.n. represents the centre line of a Transmission Line Servitude vide Diagram S.G. No.2353/1937 Sub No. 2 Remainder

Description of Beacons.
A.G.H.J.K. - 20mm peg in cairn near corner post of Game Fence.
B - 20mm peg in cairn North of GameFence
C - Nail post in cairn with W.M. pegs.
D.E. - Not beaconed.
F - 20mm peg in cairn North-west of Game Fence.

SCALE: 1 : 10 000.

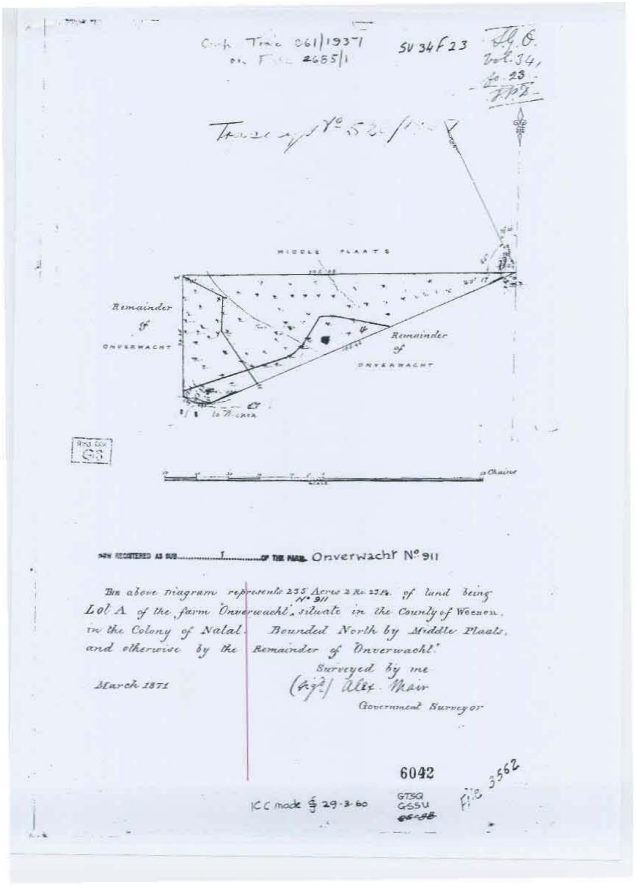
The figure A.B.C.D.E.F.G.H.J.K. represents 15,6419 Hectares of land, being Sub 4 (of 1) of the farm Onverwacht No. 911.

situate in the County of Weenen, Province of Natal.
surveyed in December 1978, January 1979 and August 1980, by me P. Botha Land Surveyor

This diagram relates to No. DIT
Registrar of Deeds.

The original diagram is S.V. No 34/23
Transfer/Grant No. 111/1871.

File No. M.R.
S.R. No. 903/1980
Comp. G5-88 G55U G1-78 G73Q
Degree Sheet 39



Onverwacht No 911

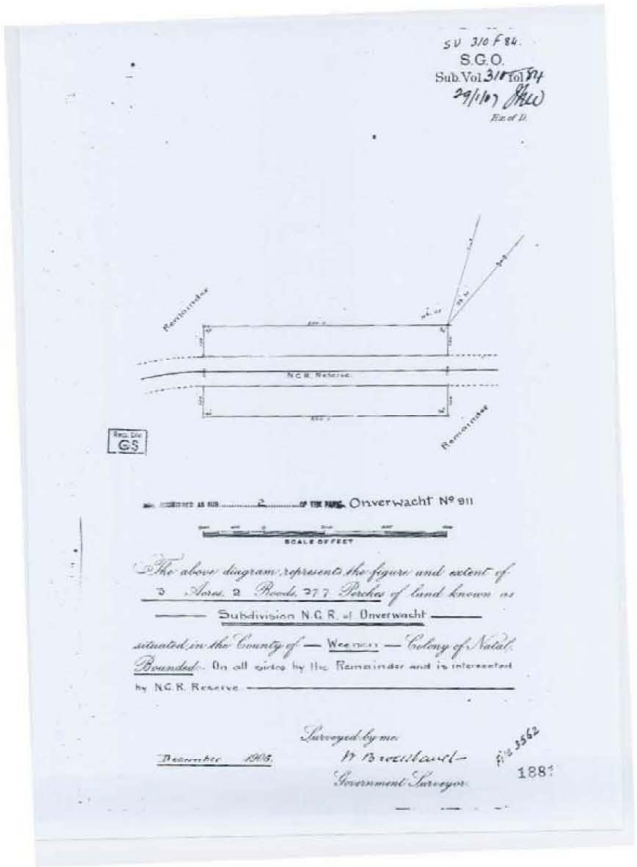
The above diagram represents 235 Acres 2 Roods 22½ Perches of land being Lot A of the farm 'Onverwacht', situate in the County of Weenen, in the Colony of Natal. Bounded North by Middle Plaats, and otherwise by the Remainder of 'Onverwacht'.

March 1871

Surveyed by me (Sgd.) Alex. Mair Government Surveyor

6042

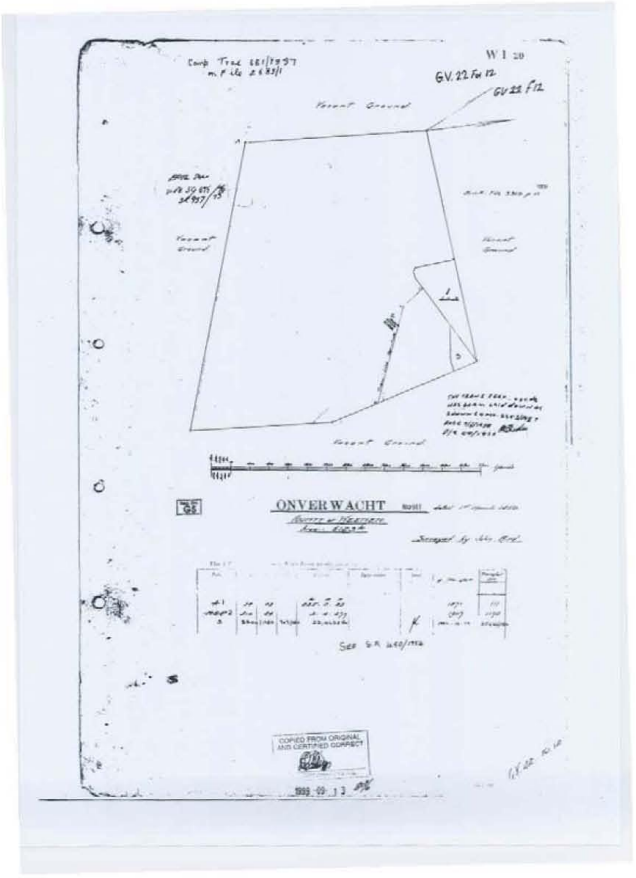
ICC made 29-3-60 G73Q G55U



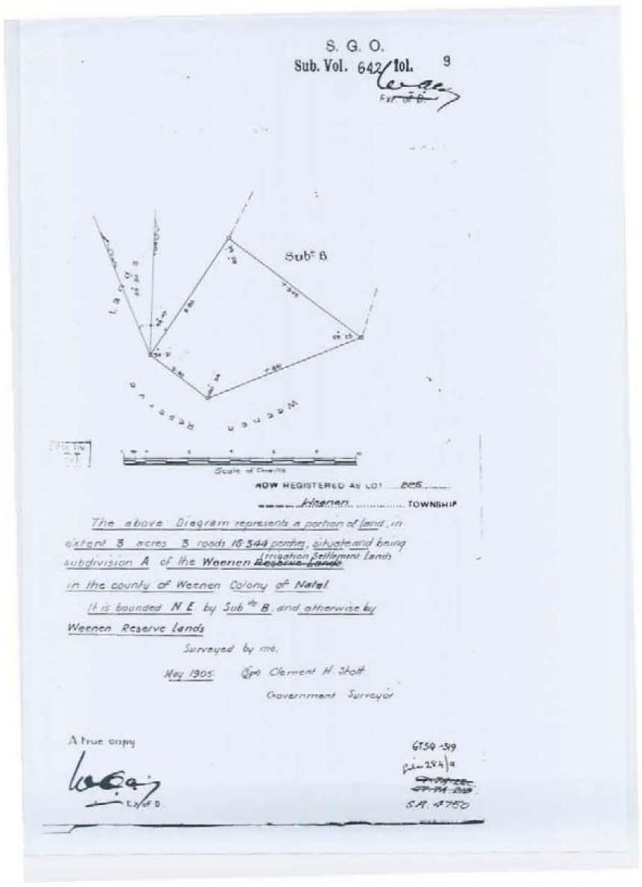
Onverwacht No 911

The above diagram represents the figure and extent of 3 Acres, 2 Roods, 27 7 Perches of land known as Subdivision N.G.R. of Onverwacht situated in the County of Weenen Colony of Natal. Bounded On all sides by the Remainder and is interested by N.G.R. Reserve

Surveyed by me December 1903. H Breutland Government Surveyor 1881



ONVERWACHT



S. G. O.
Sub. Vol. 642/Fol. 9

Sub^n B

Scale of Chains

NOW REGISTERED AS LOT ..... 225 .....
..... Weenen ..... TOWNSHIP

The above Diagram represents a portion of land, in extent 3 acres 3 roods 18·344 perches, situate and being subdivision A of the Weenen ~~Reserve Lands~~ Irrigation Settlement Lands in the County of Weenen Colony of Natal

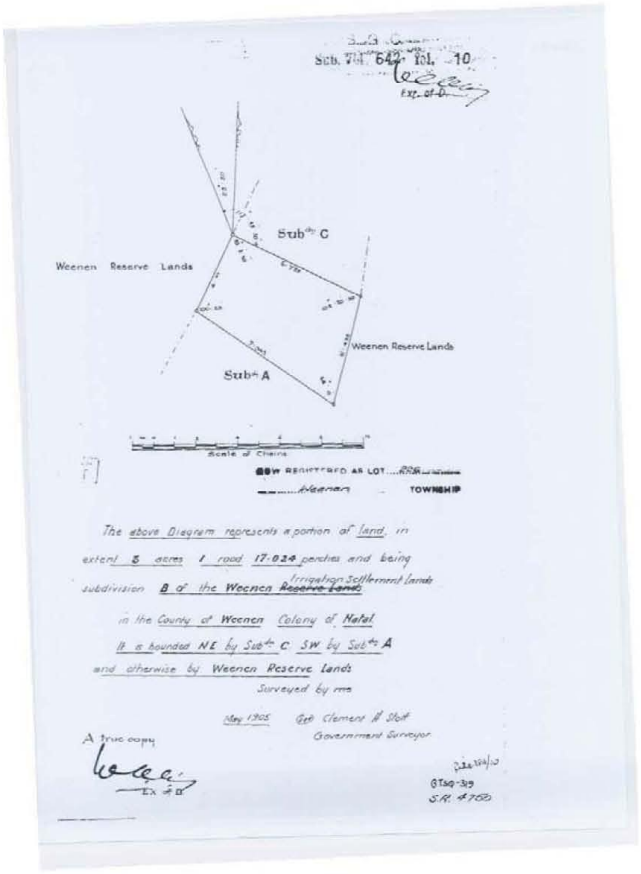
It is bounded N.E. by Sub^n B. and otherwise by Weenen Reserve Lands

Surveyed by me,

May 1905 (Sgd) Clement H. Stott
Government Surveyor

A true copy

GTSG-319
S.R. 4750



Sub. Vol. 642 Fol. 10

Sub^n C

Weenen Reserve Lands

Weenen Reserve Lands

Sub^n A

Scale of Chains

NOW REGISTERED AS LOT ..... 226 .....
..... Weenen ..... TOWNSHIP

The above Diagram represents a portion of land, in extent 3 acres 1 road 17·024 perches and being subdivision B of the Weenen ~~Reserve Lands~~ Irrigation Settlement Lands in the County of Weenen Colony of Natal

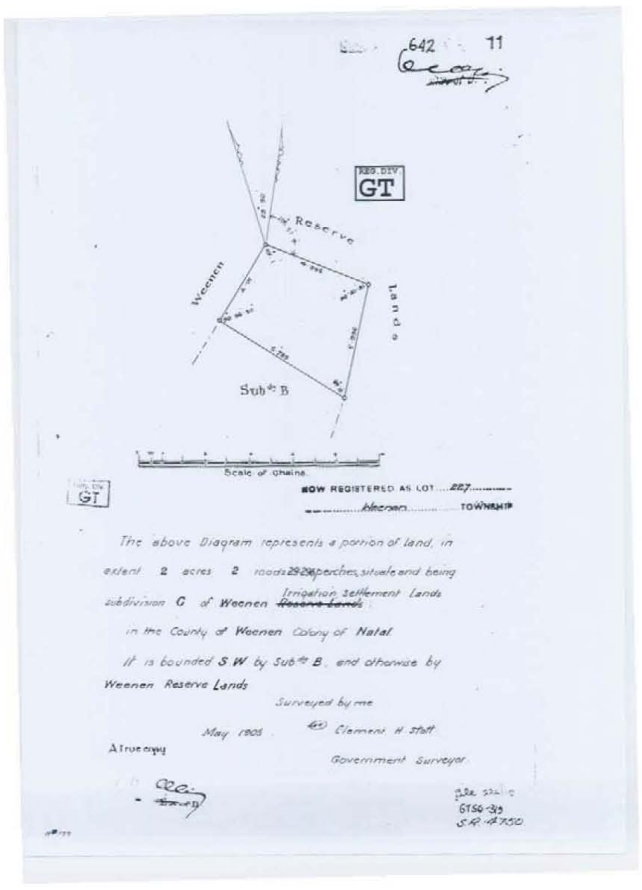
It is bounded N.E by Sub^n C. S.W. by Sub^n A and otherwise by Weenen Reserve Lands

Surveyed by me

May 1905 (Sgd) Clement H. Stott
Government Surveyor

A true copy

GTSG-319
S.R. 4750



642 11

RED. DIV. GT

Weenen Reserve Lands

Sub^n B

Scale of Chains

NOW REGISTERED AS LOT ..... 227 .....
..... Weenen ..... TOWNSHIP

The above Diagram represents a portion of land, in extent 2 acres 2 roods 28·28 perches, situate and being subdivision C of Weenen ~~Reserve Lands~~ Irrigation Settlement Lands in the County of Weenen Colony of Natal

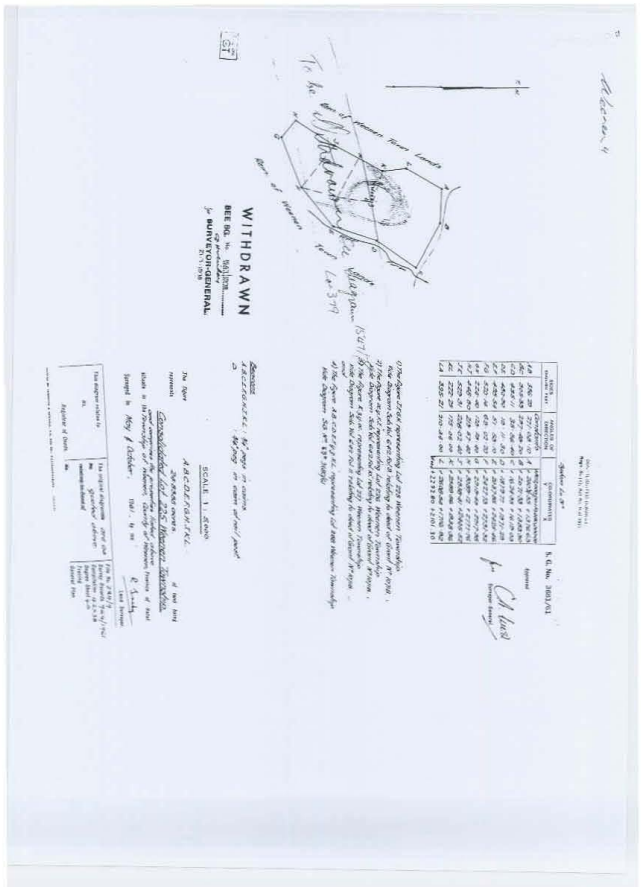
It is bounded S.W. by Sub^n B. and otherwise by Weenen Reserve Lands

Surveyed by me

May 1905 (Sgd) Clement H. Stott
Government Surveyor

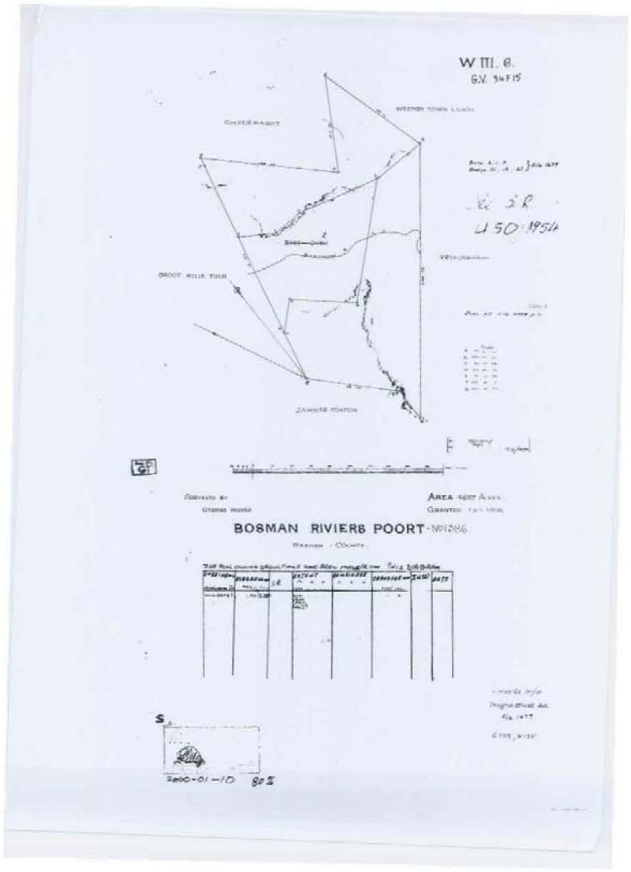
A true copy

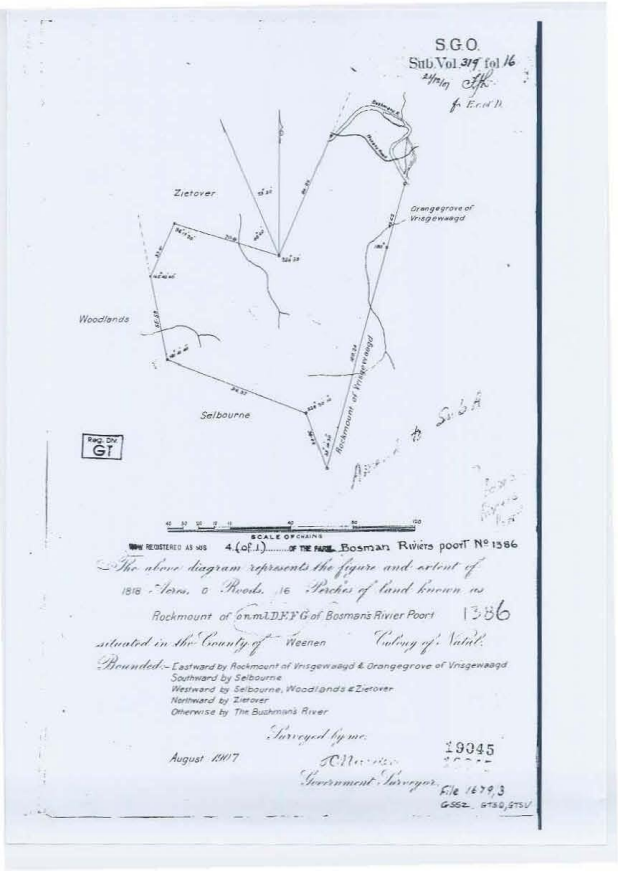
GTSG-319
S.R. 4750

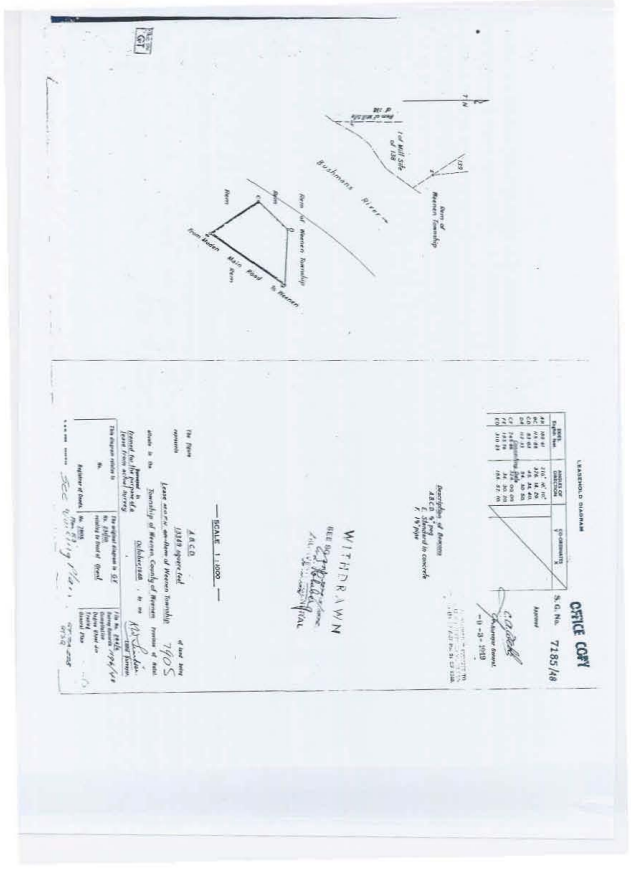


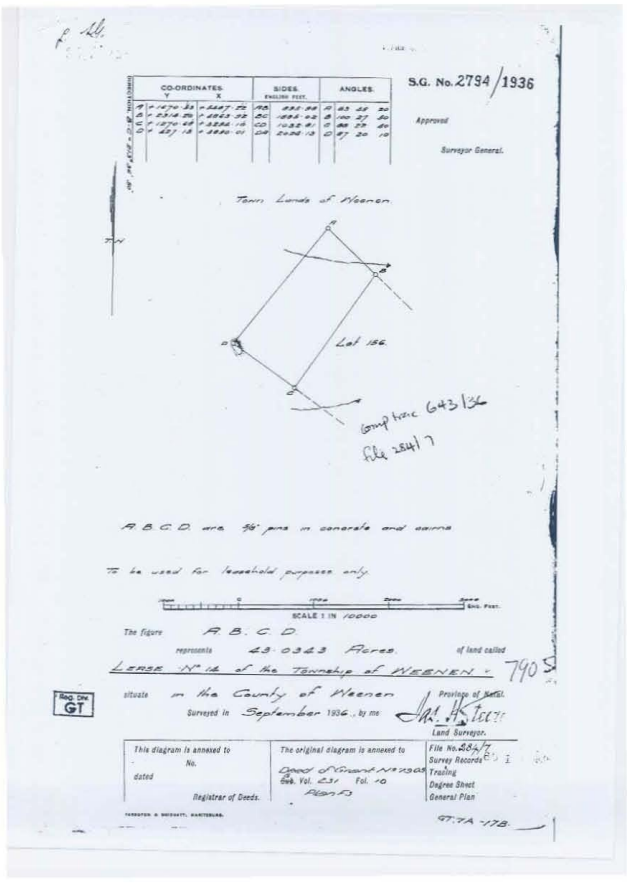
WITHDRAWN

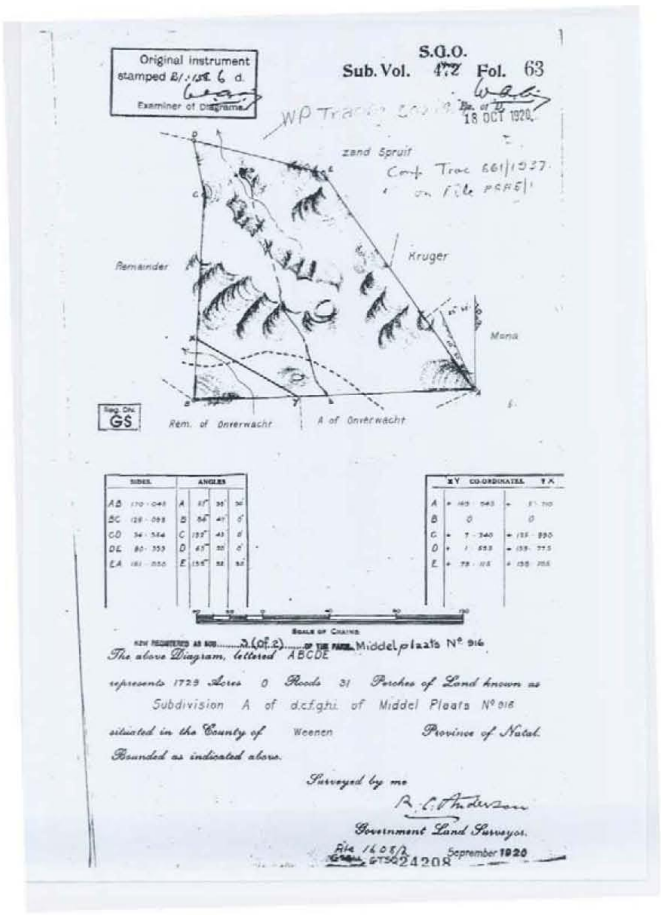
SCALE 1 : 40000

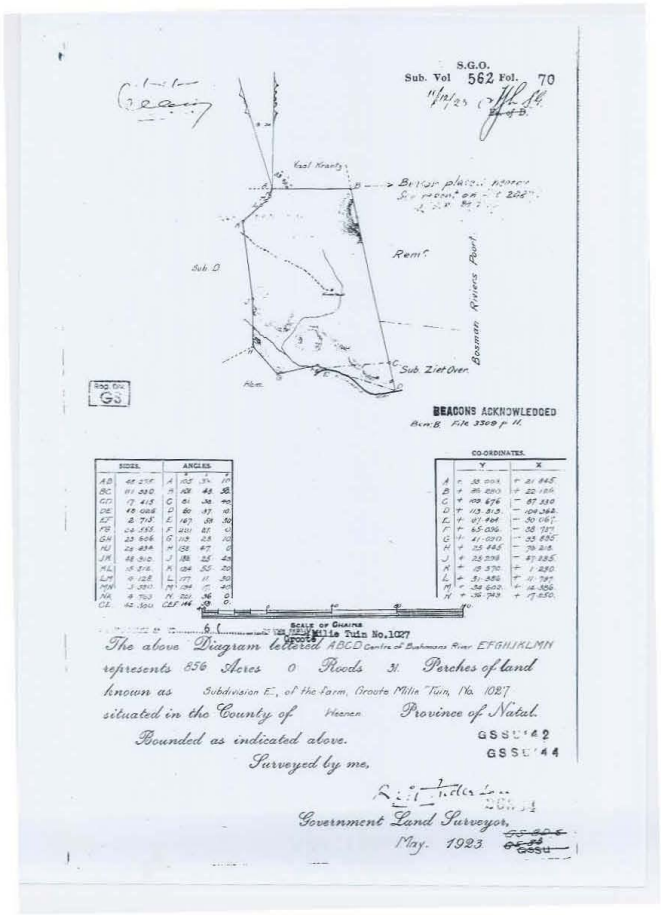

W III. 8.
G.V. 34 F 15
BOSMAN RIVIERS POORT - No 1386

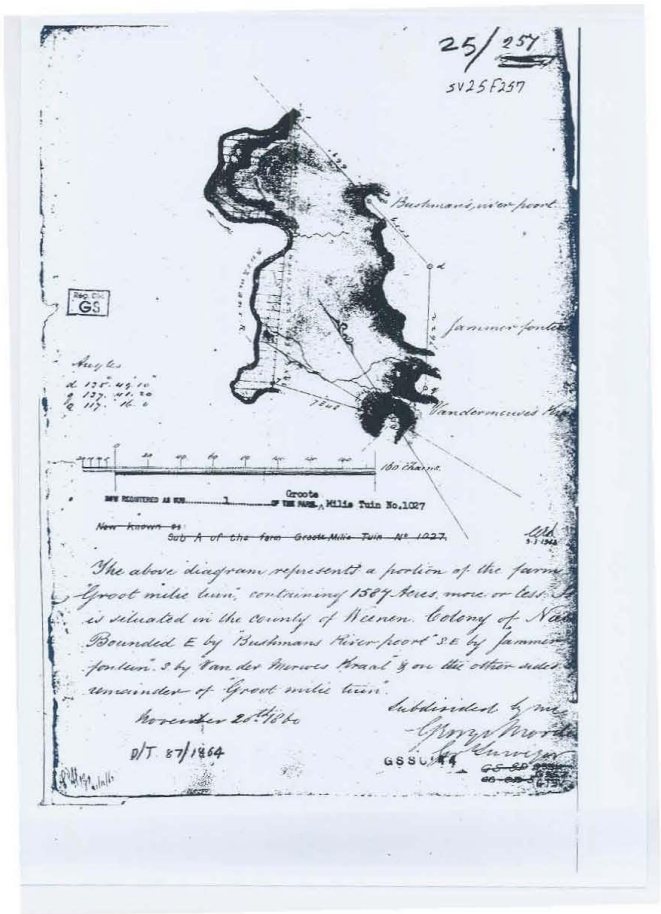

S.G.O.
Sub.Vol. 319 fol 16
Zietover
Grangegrove of Vrisgewaagd
Woodlands
Selbourne
Rockmount of Vrisgewaagd
SCALE OF CHAINS
4 (of 1) OF THE FARM Bosman Riviers poort No 1386
The above diagram represents the figure and extent of
1816 Morgen, 0 Roods, 16 Perches of land known as
Rockmount of 6 n.m.DEFG of Bosmans Rivier Poort 1386
situated in the County of Weenen Colony of Natal.
Bounded:- Eastward by Rockmount of Vrisgewaagd & Orangegrove of Vrisgewaagd
Southward by Selbourne
Westward by Selbourne, Woodlands & Zietover
Northward by Zietover
Otherwise by The Bushmans River
Surveyed by me.
August 1907
Government Surveyor.
19045
File 1679/3
G352 GT50, GT51

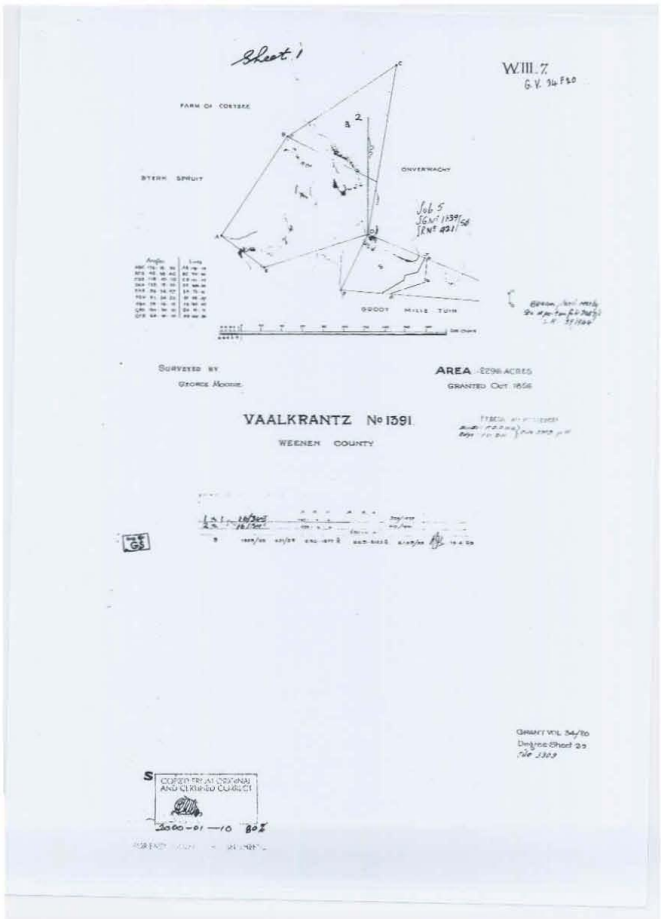

Bushmans River
WITHDRAWN
OFFICE COPY
S.G. No. 7185/10
SCALE 1:10000


S.G. No. 2794/1936
CO-ORDINATES
SIDES
ANGLES
Approved
Surveyor General.
Town Lands of Weenen.
Lot 186.
Comp Plans 643/36
File 2541/7
A B C D are 36 pins in concrete and ammo
To be used for leasehold purposes only.
SCALE 1 IN 10000
The figure A B C D
represents 43·0343 Acres. of land called
LEASE N° 16 of the Township of WEENEN 790
situate in the County of Weenen Province of Natal.
Surveyed in September 1936, by me
Land Surveyor.
This diagram is annexed to No. dated
Registrar of Deeds.
The original diagram is annexed to
Deed of Grant No 1305
Gen. Vol. 231 Fol. 10
Plan 13
File No. 880/7
Survey Records
Tracing
Degree Sheet
General Plan
GT-7A-178.


Original instrument stamped
Examiner of Diagrams
S.G.O.
Sub. Vol. 472 Fol. 63
18 OCT 1920.
Zand Spruit
Remainder
Kruger
Mona
Rem. of Onverwacht
A of Onverwacht
Surv. Dir.
GS
SIDES.
ANGLES.
X Y CO-ORDINATES.
Y.A.
SCALE OF CHAINS
NEW REGISTERED AS SUB. 3 (of 2) OF THE FARM Middelplaats N° 916
The above Diagram, lettered ABCDE
represents 1729 Acres 0 Roods 31 Perches of Land known as
Subdivision A of d.e.f.g.h.i. of Middel Plaats N° 916
situated in the County of Weenen Province of Natal.
Bounded as indicated above.
Surveyed by me
R. C. Anderson
Government Land Surveyor.
File 1605/1
September 1920
GT5424208


S.G.O.
Sub. Vol 562 Fol. 70
Kaal Krantz
Rem.
Sub D
Bosman Riviers Poort
Sub Ziet Over
Surv. Dir.
GS
BEACONS ACKNOWLEDGED
SIDES.
ANGLES.
CO-ORDINATES.
SCALE OF CHAINS
NEW REGISTERED AS SUB. 6 OF THE FARM Groote Mills Twin No.1027
The above Diagram lettered ABCD Centre of Bushmans River EFGHIJKLMN
represents 856 Acres 0 Roods 31 Perches of land
known as Subdivision E. of the farm, Groote Mills Twin, No. 1027
situated in the County of Weenen Province of Natal.
Bounded as indicated above.
GSS 1142
GSS 1144
Surveyed by me,
Government Land Surveyor,
May. 1923


25/257
SV25F357
Bushmans river poort
Jammer fontein
Vandermerwes Kraal
Surv. Dir.
GS
Groote
NEW REGISTERED AS SUB. 1 OF THE FARM Mills Twin No.1027
New Known as
Sub A of the farm Groote Mills Twin N° 1027.
The above diagram represents a portion of the farm
"Groot milles twin", containing 1587 Acres more or less
is situated in the county of Weenen. Colony of Natal
Bounded E by "Bushmans River poort" S.E. by Jammer
fontein. S by Van der Merwes Kraal & on the other sides
remainder of "Groot milles twin".
Subdivided by me
November 20th 1864
Surveyor
D/T. 87/1864
GSS 1144


Sheet 1
W.III. 7
G.V. 34 F50
FARM OF CORTEEN
BTERK SPRUIT
ONVERWACHT
Sub 5
GENT 1359/56
GENT 4231
GROOT MILLS TWIN
SURVEYED BY
GEORGE MOORE.
AREA 1539 ACRES
GRANTED OCT. 1856
VAALKRANTZ N° 1391
WEENEN COUNTY
Surv. Dir.
GS
COPY OF ORIGINAL AND CERTIFIED CORRECT
2000-01-10 BOZ

LIST OF POLICIES, UNPUBLISHED AND SUPPORTING DOCUMENTATION

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

Item:

1. Ezemvelo Corporate Strategic Plan and Performance Plan for 2009 - 2014.
2. Ezemvelo Corporate Policies and Procedures (Norms & Standards) listed in the table below.
3. Ezemvelo Biodiversity Database Checklists for Weenen Nature Reserve.
4. Proclamations of Weenen Nature Reserve
5. Weenen Nature Reserve Public Participation Report, November 2013.

The table below lists 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.

EZEMVELO CORPORATE POLICIES (NORMS & STANDARDS)	
Policy File No.	**CORPORATE AFFAIRS**
B 2	➢ Access to Ezemvelo KZN Wildlife Areas and Employment.
B 5	➢ Outsourcing of Functions and Services
B 7	➢ Monuments, Memorials and Names of Protected Areas under the control of Ezemvelo.
B 8	➢ Restricted use of Board Theatres, Halls and Conference Facilities etc.
B 9	➢ Code of Ethics / Conduct.
B 10	➢ Photography in Board Protected Areas.
B 13	➢ Mission Statement
B 14	➢ Access to Information.
Policy File No.	**INTERNAL AUDIT**
C 5	➢ Management Control
	BIODIVERSITY CONSERVATION OPERATIONS
	1. NATURAL RESOURCE SUSTAINABILITY
Policy File No.	**Threatened Species and Ecosystems**
D 1.1	➢ Disposal of Black Rhino.
D 1.2	➢ Disposal of Surplus White Rhino.
D 1.3	➢ Strategy for the Management of Southern White Rhino in KwaZulu-Natal.
D 1.4	➢ Strategy for the Biological Management of Black Rhino in KwaZulu-Natal.
D 1.5	➢ Rhinoceros Products.
D 1.6	➢ Crocodilians
D 1.7	➢ Cycads.
D 1.8	➢ Disposal of Threatened Species.

EZEMVELO CORPORATE POLICIES (NORMS & STANDARDS)	
	BIODIVERSITY CONSERVATION OPERATIONS
	1. NATURAL RESOURCE SUSTAINABILITY
Policy File No.	**Exotic and Invasive Species**
D 1.9	➢ Release of Alien Species.
D 1.10	➢ Control Measures for Red-billed Quelea.
D 1.12	➢ Grass Carp.
D 1.13	➢ Establishment of Alien Plantations.
	➢
Policy File No.	**Migratory Species**
D 1.14	➢ Black Wildebeest and Blue Wildebeest Hybridization and Conservation.
D 1.15	➢ Permit authorising the collection of Biological Material within Board Areas.
	2. CONSERVATION EFFECTIVENESS
Policy File No.	**Strategic Applications**
D 2.1	➢ Involvement of the KwaZulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme.
Policy File No.	**Conservation Management: Protected Area Management**
D 2.2	➢ Management of Wilderness Areas.
D 2.3	➢ Protected Area Development.
D 2.4	➢ Prohibition of Works and Servitudes in Board Areas.
D 2.5	➢ Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board.
D 2.6	➢ Quarries in KZN Protected Areas.
D 2.7	➢ Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas.
D 2.8	➢ Ecotourism and Protected Areas.
D 2.9	➢ Solid Waste Management within Protected Areas.
D 2.10	➢ State Security Service Activities within Board Areas.
D 2.11	➢ Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas.
Policy File No.	**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).
Policy File No.	***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.
EZEMVELO CORPORATE POLICIES (NORMS & STANDARDS)	
	BIODIVERSITY CONSERVATION OPERATIONS
	2. CONSERVATION EFFECTIVENESS
Policy File No.	**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.
Policy File No.	**Environmental Awareness**
D 2.34	➢ Environmental Education Policy.
	3. BIODIVERSITY PROTECTION
Policy File No.	**Co-management**
D 3.1	➢ Supply of Game to Conservancies, Community Conservation Areas and Biosphere Reserves in KwaZulu-Natal
D 3.2	➢ Establishment and Management of Community Conservation Reserves (CCR)
D 3.4	➢ Community Conservation Programmes
D 3.5	➢ Neighbours' Access to Board Protected Areas
D 3.6	➢ Relationship with Local Boards
D 3.7	➢ Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners
D 3.8	➢ Community Trust
D 3.9	➢ Community Levy Policy and Guidelines
D 3.10	➢ Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal
D 3.11	➢ Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal
Policy File No.	**Resource-use benefits**
D 3.12	➢ Disposal of Venison from Ezemvelo KZN Wildlife Management Operations.
D 3.13	➢ Sustainable use of wildlife resources.
D 3.14	➢ Freshwater Angling.
D 3.15	➢ Freshwater species utilisation.
D 3.16	➢ Use of plant resources from protected areas.
D 3.17	➢ Use of doomed biological material.
D 3.19	➢ Provision of hunting by Ezemvelo KZN Wildlife.
Policy File No.	**4. RELATIONSHIPS**
D 4.1	➢ Neighbour Relations.
D 4.2	➢ Participation - Non Government Organisations.
D 4.3	➢ Data Access.
D 4.4	➢ Consultation and Communication with Stakeholders: Policy and Guidelines.

EZEMVELO CORPORATE POLICIES (NORMS & STANDARDS)	
Policy File No.	**COMMERCIAL OPERATIONS**
E 1	➢ Concessions for Welfare Groups.
E 2	➢ Hiking and Mountaineering.
E 3	➢ Educational Concessions.
E 4	➢ Club Facilities within Board Areas.
E 5	➢ Hutted Camps.
E 6	➢ Joint Venture Scheme.
E 7	➢ Allocation of Sites in terms of the Joint Venture Scheme.
E 8	➢ Access to Protected Areas through Unofficial Entry Points.
E 9	➢ Visitor Facilities Management by Ezemvelo KZN Wildlife.
E 10	➢ Lease of Lakeshore at State Dam Protected Areas.
E 11	➢ Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife).
E 12	➢ Private Sector Reservations Policy.
E 13	➢ Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas.
E 14	➢ Discounting of Tariffs for Walk-in Guests.
E 15	➢ Ecotourism Discounting Strategy.
E 16	➢ Travel Trade Commissions: Tour Operator/ Travel Agency.
E 17	➢ Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements.
E 18	➢ Administrative and operational policy on Professional hunting in South Africa.
E 19	➢ Commercialisation.

LISTED ACTIVITIES REQUIRING ENVIRONMENTAL AUTHORISATION IN TERMS OF REGULATION R.546, LISTING NOTICE NO.3

If any of the following activities are proposed in a protected area, proclaimed in terms of the Protected Areas Act, or within five kilometres of one, they will be subject to either a basic assessment or full scoping and environmental impact assessment process:

- The construction of billboards exceeding 18 square metres in size.
- The construction of reservoirs for bulk water supply with a capacity of more than 250m^3.
- The construction of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast:
    - Is to be placed on a site not previously used for this purpose.
    - Will exceed 15 metres in height but excluding attachments to existing buildings and masts on rooftops.
- The construction of a road wider than four metres with a reserve less than 13.5 metres.
- The construction of resorts, lodges or other tourism accommodation facilities.
- The conversion of existing structures to resorts, lodges or tourism accommodation facilities that sleep 15 people or more.
- The construction of aircraft landing strips and runways.
- The construction of above ground cableways and funiculars.
- The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good.
- The construction of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles.
- The clearance of an area of 1ha or more of vegetation where 75% of the vegetative cover constitutes indigenous vegetation, except where such removal is required for:
    - The undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.
    - The undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No.544 of 2010
- The construction of facilities and infrastructure or structures of any size for any form of aquaculture *(this applies only inside a protected area, not within five kilometres of it)*.

- The construction of:
    - Jetties exceeding 10m^2 in size.
    - Slipways exceeding 10m^2 in size.
    - Buildings with a footprint exceeding 10m^2 in size.
    - Infrastructure covering 10m^2 or more.

  Where such construction occurs within a watercourse or within 32 metres of watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.
- The expansion of reservoirs for bulk water supply where the capacity will be increased by more than 250m^3.
- The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.
- The widening of a road by more than four metres or the lengthening of a road by more than one kilometre.
- The expansion of runways or aircraft landing strips where the expanded runways or aircraft landing strips will be longer than 1.4 kilometres in length.
- The expansion of above ground cableways and funiculars where the development footprint will be increased.
- The expansions of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles, where the development footprint will be expanded.
- The expansions of facilities or infrastructure for the storage, or storage and handling of a dangerous good.
- The expansion of:
    - Jetties where the jetty will be expanded by 10m^2 in size or more.
    - Slipways where the slipway will be expanded by 10m^2 or more.
    - Buildings where the buildings will be expanded by 10m^2 or more in size.
    - Infrastructure where the infrastructure will be expanded by 10m^2 or more.

  Where such construction occurs within a watercourse or within 32 metres of watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.
- The expansion of facilities, infrastructure or structures of any size for any form of aquaculture *(this applies only inside a protected area, not within five kilometres of it)*.
- Phased activities for all activities listed in the Schedule and as it applies to a specific geographical area, which commenced on or after the effective date of the Schedule, where any phase off the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.

SPECIES LISTS

Plant species list of Weenen Nature Reserve

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Abutilon grantii		Least Concern			
Abutilon sp.					
Acacia caffra	Common Hook Thorn	Least Concern		Controlled	
Acacia robusta					
Acalypha peduncularis		Least Concern			
Acalypha villicaulis	Heart-leaved Brooms and Brushes	Least Concern		Controlled	
Acokanthera oppositifolia		Least Concern			
Agapanthus campanulatus campanulatus	Bell Agapanthus	Least Concern		Controlled	
Allophylus africanus					
Allophylus melanocarpus					
Aloe cooperi cooperi	Cooper's Aloe	Declining	Appendix II	Protected	
Aloe dominella		Near Threatened	Appendix II		
Ammannia senegalensis		Least Concern			
Anomatheca laxa azurea					
Anthospermum pumilum pumilum					
Anthospermum rigidum pumilum		Least Concern			
Apodytes dimidiata var. dimidiata					
Aptenia sp.					
Aristida congesta barbicollis		Least Concern			
Asclepias gibba					
Barleria argillicola		Critically Endangered		Protected	
Barleria greenii	Green's Barleria, Wild Bush Petunia	Critically Endangered		Protected	
Barleria lancifolia					
Barleria obtusa		Least Concern			
Berchemia zeyheri		Least Concern			

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Berkheya erysithales		Least Concern			
Blepharis longispica		Least Concern			
Boscia albitrunca var. albitrunca	Shepherd's Tree	Not Evaluated		Controlled	
Brachylaena elliptica		Least Concern			
Buddleja dysophylla		Least Concern			
Buddleja saligna		Least Concern			
Calodendrum capense	Cape Chestnut	Least Concern		Controlled	
Calpurnia aurea					
Calpurnia aurea aurea		Least Concern			
Cassine aethiopica					
Cassinopsis ilicifolia		Least Concern			
Cephalaria oblongifolia		Least Concern			
Ceratotheca triloba	Wild Foxglove	Least Concern		Controlled	
Cheilanthes viridis var. viridis		Least Concern			
Chionanthus foveolatus foveolatus		Least Concern			
Chironia palustris palustris		Least Concern			
Chlorophytum comosum	Green Hen and Chickens	Least Concern		Controlled	
Chlorophytum modestum		Least Concern			
Clutia pulchella var. obtusata		Least Concern			
Coddia rudis		Least Concern			
Combretum erythrophyllum	River Bushwillow	Least Concern		Controlled	
Commelina africana var. africana	Yellow Wandering Jew,Yellow Commelina	Least Concern		Controlled	
Commiphora harveyi	Red-Stem Corkwood,Bronze Paperbark	Least Concern			
Conyza pinnata		Least Concern			
Corchorus trilocularis		Not Evaluated			Naturalised
Cotyledon orbiculata var. orbiculata		Least Concern			

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Crabbea hirsuta		Least Concern			
Crassula alba var. alba		Least Concern			
Crassula lineolata					
Crassula pellucida pellucida		Least Concern			
Crassula rubicunda					
Croton gratissimus var. gratissimus		Least Concern			
Cucumis myriocarpus leptodermis		Least Concern			
Cyanotis speciosa	Doll's Powderpuff	Least Concern		Controlled	
Cyperus distans		Least Concern			
Cyperus marginatus		Least Concern			
Cyperus rubicundus		Least Concern			
Cyphostemma hypoleucum		Least Concern			
Cyphostemma natalitium		Least Concern			
Cyrtanthus sp.					
Dais cotinifolia		Least Concern			
Dalbergia obovata		Least Concern			
Denekia capensis		Least Concern			
Dianthus crenatus		Least Concern			
Diclis reptans		Least Concern			
Dioscorea cotinifolia		Least Concern			
Diospyros lycioides guerkei		Least Concern			
Diospyros whyteana		Least Concern			
Dovyalis zeyheri		Least Concern			
Drimiopsis maculata	Spotted-leave Drimiopsis	Least Concern		Controlled	
Echinochloa crus-galli		Least Concern			
Ehretia rigida					
Elaeodendron transvaalense	*Bushveld saffron*	*Near Threatened*			
Erianthemum dregei		Least Concern			

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Eriosema cordatum		Least Concern			
Eriosema lucipetum		Least Concern			
Eriosema salignum	Brown Bonnet,Narrow-leaved Salignum	Least Concern		Controlled	
Erythrina humeana		Least Concern			
Euclea crispa crispa		Least Concern			
Euclea racemosa racemosa		Least Concern			
Euclea schimperi var. daphnoides					
Eucomis bicolor	Forest Pineapple Flower	Near Threatened		Protected	
Eulophia ovalis bainesii			Appendix II		
Euphorbia evansii		Least Concern	Appendix II		
Felicia filifolia bodkinii		Least Concern			
Ficus ingens		Least Concern			
Ficus sur	Broom-cluster Fig-Cape Fig	Least Concern		Controlled	
Ficus thonningii					
Fimbristylis dichotoma					
Garuleum latifolium		Least Concern			
Gladiolus crassifolius		Least Concern			
Gnidia anthylloides		Least Concern			
Grewia flava		Least Concern			
Grewia hispida		Least Concern			
Grewia occidentalis var. occidentalis		Least Concern			
Helichrysum athrixiifolium		Least Concern			
Helichrysum oxyphyllum					
Helichrysum pallidum		Least Concern			
Helichrysum rugulosum		Least Concern			
Helinus integrifolius	Soap Creeper	Least Concern		Controlled	

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Heteromorpha trifoliata					
Hibiscus aethiopicus var. aethiopicus		Least Concern			
Hibiscus pusillus		Least Concern			
Hibiscus trionum					
Hippobromus pauciflorus	Horsewood	Least Concern		Controlled	
Huernia hystrix var. appendiculata					
Hypericum aethiopicum aethiopicum		Least Concern			
Indigofera lupatana		Least Concern			
Indigofera tenuissima		Least Concern			
Indigofera torulosa					
Indigofera velutina		Least Concern			
Isoglossa grantii		Least Concern			
Jasminum breviflorum		Least Concern			
Jasminum multipartitum		Least Concern			
Jatropha natalensis	Guinea-fowl-foot Jatropha	Least Concern		Protected	
Kalanchoe rotundifolia		Least Concern			
Leonotis ocymifolia var. raineriana					
Lepidium bonariense		Not Evaluated			Naturalised
Maerua angolensis					
Maerua sp.					
Mariscus congestus					
Maytenus nemorosa					
Maytenus peduncularis		Least Concern			
Maytenus senegalensis					
Maytenus tenuispina					
Melasma scabrum					
Melhania didyma		Least Concern			
Mohria caffrorum		Least Concern			

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Monopsis decipiens		Least Concern			
Myrsine africana		Least Concern			
Mystacidium capense		Least Concern	Appendix II		
Mystacidium venosum		Least Concern	Appendix II		
Nolletia rarifolia		Least Concern			
Oenothera rosea		Not Evaluated			Naturalised
Olea europaea africana		Least Concern			
Ophrestia oblongifolia var. oblongifolia		Least Concern			
Ornithogalum sp.					
Orthosiphon labiatus					
Orthosiphon suffrutescens		Least Concern			
Orthosiphon wilmsii var. komghensis					
Ozoroa paniculosa var. paniculosa		Least Concern			
Panicum deustum		Least Concern			
Pappea capensis		Least Concern			
Pellaea calomelanos var. calomelanos		Least Concern			
Phyllanthus glaucophyllus		Least Concern			
Phyllanthus maderaspatensis var. maderaspatensis					
Plectranthus verticillatus		Least Concern			
Pleurostylia capensis	Coffee Pear	Least Concern		Controlled	
Polygala hottentotta	Small Purple Broom	Least Concern		Controlled	
Polygala serpentaria		Least Concern		Controlled	
Polygala sp.					
Premna mooiensis		Least Concern			
Priva cordifolia var. abyssinica		Least Concern			
Protasparagus plumosus					
Protasparagus virgatus					

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Rhoicissus digitata	Baboon Grape	Least Concern		Controlled	
Rhoicissus tridentata		Least Concern			
Rhoicissus tridentata tridentata		Not Evaluated			
Rhus dentata					
Rhus gerrardii					
Rhus pyroides var. pyroides					
Rhus rehmanniana var. rehmanniana					
Rhus rigida var. dentata					
Rhus sp.					
Rhynchosia caribaea		Least Concern			
Rhynchosia confusa		Not Evaluated			
Rhynchosia crassifolia		Least Concern			
Rhynchosia totta var. totta		Least Concern			
Salvia runcinata		Least Concern			
Sansevieria hyacinthoides	Mother-in-law's Tongue	Least Concern		Controlled	
Scabiosa columbaria		Least Concern			
Schistostephium griseum		Least Concern			
Schizobasis intricata		Not Evaluated		Protected	
Schizostylis coccinea					
Schkuhria pinnata		Not Evaluated			Naturalised
Schoenoplectus muricinux		Least Concern			
Schotia brachypetala		Least Concern			
Secamone filiformis		Least Concern			
Senecio digitalifolius		Least Concern			
Senecio scoparius		Least Concern			
Senecio sp.					
Senecio striatifolius		Least Concern			
Senna italica arachoides		Least Concern			

Taxon Name	English Name	South Africa Red Data Book	CITES	Ordinance	Alien Status
Sida rhombifolia rhombifolia		Least Concern			
Sideroxylon inerme inerme	White Milkwood	Least Concern		Controlled	
Solanum coccineum					
Sorghum versicolor		Least Concern			
Sphaerostylis sp.					
Sphenostylis angustifolia		Least Concern			
Sporobolus festivus		Least Concern			
Stachys natalensis var. galpinii		Least Concern			
Streptocarpus pentherianus		Least Concern			
Suregada africana		Least Concern			
Sutera atropurpurea					
Tapinanthus gracilis					
Tarchonanthus camphoratus		Least Concern			
Teucrium kraussii		Least Concern			
hunbergia atriplicifolia		Least Concern			
Trichoneura grandiglumis var. grandiglumis					
Trimeria trinervis		Least Concern			
Verbena tenuisecta					
Vernonia oligocephala					
Vitellariopsis dispar		Rare		Protected	
Vitex harveyana		Least Concern			
Vitex rehmannii		Least Concern			
Wahlenbergia grandiflora		Least Concern			
Walafrida densiflora					
Zaluzianskya glareosa		Least Concern			
Ziziphus mucronata mucronata	Buffalo Thorn	Least Concern		Controlled	

Fauna species list of Weenen Nature Reserve

Taxon Name	English Name	South African Red Data Book	CITES	ToPS Category	Alien Status
Aepyceros melampus melampus	Impala				
Alcelaphus buselaphus caama	Red hartebeest				
Allocnemis leucosticta	Goldtail				
Aloeides swanepoeli	Swanepoel's Copper				
Anisorrhina flavomaculata					
Aparallactus capensis	Cape centipede eater				
Axiocerses tjoane	Common Scarlet				
Barbus anoplus	Chubbyhead barb				
Barbus trimaculatus	Threespot barb				
Bombylella elegans					
Breviceps adspersus	Bushveld rain frog				
Bufo gutturalis	Guttural toad				
Byblia ilithyia	Spotted Joker				
Cacosternum boettgeri	Boettger's caco				
Caracal caracal	Caracal		Appendix I & II		
Catopsilia florella	African Migrant				
Ceratogomphus pictus	Common African clubtail				
Chamaeleo dilepis	Flap-neck chameleon		Appendix II		
Chlorolestes fasciatus	Mountain sylph				
Cochlitoma simplex	Thukela agate snail				
Crocothemis erythraea	Scarlet darter				
Crocothemis sanguinolenta	Stream darter				
Crocuta crocuta	Spotted hyaena	Near Threatened		Protected	
Cyprinus carpio	Carp				Alien invasive to KZN
Dolichocephla fuscilanx					
Doratogonus falcatus	Sickle-shaped black millipede				
Drepanogynis cambogiaria					

Taxon Name	English Name	South African Red Data Book	CITES	ToPS Category	Alien Status
Drepanogynis punctata					
Elattoneura glauca	Common pinfly				
Erioptera subaurea					
Galerella sanguinea	Slender mongoose				
Genetta tigrina	South African large-spotted genet				
Gonomyia thomassetiana					
Gulella bushmanensis	Bushman's river hunter snail				
Gymnobothroides hemipterus					
Hemachatus haemachatus	Rinkhals				
Hippotragus equinus cottoni	Roan	Vulnerable	Appendix II	Vulnerable	
Hypolimnas misippus	Common Diadem				
Ischnura senegalensis	Marsh bluetail				
Kassina senegalensis	Bubbling kassina				
Kinixys natalensis	Natal hinged tortoise	Rare	Appendix II		
Kobus ellipsiprymnus ellipsiprymnus	Waterbuck				
Labeobarbus natalensis	KwaZulu-Natal yellowfish				
Lachnocnema durbani	D'Urban's Woolly Legs				
Lampides boeticus	Lucerne Blue				
Leptailurus serval	Serval	Near Threatened	Appendix II	Protected	
Lestes plagiatus	Highland emerald damsel				
Lestes virgatus	Smoky emerald damsel				
Lygodactylus capensis	Cape dwarf gecko				
Nesciothemis farinosa	Ashen black-tailed skimmer				
Nucras ornata	Ornate sandveld lizard				
Oreotragus oreotragus transvaalensis	Klipspringer				
Orthetrum abbotti	Abbott's orthetrum				
Orthetrum caffrum	Mountain marsh orthetrum				
Orthetrum chrysostigma	Cryptic orthetrum				
Ourebia ourebi ourebi	Oribi	Endangered		Endangered	
Pachydactylus maculatus	Spotted thick-toed gecko				

Taxon Name	English Name	South African Red Data Book	CITES	ToPS Category	Alien Status
Panaspis wahlbergii	Wahlberg's snake-eyed skink				
Pantala flavescens	Globe skimmer				
Papilio demodocus demodocus	Citrus Swallowtail				
Papilio nireus lyaeus	Green-banded Swallowtail				
Papio hamadryas	Chacma baboon		Appendix II		
Pelomedusa subrufa	Marsh terrapin				
Phacochoerus aethiopicus	Warthog				
Philonomon luminans	Barbet				
Philothamnus semivariegatus	Spotted Bush Snake				
Proandricus ortyi	Orty's earthworm				
Pseudagrion kersteni	Kersten's sprite				
Pseudagrion salisburyense	Salisbury's sprite				
Raphicerus campestris	Steenbok				
Redunca arundinum arundinum	Southern reedbuck			Protected	
Redunca fulvorufula fulvorufula	Mountain reedbuck				
Schismaderma carens	Red toad				
Sciobius panzanus	Mpanzi snout weevil				
Sylvicapra grimmia	Common duiker, Grey duiker				
Sympetrum fonscolombii	Red-veined darter				
Syncerus caffer caffer	African Buffalo				
Tomopterna natalensis	Natal sand frog				
Tragelaphus angasii	Nyala				
Tragelaphus oryx oryx	Eland				
Tragelaphus scriptus	Bushbuck				
Trapezostigma basilare	Wheeling glider				
Trithemis arteriosa	Red-veined dropwing				
Trithemis furva	Lowland spectrum-blue dropwing				
Tritogenia zuluensis	Large Zululand earthworm				
Varanus albigularis	Rock monitor		Appendix II		
Varanus niloticus	Water monitor		Appendix II		

Taxon Name	English Name	South African Red Data Book	CITES	ToPS Category	Alien Status
Xenopus laevis	Common platanna				
Xenopus laevis laevis	Common platanna				
Zouga sp.					
Tragelaphus strepsiceros strepsiceros	Greater Kudu				
Giraffa camelopardalis capensis	Giraffe				
Canis mesomelas mesomelas	Black-backed jackal				
Panthera pardus melanotica	Leopard		Appendix I	Vulnerable	
Aonyx capensis capensis	Cape clawless otter, African clawless otter		Appendix II	Protected	
Proteles cristatus cristatus	Aardwolf		Appendix III		
Equus quagga antiquorum	Plains Zebra				
Ceratotherium simum simum	White rhinoceros		Appendix II	Protected	
Diceros bicornis minor	Black rhinoceros	Vulnerable	Appendix I	Endangered	
Anguilla bengalensis labiata	African mottled eel	Not Evaluated			
Stigmochelys pardalis babcocki	Leopard tortoise		Appendix II		
Agama aculeata distanti	Distant's ground agama				
Chamaeleo dilepis dilepis	Flap-neck chameleon		Appendix II		
Lygodactylus capensis capensis	Cape dwarf gecko				
Varanus albigularis albigularis	Rock monitor		Appendix II		
Dispholidus typus typus	Boomslang				
Duberria lutrix lutrix	Common slug-eater				
Leptotyphlops scutifrons scutifrons	Peter's thread snake				
Acraea neobule neobule	Wandering Donkey Acraea				
Anax imperator	Blue emperor				
Belenois aurota aurota	Brown-veined White				
Belenois gidica abyssinica	African Veined White				
Byblia anvatara acheloia	Common Joker				
Colotis eris eris	Banded Gold Tip				
Danaus chrysippus orientis	African Monarch				
Eurema brigitta brigitta	Broad-bordered Grass Yellow				
Eurema desjardinsii regularis	Angled Grass Yellow				

Taxon Name	English Name	South African Red Data Book	CITES	ToPS Category	Alien Status
Graphium leonidas leonidas	Veined Swordtail				
Pinacopteryx eriphia eriphia	Zebra White				
Trithemis kirbyi ardens	Kirby's dropwing				
Ovios capensis capensis	Sleepy Tiger				
Leptailurus serval serval	Serval	Near Threatened	Appendix II	Protected	
Acanthocerus atricollis atricollis	Southern tree agama				
Porphyronota hebreae hebreae					
Dromica cordicollis	Heart-necked tiger beetle			Protected	
Zinophora thukela	Thukela spined millipede				
Tragelaphus scriptus sylvaticus	Bushbuck				
Phacochoerus africanus	Common warthog				
Cupidopsis cissus cissus					
Precis archesia archesia					
Junonia hierta cebrene	Yellow Pansy				
Junonia oenone oenone	Blue Pansy				
Africallagma glaucum	Common African blue				
Trachylepis punctatissima	Montane speckled skink				
Trachylepis varia	Variable skink				
Anax ephippiger	Vagrant emperor				
Leptotyphlops sp.					
"Quintilia" sp.					

Bird species list of Weenen Nature Reserve

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Accipiter melanoleucus	Black sparrowhawk		Appendix II		
Accipiter minullus	Little Sparrowhawk		Appendix II		
Accipiter tachiro	African Goshawk		Appendix II		
Acridotheres tristis	Common Myna, Indian Myna				Alien invasive to KZN
Acrocephalus arundinaceus	Great Reed-Warbler				
Acrocephalus baeticatus	African Reed-Warbler, African Marsh Warbler				
Acrocephalus gracilirostris	Lesser Swamp-Warbler, Cape Reed Warbler				
Acrocephalus palustris	Marsh Warbler, European Marsh Warbler				
Acrocephalus schoenobaenus	Sedge Warbler, European Sedge Warbler				
Aegypius tracheliotus	Lappet-faced Vulture	Vulnerable		Endangered	
Alcedo cristata	Malachite Kingfisher				
Alcedo semitorquata	Half-collared Kingfisher	Near Threatened			
Alopochen aegyptiaca	Egyptian Goose				
Amadina erythrocephala	Red-headed Finch				
Amaurornis flavirostris	Black Crake				
Amblyospiza albifrons	Thick-billed Weaver				
Anas hottentota	Hottentot Teal				
Anas sparsa	African Black Duck				
Anas undulata	Yellow-billed duck				
Andropadus importunus	Sombre Greenbul, Sombre Bulbul				
Anomalospiza imberbis	Cuckoo Finch				
Anthoscopus caroli	Grey Penduline-Tit				
Anthropoides paradiseus	Blue Crane	Vulnerable	Appendix II	Endangered	
Anthus caffer	Bushveld Pipit				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Anthus cinnamomeus	African Pipit, Grassveld Pipit				
Anthus leucophrys	Plain-backed Pipit				
Anthus lineiventris	Striped Pipit				
Anthus similis	Long-billed Pipit				
Anthus vaalensis	Buffy Pipit				
Apalis thoracica	Bar-throated Apalis				
Apus affinis	Little Swift				
Apus apus	Common Swift, European Swift				
Apus barbatus	African Black Swift, Black Swift				
Apus caffer	White-rumped Swift				
Apus horus	Horus Swift				
Aquila pennatus	Booted Eagle				
Aquila rapax	Tawny Eagle	Vulnerable	Appendix II	Vulnerable	
Aquila verreauxii	Verreauxs' Eagle, Black Eagle		Appendix II		
Aquila wahlbergi	Wahlberg's Eagle		Appendix II		
Ardea cinerea	Grey Heron				
Ardea melanocephala	Black-headed Heron				
Asio capensis	Marsh Owl		Appendix II		
Aviceda cuculoides	African Cuckoo Hawk		Appendix II		
Batis capensis	Cape Batis				
Batis molitor	Chinspot Batis				
Bostrychia hagedash	Hadeda Ibis				
Bradornis pallidus	Pale Flycatcher, Pallid Flycatcher				
Bubo africanus	Spotted Eagle-Owl		Appendix II		
Bubo capensis	Cape Eagle-Owl		Appendix II		
Bubulcus ibis	Cattle Egret				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Bucorvus leadbeateri	Southern Ground-Hornbill, Ground Hornbill	Vulnerable		Endangered	
Bugeranus carunculatus	Wattled Crane	Critically Endangered	Appendix II	Critically Endangered	
Buphagus erythrorhynchus	Red-billed Oxpecker	Near Threatened			
Burhinus capensis	Spotted Thick-knee, Spotted Dikkop				
Buteo rufofuscus	Jackal Buzzard		Appendix II		
Buteo vulpinus	Steppe Buzzard				
Bycanistes bucinator	Trumpeter Hornbill				
Calandrella cinerea	Red-capped Lark				
Calendulauda sabota	Sabota Lark				
Camaroptera brachyura	Green-backed Camaroptera, Bleating Warbler				
Campephaga flava	Black Cuckooshrike				
Campethera abingoni	Golden-tailed Woodpecker				
Caprimulgus pectoralis	Fiery-necked Nightjar				
Centropus burchellii	Burchell's Coucal				
Cercomela familiaris	Familiar Chat				
Cercotrichas leucophrys	White-browed Scrub-Robin, White-browed Robin				
Certhilauda curvirostris	Cape Long-billed Lark, Long-billed Lark				
Ceryle rudis	Pied Kingfisher				
Chalcomitra amethystina	Amethyst Sunbird, Black Sunbird				
Chalcomitra senegalensis	Scarlet-chested Sunbird				
Charadrius tricollaris	Three-banded Plover				
Chrysococcyx caprius	Diederick Cuckoo, Diederik Cuckoo				
Chrysococcyx klaas	Klaas's Cuckoo				
Ciconia abdimii	Abdim's Stork				
Ciconia ciconia	White Stork				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Ciconia nigra	Black Stork	Near Threatened	Appendix II	Vulnerable	
Cinnyricinclus leucogaster	Violet-backed Starling, Plum-coloured Starling				
Cinnyris afer	Greater Double-collared Sunbird				
Cinnyris chalybeus	Southern Double-collared Sunbird, Lesser Double-collared Sunbird				
Cinnyris talatala	White-bellied Sunbird				
Circaetus cinereus	Brown Snake-Eagle		Appendix II		
Circaetus pectoralis	Black-chested Snake-Eagle, Black-breasted Snake-Eagle		Appendix II		
Circus ranivorus	African Marsh-Harrier	Vulnerable	Appendix II	Vulnerable	
Cisticola aberrans	Lazy Cisticola				
Cisticola aridulus	Desert Cisticola				
Cisticola ayresii	Wing-snapping Cisticola, Ayres' Cisticola				
Cisticola chiniana	Rattling Cisticola				
Cisticola fulvicapilla	Neddicky				
Cisticola juncidis	Zitting Cisticola, Fan-tailed Cisticola				
Cisticola natalensis	Croaking Cisticola				
Cisticola tinniens	Levaillant's Cisticola				
Clamator glandarius	Great Spotted Cuckoo				
Clamator jacobinus	Jacobin Cuckoo				
Clamator levaillantii	Levaillant's Cuckoo, Striped Cuckoo				
Coccopygia melanotis	Swee Waxbill				
Colius striatus	Speckled Mousebird				
Columba arquatrix	African Olive-Pigeon, Rameron Pigeon				
Columba guinea	Speckled Pigeon, Rock Pigeon				
Columba livia	Rock dove, Feral Pigeon				Alien to KZN

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Coracias garrulus	European Roller				
Coracias naevius	Purple Roller				
Corvus albicollis	White-necked Raven				
Corvus albus	Pied Crow				
Corvus capensis	Cape Crow, Black Crow				
Cossypha caffra	Cape Robin-Chat, Cape Robin				
Cossypha dichroa	Chorister Robin-Chat, Chorister Robin				
Cossypha humeralis	White-throated Robin-Chat, White-throated Robin				
Coturnix coturnix	Common Quail				
Crithagra atrogularis	Black-throated Canary				
Crithagra gularis	Streaky-headed Seedeater, Streaky-headed Canary				
Crithagra mozambicus	Yellow-fronted Canary, Yellow-eyed Canary				
Crithagra sulpuratus	Brimstone Canary, Bully Canary				
Cuculus clamosus	Black Cuckoo				
Cuculus gularis	African Cuckoo				
Cuculus solitarius	Red-chested Cuckoo				
Cypsiurus parvus	African Palm-Swift, Palm Swift				
Delichon urbicum	Common House-Martin, House Martin				
Dendrocygna viduata	White-faced Duck				
Dendropicos fuscescens	Cardinal Woodpecker				
Dendropicos griseocephalus	Olive Woodpecker				
Dicrurus adsimilis	Fork-tailed Drongo				
Dryoscopus cubla	Black-backed Puffback, Puffback				
Egretta alba	Great Egret, Great White Egret				
Elanus caeruleus	Black-shouldered Kite		Appendix II		
Emberiza capensis	Cape Bunting				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Emberiza flaviventris	Golden-breasted Bunting				
Emberiza tahapisi	Cinnamon-breasted Bunting, Rock Bunting				
Estrilda astrild	Common Waxbill				
Euplectes afer	Yellow-crowned Bishop, Golden Bishop				
Euplectes albonotatus	White-winged Widowbird, White-winged Widow				
Euplectes ardens	Red-collared Widowbird, Red-Collared Widow				
Euplectes axillaris	Fan-tailed Widowbird, Red-shouldered Widow				
Euplectes orix	Southern Red Bishop, Red Bishop				
Euplectes progne	Long-tailed Widowbird, Long-tailed Widow				
Falco amurensis	Amur Falcon, Eastern Red-footed Kestrel		Appendix II		
Falco biarmicus	Lanner falcon	Near Threatened	Appendix II		
Falco rupicolus	Rock Kestrel		Appendix II		
Falco subbuteo	Eurasian Hobby, Hobby Falcon		Appendix II		
Fulica cristata	Red-knobbed Coot				
Gallinula chloropus	Common Moorhen				
Gallirex porphyreolophus	Purple-crested Turaco, Purple-crested Lourie				
Geronticus calvus	Southern Bald Ibis, Bald Ibis	Vulnerable	Appendix II	Vulnerable	
Gyps coprotheres	Cape vulture	Vulnerable	Appendix II	Endangered	
Halcyon albiventris	Brown-hooded Kingfisher				
Haliaeetus vocifer	African Fish-Eagle		Appendix II		
Hippolais icterina	Icterine Warbler				
Hirundo abyssinica	Lesser Striped Swallow				
Hirundo albigularis	White-throated Swallow				
Hirundo cucullata	Greater Striped Swallow				
Hirundo fuligula	Rock Martin				
Hirundo rustica	Barn Swallow, European Swallow				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Hirundo smithii	Wire-tailed Swallow				
Indicator indicator	Greater Honeyguide				
Indicator minor	Lesser Honeyguide				
Indicator variegatus	Scaly-throated Honeyguide				
Ispidina picta	African Pygmy-Kingfisher, Pygmy Kingfisher				
Ixobrychus minutus	Little Bittern				
Ixobrychus sturmii	Dwarf Bittern				
Jynx ruficollis	Red-throated Wryneck				
Lagonosticta rhodopareia	Jameson's Firefinch				
Lagonosticta rubricata	African Firefinch, Blue-billed Firefinch				
Lamprotornis nitens	Cape Glossy Starling, Glossy Starling				
Laniarius ferrugineus	Southern Boubou				
Lanius collaris	Fiscal Shrike				
Lanius collurio	Red-backed Shrike				
Lanius minor	Lesser Grey Shrike				
Lioptilus nigricapillus	Bush Blackcap	Near Threatened			
Lissotis melanogaster	Black-bellied Bustard, Black-bellied Korhaan				
Lophaetus occipitalis	Long-crested Eagle		Appendix II		
Lybius torquatus	Black-collared Barbet				
Macronyx capensis	Cape Longclaw, Orange-throated Longclaw				
Malaconotus blanchoti	Grey-headed Bush-Shrike				
Megaceryle maximus	Giant Kingfisher				
Melaenornis pammelaina	Southern Black Flycatcher, Black Flycatcher				
Melierax gabar	Gabar Goshawk		Appendix II		
Merops apiaster	European Bee-eater				
Merops pusillus	Little Bee-eater				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Milvus migrans	Black Kite,Yellow-billed Kite		Appendix II		
Mirafra africana	Rufous-naped Lark				
Mirafra cheniana	Melodious Lark	Near Threatened			
Monticola explorator	Sentinel Rock-Thrush				
Monticola rupestris	Cape Rock-Thrush				
Motacilla aguimp	African Pied Wagtail				
Motacilla capensis	Cape Wagtail				
Muscicapa adusta	African Dusky Flycatcher, Dusky Flycatcher				
Muscicapa striata	Spotted Flycatcher				
Myrmecocichla formicivora	Ant-eating Chat				
Nectarinia famosa	Malachite Sunbird				
Nilaus afer	Brubru				
Numida meleagris	Helmeted guineafowl				
Oena capensis	Namaqua Dove				
Oenanthe bifasciata	Buff-streaked Chat				
Onychognathus morio	Red-winged Starling				
Oriolus larvatus	Black-headed Oriole				
Ortygospiza atricollis	African Quailfinch, Quail Finch				
Otus senegalensis	African Scops-Owl				
Pandion haliaetus	Osprey		Appendix II		
Parisoma subcaeruleum	Chestnut-vented Tit-Babbler, Tit-Babbler				
Parus niger	Southern Black Tit				
Passer diffusus	Southern Grey-headed Sparrow, Grey-headed Sparrow				
Passer domesticus	House Sparrow				Alien invasive to KZN
Petronia superciliaris	Yellow-throated Petronia, Yellow-throated Sparrow				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Phalacrocorax africanus	Reed Cormorant				
Phalacrocorax lucidus	White-breasted Cormorant				
Phoeniculus purpureus	Green Wood-Hoopoe, Red-billed Woodhoopoe				
Phylloscopus trochilus	Willow Warbler				
Platalea alba	African Spoonbill				
Plectropterus gambensis	Spur-winged goose				
Plegadis falcinellus	Glossy Ibis				
Ploceus capensis	Cape Weaver				
Ploceus cucullatus	Village Weaver, Spotted-backed Weaver				
Ploceus intermedius	Lesser Masked-Weaver				
Ploceus ocularis	Spectacled Weaver				
Ploceus velatus	Southern Masked-Weaver, Masked Weaver				
Pogoniulus pusillus	Red-fronted Tinkerbird, Red-fronted Tinker Barbet				
Polemaetus bellicosus	Martial eagle	Vulnerable	Appendix II	Vulnerable	
Polyboroides typus	African Harrier-Hawk, Gymnogene		Appendix II		
Prinia hypoxantha	Drakensberg Prinia				
Prinia subflava	Tawny-flanked Prinia				
Prodotiscus regulus	Brown-backed Honeybird, Sharp-billed Honeyguide				
Promerops gurneyi	Gurney's Sugarbird				
Psalidoprocne holomelaena	Black Saw-wing, Black Saw-wing Swallow				
Psophocichla litsitsirupa	Groundscraper Thrush				
Pternistis natalensis	Natal Spurfowl, Natal Francolin				
Pternistis swainsonii	Swainson's Spurfowl, Swainson's Francolin				
Pycnonotus tricolor	Dark-capped Bulbul, Black-eyed Bulbul				
Pytilia melba	Green-winged Pytilia, Melba Finch				
Quelea quelea	Red-billed Quelea				
Rhinopomastus cyanomelas	Common Scimitarbill, Scimitar-billed Wood-Hoopoe				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Rhinoptilus chalcopterus	Bronze-winged Courser				
Riparia cincta	Banded Martin				
Riparia paludicola	Brown-throated Martin				
Riparia riparia	Sand Martin				
Sagittarius serpentarius	Secretarybird	Near Threatened	Appendix II		
Saxicola torquatus	African Stonechat, Stonechat				
Schoenicola brevirostris	Broad-tailed Warbler	Near Threatened			
Scleroptila shelleyi	Shelley's Francolin				
Scopus umbretta	Hamerkop				
Serinus canicollis	Cape Canary				
Sigelus silens	Fiscal Flycatcher				
Spermestes bicolor	Red-backed Mannikin				
Spermestes cucullatus	Bronze Mannikin				
Sphenoeacus afer	Cape Grassbird, Grassbird				
Sporaeginthus subflavus	Orange-breasted Waxbill				
Stenostira scita	Fairy Flycatcher				
Stephanoaetus coronatus	African Crowned Eagle	Near Threatened	Appendix II		
Sterna fuscata	Sooty Tern				
Streptopelia capicola	Cape Turtle-Dove				
Streptopelia semitorquata	Red-eyed Dove				
Streptopelia senegalensis	Laughing Dove				
Struthio camelus	Common Ostrich, Ostrich		Appendix I		
Sylvia borin	Garden Warbler				
Sylvietta rufescens	Long-billed Crombec				
Tachybaptus ruficollis	Little Grebe, Dabchick				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Tachymarptis melba	Alpine Swift				
Tadorna cana	South African Shelduck				
Tchagra australis	Brown-crowned Tchagra, Three-streaked Tchagra				
Tchagra senegalus	Black-crowned Tchagra				
Tchagra tchagra	Southern Tchagra				
Telophorus sulfureopectus	Orange-breasted Bush-Shrike				
Telophorus viridis	Gorgeous Bush-Shrike				
Telophorus zeylonus	Bokmakierie				
Terpsiphone viridis	African Paradise-Flycatcher, Paradise Flycatcher				
Thamnolaea cinnamomeiventris	Mocking Cliff-Chat, Mocking Chat				
Threskiornis aethiopicus	African Sacred Ibis, Sacred Ibis				
Tockus alboterminatus	Crowned Hornbill				
Trachyphonus vaillantii	Crested Barbet				
Tricholaema leucomelas	Acacia Pied Barbet, Pied Barbet				
Tringa glareola	Wood Sandpiper				
Tringa stagnatilis	Marsh Sandpiper				
Turdoides jardineii	Arrow-marked Babbler				
Turdus libonyanus	Kurrichane Thrush				
Turdus olivaceus	Olive Thrush				
Turnix sylvaticus	Kurrichane Buttonquail				
Turtur chalcospilos	Emerald-spotted Wood-Dove, Greenspotted Dove				
Turtur tympanistria	Tambourine Dove				
Tyto alba	Barn Owl		Appendix II		
Tyto capensis	African Grass-Owl, Grass Owl	Vulnerable	Appendix II	Vulnerable	
Upupa africana	African Hoopoe, Hoopoe				

Taxon Name	English Name	South African Red data Book	CITES	ToPS Category	Alien Status
Uraeginthus angolensis	Blue Waxbill				
Urocolius indicus	Red-faced Mousebird				
Vanellus armatus	Blacksmith Lapwing, Blacksmith Plover				
Vanellus coronatus	Crowned Lapwing, Crowned Plover				
Vidua funerea	Dusky Indigobird, Black Widowfinch				
Vidua macroura	Pin-tailed Whydah				
Vidua paradisaea	Long-tailed Paradise-Whydah, Paradise-Whydah				
Zosterops virens	Cape White-eye				

PRO FORMA ANNUAL PLAN OF OPERATION

NOTES OF A MANAGEMENT MEETING FOR WEENEN NATURE RESERVE HELD AT … OFFICE ON …

Present:

Apologies:

CC:

In the notes set out below two separate tables are presented. The first sets out all of the management targets, which are the responsibility of the WNR Conservation Manager and the second sets out all of the management targets that are the responsibility of other units or individuals.

Table 1 Progress and goals set for the Weenen Nature Reserve Conservation Manager

Management target	2012/13 Progress	2014/15 goals	Completion date	Responsibility	Action
LEGAL COMPLIANCE AND ENFORCEMENT					
Creation of cooperative structures with local communities and law enforcement officials.		▪	Year 1	Officer in Charge	
Regular patrols covering the full extent of the nature reserve.		▪	Ongoing	Officer in Charge	
Prosecution of any offender caught committing an offence.		▪	Ongoing	Officer in Charge	
Appropriate signage before entering the reserve.		▪	Year 1	Officer in Charge	
Regular enforcement operations as per targets set in the annual plan of operation.		▪	Ongoing	Officer in Charge	
Co-management and potential expansion of WNR.		▪	Upon settlement	Officer in Charge and Community Conservation	
STAKEHOLDER ENGAGEMENT					
Annual meetings of the liaison forum.		▪	Year 1 - Ongoing	Officer in Charge	
Minutes of stakeholder meetings. Records of Environmental Awareness.		▪	Ongoing	Officer in Charge and Community Conservation	
BUFFER ZONE PROTECTION AND REGIONAL MANAGEMENT					
Identification of threats on the nature reserve's boundary.		▪	Year 1	Ezemvelo KZN Wildlife Ecological Advice Unit	
Legal protection of key buffer zone areas through establishment of biodiversity management plans or		▪	Ongoing	Ezemvelo KZN Wildlife Stewardship Unit and DCO	Refer management activity to

protected environments.					Stewardship Unit
Co-management agreement for the Umthontwane area and Weenen Nature Reserve		▪	Year 1	Community Conservation and SCM	
Adoption of environmentally appropriate land uses in IDPs and SDFs in the areas immediately surrounding the nature reserve.		▪	Annually	Ezemvelo KZN Wildlife Planning Unit, Officer in Charge and Ecological Advice Unit	Refer management activity to Planning Unit
Retention of existing benign land uses in the areas immediately surrounding the nature reserve.		▪	Annually	Ezemvelo KZN Wildlife Planning Unit, Officer in Charge and Ecological Advice Unit	
ECO-TOURISM					
An updated brochure providing information on the reserve, its values and activities.		▪	Year 2	Officer in Charge	
Improve visitor orientation and disseminate important information.		▪	Year 1	Officer in Charge	
Regular Inspection and maintenance reports. Well maintained and safe tourism facilities.		▪	Ongoing	Officer in Charge	
Increased tourism marketshare through increased awareness of the Weenen Nature Reserve.		▪	Year 2	Officer in Charge with municipalities	
ENVIRONMENTAL INTERPRETATION AND AWARENESS					
Report indicating requirements for the environmental and awareness programme.		▪	Year 2	Officer in Charge and CCO	
Number of school groups per year visiting the reserve and taken through an environmental awareness		▪	Annually	Community Conservation Officer	

programme.					
Environmental awareness programme.		▪	Year 2	Community Conservation Officer	
CONSERVATION MANAGEMENT					
Burning according to annual planning and compliant with National Veld and Forest Fires Act.		▪	Year 1 and ongoing	Ecological Advice Unit	With Officer in Charge
Compliance with the National Veld and Forest Fires Act.		▪	Ongoing	Ezemvelo KZN Wildlife Ecological Advice Unit	
Co-operative management agreements with surrounding community conservation areas.		▪	Year 1	Ezemvelo KZN Wildlife Ecological Advice Unit	With Officer in Charge
Achieve maintenance level within 5 years for all listed invasive species.		▪	Year 1 - 5	Ezemvelo KZN Wildlife Ecological Advice Unit	With Alien and Invasive Species Unit
A detailed map depicting areas of soil erosion within the nature reserve. Implementation of soil erosion control measures in areas in which plant cover is low, which are susceptible to erosion.		▪	Year 1 - 5	Ezemvelo KZN Wildlife Ecological Advice Unit	
An agreed upon approach to any extractive resource use. Approved extractive resource use is managed, monitored and reported on.		▪	If required	Officer in Charge, Ecological Advice Unit and Resource Use Ecologist	
No illegal collection of biological material or samples.		▪	If required	Officer in Charge, Ecological Advice Unit and Resource Use Ecologist	
Control of any alien animals found within the nature reserve.		▪	Ongoing	Officer in Charge	
An agreed upon approach to future		▪	Ongoing	Ezemvelo KZN Wildlife	

wildlife species introductions.				Ecological Advice Unit and Officer in Charge	
Game census data and report to inform population management decisions.		▪	Annually	Ezemvelo KZN Wildlife Ecological Advice Unit	
Up to date monthly biological returns.		▪	Monthly	Officer in Charge	
Control of population numbers of species that are exceeding identified carrying capacities.		▪	Ongoing		
Updated information available for decision-making. (Species lists)		▪	Year 1		
Standard operating procedure communicated to neighbours to deal with human/wildlife conflict.		▪	Year 1 and then ongoing	OIC and DCO	
Surveillance and monitoring plans for key threatening processes. Monitoring plans for key rare and endangered species.		▪	Year 3	Ezemvelo KZN Wildlife Ecological advice unit	
Maintenance of optimum population numbers of rare and endangered species within the nature reserve. Improved understanding of biodiversity research and monitoring requirements.		▪	Ongoing	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge	
Monitoring of flagship species.		▪	Annually	Ezemvelo KZN Wildlife Ecological Advice Unit and Officer in Charge	
Secure and protected cultural heritage sites.		▪	Year 1 and ongoing	Officer in Charge	
Increased awareness of cultural values.		▪	Ongoing	Officer in Charge Community Conservation Officer	
Priotitised research list that are		▪	Ongoing	Ezemvelo KZN Wildlife	

communicated to the relevant tertiary institutions.				Ecological Advice Unit and Officer in Charge	
		▪			
		▪			
		▪			
OPERATIONAL MANAGEMENT					
Adequate funding for completion of the actions set out in the annual plan of operation.		▪	Annually	Ezemvelo KZN Wildlife Regional management	Refer management activity to Operations Committee: West
Appointment of staff in all positions in the nature reserve.		▪	Year 2	Ezemvelo KZN Wildlife Regional management	Refer management activity to Operations Committee: West
Appropriately functioning service infrastructure and systems that do not cause harm to the environment.		▪	Ongoing	Officer in Charge	

FINANCIAL PLAN FOR WEENEN NATURE RESERVE

1. Purpose and aim

The National Environmental Management: Protected Areas Act (No.57 of 2003) stipulates that the management plan must contain at least:
"a programme for the implementation of the plan and its costing" for the approval of a Protected Area Management Plan by the MEC or Minister.

Management Effectiveness of protected areas relates directly to the availability of financial resources to achieve biodiversity conservation objectives. It is recognised that most protected areas do not have adequate financial resources to achieve their vision and stated objectives. The Financial plan should be developed in the context of the management plan and should be tied in with management priorities.

This financial plan has been developed in the interests of proper planning and sustained conservation management of the Weenen Nature Reserve. Certain management recommendations have been made in the Management Plan which requires dedicated financial resources which include:

- Upgrade of all building infrastructure (management and tourism)
- Repair of roads including tourist and management roads. (Approximately 37 km)
- Replace and upgrade (Approximately 31 km) of the WNR fence to secure the boundary of the protected area.
- Installation of signage directing tourists to the nature reserve.
- Installation of directional and interpretive signage within the nature reserve.
- The possible re-introduction of game species into the nature reserve (especially Buffalo).

2. Financial management of Weenen Nature Reserve

The financial objective for Weenen NR states:

"Provide adequate human resources, equipment, infrastructure and funding to enable the effective protection, development and management of Weenen Nature Reserve."

Current income generation activities include:

- Day visitor fees
- Bush camp
- Self catering facility
- Camping
- Game off takes
- Curio shop at the entrance gate

During the five year implementation period the following potential income generation activities will be investigated:

- The feasibility of a cultural heritage hiking trail will be investigated and implemented depending on the outcome of a study in cooperation with AMAFA.
- Future expansion of the reserve could potentially lead to rhino range expansion which will have a positive impact on the conservation objective and could also increase income from live removals of excess animals.

Current funding is not sufficient to effectively maintain the reserve and of particular concern is the security of rhinos, tourism and management infrastructure and in particular the effective maintenance of the road and fence infrastructure. The table below provides a cost estimate of the requirements for the implementation of the management plan.

Appendix H

Weenen Nature Reserve – approximate costing estimate for critical activities per annum

Ezemvelo Provincial Budget Allocation					**3 668 057**
EXPENCES (Projected operational budget)					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Road maintenance	22 400	22400	22400	22400	22400
Fence maintenance	11220	11220	11220	11220	11220
Building maintenance	100000	50000	20000	10000	10000
Equipment maintenance	15000	15000	15000	15000	15000
Alien and invasive plant control	59800	59800	59800	59800	59800
Fire management	102000	102000	102000	102000	102000
Erosion control and rehabilitation	44800	44800	44800	44800	44800
Law enforcement	120000	128400	137388	147005.16	157295.52
Services (gas, electricty, water)	90000	96300	103041	110253.87	117971.64
Vehicle running cost and maintenance	120000	128400	137388	147005.16	157295.52
TOTAL OPERATIONAL	**685220**	**658320**	**653037**	**669484.19**	**697782.68**
Salaries	3272511	3636123	4040013	4489041	4987823
TOTAL EXPENSES (Critical Activities)	**3957731**	**4294443**	**4693050**	**5158525.19**	**5685605.68**

CAPITAL REQUIREMENT					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Roads	500000				250000
Fences	5800000				
Buildings	1500000	250000	100000		
TOTAL EXPENSES (Critical Activities)	**7800000**	**250000**	**100000**	**0**	**250000**

INCOME GENERATION 2011 TO 2014				
	2011/2012	2012/2013	2013/2014	
	273538	269268	261887	

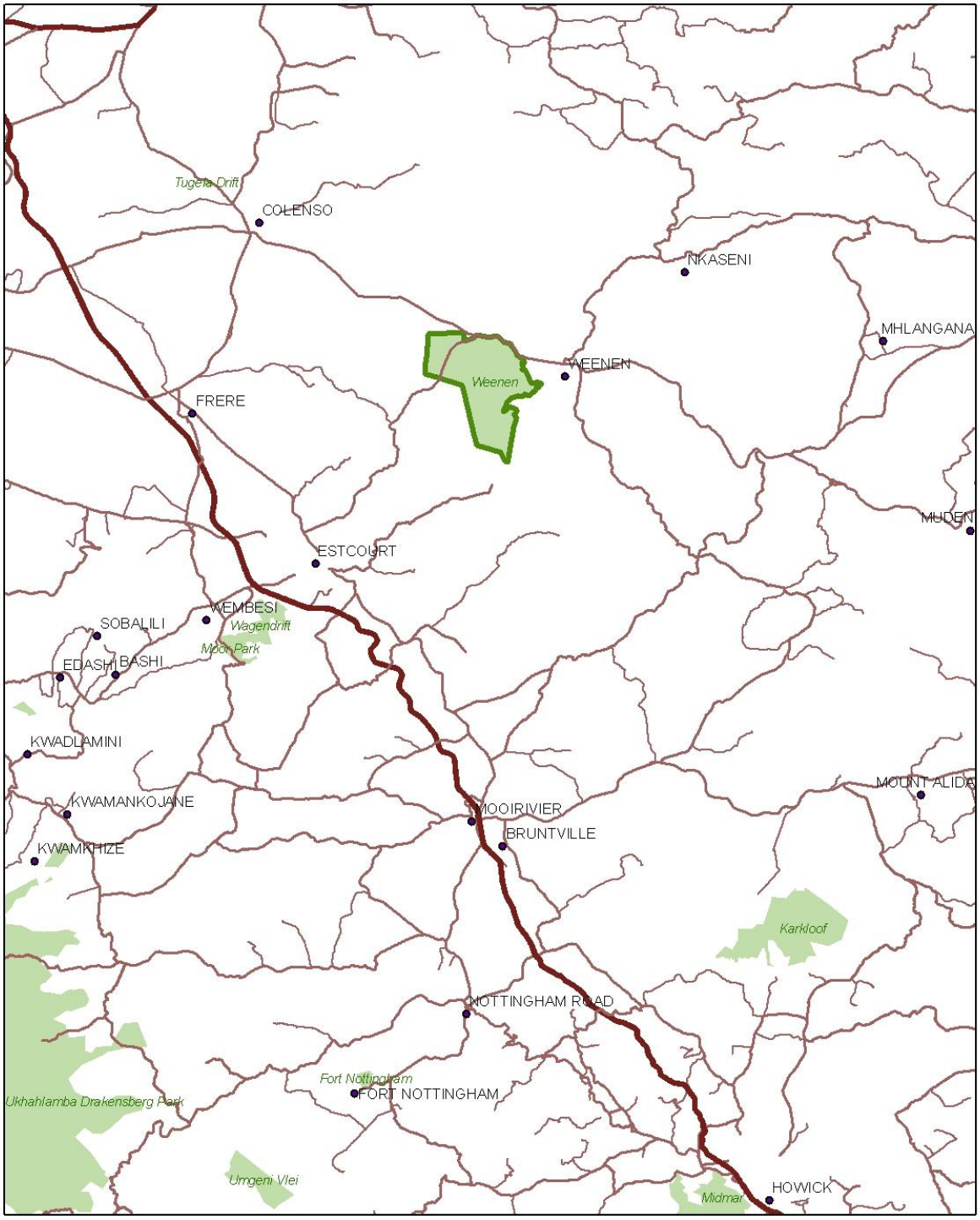
PROJECTED INCOME					
	Year 1	Year 2	Year 3	Year 4	Year 5
	268231	289979	313491	338909	366388

References:

Cowan, G.I. and Nobusika M. (2011) Guidelines for the development of a management plan for a protected area in terms of the National Environmental Management: Protected Areas Act, 2003. Unpublished document, Department, Department of Environment Affairs, Pretoria. 17 pp.

Ezemvelo KZN Wildlife (2013) Weenen Nature Reserve: Management Plan. Version 1.0 (2013), Ezemvelo KZN Wildlife, Pietermaritzburg.

MAP A – LOCATION OF WEENEN NATURE RESERVE



Legend

- Towns
- National Road
- Provincial Road
- District Road
- Boundary of Weenen NR
- EKZNW Protected Areas

Weenen Nature Reserve

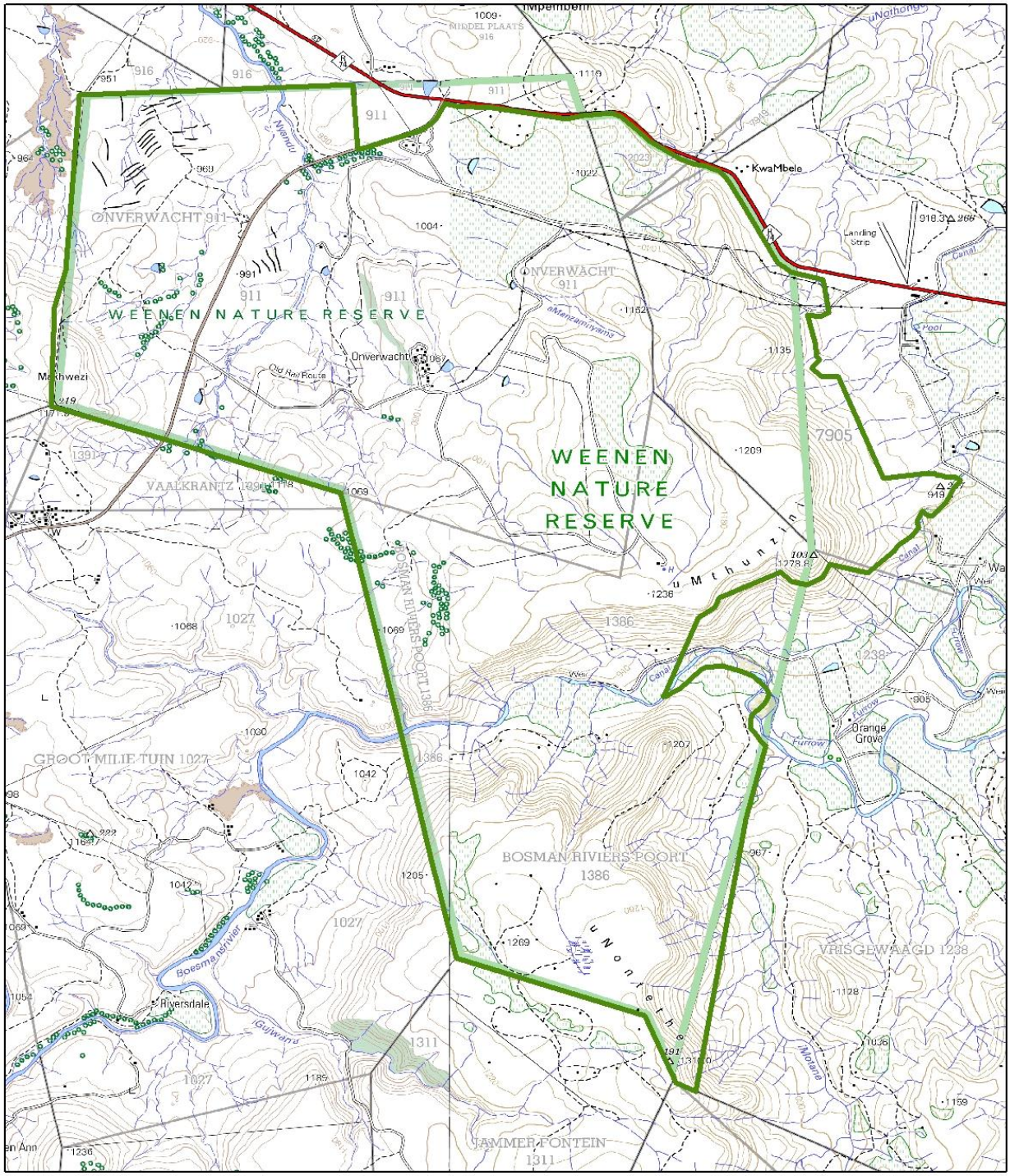
- Locality -

N

0 5 10 20 30

Kilometers

MAP B - TOPOGRAPHY OF WEENEN NATURE RESERVE



Weenen Nature Reserve

- Topography -

N

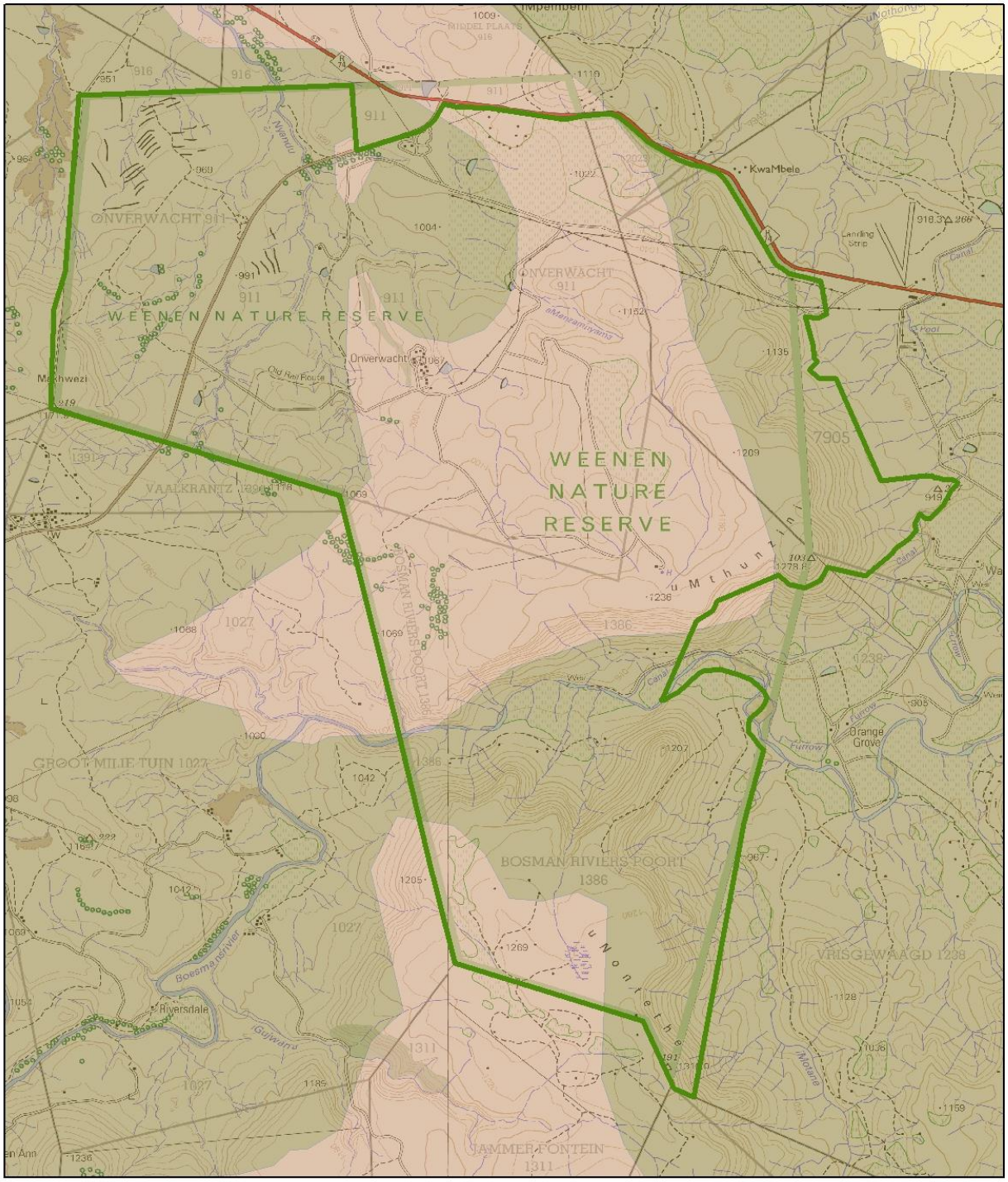
0 0.5 1 2 3

Kilometers

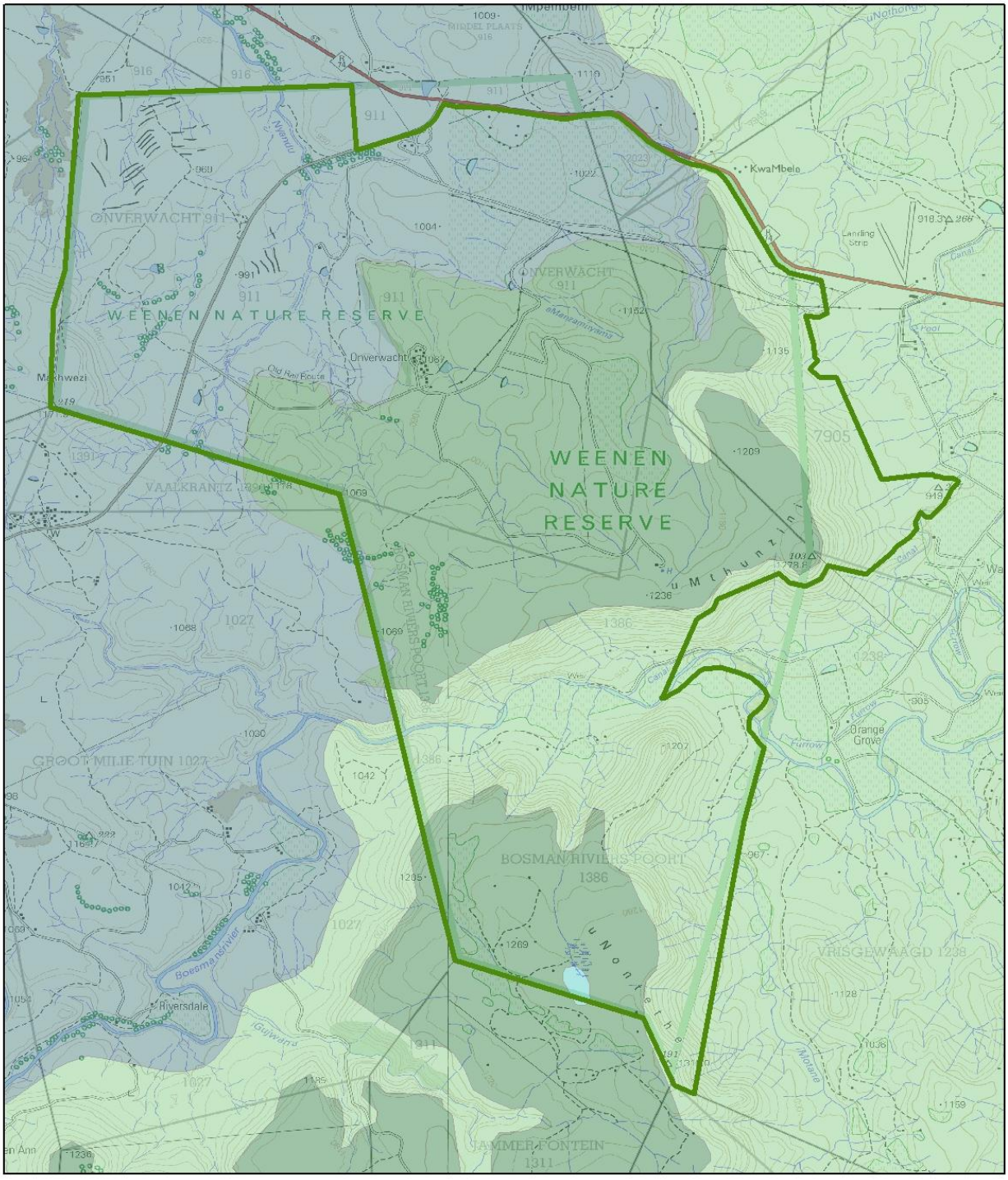
Legend

Boundary

MAP C – GEOLOGY OF WEENEN NATURE RESERVE



MAP D – VEGETATION OF WEENEN NATURE RESERVE



Weenen Nature Reserve

- Vegetation -

Legend

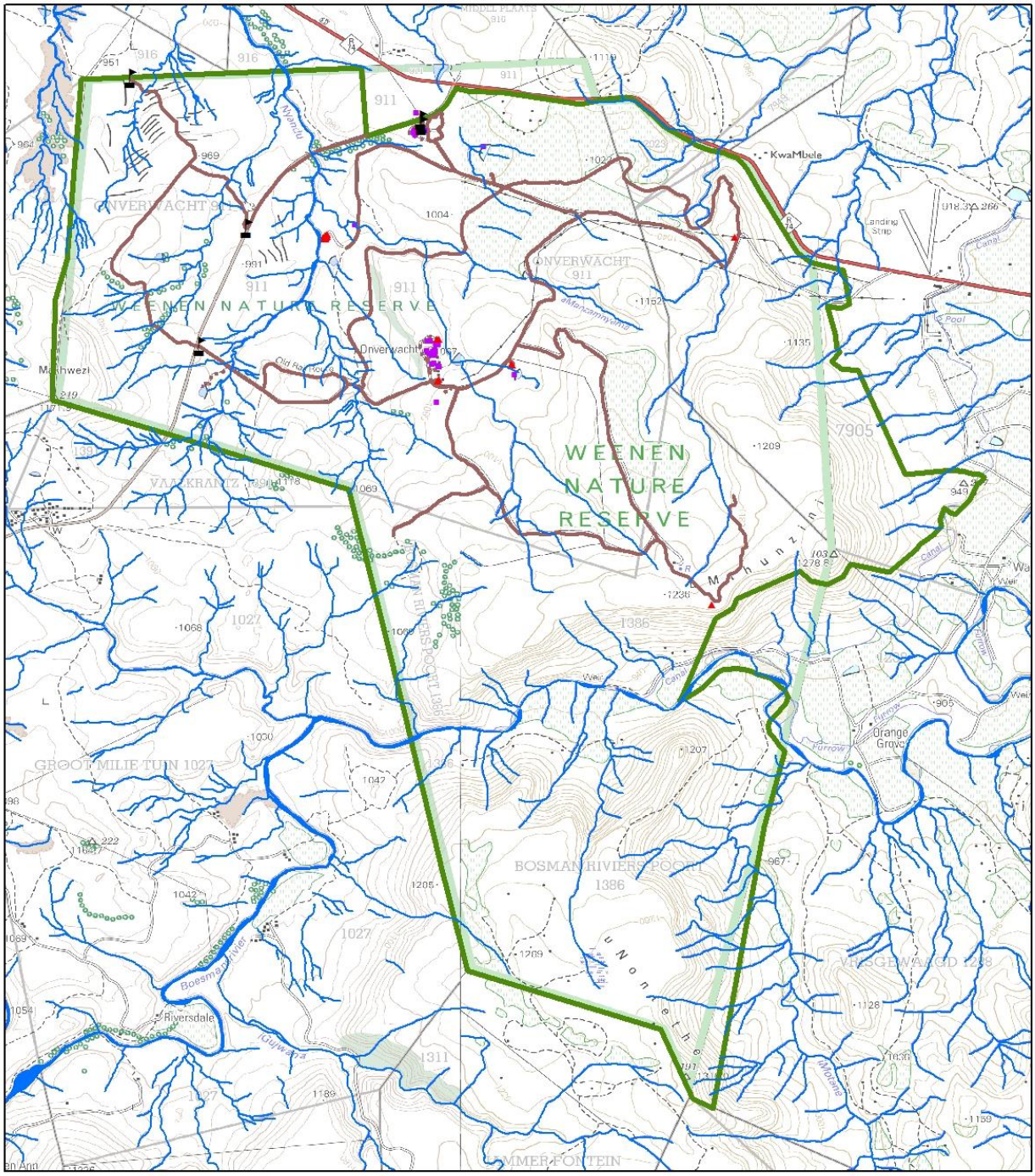
- Boundary
- Alluvial Wetlands : Temperate Alluvial Vegetation : Midland Floodplain Grasslands
- KwaZulu-Natal Highland Thornveld
- Thukela Thornveld
- Thukela Valley Bushveld

N

0 0.5 1 2 3

Kilometers

MAP E – INFRASTRUCTURE OF WEENEN NATURE RESERVE



Legend

- Rivers
- Gates
- Management Infrastructure
- Tourism Infrastructure
- Public Road
- Service Road
- Boundary

Weenen Nature Reserve

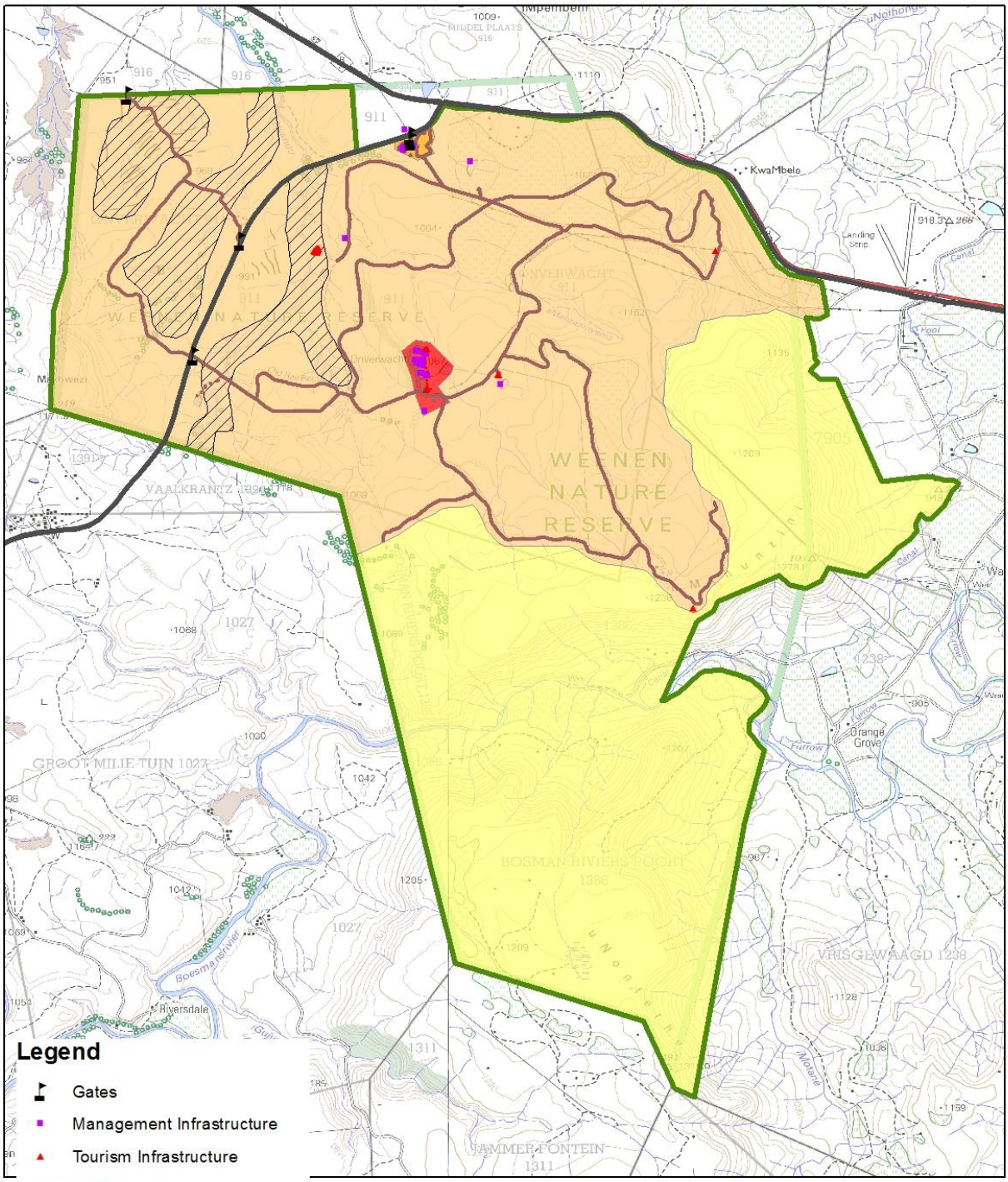
- Infrastructure -

N

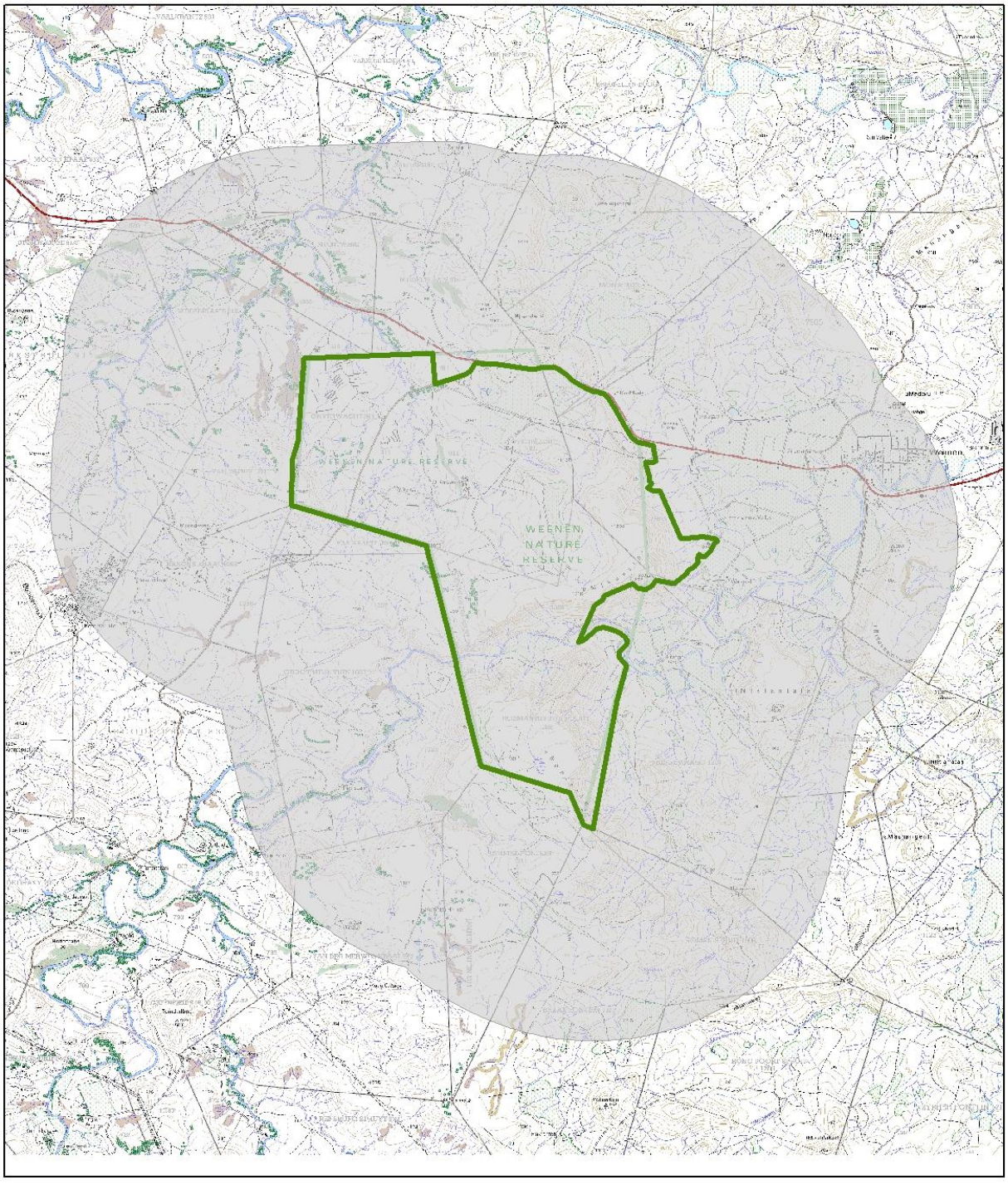
0 0.5 1 2 3

Kilometers

MAP F – ZONATION



MAP G – BUFFER ZONE



Weenen Nature Reserve
- 5 km Buffer -

Legend

Boundary

5 km Buffer

N

0 0.5 1 2 3

Kilometers