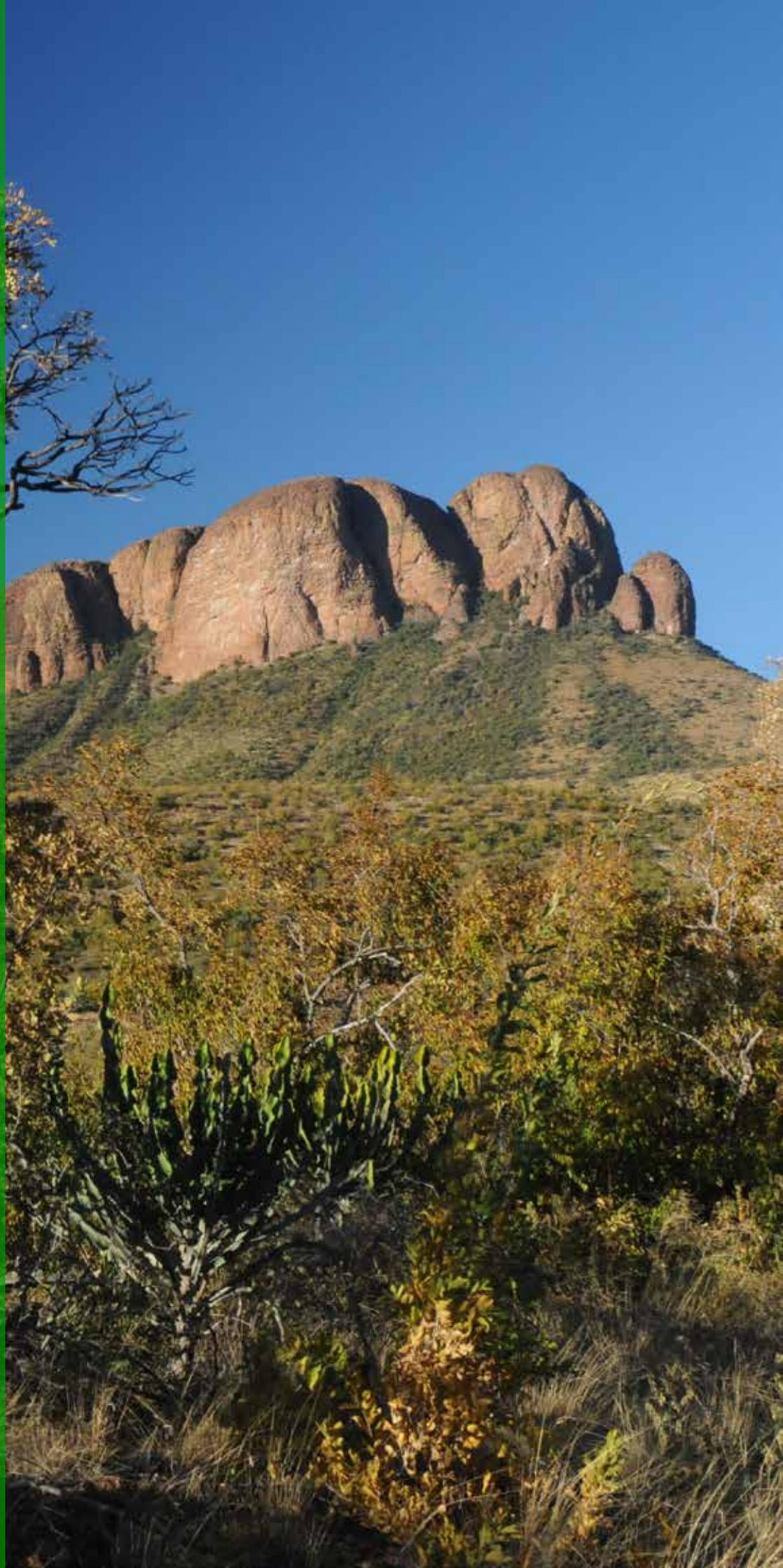




# Marakele National Park

## Park Management Plan

For the period  
2014-2024



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*This plan was prepared by Dr Peter Novellie and André Spies, with significant input and help from Johan Taljaard, Dr Nomvuselelo Songelwa, Dr Stefanie Freitag-Ronaldson, Dr Sam Ferreira, Dr Mike Knight, Dr Peter Bradshaw, Dr Hugo Bezuidenhout, Dr André Uys, Dr Rina Grant-Biggs, Dr Llewellyn Foxcroft, Dr Danny Govender, Michele Hofmeyr, Mphadeni Nthangeni, Siphso Zulu, Ernest Daemane, Cathy Greaver, Louise Swemmer, Navashni Govender, Robin Peterson, Karen Waterston, Joep Stevens, Sandra Taljaard, Property Mokoena and various stakeholders.*

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## Section 1: Authorisation

This management plan is hereby internally accepted and authorised as required for managing the Marakele National Park in terms of Sections 39 and 41 of the National Environmental Management: Protected Areas Act (Act 57 Of 2003).

Mr Johan Taljaard  
Park Manager: Marakele National Park

Date: 01 May 2014

Mr Property Mokoena  
General Manager: Northern Cluster

Date: 01 May 2014

Dr Nomvuselelo Songelwa  
Managing Executive: Parks

Date: 01 May 2014

Mr Abe Sibiya  
Acting Chief Executive: SANParks

Date: 18 August 2014

Mr Kuseni Dlamini  
Chair: SANParks Board

Date: 19 August 2014

**Approved by the Minister of Environmental Affairs**

Mrs B.E.E. Molewa, MP  
Minister of Environmental Affairs

Date: 10 November 2014

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## Glossary

<b>Biosphere reserve</b>	A biosphere reserve is a world heritage site that has been identified by the IUCN as worthy for national park or wildlife refuge status because of high biological diversity or unique ecological features.
<b>Desired state</b>	The park desired state is based on a collectively developed vision and set of objectives of the desired future conditions (that are necessarily varying, across the full V-STEEP range) that stakeholders desire.
<b>Tourism development node</b>	A location or an area, possibly an intersection, that is identified for multi- tourism services. Depending on volumes, this will generally offer a variety of products and services and may include an activity departure point and would likely be zoned as high-intensity leisure.
<b>Endemism</b>	Confined to a specific place or area.
<b>Feral animal</b>	A feral animal is a domestic animal that has returned to the wild. It is distinguished from a stray cat, which is a pet cat that has been lost or abandoned, while feral cats are born in the wild.
<b>Guidelines</b>	DEAs Guidelines for the development of a management plan for a protected area in terms of NEM:PAA (Cowan & Mpongoma 2010).
<b>Mission</b>	An articulation of the Vision that describes why the park exists and its overall philosophy on how to achieve its desired state.
<b>Objectives hierarchy</b>	The objectives for a park, with the most important, high level objectives at the top, cascading down to objectives at finer levels of detail, and eventually to operational actions at the lowest level.
<b>Responsible tourism</b>	Tourism that maximises benefits to local communities, minimises negative social or environmental impacts, and helps local people conserve fragile cultures, habitats and species. Or, it is a tourism or leisure activity implementing a practice that is respectful of natural and cultural environment and which contributes, in an ethical manner, to local economic development.
<b>Stakeholder</b>	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) of NEM:BA
<b>Tuyère</b>	A tube, nozzle or pipe through which air is blown into a furnace or hearth.
<b>Vision</b>	A word 'picture' of the future, or what the stakeholders see as the future for the park
<b>Vital attributes</b>	Unique or special characteristics of the park, the determinants of which management should strive to protect, and the threats towards which management should strive to minimise
<b>V-STEEP</b>	The values (social, technological, economic, ecological and political), used to understand, with stakeholders, the social, economic and ecological context of the system to be managed, and the principles/values that guide management. These are used to develop a broadly acceptable vision for the future.



## Acronyms and abbreviations

1	AIS	Alien and invasive species
2	AMSL	Above mean sea level
3	APO	Annual plan of operations
4	BBBEE	Broad based black economic empowerment
5	BSC	Balanced score card
6	BSP	Biodiversity social projects
7	CARA	Conservation of Agricultural Resources Act (Act 43 Of 1983)
8	CDF	Conservation development framework
9	CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
10	CPF	Coordinated policy framework
11	CLUZ	Conservation land use zoning
12	CSD	Conservation services division
13	DEA	Department of Environment Affairs
14	EEI	Environmental education and interpretation
15	EFR	Environmental flow requirement
16	EIA	Environmental Impact Assessment
17	EMP	Environmental Management Plan
18	EPWP	Expanded Public Works Programme
19	FET	Further education and training
20	FPA	Fire protection association
21	GG	Republic of South Africa Government Gazette
22	GM	General manager
23	GN	Government notice
24	HIA	Heritage impact assessment
25	HIL	High intensity leisure
26	HR	Human resources
27	IDP	Integrated development plan
28	IMP	Integrated management plan
29	ISCU	Invasive species control unit
30	JMC	Joint management committee
31	LIL	Low intensity leisure
32	IUCN	The World Conservation Union
33	LLP	Lower level plan
34	MICE	Meetings, Incentives, Conferences, Exhibitions
35	MNP	Marakele National Park
36	MODIS	Moderate Resolution Imaging Spectroradiometer
37	Nbal	Natural biological alien location
38	NBSAP	National Biodiversity Strategy and Action Plan
39	NEMA	National Environmental Management Act (Act 107 of 1998)
40	NEM:BA	National Environmental Management: Biodiversity Act (Act 10 of 2004)
41	NEM:PAA	National Environmental Management: Protected Areas Act (Act 57 of 2003)
42	NGO	Non-governmental organisation
43	NPT	National Parks Trust
44	NPAES	National Protected Area Expansion Strategy
45	OHS	Occupational health and safety
46	P&C	People and Conservation
47	PM	Park manager
48	PPP	Public private partnership
49	RM	Regional manager
50	SA	South Africa
51	SAHRA	South African Heritage Resources Agency
52	SANBI	South African National Biodiversity Institute

53	SANParks	South African National Parks
54	SHR's	SANParks Honorary Rangers
55	SAPS	South African Police Service
56	SDF	Spatial development framework
57	SETA	Sector education training authority
58	SMME	Small, medium and micro enterprises
59	SSC	Species of special concern
60	TPC	Threshold of potential concern
61	UNESCO	United Nations Educational, Scientific, Cultural Organisation
62	UP-ZRU	University of Pretoria Zoonotic Research Unit
63	VWS	Veterinary wildlife services
64	WMA	Water management area
65	WMC	Wildlife management committee
66	WWF-SA	Worldwide Fund for Nature South Africa



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## Introduction

The first management plan for the Marakele National Park (MNP) required in terms of the National Environmental Management: Protected Areas Act (Act 57 of 2003 as amended) (NEM:PAA) was submitted to, and approved in part, by the Department of Environment Affairs (DEA) in 2008 (SANParks 2008).

This first review of the management plan builds on the foundation of the first plan and addresses its inadequacies. The layout of the plan follows the format provided in the Guidelines drawn up by the DEA (Cowan & Mpongoma 2010) while also incorporating the adaptive planning process adopted by South African National Parks (SANParks). Local municipalities, the district municipality and other organs of state as well as other stakeholders were consulted as required (Appendix 3). Relevant aspects of local authority plans were considered in the compilation of the plan.

The plan serves as a reference to the management and development of the park in its current and envisaged future form with information on the background, biophysical context, desired state, management and programmes at strategic and operational levels.

This management plan will come into effect following the approval by the Minister in terms of sections 39 and 41 of NEM:PAA on a date specified by the Minister and is intended for a timeframe of 10 years after commencement unless it is replaced earlier by a newly approved plan. SANParks will review this plan no later than ten years after the commencement date.

The plan follows the DEA guidelines and contains the following sections for this plan:

- **Section 1** provides for the required authorisation
- **Section 2** provides a record of the legal status of the park, descriptions of its context as well as relevant local, regional, national and international agreements
- **Section 3** sets out the framework of legislation, national policies, SANParks structures, policies, guidelines, practices regarding management
- **Section 4** describes the consultation process followed in the preparation of this plan
- **Section 5** presents the vision, purpose, values, principles and attributes considered in developing a desired state for the park and provides the high level objectives as basis for the management programmes contained in Section 10 of the plan
- **Section 6** outlines the zoning plan
- **Section 7** describes access and facilities
- **Section 8** summarises the expansion and consolidation strategy
- **Section 9** sets out the concept development plan
- **Section 10** provides a strategic plan with programmes, objectives and activities with cost estimates. Monitoring and evaluation are integrated into the actions
- **Section 11** contains detailed costing of the programmes

**Appendices** to this plan contain further details such as proclamations, co-management areas, legislation and policies.



## Section 2: Legal status

### 2.1 Name of the area

The park is defined as the Marakele National Park in Government Notice 248 of 11 February 1994, published in Government Gazette No. 15483.

### 2.2 Location

Marakele National Park is situated in the Limpopo Province, roughly 15 km northeast of Thabazimbi between latitudes 24° 15' and 24° 32' south and longitudes 27° 30' and 27° 40' east. The park lies on the extreme south-western quadrant of the Waterberg massif and its adjoining lowlands to the west (Appendix 6, Map 1). The Kwaggasvlakte section of the park is currently disconnected from the main area of the park by the D928 provincial Hoopdal road.

### 2.3 History of establishment

Marakele National Park is one of the younger national parks in South Africa, initiated in 1986, declared in 1994 as Kransberg National Park and expanded over the years and it is still in a phase of consolidation.

### 2.4 Contractual agreements

There are a number of contractually included parcels of land which contribute to achieving the vision and overall desired state of this national park as outlined in Table 1 below. The most important existing contractual agreement includes the Marataba section (15 753 ha), owned by The Marakele Park (PTY) Ltd. The expansion included the incorporation of land owned by The Marakele Park (PTY) Ltd as a Schedule 2(b)1(b) National Park into the Marakele National Park. The contractual park agreement between Marakele Park (PTY) Ltd and SANParks, signed in November 2000, enabled the expansion of the Marakele National Park and has as its core the development of a sustainable income generating model for The Marakele Park (PTY) Ltd as well as the Marakele National Park. In this contractual agreement SANParks and The Marakele Park (PTY) Ltd agree to work together on the project in which The Marakele Park (PTY) Ltd establishes, promotes and manages operations on the properties in consultation with SANParks through the contractually established Joint Management Committee. The intention of the contractual agreement is that SANParks will acquire the land at the end of the contract period in 2030, alternatively the contract will be renewed for an additional period of 30 years.

Table 1. Private land included, by proclamation, into the national park

Title deed	Farm name	Portion No	Extent (Ha)	Owner	Section	GG	Proclamation date	Period
T21440/2001	Remainder of Hoopdal 96	0	67.9290	CCG108	2B(1)(b)	22335	2001/05/29	30 Years
T21440/2001	Hoopdal 96	6	42.8266	CCG108	2B(1)(b)	22335	2001/05/29	
T21440/2001	Hoopdal 96	7	192.2528	CCG108	2B(1)(b)	22335	2001/05/29	
T21440/2001	Hoopdal 96	11	222.6003	CCG108	2B(1)(b)	22335	2001/05/29	
T96214/1999	Diamant 228	19	1284.7980	CCG108	2B(1)(b)	22335	2001/05/29	

Title deed	Farm name	Portion No	Extent (Ha)	Owner	Section	GG	Proclamation date	Period
T4635/2001	Klipdrift 231	2	873.6626	CCG108	2B(1)(b)	22335	2001/05/29	
T96214/1999	Klipdrift 231	3	873.6626	CCG108	2B(1)(b)	22335	2001/05/29	
T96214/1999	Klipdrift 231	4	873.6626	CCG108	2B(1)(b)	22335	2001/05/29	
T96214/1999	Klipdrift 231	5	873.6626	CCG108	2B(1)(b)	22335	2001/05/29	
T4806/2001	Retseh 594	0	878.9510	CCG108	2B(1)(b)	22335	2001/05/29	
T3295/2001	Remainder of Waterval 267	0	1708.0761	CCG108	2B(1)(b)	22335	2001/05/29	
T30444/2001	Remainder of Buffelspoort 265	0	1997.5010	CCG108	2B(1)(b)	22492	2001/07/27	
T110606/1996	Groothoek 278	2	499.2434	Wandor Holdings Pty Ltd	Not declared			15 Years
T41029/1994	Vygeboomfontein 239	4	534.4720	Aapiesrivier-park CC	2B(1)(b)	16527	1995/07/14	50 Years
T74496/1991	Waterval 267	1	1713.0640	NPT of SA	2B(1)(b)	25562	2003/10/17	99 Years
T74496/1991	Jagtersrus 418	0	1000.0000	NPT of SA	2B(1)(b)	25562	2003/10/17	

## 2.5 Co-management agreements

A co-management agreement exists between SANParks and The Marakele Park (PTY) Ltd. This agreement, amongst other things, provides for the delegation of powers by SANParks to The Marakele Park (PTY) Ltd to manage the land, owned by The Marakele Park (PTY) Ltd, as mentioned in Table 1 above as well as land owned by SANParks and the National Parks Trust. The MNP management plan will also be applicable to The Marakele Park (PTY) Ltd hence forth referred to as the Marataba section. The Marakele Park (PTY) Ltd have developed an integrated management plan (IMP) together with SANParks which has been approved at the joint management committee (JMC). This integrated management plan is the contractually obliged outcome of consultation between the two parties at the JMC.

## 2.6 Total area

The park currently covers approximately 63, 926 ha of which 57, 154 ha are declared while 6, 772 ha are in the process of being declared.

A list of all the declarations can be found in Annexure 1.

## 2.7 Highest point

The highest point in the park is 2,088 m (6,850 ft) above mean sea level (Appendix 6, Map 2). The latter is of note as this determines the park's airspace (2,500 feet above the highest point, thus 9,350 feet) above the park.

## 2.8 Municipalities within which the park falls

Marakele National Park falls within the boundary of the Waterberg District Municipality and three local municipalities, namely Thabazimbi, Lephalale and Modimolle local municipalities. Marakele National Park is incorporated in the district and local municipality's integrated development plans and all projects are submitted to the municipality for inclusion in their planning processes and documents.

## 2.9 Land claims

There is a land claim registered against the property, Waterval 267 KQ. The Limpopo Regional Land



## **2.10 International, national and provincial listings**

Marakele's participation and contribution to the UNESCO registered Waterberg Biosphere Reserve forms an important component of the international context for this park.

## **2.11 Environmental authorisations**

There are no authorisations.

## **2.12 Biophysical and socio-economic description**

### **2.12.1 Climate**

The climate of the area is classified as warm temperate with summer rainfall. Mean annual rainfall varies from 485 mm on the plains, to 719 mm in the highest parts of the Waterberg mountain range with 94% of the annual rainfall occurring between October and April. Mean daily maximum temperature ranges in summer are between 26°C - 30°C while mean daily minimum temperatures in winter range between 1°C - 6°C.

### **2.12.2 Topography**

Altitude ranges from 2 088 m in the Waterberg to 1 050 m on the plains surrounding the Waterberg mountain range (Appendix 6, Map 2). The scenery is spectacular and diverse, varying from rugged mountains, high cliffs, rolling hills to bush-covered plains.

### **2.12.3 Geology and soils**

The strongly undulating plateau of the Waterberg mountain range rises above the surrounding countryside and is built up of sandstone of the Kransberg Subgroup of the Waterberg Group. Dominant soils are dystrophic (markedly leached, generally nutrient poor) to mesotrophic (moderately leached) yellow-brown apedal coarse sands and medium to coarse sandy loams and apedal grey loamy coarse sands. To the south-west of the Waterberg mountain range lies a broad, gently undulating plain with geology consisting of Swazian granite and gneiss that has largely been covered by colluvium, calcrete and Kalahari sand mixed with locally transported sandy material. Eutrophic (minimally leached, nutrient rich) apedal red medium to coarse sandy loam and sandy clay loam soils occur on the granite and gneiss. On the colluvium and calcrete red and black sandy clay and clay soils occur. Soils occurring on the transported sandy material are eutrophic apedal red and yellow- brown loamy medium to coarse sands and medium to coarse sandy loams.

### **2.12.4 Hydrology**

Marakele National Park falls within the Limpopo Water Management Area (WMA) and in the Matlabas/Mokolo sub-catchment. The most prominent river draining the area is the Matlabas River. Importantly the Waterberg mountain range is a significant catchment area for the Sunday, Mamba, Matlabas and Sand Rivers as well as many other smaller streams which are vital headwater / water supply areas for the surrounding environment. The Matlabas is a perennial river, although the flow is highly subject to seasonal variations, thus its runoff is very variable. Its main tributary is the Mamba River. There are wetland sponges at the headwaters of the Matlabas River.

### 2.12.5 Flora

Marakele hosts a wide spectrum of vegetation diversity comprising four major physiognomic vegetation units, namely fine-leaved thornveld, broad-leaved woodland, forest and grassland. Presently about 70% of Marakele consists of Waterberg Moist Mountain Bushveld (Appendix 6, Map 8). This vegetation type occurs on the high to intermediate altitude areas on the southwestern part of the Waterberg range. Two other Low & Rebelo vegetation types occur, namely Mixed Bushveld and Sweet Bushveld. Nevertheless, the low-lying grassland and wetland areas contribute to the high diversity of vegetation types. The Mixed Bushveld is dominated by small-leaved thorny woody species such as *Dichrostachys cinerea*, *Acacia karroo*, *A. erubescens*, *A. tortilis* and *A. erioloba* and, on the whole, this vegetation diversity can host a variety of animals.

Floristically Marakele is exceptionally rich (Van Staden 2001), with representatives typical of fynbos and forest systems (e.g. *Passerina montana*, *Erica drakenbergensis*, *Widdringtonia nodiflora*, *Podocarpus latifolius* and *Curtisia dentata*) as well as species typical of the Kalahari system (e.g. *Acacia erioloba*, *A. mellifera*, *Boscia foetida*, *Stipagrostis uniplumis* and *Limeum fenestratum*). A rich diversity of plant species as well as plant communities and habitats give Marakele a high conservation value and it lies on the edge of the SANBI delineated central bushveld biodiversity hotspot. Six plant species are listed as rare and uncertain in Marakele, namely *Boscia foetida* subsp. *minima*, *Erythrophysa transvaalensis*, *Freylinia tropica* and *Kniphofia coralligemma* while the status of *Agapanthus coddii* (an endemic to the region) and *Hibiscus waterbergensis* are uncertain. Stands of the endemic *Encephalartos eugene-maraisii* (Waterberg Cycad), listed as endangered (IUCN Red List of Threatened Species, 2013), typically found on rocky soils in the Waterberg mountains, are found in Marakele. This species is threatened due to over-collecting for ornamental purposes. The vulnerable *Gladiolus pretoriensis* and the rare *Euclea linearis* also occur here. The common tree fern *Cyathea dregei*, which has specific habitat requirements, is also found in Marakele.

### 2.12.6 Fauna

Because the Waterberg represents an important transitional zone in the distribution of mammals, it is capable of maintaining a high diversity of species. Most of the large game species present in the area historically were exterminated, and only ubiquitous species such as kudu *Tragelaphus strepsiceros*, bushbuck *Tragelaphus scriptus*, impala *Aepyceros melampus*, duiker *Sylvicapra grimmia*, warthog *Phacochoerus aethiopicus* and mountain reedbuck *Redunca fulvorufula* were common at the time of establishment of the park. In accordance with SANParks policy of reintroducing historically occurring species, a programme of population re-establishment was initiated in 1991. To date elephant *Loxodonta africana*, hippopotamus *Hippopotamus amphibius*, black rhinoceros *Diceros bicornis minor*, spotted hyena *Crocuta crocuta*, lion *Panthera leo*, white rhinoceros *Ceratotherium simum*, buffalo *Syncerus caffer*, eland *Taurotragus oryx*, gemsbok *Oryx gazella*, roan antelope *Hippotragus equinus*, sable antelope *Hippotragus niger*, red hartebeest *Alcelaphus buselaphus*, tsessebe *Damaliscus lunatus*, giraffe *Giraffa camelopardalis*, blue wildebeest *Connochaetes taurinus*, plains zebra *Equus quagga* and common reedbuck *Redunca arundinum* have been reintroduced. Currently the fence bordering the park presents a “hard” boundary with potential private partners; however it also provides a means of separating some as yet incompatible interaction between wildlife and domestic livestock on some neighbouring farms.

### 2.12.7 Archaeology and cultural heritage

During 2001-2002 a heritage inventory and Cultural Heritage Management Plan were developed for Marakele National Park and adjacent properties, identifying 130 tangible heritage sites, including Stone Age surface scatters, historic cemeteries, historic farmsteads and outbuildings as well as Early and Late Iron Age sites. Intangible resources were also documented, including traditional and medicinal uses of plants. Evaluations of the significance, conservation status and utilisation options of all the heritage resources were accompanied by detailed recommendations for implementation.



### **2.12.8 Socio-economic context**

The regional economy is focused primarily on mining, agriculture and growing ecotourism opportunities and this is reflected in the regional Integrated Development Plans (IDP's) of local municipalities that are focussed on tourism, agriculture and mining. The levels of unemployment within the urbanised communities in the Thabazimbi municipal area are high. Since 2007 the population has increased by 10%. There seems to be an influx of work seekers to the area. This will undoubtedly put pressure on the local municipality regarding service provision. Particularly high unemployment and low income levels are found in Regorogile, with many of the youths not attending school. There are also a number of farm-based workers with varying levels of employment and literacy residing within the municipal boundary. This poor, previously disadvantaged community contrasts sharply with other stakeholders.

The mining sector plays a major role in job creation and is a major economic engine of this region. The investment made by Kumba Iron Ore in the building the environmental education centre located in MNP has enabled the park to reach more children through their structured programmes. It has been mentioned that the life cycle for the Kumba iron ore mine will come to an end in 2022. The Waterberg region has been identified as a key development node for mining and electricity production. The new Medupi coal power station is being built close to Lephalale in the Limpopo province. Linked to these developments will be the expansion of the Transnet freight rail network to transport the coal as well as the Eskom power line distribution network supporting Medupi. These developments could have negative impacts on protected areas and the various management authorities will have to work closely with Eskom, Transnet and other state entities to try and mitigate the potential impacts.

The biosphere reserve concept (the Waterberg Biosphere Reserve is registered with UNESCO) and recent developments and upswings in nature-based tourism opportunities (including ecotourism and hunting) could be an alternative long-term socio-economic driver within the region. This is emphasised by the many and varied existing agreements between parties as well as by the diversity of tourism infrastructure external to the park which caters for the upper and lower income eco-tourist market, although there is much less available for middle income tourists. The Expanded Public Works Projects (EPWP) and Biodiversity Social Projects (BSP) in MNP provide much needed job opportunities to local inhabitants while addressing park specific needs such as erosion control, rehabilitation, alien clearing etc.

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## Section 3: Policy framework

### 3 Introduction

SANParks, like all protected area management authorities, are subject to the constitution, legislation, international agreements, national policies and government priorities. Section 41 of the NEMA:PAA requires that management plans be located within the context of a Coordinated Policy Framework (CPF). SANParks developed the CPF in 2006.

This CPF will be updated within the 2015 / 2016 financial year. The CPF will provide the information required by the Department of Environmental Affairs (DEA) guidelines for management plans (Cowan & Mpongoma 2010). This document will summarise the institutional, ecological, economic and social environment for park management and includes:

- An introduction to the management plan requirements of the NEM:PAA, what it means for stakeholders, and the corporate provisions SANParks has made to comply with NEM:PAA.
- SANParks as an organisation: including its organisational structure, vision, mission, biodiversity values and performance management system (by means of the balanced scorecard), and its approach to strategic adaptive management.
- Policies and guiding principles:
  - Finances and commercialisation
  - Tourism
  - Zoning system in parks
  - Stakeholder relationships
  - Management to maintain biodiversity and ecosystem processes.
  - Risk management
  - Safety and security
  - Cultural heritage resources
  - Resource use
  - Research

The CPF can be downloaded from the SANParks website using the link [http://www.sanparks.org/conservation/park\\_man/](http://www.sanparks.org/conservation/park_man/). A revised and updated CPF is due in 2014.

SANParks policies are guided by its vision and mission statements. As a public entity, SANParks is committed to act in pursuit of transformation of South Africa's society in support of entrenching South Africa's democracy. And as such, this policy framework is open to public review by stakeholders.

The planning cycle for management plans in SANParks is 10 years, although the programmes and costing could be revised every five year, if required.

#### 3.1 Park specific framework

All park managers (except for Kruger National Park) report to the Managing executive: Parks through a Regional general manager. In the case of the MNP reporting is via the regional general manager for the Northern cluster. The park's organogram (Figure 1) sets out the reporting structure in the park.

#### 3.2 Park rules

A list of the MNP park rules can be found in Appendix 5.

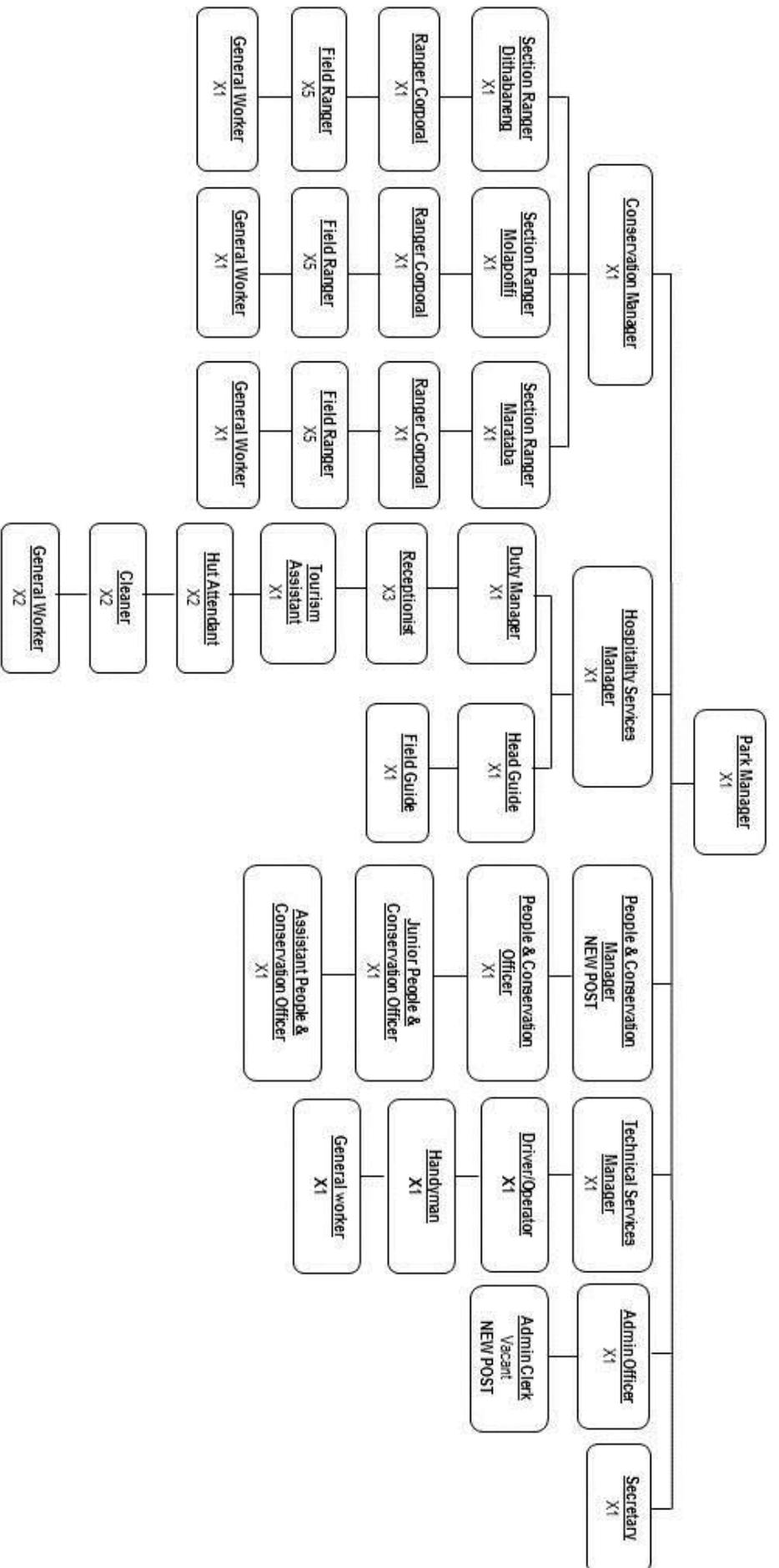


Figure 1. Park organogram.



## Section 4: Consultation

SANParks recognises that parks must serve societal values and that they need to be part of and interrelate with the broader landscape and socio-economic context within which they are situated. The goal of the park within the public participation process is to work directly with stakeholders to ensure that the stakeholder concerns and aspirations are consistently understood and considered. Therefore stakeholders, both interested and affected, were included in the revision process of the park management plan by notifying them of participation processes through mechanisms suitable for the different stakeholder groups. These processes provided the opportunity for input from all stakeholders within reasonable timeframes, with the emphasis on sharing of information and joint learning. Processes also aimed to recognise all knowledge, indigenous, ordinary and expert, as well as the diversity of values and opinions that exist between stakeholders. The commitment to the incorporation of public opinion into this plan is rooted in the park's management activities and is therefore geared towards promoting conservation values (and society's connection with those values, as also outlined in the NEM:PAA) and promoting this goal in part, by engaging the broader context in which the park is situated. The adaptive planning process that was followed was designed to (i) help stakeholders express opinions and values in a structured way, (ii) to use the opinions and expressed values to formulate a vision for MNP, and (iii) to translate the vision into management objectives that reflect the values as expressed by stakeholders.

The objectives of the stakeholder participation process are to:

- Create a channel for the accurate and timely dissemination of information to interested and affected stakeholders;
- Create the opportunity for communication between SANParks and the public;
- Promote opportunities for the building of understanding between different parties;
- Provide the opportunity for stakeholders to give meaningful input into the decision-making processes that drive the development of the park management plan.

The approach to the stakeholder participation process is based on the principles embodied in the following legal framework:

- The Constitution of the Republic of South Africa Act No. 108 of 1996;
- National Environmental Management Act No. 107 of 1998 (NEMA); and
- The National Environmental Management: Protected Areas Act No.57 of 2003 as amended by the National Environmental Management: Protected Areas Act No.31 of 2004.

In addition to the above legal framework, the stakeholder process was developed with the guiding principles for SANParks stakeholder participation in mind. SANParks thus undertakes to:

- Seek to notify stakeholders of participation processes through appropriate mechanisms.
- Ensure that the process provides the opportunity for input from all stakeholders within reasonable timeframes, emphasising the sharing of information, joint-learning and capacity building.
- Promote participation by stakeholders through timeous and full disclosure of all relevant and appropriate information.
- Provide feedback on the outcome of the process to stakeholders and demonstrate how their inputs have been considered in the decision making process.
- Ensure that methodologies accommodate the context of the issue at hand and the availability of resources (people, time, money) and do not conflict with these guiding principles.
- Give particular attention to ensuring participation by marginalised communities, communities with specific concerns, or communities that have contractual rights in the national park.

Details regarding the stakeholder process are outlined in Appendix 3.



## Section 5: Purpose and vision

### 5.1 Purpose of the park

The NEM:PAA requires that the park be managed in accordance with the purpose for which it was declared. The original purpose of the park is not officially specified, neither in the first gazetted declaration nor any subsequent addition. However, the park protects the Waterberg Massif and associated Bushveld vegetation types. It further acts as an alternative big 5 destination that is located close to Gauteng. Hence SANParks will manage the park firstly in accordance with its organisational vision and secondly in accordance with the mission and objectives hierarchy that were derived through consultation with stakeholders, as set out in this section.

### 5.2 Vision and mission

The vision is an inspirational statement designed to provide a picture of the envisaged future for the park. It answers the question of ‘where do we want to go?’ SANParks’ corporate vision, which holds for all national parks including MNP, is as follows:

#### VISION

*“South African National Parks connecting to society”*

The mission defines the fundamental purpose of the park, succinctly describing why it exists and what it does to achieve its vision. The following mission was developed after consultation with stakeholders at a workshop on 22 May 2013:

#### MISSION

*As an integral component of the Waterberg Biosphere Reserve, Marakele National Park strives to promote the adaptive and integrated management of biodiversity\* and the park’s wilderness qualities\*\* and cultural character, through becoming a preferred innovative nature-based tourism destination, promoting community participation and empowerment, and including public/private partnerships, which also benefits regional economic, social and educational development supported by sound research.*

*\* biodiversity refers to the species diversity, habitat (structural) diversity and diversity of ecosystem processes.*

*\*\* a substantial portion of the park qualifies as wilderness in the strict sense of the PAA; in the rest of the park we strive to retain as authentic a sense of place as feasible*

### 5.3 SANParks corporate vision of the desired state of Marakele National Park

Examined from the perspective of the entire system of national parks, SANParks has identified a broad vision and strategic direction for each individual park. This corporate strategic direction is intended to complement the role of other parks in adding overall value to South Africa’s national park system in terms of biodiversity conservation, recreational opportunities and regional socio-economic contribution. Thus the following strategic direction for Marakele National Park has also informed the programmes of implementation (Section 10) of this management plan:

Marakele National Park is of overall average value regarding most of the desired state components, but there is strong potential to develop tourism and environmental education. The goal is to generate revenue through increased diversity of tourism products including the establishment of a rest camp. Environmental education and heritage values have been targeted for improvement. Funding for some development projects has been secured. The completion of contractual arrangements with neighbours will strengthen the value of MNP as a regional node.

Infrastructure development requirements include the road network and fences. The biodiversity value is predicted to remain stable over the next 20 years, and the park faces no outstanding biodiversity risks.

#### 5.4 Operating principles or values

The stakeholders recognised and endorsed the SANParks corporate and conservation values as outlined in the Coordinated Policy Framework. The participants agreed that the values as listed in the 2008 park management plan are still valid. These values are:

- We have mutual respect for cultural, economic and environmental differences within and across the regional spectrum of cooperation and agreements.
- Recognising that ecosystems and biodiversity are complex, and that we will seldom have all the information we want to make decisions, we adopt a ‘learning by doing’ approach to their management.
- We have a culture of honesty, transparency, cooperative sharing of expertise, and of empowerment and advancement of all parties.
- Clear definition of each stakeholder group’s expectations, and how we balance the distribution of costs and benefits, helps us avoid conflict.
- We keep our expectations and the distribution of costs and benefits within the cooperative governance relationships explicit, transparent and within biodiversity constraints.

#### 5.5 Park context

The context refers to the current circumstances and the conditions that determine these circumstances. The context is therefore important as a set of agreed-upon realities that will influence the setting of management objectives.

In addition to the context summarised under sections 2.1 to 2.11.8 stakeholders requested that the undermentioned additional context be added:

- Acknowledges SANParks park differentiation framework;
- Acknowledges the new SANParks responsible tourism strategy;
- Acknowledges the National Protected Area Expansion strategy;
- Raises regional development and associated planning issues, such as:
  - “is MNP becoming an island?”;
  - Pressure on fresh water resources;
  - Game breeding farms not always biodiversity friendly;
  - Importance of the Waterberg Biosphere Reserve;
  - Growing pressure of existing and new mining ventures;
  - Potential impact of proposed new power lines.
- Highlight the security risk to rhinoceroses and other species of special concern;
- Take note of new legislation regarding land reform:
  - The expropriation of land bill;
  - Outcome 10 deliverable;
- Big change in land use – farmers switching from cattle farming to game farming;
- Kumba Iron Ore mine closure set for 2022. There seem to be transitional plans in place.
- There has been a 10% increase in the local population over the past five years;
- Noted that a land claim was submitted against land in The Marakele Park (PTY) Ltd;
- SANParks now has an approved resource use policy;
- MNP now has an approved elephant management plan;
- Wild dogs *Lycaon pictus* were removed from MNP for specific reasons;
- There have been changes in The Marakele Park (PTY) Ltd ownership;
- There have been changes to the staff complement of both Marakele National Park and The Marakele Park (PTY) Ltd;
- Changes in access that are planned:
  - Controlled access on the Hoopdal road;
  - Dropping fence between MNP and Welgevonden is possible but not within the short to medium term.
- Increased focus on environmental education. Big investment was made by Kumba Iron Ore;
- There is intense marketing of tourism products available to the east of Thabazimbi, whilst marketing of products to the west of Thabazimbi is lagging behind.
- EPWP and BSP projects are well entrenched in the park;
- The Pom Pom *Campuloclinium macrocephalum* is an emerging weed;



## 5.6 Vital attributes

The vital attributes of the park are the important characteristics and / or properties of the park that concisely describe the key features of the park. The park identified seven attributes that are vital to the approach by which it is managed. The key attributes are:

- There is a diversity of stakeholders, each of which brings knowledge and expertise to the cooperation and SANParks is recognised as being able to provide particular skills in conservation and tourism.
- Marakele is an important element of the IUCN-recognised Waterberg Biosphere Reserve and falls within a South African National Biodiversity Institute (SANBI) recognised biodiversity hotspot.
- Nature based responsible tourism provides a long term economic option in the region. There is currently a good diversity of adventure tourism activities and infrastructure in the region based on both cultural (pioneer country) and resource (wildlife and outdoor) markets. The area is malaria and bilharzia free and located near a large regional market (Gauteng).
- The mountain massif provides a large altitudinal range, a wide-open-space visual aesthetic and associated biodiversity within a short distance.
- Vital biodiversity attributes include the Cape vulture *Gyps coprotheres* breeding colonies, Waterberg cycad *Encephalartos eugene maraisii*, and a very wide range of vegetation types including Kalahari bushveld in the lowlands, and fynbos elements on the mountain.
- Many headwater streams arise within the park and contribute to important aquatic ecosystem services related to flow of good quality water to surrounding landscapes, for various livelihood benefits.
- Key important white and important black rhino populations.

## 5.7 Determinants and risks to the vital attributes

A major component of park management's responsibility is to ensure the maintenance of the determinants or strengths of the vital attributes and to limit the influence of threats to the system where possible.

The boxes below reflect the vital attributes, determinants and threats.

<b>1. Waterberg biosphere</b>	
<b>Determinants:</b> Regional landuse largely compatible	
<b>Threats</b>	
Inappropriate development Inappropriate water utilisation Lack of institutional arrangements and co-operative governance	Lack of communication and transparency Lack of integrated planning

<b>2. Diversity of stakeholders bring different knowledge and expertise (SANParks, conservation, tourism and skills)</b>	
<b>Determinants:</b> Good institutional arrangements with trust and communication, transparency	
<b>Threats</b>	
Under resourcing Loss of constituency Lack of institutional arrangements and governance	Lack of communication and feedback Lack of continuity and knowledge base

<b>3. Nature based responsible tourism provide long term economic options</b>	
<b>Determinants:</b> Potentially good tourist flow (international, national and regional), attractiveness of area, innovative tourism model	
<b>Threats</b>	
Poor access and internal roads (consider alternatives) Loss of constituency / ineffective marketing (Lack of good sightings of Big 5) Over development	Inappropriate change in landuse Poor relationships amongst tourism stakeholders Higher internal expectations Restricted income generation model
<b>4. Mountain massif</b>	
<b>Determinants:</b> Local topography, spectacular, undeveloped massif	
<b>Threats</b>	
Inappropriate development Inappropriate management (aliens, fire etc.)	Private ownership
<b>5. Head water</b>	
<b>Determinants:</b> Rainfall, good land cover, healthy wetlands, relationship with groundwater, topography	
<b>Threats</b>	
Inappropriate water utilisation Alien plants Inappropriate fire Lack of institutional arrangements and co-operative governance	Range of threats to water quality Acid rain Climate change Inappropriate development, impoundments
<b>6. Range of biodiversity (special species), many vegetation types</b>	
<b>Determinants:</b> SANBI priority area, national park presence, high ecological integrity of many of the diverse landscapes, compatible landuse, altitudinal gradient	
<b>Threats</b>	
Poaching (organised crime, subsistence) Aliens Inappropriate bush thinning Disturbance (aircraft, helicopters) Past landuse – bush encroachment Lack of institutional arrangements Inappropriate development (river system etc.)	Park size (scale of processes) Opportunity and hidden costs of rhino management Change in landuse (inside and outside) Climate change Local and regional air pollution and deposition Lack of monitoring and feedback Impact of mega herbivores
<b>7. Important white rhino key 1 population and important black rhino population</b>	
<b>Determinants:</b> Institutional arrangements, topography give security opportunities, high tourism value, most genetically diverse black rhinoceros <i>Diceros bicornis minor</i> population in SA	
<b>Threats</b>	
Poaching Topography a security risk Ease of access (proximity of provincial roads) Lack of resources and training Lack of institutional arrangements and co-operative governance	Disproportionate allocation of resources Lack of alternative options / models Lack of monitoring and feedback Inability to influence global drivers of rhino horn demand Emerging diseases



## 5.8 High level objectives

While the Mission sets out the “Where do we want to go”, high level objectives act as the roadmap to achieve the Mission. These high level objectives tend to flow naturally from the vital attributes. The desired state is achieved by means of a hierarchy of objectives, starting with an overall objective aligned with SANParks’ organisational structure and the park’s Vision and Mission statements, then broad, high level objectives (this Section) and then to finer and finer levels of detail, ending with specific operational or management actions (Section 10).

Discussions at the stakeholder meeting gave rise to an initial set of high level objectives. These were refined to reflect the following:

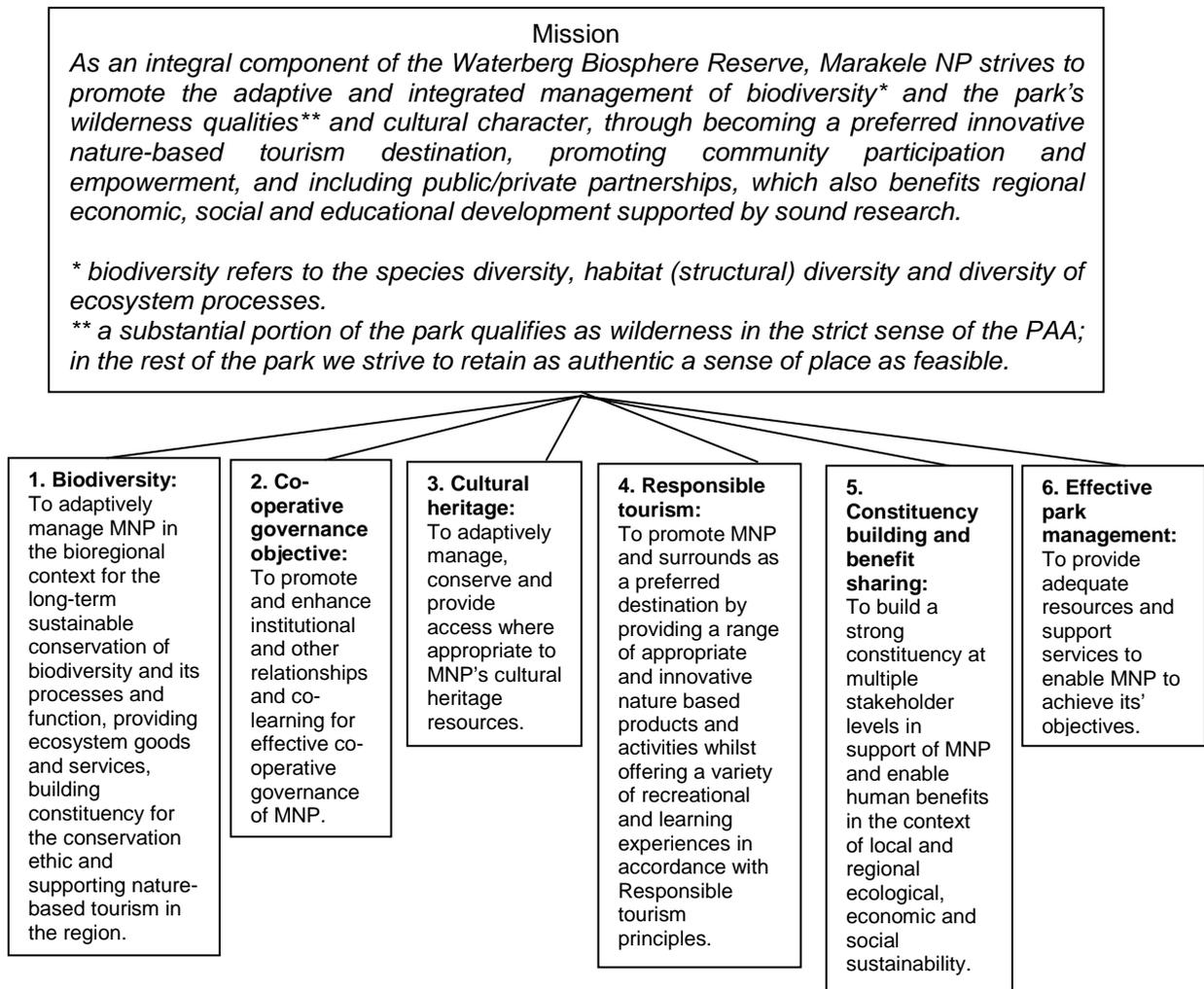


Figure 2: Park high level objectives

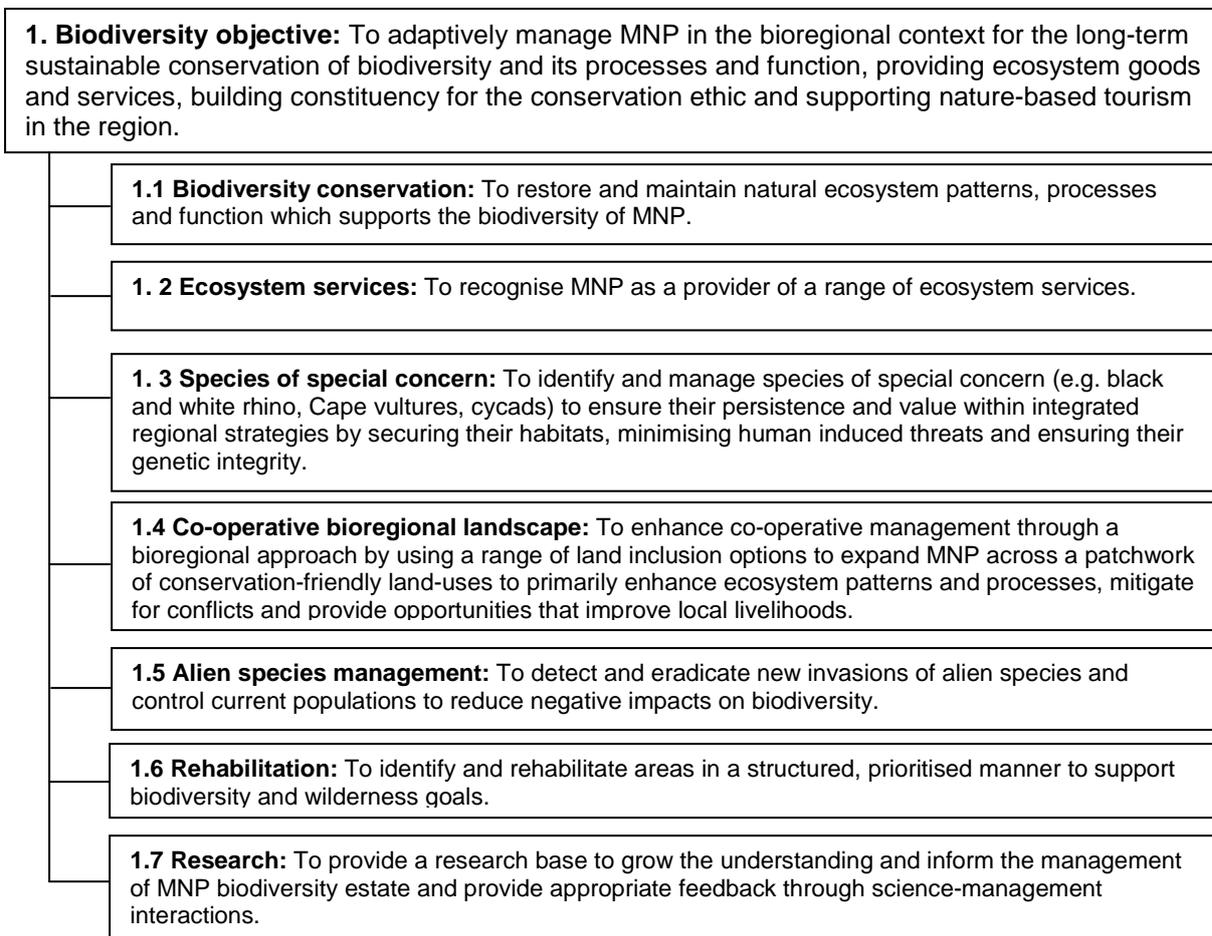


Figure 3: Biodiversity objective and supporting sub objectives for MNP.

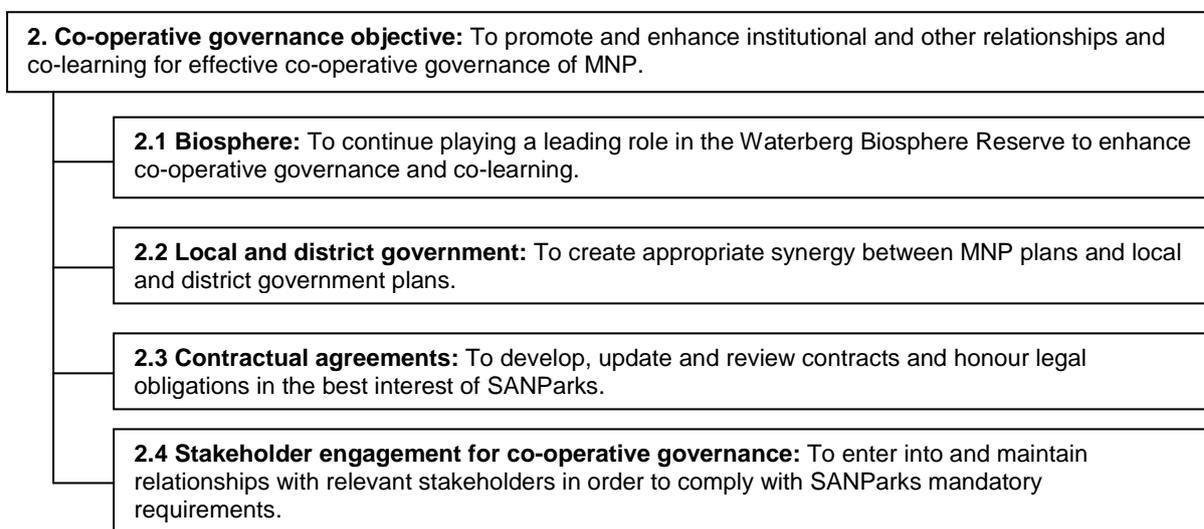


Figure 4: Co-operative governance objective and supporting sub objectives for MNP.

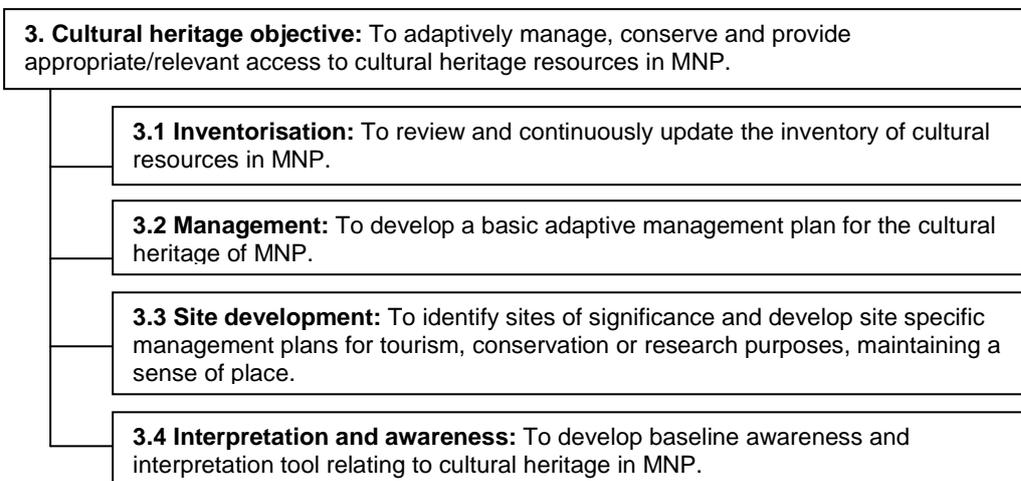


Figure 5: Cultural heritage objective and supporting sub objectives for MNP.

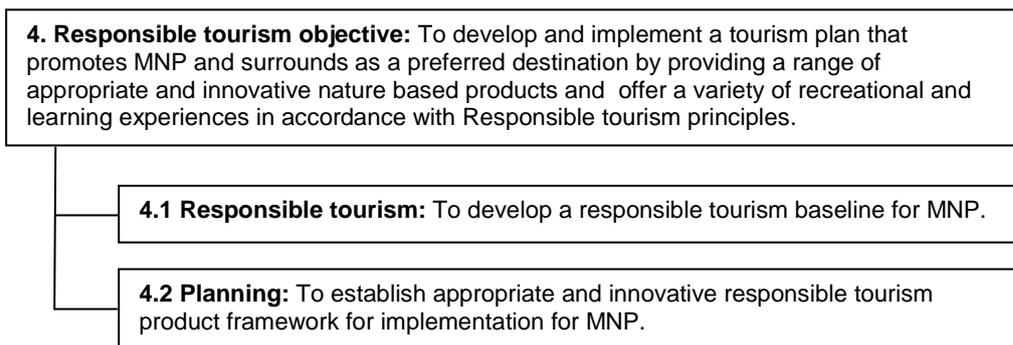


Figure 6: Responsible tourism objective and supporting sub objectives for MNP.

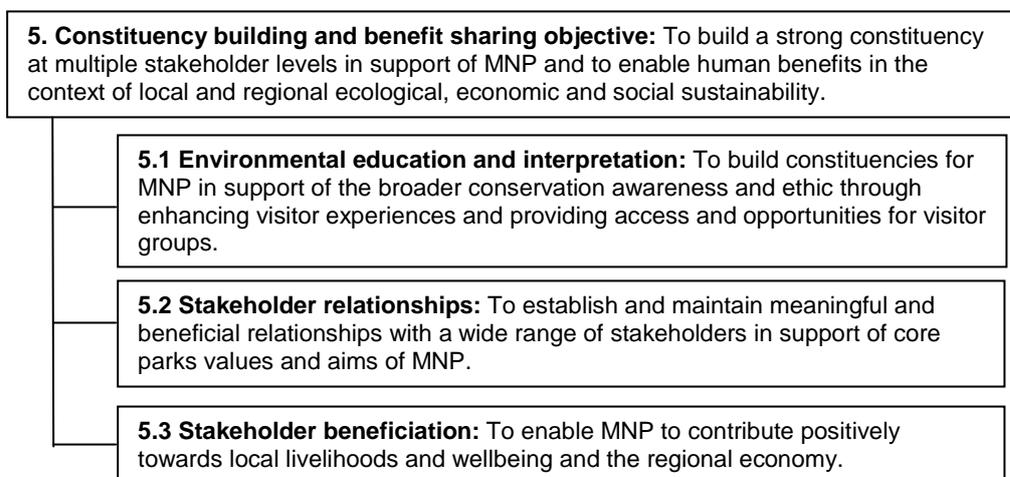


Figure 7: Constituency building and benefit sharing objective and supporting sub objectives for MNP.

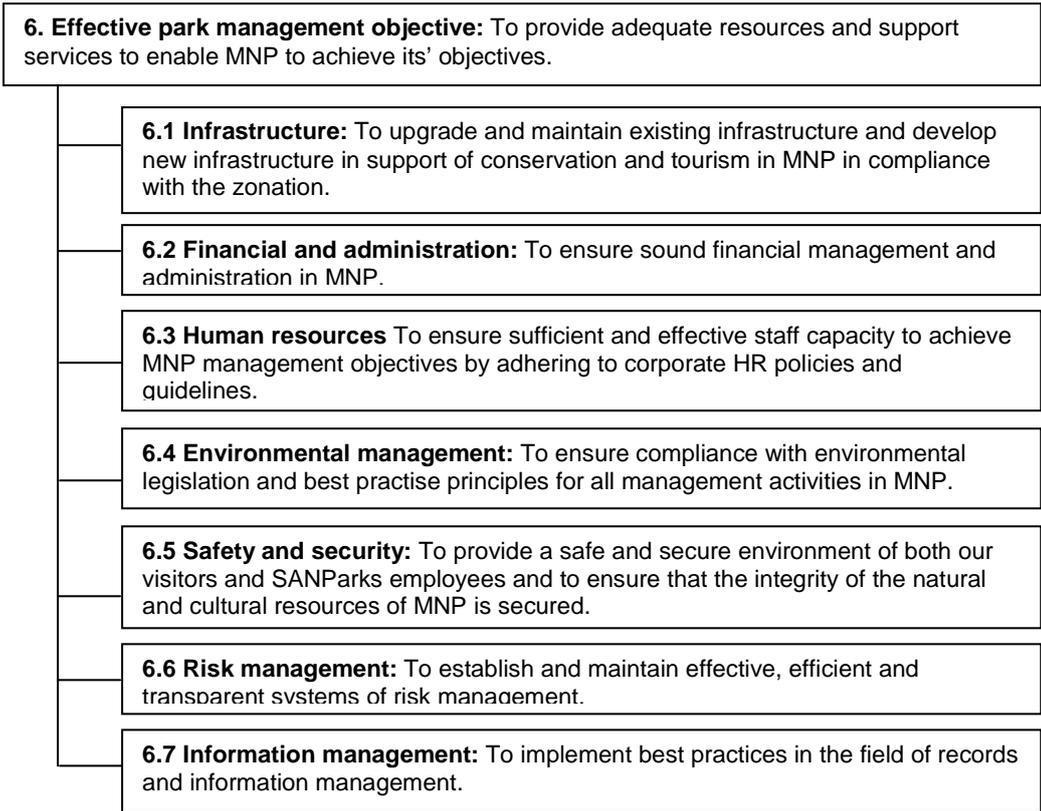


Figure 8: Effective park management objective and supporting sub objectives for MNP.



## Section 6: Zoning

The primary objective of a park zoning plan is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives and activities. A zoning plan plays an important role in minimising conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas.

The zoning of MNP was based on an analysis and mapping of the sensitivity and value of the park's biophysical, heritage and scenic resources; an assessment of the regional context; and an assessment of the park's current and planned infrastructure and tourist routes / products; all interpreted in the context of park objectives.

### Overview of the use zones

The summary of the use zoning plan for MNP is shown in (Appendix 6, Map 4). Full details of the use zones (including high resolution maps), the activities and facilities allowed in each zone, the conservation objectives of each zone, the zoning process, the park buffer zone (detailing park interaction with adjacent areas) and the underlying landscape analyses are included in Appendix 2.

### Remote zone

This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless. There are no permanent improvements or any form of human habitation. It provides outstanding opportunities for solitude with awe inspiring natural characteristics, with sight and sound of human habitation and activities barely discernable and at a far distance. The conservation objectives for this zone require that deviation from a natural / pristine state should be minimised, and existing impacts should be reduced. The aesthetic / recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace *etc.*) will not be tolerated. In MNP, remote areas were designated in the rugged mountain areas in the centre and eastern areas of the park. The zone was designated to include most landscapes with high environmental sensitivity and value.

### Primitive zone

The prime characteristic of this zone is the experience of wilderness qualities with access controlled in terms of numbers, frequency and size of groups. The zone shares the wilderness qualities of the remote zone, but with limited access roads and the potential for basic small-scale self-catering accommodation facilities such as a bushcamp or small concession lodge. Views of human activities and development outside of the park may be visible from this zone. The conservation objectives for this zone require that deviation from a natural / pristine state should be small and limited to restricted impact footprints, and that existing impacts should be reduced. The aesthetic / recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace *etc.*) should be restricted and impacts limited to the site of the facility. Ideally visitors should only be aware of the facility or infrastructure that they are using, and this infrastructure / facility should be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts. In MNP, primitive areas were designated to buffer remote areas from higher use areas.

Primitive areas were also designated in valleys with relatively low environmental sensitivity to allow access to activities outside the park, as well as to protect most of the remaining sensitive areas (such as lower mountains in the west and east) from high levels of tourist activity. Almost all highly and moderately sensitive environments that were not included within the Remote areas as well as to contain the infrastructure required for management and tourist activity in these areas (e.g. trail huts and access roads). The plains in the contractual park were designated primitive, as the controlled access associated with primitive is compatible with the activities undertaken by the concessionaires. It is possible that these areas may be rezoned once the contracts have expired.

### **Low intensity leisure zone**

The underlying characteristic of this zone is motorised self-drive access with the possibility of small basic camps but without commercial facilities such as shops and restaurants. Facilities along roads are limited to basic self-catering picnic sites with toilet facilities. The conservation objectives for this zone specify some deviation from a natural / pristine state is allowed, but care should be taken to restrict the development footprint. The aesthetic / recreational objectives for the zone specify that activities which impact on the relatively natural appearance and character of the area should be restricted, though the presence of larger numbers of visitors and the facilities they require, may impact on the feeling of “wildness” found in this zone. Low intensity leisure (LIL) areas were designated in the current game viewing area (Kwaggasvlakte and Zandfontein) in the southwest of the park, around current accommodation and other infrastructure, and in the areas around the road network. Plains areas with low environmental sensitivity south of The Marakele Park (PTY) Ltd were also included in this zone to allow for potential expansion of game viewing areas north of the mountains. The existing access road to the Sentech Towers was included in the LIL zone despite it traversing highly sensitive and valuable environments, as it is a key part of the park’s tourist infrastructure and the impacts associated with its construction have already been incurred. The zoning along this road was designed to reduce the possibility of expansion of infrastructure along this access road. Low intensity leisure zones were also designated around two contractual areas: for Aapiesrivier CC, situated in the Vygeboomfontein area in the northeast; and for Wandor Holdings in the Groothoek area to the south, to accommodate existing contractual obligations.

### **High intensity leisure zone**

The main characteristic is that of a high density tourist development node with commercial amenities such as shops, restaurants and interpretive centres. This is the zone where more concentrated human activities are allowed, and is accessible by motorized transport on high volume transport routes. The main focus is to ensure a high quality visitor experience, however the conservation objectives still require that the high levels of tourism activity and infrastructure that are accommodated within this zone are planned and managed to minimize the effect on the surrounding natural environment, and that the zone must still retain a level of ecological integrity consistent with a protected area. The aesthetic / recreational objectives for the zone specify although the high visitor numbers, activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc.) is inevitable, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience. In MNP, a High Intensity Leisure (HIL) zone was designated on the periphery of the park, in an existing high usage area, from the main park entrance gate to Bontle rest camp. This will allow the park to accommodate higher visitor numbers in this area, and offer modern commercial facilities such as a restaurant and shop within this zone. SANParks is also currently investigating the feasibility of a lodge development, which would also require HIL zonation.

### **Overview of the park buffer zone**

The park buffer zone shows the areas within which landuse changes could affect a national park. The zones, in combination with guidelines, serve as a basis for (i) identifying the focus areas in which park management and scientists should respond to EIA’s, (ii) helping to identify the sort of impacts that would be important at a particular site, and most importantly (iii) serving as the basis for integrating long term protection of a national park into the SDF’s and IDP’s and local authorities. In terms of EIA response, the zones serve largely to raise red-flags and do not remove the need for carefully considering the exact impact of a proposed development. In particular, they do not address activities with broad regional aesthetic or biodiversity impacts.



Marakele National Park has three park interface zone categories. The first two are mutually exclusive, but the final visual / aesthetic category can overlay the others (Appendix 6, Map 6).

### **Priority natural areas**

These are key areas for both pattern and process that are required for the long term persistence of biodiversity in and around the park. The zone also includes areas identified for future park expansion. Inappropriate development and negative land-use changes should be opposed in this area. Developments and activities should be restricted to sites that are already transformed. Only developments that contribute to ensuring conservation friendly land-use should be viewed favourably.

### **Catchment protection areas**

These are areas important for maintaining key hydrological processes within the park. Inappropriate development (dam construction, loss of riparian vegetation *etc.*) should be opposed. Control of alien vegetation and soil erosion as well as appropriate land care should be promoted.

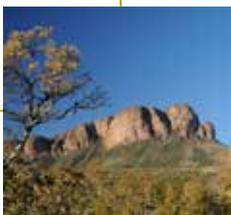
### **Viewshed protection areas**

These are areas where development is likely to impact on the aesthetic quality of the visitor's experience in a park. Within these areas any development proposals should be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone would be perfectly suited for development. In addition, major projects with large scale regional impacts may have to be considered even if they are outside the viewshed protection zone.

### **Current status and future improvements**

The current park use zonation is based on the same biodiversity and landscape analyses undertaken for a Conservation Development Framework (CDF); however certain elements underlying the CDF such as a tourism market analysis are not fully incorporated into the park use zonation. A full CDF will be developed for MNP within the current update cycle. Remote areas will be investigated for possible formal declaration as Wilderness Area in terms of Section 22 of the PAA. Special management overlays which designate specific areas of a park that require special management interventions (*e.g.* areas requiring rehabilitation) will also be identified.

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## Section 7: Access and facilities

### 7.1 Public access and control

Visitors to the sections of the park managed by SANParks, access the park through the MNP main gate, which is located on the Alma road, approximately eight kilometres from Thabazimbi.

Visitors to the Wandor section also access the park from a gate located on the Alma road, a few kilometres east of the MNP main gate. This gate is for exclusive use by visitors to the Griffin @ Marakele Bush Lodge. Visitors to the Wandor section of the park would access the SANParks sections through the SANParks main gate. Visitors to the Marataba section of the park, access the park through the Marataba gate which is situated on the north-west of the park, eight kilometres along the Rooiberg / Hoopdal road. This gate is for exclusive use by visitors to the Marataba Safari Lodge or facilities and activities sold within the Marataba section.

### 7.2 Areas with restricted access

Guest access is restricted to the specific sections of the park in which they are staying. Thus guests staying in SANParks accommodation are unable to travel into the Marataba section of the park. Guests who are staying in the Marataba section access that section at the entrance gate. Guests entering the park through the SANParks main gate, including guests who are staying in SANParks accommodation, may self-drive in the park between 06:00 - 18:00 from October to April and from 06:00 - 17:30 from May to September in the sections of the park managed by SANParks.

### 7.3 Airfields and flight corridors

The park has no airstrip. SANParks makes use of helicopters for management purposes and there are various landing zones in the park. Occasionally visitors access the park by helicopter using SANParks landing zones. However, visitors who intend using this method must get prior permission from park management.

### 7.4 Administrative and other facilities

Table 2 includes facilities utilised for administrative and operational purposes, enabling the park in fulfilling the legal mandate.

Administrative offices are located at the SANParks main gate and the Kameeldraai gate, servicing the respective park sections. There are also a number of old buildings in use for various purposes, throughout the park.

Table 2: Current administrative infrastructure in the park.

Infrastructure / Visitor sites	Current status / use	Zone	Proposed role by 2024
MNP main gate	Existing gate	HIL	Proposed Tourism Hub development with high traffic through the gate and within the parking area
Marataba gate	Existing gate	Primitive	

Infrastructure / Visitor sites	Current status / use	Zone	Proposed role by 2024
Garden gate	Existing gate	Primitive	
Management offices at MNP main gate	Existing gate	HIL	Moving of certain Management Offices from the Main Gate to new lodge development site
Sentech facilities at lookout point	Existing infrastructure	LIL	
Itikeng staff housing (along Alma road)	Existing accommodation	LIL	Additional staff accommodation
Imbewu			
Rock Fig lapa	Existing building, unused / store room	LIL	Potential development of Boma or possible Lodge development site.
The Marakele Park (PTY) Ltd Administration offices at Garden gate	Existing buildings	Primitive	Administrative
Guest arrival facilities at Marataba gate	Existing buildings	Primitive	Administrative
4x4 Eco trail	Guided overnight 4x4 Trail route, no facilities	Remote / Primitive	Upgrade the trail and grade it for different levels of vehicle / skill.

### 7.5 Visitor facilities

Visitor facilities include all non-commercial facilities and points of interest available to visitors, to the exclusion of any management and administrative facilities, and are set out in Table 3 below.

There are a number of activities available to visitors that are not commercially operated, which include:

- 4x4 trails (self-drive)
- Birding
- Game viewing
- Eco walks

Table 3: Visitor facilities and points of interest

Infrastructure / Visitor sites / Points of interest	Current status	Zone	Proposed role by 2024
Matlabas 4x4 Trail	Established	Remote	Addition of a bird hide
Coetzee graves	Basic signage	LIL	Addition of interpretation
Boloto bird hide	Existing facilities	LIL	N/A
Lenong drive	Existing road (single lane up mountain)	LIL	Addition of picnic site at intersection with Mbidi Loop
Lenong viewpoint	Existing masts and ablutions	LIL	Boardwalk with interpretation
Viewpoint along 4x4 trail to Matlabas Zyn Kloof	Existing viewing point	Remote	Add interpretation
Lenong drive wetland	View from drive only.	Remote	Possible interpretation along route
Matlabas river	No development	Primitive / Remote	Possible addition of jetty for boat cruise activities
Ikhuseng picnic site	No development	LIL	Unlikely to develop further
Bush braai site	No development	LIL	Unlikely to develop further

### 7.6 Commercial activities

For purposes of this plan, commercial activities include all income generating facilities, products and services offered, and are broken down into those operated by the park and those operated by third parties for example concession lodges.



### 7.6.1 Accommodation

Accommodation for visitor use includes accommodation units and formal camping site that are dispersed through the park, as summarised in Table 4.

Accommodation operated by SANParks includes the following:

- **Bontle Camp Site.** Comprises of 38 camp-sites with communal facilities, as well as 10 tented units (semi-brick and canvas structures) that include both 2 and 4 bed units, all of which are in an unfenced area.
- **Motswere Guest House.** The guest house provides accommodation for a maximum of 8 guests, including two bathrooms and a central open plan kitchen, dining room and lounge area.
- **Thutong Environmental Learning Centre.** The facility includes dormitory accommodation for up to 140 learners, with communal ablutions, a kitchen / dining room which is fenced for learner safety.
- **Tlopi Tented Camp.** These are 10 canvas tents on wooden platforms, which include an en-suite bathroom in an unfenced area overlooking the Apies River dam.

### 7.6.2 Concessions / Contractual park facilities

The Marataba section is situated within contractual park land, on which the Marataba safari lodge is situated and is being managed on behalf of The Marakele Park (PTY) Ltd. This section of the park also houses Kubu Lodge fly camp which is a private concession.

Griffon @ Marakele Bush Lodge is situated on the Wandor section, also a contractual section, of the park, and includes 4 self-catering units.

Table 4: Commercial facilities available in MNP

Facilities	Current Status	Zone	Proposed Role 2024
Bontle camp	Camping, budget, power / no power, self-catering economy serviced	HIL	Camp site, possible conversion for different types, possible addition of sites.
Motswere guest house	Self-catering, serviced, premium guest house	LIL	Self-catering accommodation
Thutong environmental learning centre	Self-catering, Limited service, rooms and mall dormitories / school groups	LIL	Conversion to become a multi purpose centre that also caters for team buildings, functions and meetings.
Tlopi tented camp	Self-catering economy serviced	LIL	Accommodation
CONTRACTUAL AGREEMENTS			
Marataba safari lodge	Full service lodge, 30 beds plus	LIL	Accommodation, possible addition of two units or conversion of existing units
Kubu lodge	Full service, remote camp / fly camp / platform / sleep out	Primitive	Temporary rustic accommodation, may move
Griffons @ Marakele bush lodge	Self-catering economy serviced	Primitive	Accommodation

### 7.6.3 Retail and other facilities

The only commercial facility in the park is currently a small convenience shop selling a few essentials and refreshments. This shop is located at the MNP main gate.

### 7.6.4 Activities

There are currently limited activities offered within the park, and the objective is for the park to provide visitors with a large variety of activities that both expand on the products and services available, but also serve to remove visitors from the limited road network.

Table 5: Commercial activities available in MNP

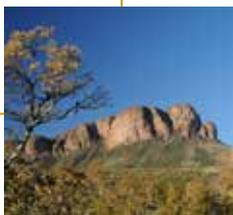
Commercial activities	Current status	Zone	Proposed role 2024
Interpretive game drives (SANParks)	Reserved and departing from MNP main gate	LIL / Remote	Expansion on offering with potential for interpretive drives, child specific or universal access drives.
Interpretive day walks	Reserved and departing from MNP Main Gate	Remote / Primitive	Expansion of locations and types of walks offered
4x4 Eco trail (no facilities)	Guided 2 night excursion.	Remote	Improvement of road surface and grading of the trail.
<b>CONTRACTUAL AGREEMENTS</b>			
Interpretive game drives (Marataba safari lodge)	Activity offered as part of package	Primitive / Remote	Addition of new routes, and additional offering in line with accommodation expansion
Interpretive day walks (Marataba safari lodge)	Activity offered as part of package	Primitive / Remote	Addition of new routes, and additional offering in line with accommodation expansion
Kloofing (Marataba safari lodge)	Activity offered as part of package	Primitive / Remote	Possible additional sites.
Boat cruise on Matlabas river (Marataba safari lodge)	Activity offered as part of package	Primitive / Remote	Addition of new routes, and additional offering in line with accommodation expansion
Hoopdal breeding centre	Existing centre	Buffer	Product development for income generation
Interpretive game drives (Griffins @ Marakele)	Advance booking required.	LIL / Primitive	Unknown, though unlikely expansion
Interpretive day walks (Griffons @ Marakele)	Advance booking required.	LIL / Primitive	Unknown, though unlikely expansion
Mountain-biking (Griffons @ Marakele)	Advance booking required.	LIL / Primitive	Unknown, though unlikely expansion
Horse-riding (Griffons @ Marakele)	Advance booking required.	LIL / Primitive	Unknown, though unlikely expansion
Quad biking (Griffons @ Marakele)	Advance booking required.	LIL / Primitive	Unknown, though unlikely expansion

### 7.7 Cultural and heritage sites

Though there may be some cultural and heritage sites of value, research is required in order to identify specific sites that may provide product and interpretation opportunities.

Table 6: Cultural and heritage sites available in MNP

Heritage node / section	Attraction	Cultural / heritage value	Use zone	Proposed role by 2024
Kwaggsvlakte section	Coetzee graves	Low	LIL	Possible interpretation



Heritage node	Attraction	Cultural / heritage value	Use zone	Proposed role by 2024
Eastern mountainous section	Red roof house at Kareehoek	Medium	LIL	Historic building Not in good condition Possible conversion to guest house or visitor facility with reuse of existing sites
Eastern mountainous section	Dreyer farmhouse at Kareehoek	Low	LIL	Little historical value, reasonable condition for possible conversion to guest house or visitor facility

### 7.8 Community use

There are no communities living on the periphery of the park. Stakeholder communities on the immediate periphery of the park include the Santa and Matlabas communities. These communities and Regologile at Thabazimbi provide the main employment source for the park. A community project has been established to package and sell wood that is removed as a result of the bush encroachment project.

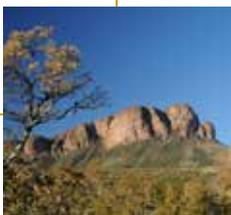
### 7.9 Mining

No mining, legal or otherwise, is currently known to occur in the park or on the park periphery, though the Kumba Iron Ore mine is located within the immediate vicinity and presents a number of large income generating opportunities.

### 7.10 Servitudes

The only servitude that exists is the road to Sentech and other radio transmission aerials located in the park.

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## Section 8: Consolidation and expansion

The expansion and consolidation of the park is in line with the national strategic objective (DEA 2005) of expanding South Africa's protected area system. The expansion and consolidation programme are also informed by SANParks policy regarding land inclusion (SANParks 2006; Knight *et al.* 2009), the latest National Biodiversity Assessment (NBA) (Driver *et al.* 2012), the National Protected Areas Expansion Strategy (NPAES) (DEA 2008) as well as the three year rolling land acquisition plan. It is important to note that this three year plan can change due to the availability of funds, willing buyer willing seller concept and the negotiation process.

The overall vision for MNP is to be an integral part of the greater Waterberg biosphere in terms of its biological, socio-economic and cultural management. Marakele National Park sits within the Bushveld-Bankenveld priority biodiversity area, one of nine such areas in need of national conservation (Driver *et al.* 2004). In addition, the park and its surrounds, described as the Limpopo Central Bushveld, has been identified as one of the 42 priority protected areas expansion areas in the national protected areas expansion strategy (NPAES) (DEAT 2008). Moreover, with the latest NBA (Driver *et al.* 2012) emphasising the importance of conserving wetlands and river systems, the park as part of the Waterberg Mountains has been identified as an important national 'water factory', and worthy of further protection.

The expansion/consolidation of the MNP falls in line with the following national strategic objectives (NBSAP 2005), namely:

- National strategic objective 5: Expanding the national protected area system towards 12% of the terrestrial area;
- National strategic objective 3: A coordinated approach to the management of terrestrial and aquatic ecosystems.

In order to achieve its national mandate of conserving representative samples of South Africa's different ecological landscapes, the establishment of an ecologically sustainable park in the Waterberg remains a priority for SANParks. The expansion vision for the park has varied over time from an initial 3, 000 km<sup>2</sup> (Coetzee *et al.* 1981), to 1, 110 km<sup>2</sup> (Hall-Martin *et al.* 1995) that focused primarily on maximising biodiversity with a sustainable large herbivore-carnivore system within pragmatic boundaries (Appendix 6, Map 3). This was reassessed using conservation land-use zoning (CLUZ) and MARXAN conservation planning software to adequately reflect adjacency criteria towards designing manageable reserve shapes in sync with conservation targets (Holness 2005). A 1, 329 km<sup>2</sup> planning domain largely defined by major roads and railways was identified and conservation targets were set for the four main vegetation types, 17 land types and 30 large mammal species. Outputs from this systematic conservation planning assessment have been used to identify areas that fit an initial optimum solution in terms of including the land (totalling a 6, 720 km<sup>2</sup>) into the park via acquisition or contractual methods. The acquisition only (345 ha) areas lie primarily along the southern boundary and are focused on consolidating the fence line and including the biologically important Cape Vulture colony. The 9, 674 ha large acquisition or contractual priority area lies primarily to the west of the park and largely consolidates the park on the logical north –south railway line, as well as with some on the southern boundary. This inclusion would importantly see the inclusion of the poorly protected and vulnerable Central Bushveld vegetation type. The primarily contractual inclusion area (~5, 700 km<sup>2</sup>) lies mainly to the north east of the park and includes the Welgewonden Private Nature Reserve whom SANParks are engaging on a possible fence dropping arrangement. The expansion of this park is in line with an even larger regionally focused Waterberg Biosphere Reserve ([www.theta.org.za](http://www.theta.org.za)) proposed by Collinson & Brett (2004).

The acquisition costs of the areas to the south and to the west of the park are estimated at R129 million. Focus in the short to medium term should ideally be on consolidating the western boundary of the park, which would include the productive Central Bushveld vegetation, and link with The Marakele Park (PTY) Ltd land and further develop the tourism product.



## Section 9: Concept development plan

### 9.1 Long term development plan

Marakele National Park is considered to be a park with substantial development potential due to its location and proximity to Gauteng, thereby making it an ideal weekend or short break-away location. A limitation on visitor access would be the road access to the park, and the road network within the park which is currently limited.

Activity development would be a key element to the development strategy of the park, with the aim of limited accommodation infrastructure development.

There is a clear relationship between the role that a site fulfils and the underlying visitor use zone (Appendix 2) in which that site is situated. Tables 7 - 12 summarise the proposed activities and development per site, which park zones are applicable and the management guidelines for the sites. In order to enhance the visitor experience of these tourism features, appropriate and sustainable infrastructure and facilities need to be provided, in accordance with the conservation and responsible tourism mandate.

Development is not considered lightly and is only done to fulfil a real operational need or tourism opportunity. All sites considered for development, are located on previously disturbed sites where existing facilities and infrastructure that have traditionally provided either access to the park and / or a tourism or visitor services. The type and nature of facilities provided for at these sites should not only meet visitor expectations, but also be compatible with the ethos of the area.

New activity or product development may create disturbance, *e.g.* hiking / mountain-biking trails, accommodation *etc.*, however these will be considered based on the zonation and will comply to all legal requirements governing development.

It is important to note that the implementation of any proposed projects is dependent on the availability of funds.

### 9.2 Development nodes

The desire is for the development of a Tourism Hub, to be located at the MNP main gate, which would aim at providing visitors with facilities including but not limited to:

- Curios (local and other)
- Retail store
- Activity departure point
- Park and ride facility
- Restaurant / cafeteria
- Picnic baskets for game drives
- Visitor centre / interpretation centre

Considerations prior to investment in such a facility would be passing traffic and potential visitor volumes, opportunities provided by farmers and mines in the area, and whether an interpretation centre should be located at the gate, or an accessible location within the park, based on park and ride experience.

### 9.3 Communication routes

There is a need to upgrade and or move existing tourism routes within the park, as a number of these routes are relatively inaccessible to sedan vehicles or located on the periphery / fence line of the park. Though additional routes are required, there is limited space for expansion, and thus the aim would be to create activities that remove visitors from the routes, rather than simply adding additional routes.

### 9.4 Service supply routes

Depending on the location of the planned lodge development and new infrastructure, additional routes may be required to service the developments; however this is unlikely to be extensive, as proposed development would be located near park access points or within already disturbed areas.

### 9.5 Infrastructure development proposals

All infrastructure development proposals, including activity development proposals are presented in Tables 7 – 11 below.

#### 9.5.1 Administrative and other facilities

Table 7: Proposed administrative and other facility development

Product type	Infrastructure / Visitor sites	Current status / use	Use zone	Proposed role by 2024	Probability
Staff accommodation	Staff accommodation at Itikeng	Expansion of existing with new development	LIL	R 5.15 million budget allocated for new staff accommodation development in 2014/2015.	High
Fencing	Park boundary / game fence	Existing fence	LIL	R 6.4 million budget allocated upgrade of existing and implementation of new game fence	High
Roads	Motswere Loop (Thutong to Motswere)	Existing road	LIL	Move existing road away from fence (Total roads budget R 14 million)	High
Roads	Kwa-Motsweri roads	New roads on donated land	HIL / LIL	New roads to link park to Kwa-Motswere Eco Park development. Pending development approval, though contractually obligated (Total roads budget R 14 million)	Medium
Roads	Duikers Pan loop	Existing road	Remote	Existing road expansion and upgrade (Total roads budget R 14 million)	High
Roads	Hoopdal road	Existing provincial road	HIL	Investigate incorporation into the park	High
Roads	All roads in south west of park	Existing road	LIL	To be classified as main road. Need to be upgraded to Class A1 or B1 roads. (Total roads budget R 14 million)	Medium



Product type	Infrastructure / visitor sites	Current status / use	Use zone	Proposed role by 2024	Probability
Roads	Lenong drive from subway to Lenong viewpoint	Existing road	LIL	To be classified as main road. Upgrade to Class A2 road. (Total roads budget R 14 million)	High
Roads	Tlopi to Thutong	Existing road	LIL	To be classified as main road. Upgrade to Class A2 road (Total roads budget R 14 million)	High
Roads	Road to Motswere away from fence	Existing road	LIL	Move access road off fence. Create secondary Class B2 road. (Total roads budget R 14 million)	High
Roads	Subway link to tar road	Existing road	LIL	Needs to be surfaced to prevent erosion. (Total roads budget R 14 million)	High
Roads	Tar road link to Tlopi gate	Existing road	LIL	Main road access needs to be upgraded to Class A2 or B1. (Total roads budget R 14 million)	High
Roads	Tlopi Camp linking road to Mbidi loop	Existing track	LIL	Existing track needs to be enhanced to a Class B2 secondary road. (Total roads budget R 14 million)	High
Infrastructure	Jetties for boat cruises	Non existing		Marataba section development for boat cruises	High
Fence	Hoopdal road fence removal	Existing fence	N/A	Removal or partial removal of fence along Hoopdal road	Medium
Fence	Wild dog fencing	Existing fencing	N/A	Possible fencing for wild dog	Low

### 9.5.2 Visitor facilities

Table 8: Proposed visitor facility development

Product Type	Infrastructure / Visitor Sites	Current Status / Use	Zone	Proposed Role by 2024	Probability
Interpretive products	Interpretation centre / Museum	None	LIL	Identified as potential at tourism hub. May be commercial or product extension	Medium
Interpretive products	View point / bird hide	New development	Primitive	Desired along all routes	Low
Visitor facilities	Develop new picnic site at Rock fig lapa and en route to Lenong viewpoint	None	LIL	Two new picnic sites, one small basic picnic site with ablution facilities en route to the Lenong viewpoint and another more substantial picnic site with ablution and small tuck shop facilities at the Rock fig lapa	High
Visitor facilities	Develop a boardwalk and viewing decks	None	LIL	Boardwalk or effective walking trail, including interpretation for enhanced views at Lenong viewpoint.	High
Visitor facilities	Enhance MNP main gate	Redevelop existing	HIL	Develop gate, in line with tourism hub development plans or stand alone with redevelopment of parking and visitor flow	Medium
Visitor facilities	Day visitor / community area	New development	HIL	Day visitor facility for enjoying the park without disrupting overnight guests.	Medium

### 9.5.3 Commercial activities

There are a wide variety of commercial activities to be developed within the park, to expand the tourism product and sustainability, these are listed in Table 9-12 below.

All activities will be individually investigated and their priority determined based on feasibility and income potential. Following these studies, some potential activities may be excluded.

In addition, there are a large number of activities for potential development that are excluded as they are considered unlikely to be developed within the term of this plan. However, should the market change or a third party supplier present a real opportunity, any and all products may be considered based on the agreed terms and locations, as per the MNP Product Development Framework presented in Appendix 4.

It is important to note that the execution of the programmes is dependent on the availability of funds.

#### 9.5.3.1 Accommodation

Table 9: Proposed accommodation development

Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Full Lodge – 20 beds plus	New lodge development	New development	LIL	Budget of R 30 million allocated for new rest camp / lodge development. Desired location near MNP main gate or near boundary.	High



Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Rustic / Spartan accommodation	Thutong converted to multi-use facility	Conversion of existing facility	LIL	Understand opportunity and requirements in order to consider converting for special interest groups, team building events, functions and meetings	Medium
Serviced / limited service accommodation premium / guest house	Red roof house at Kareehoek	Existing structure with historical value	LIL	Conversion of existing building to guest house or picnic area	Low
Serviced / limited service accommodation premium / guest house	Dreyer house at Kareehoek	Existing structure with life rights	LIL	Conversion of existing infrastructure to guest house	Medium
Self-catering limited service tree houses	Tree house	New development	LIL / Remote	Possible development or rustic remote tree houses on stilts Could be utilised as part of multi-day hike in gorges	Medium
Camping bush rustic (premium facilities)	Add 4-5 luxury camp sites	New development	Remote	Consider with or without facilities	Medium
<b>Contractual park</b>					
Full service lodge – 30 plus beds	Marataba safari lodge extension / Kubu lodge	Expansion of existing infrastructure	LIL	Addition of 2 family units or conversion of existing?	High
Full service lodge – 30 beds	Development of 2 <sup>nd</sup> lodge	New development	LIL	New lodge development in Marataba section	Medium
Full service	Low impact camp	New development	LIL / Remote	Five alternative sites for consideration	Medium
Self-catering limited service	Owner camps	New development	LIL / Remote	Self-catered guiding experience Not self-drive	Medium

Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Full service	Walking trails camp	New development	Remote / Primitive		High
Self-catering limited service	Lifestyle eco estate living. Consortium type scheme of x weeks per annum	New development	HIL	Development in contractual section, awaiting approvals MNP game moving into section	Medium

### 9.5.3.2 Concessions

No new concession development is planned at this time. It is aimed to promote concession facilities on SANParks booking website.

### 9.5.3.3 Retail and other facilities

Table 10: Proposed retail and other commercial facility development

Product type	Infrastructure / Visitor Sites	Current Status / Use	Zone	Proposed Role by 2024	Probability
Restaurant(s)	Lodge facilities	NA	HIL	Restaurant / cafeteria / lounge area. Available to lodge guests and other guests. Prepare meals, picnic baskets and or offer cook off-peak to visitors. Consider growth if conference facility is added	High
Catering	Catering for conferences	NA	HIL	Either from restaurant or within conference venues	Medium
Retail facilities	Tuckshop to be added at Bontle	NA	LIL		Medium
Retail facilities	Restaurant / coffee shop / curio shop / convenience store / fuel station / other	NA	HIL	Variety of retail outlets to be offered at tourist hub	Medium

### 9.5.3.4 Activities

Leisure activities are a mechanism for income generation, with the potential for community development without the high capital investment required for accommodation.

Key challenges regarding provision of leisure activities in future will be diversity of offering, customer demand and increasing the ‘adventure’ element of activities in order to engage Gauteng travellers, including the younger markets and markets with a high disposable income.

Activity development will need to take the visual impact of each activity into account, in order to ensure the visitor experience for other activities and visitors is not impacted. Certain activities will also need to cater for different product grades and visitor experience levels.



Table 11: Proposed activity development

Activity	Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Leisure / recreational activity	4x4 Eco trail (no facilities)	Unguided 4x4 trail	Existing development	Primitive	Upgrade existing trail.	Medium
Leisure / recreational activity	4x4 Eco trail (basic facilities)	Additional / new 4x4 eco trail	New development	Primitive	Possibly include some basic facilities. Possible development of new trail for different grade or facility level.	Medium
Leisure / recreational activity	Rock climbing & abseiling / rappelling	Permitted unguided rock climbing / abseiling / rappelling combo	New development	Primitive / Remote	New activity to offer, with different grades.	High
Leisure / recreational activity	Hike/drive and abseiling / rappelling	Guided hike / abseil / rappel for novices	New development	Primitive / Remote	New activity to offer, with different grades.	High
Leisure / recreational activity	Archery	Archery	Existing activity	Buffer	SANParks sell existing activity.	High
Leisure / recreational activity	Base jumping	Base jumping activity. Permit issued for specialists	New activity (permit required)	Primitive / Remote	New activity. Could be combined with rock climbing	High
Leisure / recreational activity	Boat cruises	Site-seeing Boat Cruises	New guided activity	Primitive	Marataba sell existing activity.	High
Leisure / recreational activity	Bouldering / kloofing	Kloofing	Expansion on existing sites	Primitive / Remote	Develop new sites.	Medium
Leisure / recreational activity	Canopy tour / flying fox	Offer a canopy tour in one of the gorges	New activity	Primitive	New activity potential.	Low
Leisure / recreational activity	Fishing (catch & release)	Catch and release angling	New activity	Primitive / Remote	New activity potential.	Low
Leisure / recreational activity	Games facilities (e.g. table tennis / pool, mini golf, etc.)	Games facilities offered to entertain youth	New activity	HIL / LIL	New activity potential	Medium
Leisure / recreational activity	Hang-gliding	Permit based hang-gliding	New activity	Primitive / Remote	New activity potential	Low

Activity	Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Leisure / recreational activity	Geocaching	Geocaching of specific park sites for attracting interest, specifically of the youth	Existing activity	HIL / LIL	Expansion on existing activity	High
Leisure / recreational activity	Rock climbing	Rock-climbing. Permit or package. Combine with abseiling / rappelling. Potentially permit based for experts only	New activity	Primitive / Remote	New activity potential	Medium
Leisure / recreational activity	Hiking	Guided day hikes	New activity	Primitive / Remote / LIL	New activity potential	Medium
Leisure / recreational activity	Hiking trails – Wilderness with facilities	2-3 Day hike. Rustic 6-8 Pax guided hike	New activity	Primitive / Remote / LIL	New activity potential	Medium
Leisure / recreational activity	Horse-riding trails	Guided horse riding trails	New activity	LIL / Primitive	New activity potential	Medium
Leisure / recreational activity	Mountain biking trails	Unguided mountain biking	New activity	HIL / LIL / Primitive	New activity potential. Various lengths and difficulty levels	High
Leisure / recreational activity	Park and ride	Park and ride facility for events and accommodation in park	New activity	HIL / LIL	New activity potential	Medium
Leisure / recreational activity	Para-gliding	Para-gliding in park, combine with hiking.	New activity	Primitive / Remote	New activity potential	Low
Leisure / recreational activity	Quad biking	Quad-biking	New activity	Primitive / Remote	New activity potential	Low
Leisure / recreational activity	Railway	Railway excursions. Could be a Rovos overnight trip or steam train trip from Pretoria similar to Culminant mine tour	New activity	Primitive / Remote	New activity potential	Low
Leisure / recreational activity	Swimming	Swimming pool at Bontle	None	LIL	New development potential	Medium



Activity	Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Interpretive	Brail trail / Sensory trail	Brail trail / sensory trail	None	LIL / Primitive	New development potential	Medium
Interpretive	Amphitheatre films	Amphitheatre films	None	HIL / LIL	New development potential	Low
Interpretive	Game drives - standard	Game drives	Existing product	LIL / Primitive	Expansion potential	High
Interpretive	Night drives – night vision aided	Vision aided night drives	Existing product	LIL / Primitive	Expansion potential	Low
Interpretive	Game drives – premium	Premium game drives with drinks, blankets, etc.	Existing product	LIL / Primitive	Expansion potential	Medium
Interpretive	Mountain-biking trails	Guided mountain biking	None	LIL / Primitive	Development potential	Medium
Interpretive	Tours - botanical	Botanical tours. Market and offer regular botanical tours	None	LIL / Primitive	Development potential	Medium
Interpretive	Tours - specialist	Specialist tours cycad and vultures	None	LIL / Primitive	Development potential	Low
Interpretive	Tours - trees (Dendrology)	Botanical tours	None	LIL / Primitive	Development potential	Medium
Medical / health products	Health spa	Limited product massage / relaxation therapies	Existing product at Marataba	HIL / LIL / Primitive	Expansion potential	Medium
Developmental	Photography courses	Wildlife / nature photography courses	Existing product at Marataba	HIL / LIL / Primitive	Expansion potential	High
Developmental	Skills courses	Various course offerings. Survival skills off-road driving skills, orienteering skills, First aid training, rope skills, rock climbing skills, mountain-biking skills	None	HIL / LIL / Primitive	Development potential	High

Activity	Product type	Infrastructure / visitor sites	Current status	Use zone	Proposed role by 2024	Probability
Developmental	Wildlife courses	Possible short course offerings. Birding, botany, bush skills tracking Skills bush homeopathy astronomy courses  Possible long-term course offerings. Ranger training, field guide training, nature-based hospitality	None	HIL / LIL / Primitive	Development potential	High
Developmental	Volunteering	Voluntourism	New activity	HIL / LIL	New activity potential	Low
Child Related	Childcare centres in camps	Day-care for small children	New activity	HIL / LIL	New activity potential	Medium
Child Related	Children activity centres	Children activity centres, swimming pool, jungle gym, chess, putt putt, conservation games, children backpacks or rent on a subject e.g. spiders	New activity	HIL / LIL	New activity potential	Medium
Child Related	Children encounter zone	Children encounter zone	New activity	HIL / LIL	New activity potential	Low
Child Related	Children game drives	Game drives for children	New activity	HIL / LIL / Primitive	New activity potential	Medium
Child Related	Children trails	Walking rails for children	New activity	HIL / LIL / Primitive	New activity potential	Medium
Child Related	Holiday programmes in camps	Duration based holiday programmes for children	New activity	HIL / LIL	New activity potential	Medium
Child Related	Learner programmes	Educational programmes in the Thutong e-learning facility	New activity	HIL / LIL	New activity potential	Medium
Child related	Youth camps / summer camps	Summer camp for children	New activity	HIL / LIL	New activity potential	Medium
Business tourism and events	MICE – Meetings, Incentives, Conventions and Exhibitions	Conference facility	New activity	HIL / LIL	New development potential. Establish size and volume potential	High
Business tourism and events	Adventure/ expedition racing event	Competitive event	New activity	HIL / LIL / Primitive	New activity potential	Medium
Business tourism and events	Marathon event	Marakele marathon / trail running event	New activity	HIL / LIL / Primitive	New activity potential	High



Activity	Product Type	Infrastructure / Visitor Sites	Current Status	Use Zone	Proposed Role by 2024	Probability
Business tourism and events	Mountain-biking event	Mountain biking challenge	New activity	HIL / LIL / Primitive	New activity potential	High
Business tourism and events	Various events	Various options: Rock climbing challenge Paragliding challenge Ski-Dive for rhinos Hot air balloon adventure The amazing race family challenge Music in the bush	New activity	HIL / LIL / Primitive / Remove	New activity potential	High
Business tourism and events	Product launches	Product launches	New activity	HIL / LIL / Primitive	New activity potential	High
Business tourism and events	Photographic shoots, filming	Professional shoots	New activity	HIL / LIL / Primitive	New activity potential	Medium
Business tourism and events	Team building	Team building	New activity	HIL / LIL	New activity potential	High
Business tourism and events	Weddings	Bush weddings	Existing product	Primitive	Expansion on existing product and SANParks sell existing product	High
Business tourism and events	Festival	Wildlife / adventure film festival with wildlife film and photography awards	New activity	HIL / LIL	New activity potential	Low

### 9.5.3.6 Cultural heritage sites

There is no clear indication of current cultural and heritage sites of value, and a study would be required in order to clearly define these prior to potential development.

Table 12: Proposed cultural heritage sites to be developed

Heritage node / section	Attraction	Use zone	Proposed role by 2024	Probability
Kwaggasvlakte section	Coetzee graves	LIL	Interpretation potential	Medium
Marataba section	Visit to local village	LIL / Buffer	To be developed, not yet in existence	Low
Marataba section	Story telling by local community	LIL / Buffer	To be developed, not yet in existence	Low

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## Section 10: Strategic plan

### 10 Introduction

Sections 3, 4 and 5 of this plan outlined the policy framework, the consultation process and development of a mission and high level objectives for the park. In this section the goals and higher level objectives of the park are developed into lower level objectives and sub-objectives and finally into operational actions. In this way decision-making, even at the operational level, can be traced all the way back to the core values and inputs from stakeholders on which they have been based. This approach conforms to the requirements of the NEM:PAA, the NEM:BA, SANParks policy, and ratified international conventions.

Programmes of implementation, developed as outlined above, form the strategic plan for this planning cycle, are arranged under the following headings:

- Bioregional
- Biodiversity
- Responsible tourism
- Constituency and benefit sharing
- Effective park management

Each programme is presented as follows:

- **Programme name:** A name describing the programme.
- **High level objective:** Stating the overall goal of the programme.
- **Background:** Overview of intent, guiding principles, description, outcome, research and monitoring and risk (all where applicable).
- **Tables:** Outline of objectives, initiatives and management actions within the scope of the objective with an indication if the programme is once off, continuing or conditional on the availability of resources. These tables have the following headings:
  - **Initiatives or objectives:** The various initiatives or objectives, derived the hierarchy of higher level objectives, which make up each programme.
  - **Actions:** The actions necessary to achieve the objective.
  - **Responsibility:** The SANParks person, section, department, division or unit responsible for implementing the action.
  - **Indicator:** A measure whereby the achievement of the objective can be evaluated.
  - **Timeframe:** An indication of when the action is likely to be completed (indicated by year over the planning cycle).
  - **References:** References to relevant programmes, lower level plans (LLP's) or other documents.

The Marakele Park (PTY) Ltd have developed an IMP for the Marataba section in conjunction with SANParks which has been approved at the JMC. The IMP incorporates all the principles and policies of the MNP management plan.

The commitments outlined in the various programmes under section 10 are aligned with the performance management system of the operational staff. This is revised annually to ensure all the actions will be implemented.

## 10.1 Bioregional

The purpose of the bioregional objective is to conserve systems and processes within and around the park by acquiring sufficient land to consolidate and manage the park so that it makes a meaningful contribution to the conservation of biodiversity in the Waterberg area. It aims to collaborate with relevant international, national, provincial and local government structures; non-governmental organisations (NGO's) and land owner groups.

### 10.1.1 Co-operative bioregional landscape programme

The purpose of this programme is to engage and interact with neighbours and surrounding communities bordering the park to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders supporting SANParks' core business, and MNP's desired state specifically. Marakele National Park has on its surrounding borders numerous land uses taking place, from mining to traditional stock farming and game farms. Some of these activities can negatively affect the natural systems in the park and its future to conserve biodiversity, if left unchecked and uninformed. The park aims to minimise the negative impacts of poor conservation strategies and development along its borders, through the proactive engagement with surrounding land owners and regional planners. The achievement of the park's aspirations depends on understanding the relationships and inter-dependencies between various strategic planning processes and partnerships in the region. The park will co-operate with the relevant international, national, provincial and local government structures where these affect the park and keep track of issues affecting the park and region to ensure functional ecosystem are protected. Through education about the importance of biodiversity, the park intends to raise the awareness of people and communities, in the interface zone, to the plight of conservation in the region. By building positive relationships with land owners and providing a central point for conservation ideas and examples MNP can achieve the objective of this programme.

This programme links with objective 1 and sub-objective 1.4 on page 16.

COOPERATIVE BIOREGIONAL LANDSCAPE PROGRAMME					
<b>High level objective:</b> To enhance co-operative management through a bioregional approach by using a range of land inclusion options to expand Marakele NP across a patchwork of conservation-friendly land-uses to primarily enhance ecosystem patterns and processes, mitigate for conflicts and provide opportunities that improve local livelihoods.					
Objectives	Action	Responsibility	Indicators	Timeframe	References
To minimise potential conflicts that arise from the differing objectives of non-aligned land uses through responsible engagement with land owners in the park interface zone, and development of conservation options.	Identify land use in surrounding park buffer zone.	PM, CSD	Report	Year 1	
	Undertake risk-benefit analysis of identified properties.	PM, CSD	Report	Year 2	
	Engage with identified and prioritized land owners to achieve common conservation goals.	PM, CSD	Minutes of meetings	Ongoing	
	Identify possible conservation options for land use.	PM, CSD	Scientific report	Year 2	
	Formalise engagements / agreements.	PM, CSD	Agreement	Ongoing	
	Participate in IDP and SDF processes to influence decisions.	PM	Minutes of meetings	Ongoing	
	Engage with relevant forums and participate in EIAs, scoping etc.	PM, CSD	Scoping, EIA reports	Ongoing	
	Establish communication protocols with land owners and partners to improve communications.	CSD, PM	Minutes of meetings, plans	Ongoing	



### 10.1.2 Park expansion / consolidation programme

The purpose of this programme is to achieve the SANParks goal of conserving ecological systems and patterns typical of the region by acquiring conservation worthy land through purchase or other means by following the SANParks land acquisition framework. The park has been identified as a key contributor regarding ecosystem services *i.e.* water production and providing secure habitat to local species of special concern.

The rational and approach that SANParks will follow can be found in section 8 on page 27. This programme links with objective 1 and sub-objective 1.4 on page 14.

PARK EXPANSION / CONSOLIDATION PROGRAMME					
<b>High level objective:</b> To enhance co-operative management through a bioregional approach by using a range of land inclusion options to expand MNP across a patchwork of conservation-friendly land-uses to primarily enhance ecosystem patterns and processes, mitigate for conflicts and provide opportunities that improve local livelihoods.					
<b>Objective:</b> To consolidate the ecological representation and resilience of MNP through a series of conservation-focused partnerships and strategic land acquisitions over the next 10 years					
Sub-objectives	Actions	Responsibility	Indicators	Timeframe	References
To acquire strategically identified properties to ensure that ecological deficiencies and the logistical and development requirements of park management are addressed.	Review / update conservation expansion plan.	CSD, PM	Annual report	Year 3, ongoing	Land acquisition plan
	Motivate and prioritise acquisitions.	CSD, PM	Priority list	Ongoing	
	Seek funding.				
	Target the acquisition of 12, 000 ha over the next 10 years.	CSD, PM	Land purchased	Ongoing	
To promote ecological linkages across the landscape through strategically-identified contractual land partnerships and provide possible responsible development options.	Draw up a detailed conservation plan (including a GIS map of current conservation land status).	CSD, PM	Plan	Year 1	Land acquisition plan
	Develop a potential partnership Database.	CSD, PM,	Annual report	Year 3, ongoing	
	Cost-benefit evaluation of intactness of the land.	CSD	Plan	Ongoing	
	Formalise of partnership contracts against expansion targets.	CSD	Agreement	As required	

## 10.2 Biodiversity

Biodiversity management is the core mandate of MNP. The Park's approach to biodiversity is in line with SANParks policies and the principles of adaptive management. A number of biodiversity management programmes were developed with the aim to effectively manage the diversity, patterns and processes of the region. The key management strategies listed below cover the next planning cycle so that the park can advance towards its desired state in terms of biodiversity:

- Ensure the sound management of wildlife through the development and implementation of specific programmes, guidelines and protocols for harvesting, species re-introductions and removals;
- Undertake research to understand threats to the fresh water systems in the park and take actions to mitigate these;
- Undertake appropriate fire management through the preparation of management guidelines and implementation of a fire management programme;

- Improve knowledge and management of red data species through the species of special concern (SSC) programme;
- Rehabilitate the landscapes in the park through appropriate actions to manage alien and extralimital plants and animals, as well as erosion control through the development and implementation of programmes;
- Continue with standard conservation management such as the maintenance of conservation infrastructure and continuing with operational activities.

### 10.2.1 Ecosystem processes

The purpose of this programme is to ensure that conservation of biodiversity within MNP remains functional and provides for continued operation of the ecosystems in the region. The main processes that affect the functioning of the ecological systems in the park have been identified as herbivore (including fire) impact on the vegetation, the associated impact of predation on the herbivores, as well as the aquatic systems and the effects of climate and change thereof on the ecosystems as a whole. This programme aims to identify the interactions of key concern to the park, develop management activities, whether it is to take action or monitor, and to implement these for the continued management of diversity. Due to the complexity of these relationships four sub-objectives were developed within this objective.

#### 10.2.1.1 Ecosystem services programme

Marakele National Park is in a unique position to provide society with essential goods and services in the form of ecosystem services. Ecosystem services are defined as “the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life” (Daily 1997), in other words the benefits people obtain from ecosystems” (Millennium Ecosystem Assessment, 2004). Most of the regulating services such as the supply of good clean water and the protection of biodiversity are supplied within a regional context, while services such as aesthetic, spiritual and recreational are supplied within the park.

The reliable supply of high quality water from Marakele National Park is acknowledged as a very important ecosystem service as it forms the source of the Matlabas River, one of the main permanent rivers in the region. A detailed lower level plan will be developed to address this programme as guided by the research programmes.

This programme links with objective 1 and sub-objective 1.2 on page 14.

ECOSYSTEM SERVICES PROGRAMME					
<b>High level objective:</b> To adaptively manage MNP in the bioregional context for the long-term sustainable conservation of biodiversity and its processes and function, providing ecosystem goods and services, building constituency for the conservation ethic and supporting nature-based tourism in the region.					
<b>Objectives:</b> To recognise MNP as a provider of a range of ecosystem services.					
Sub-objectives	Actions	Responsibility	Indicators	Timeframe	References
To identify the range of ecosystem services and understand the scope and importance of these from MNP.	Identify the ecosystem services provided by the park.	CSD, PM	Report	Year 1	
	To develop an ecosystems lower level plan.	CSD, PM	Plan	Year 1	
	Consider valuing these appropriately, recognising multiple tangible and non-tangible valuation methods.	CSD, PM	Report	Year 3	
	Communicate and highlight these broadly.	PM, CSD	Information sessions	Year 2	
	Monitor the effects of climate change related to the variability in elevation of the different habitats in MNP.	CSD, PM	Report	Ongoing	

#### 10.2.1.2 Fresh water ecosystems programme

The purpose of this programme is to understand the role of surface and groundwater as a potential major driver of important ecological functions and ecosystem health. Consistent with global trends, high levels of threat have been reported for freshwater ecosystems, with over half of the country’s river and wetland



ecosystem types considered threatened in the National Biodiversity Assessment of 2011 (Nel *et al.*, 2011B). Marakele National Park includes the higher lying areas in the Waterberg Mountain range and thus acts as a headwater catchment area for a number of smaller rivers that feed into the Limpopo River system. Thus the aim of the biodiversity and ecosystems services programme is to maintain and / or restore headwater catchment function to deliver freshwater ecosystem services to surrounding environments. In this way, MNP can support the overall water budget of the region and support the environmental flow (reserve). This aim is in accordance with the SANParks Coordinated Policy Framework which states that “where SANParks holdings are in headwaters, it will be a major and explicit function of those headwaters to deliver adequate water and of sufficient quality”. Marakele National Park falls within the Limpopo Water Management Area (WMA) and in the Matlabas / Mokolo sub-catchment. The Waterberg Mountain range is a vital headwater catchment area for the Sondags, Mamba, Matlabas and Sterkstroom Rivers which eventually drain into the Limpopo River providing water to surrounding environments and downstream users. The most prominent river draining the area is the Matlabas, a perennial river subject to high seasonal variation. Its main tributary is the Mamba River.

An issue of concern is flow alteration of these rivers caused by earthen / concrete dams constructed by previous landowners. The distribution, function and need for these dams within MNP will be evaluated and removal and / or rehabilitation instituted in the next 5 - 10 year cycle, where necessary. There is a potential threat of invasive fish species (largemouth bass) on the indigenous fish species.

The river management programme comprises the following:

- A full river health survey which includes fish, macro-invertebrates and vegetation will have to be completed to establish an ecological class for the rivers.
- Where a river ecological class needs to be improved *i.e.* from a “C” to “AB” category, damaged or redundant structure negatively impacting on the system will require an assessment of the structures and then decisions on which require removal / rehabilitation, and monitoring thereof.
- Alien fish have potentially severe impacts on in-stream biota and will require inventory, monitoring and impact related research.

In addition, to quantify ecosystem services in terms of flow and quality provided by the park, immediate attention will be required in collating and evaluating hydrological flow data from Department of Water Affairs (DWA). The DWA currently monitors both flow and quality in the Matlabas and Sterkstroom Rivers, although this is a few kilometers downstream of the park. As no environmental flow requirements (EFR) or ecological reserves have been set for these rivers, detailed evaluation of the long-term flow and quality data will be required, and Thresholds of Potential Concern (TPCs) set accordingly.

There are many smaller wetlands scattered throughout the park. The largest, the Matlabas, is in a near pristine condition with no immediate threats such as erosion or undesirable draining. It provides an excellent research site to further knowledge on wetland functioning and processes. Many boreholes, drilled by previous landowners are distributed throughout the park. Most of these however are currently not operational.

The risks associated largely relate to MNP being unable to deliver ecosystem goods and services to downstream users through an inability to maintain or improve either the flow of water from the catchment into the rivers or the quality of water supplied. Ongoing monitoring of water flow and quality downstream and appropriate reaction to the TPC’s determined should allow for a learning-by-doing approach. Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 1 and sub-objective 1.1 on page 14.

FRESH WATER ECOSYSTEMS PROGRAMME					
<b>High level objective:</b> To adaptively manage MNP in the bioregional context for the long-term sustainable conservation of biodiversity and its processes and function, providing ecosystem goods and services, building constituency for the conservation ethic and supporting nature-based tourism in the region.					
<b>Objective:</b> To maintain mountain catchment function to deliver strong high quality flow of water to surrounding environments.					
Sub objectives	Actions	Responsibility	Indicators	Timeframe	References/Notes
To monitor the quantity and quality of water provided by MNP.	Download hydrological flow data from the DWA gauging weirs along the Matlabas and Sterkstroom Rivers.	CSD, PM	Report	Ongoing	
	Collect regular water quality samples.	CSD, PM	Lab reports	Ongoing	
	Ensure ongoing monitoring, evaluation and learning.	CSD, PM	Records	Ongoing	
To understand the ecology of important elements of the river ecology and identify and monitor threats which may lead to unacceptable changes.	Undertake a full river health assessment (including a fish, macro-invertebrates, and vegetation).	CSD, PM	Eco-status A, B, C ecological class river.	Year 1	
	Identify and prioritize threats and take corrective action, where appropriate.	CSD, PM	Monthly reports, SFM minutes	Ongoing	
	Mapping of redundant infrastructure to inform rehabilitation plan.	BSP, CSD, PM	Map	Year 1	
<b>Objective:</b> To restore and maintain wetland and groundwater ecosystem processes.					
To identify all non-riverine wetlands in terms of distribution, type, origin and permanence of water and degree of disturbance, and rehabilitate where necessary.	Inventorise the distribution and status of the wetlands.	CSD, PM	Map, list of wetlands	Year 1	
	Rehabilitate disturbed wetlands on a prioritised basis.	CSD, PM	Rehabilitate sites	Year 5	
	Ensure ongoing monitoring, evaluation and learning.	CSD, PM	Reports, SMF minutes	Ongoing	
To monitor the long – term changes in the groundwater table and its impact on surface water and vegetation.	Complete a groundwater hydro-census.	CSD, PM	Map	Year 1	
	Design an appropriate monitoring program to evaluate water level fluctuations.	CSD, PM	Report	Ongoing	
	Remove infrastructure around disused boreholes.	PM	Cleared sites	Year 5	

### 10.2.1.3 Herbivory programme

The purpose of the herbivory management programme is to restore and conserve biodiversity and ecosystem patterns and processes. The mission of MNP includes the promotion of the adaptive and integrated management of biodiversity and the park's wilderness qualities as well as a variety of social aspects. The herbivore management plan addresses these requirements. Thus a wildlife management strategy will have to be adopted to achieve the objective of an ecologically healthy and sustainable animal community with balanced predator-prey relations. To effectively manage herbivores in balance with other park objectives the areas that could be threatened by excessive herbivore impact or utilisation have to be identified. Monitoring programmes to determine unacceptable change in these areas and levels of concern must be agreed on as indicated in the research and monitoring plan. The evaluation of change in these areas has to link with detection and levels of concern in accordance with the degradation and restoration plan. This also applies to areas of bush encroachment that may limit forage availability, animal movement and visibility.



Management of elephants aligns with the elephant management plan for MNP (approved by DEA in April 2013). This plan was compiled in accordance and compliance with the National Norms and Standards for Elephant Management and is subsidiary to the MNP park management plan. The management of elephants and their ecological impacts are embedded in the overall SANParks objectives of:

- maintaining, or restoring, ecosystem integrity,
- providing benefits to people, and
- taking cognisance of aesthetic and wilderness qualities.

The link between tourism and herbivore distribution is important, but has to be addressed as specific research projects that will inform future infrastructure development to take herbivore distribution and tourist requirements into account.

Lastly the production of herbivores for sale needs agreement from a wide range of stakeholders and a specific management plan will have to be developed to address this need once all stakeholders have agreed on the best approach to achieve the goals. Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme link with objective 1 and sub-objective 1.1 on page 14.

HERBIVORY PROGRAMME					
<b>High level objective:</b> To restore and maintain natural ecosystem processes and function which supports the biodiversity of MNP					
<b>Objective:</b> To monitor and manage the impacts of herbivory and predation within MNP and to balance this effectively with other park objectives					
Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
Ensure natural ecosystem function and processes by allowing herbivores to fulfill their role as ecosystem drivers and contributors to biodiversity.	Remove fences that limit herbivore movement within the combined unit.	PM	Km of fence removed	Year 5	
	Identify areas of unnatural bush densification that limit herbivore distribution, and implement the rehabilitation programme.	PM, CSD	Map	Year 2	
	Identify essential artificial watering points, and remove the non-essential ones as far as possible to encourage animals to utilize the natural landscape.	PM, CSD, BSP	Number of closed water points	Year 2	
	Identify vegetation types that may lose biodiversity components due to herbivory and implement corrective measures.	PM, CSD	Report, map	Year 2	
Ensure natural ecosystem function and processes by allowing herbivores to fulfill their role as ecosystem drivers and contributors to biodiversity.	Identify areas sensitive to over utilization such as small fenced areas and implement corrective measures.	PM, CSD	Report, map	Year 1	

Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
Monitor the effects of mega herbivores, especially elephant, on heterogeneity and biodiversity at different spatial and temporal scales.	Implement actions as outlined in the elephant management plan.	PM, CSD	Report	Ongoing	
	Review the elephant management plan when necessary.	PM, CSD	Updated plan	As needed	
Explore models for the generation of income through wildlife harvesting.	Determine the need and objectives for sustainable harvesting of wildlife.	PM, CSD, WMC	Minutes of WMC	Year 1	
	Develop a specific management plan indicating suitable sections and species for harvesting.	PM, CSD, WMC	Management plan	As required	

### 10.2.1.4 Carnivore programme

The purpose of this programme is to restore / maintain the ecological role of large carnivores as apex predators in the terrestrial ecosystem. It is the policy of SANParks to, as far as possible, restore the diversity of species that were present in historical times, provided that habitat conditions have either remained adequate or can be rendered adequate through rehabilitation measures. Management of carnivores in MNP is guided by park-specific objectives primarily aiming at the conservation and promotion of values of the unique Marakele landscapes. For the purpose of this plan, carnivores refer primarily to meso (e.g. black-backed jackal *Canis aureus* and caracal *Caracal caracal*) and large mammalian predators (e.g. wild dog *Lycaon pictus*, brown hyaena *Hyaena brunnea*, spotted hyaena *Crocuta crocuta*, cheetah *Acinonyx jubatus*, leopard *Panthera pardus* and lion *Panthera leo*). A key constraint, however, is the size of the park. This carries several consequences. It reduces habitat diversity and suitability, and hence species diversity of prey and predators. Fences limit dispersal and movement opportunities that often lead to inflated abundances of predators that pose risks to local persistence of prey species (Hayward & Kerley 2009). Such spatial constraints reduce the likelihood that dynamic predator-prey relationships will be established and increase the likelihood that siblings can breed with each other.

Carnivore management in MNP thus encapsulates four key management aspects:

- Restoring the ecological processes driven and affected by large carnivores.
- Restricted size and fragmentation of MNP may accentuate localised carnivore impacts on prey as well as reduced genetic integrity of individuals living in MNP.
- Restricted park size may also accentuate predator conflicts with neighbours.
- Given that MNP is a key wildlife viewing attraction enhanced by large carnivores, a fourth aspect thus relates to how the absence or inconspicuousness of certain species may influence revenue generation through tourist experiences and expectations.

In the MNP context the size of the park imposes a social unit management approach for large carnivores. This is in line with the large mammal management direction for SANParks (Ferreira *et al.* 2009). In the Marakele case, carnivore management will primarily focus on maintaining dynamic social units rather than on numerical aspects. Actions aim to restore ecological processes in the first instance, and if not possible, to mimic them.

The management actions to achieve each objective of the carnivore management programme are set out below. Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 1 and sub-objective 1.1 on page 14.

CARNIVORE PROGRAMME					
<b>High level objective:</b> To restore and maintain natural ecosystem processes and function which supports the biodiversity of MNP.					
<b>Objective:</b> To monitor and manage the impacts of predation within MNP and to balance this effectively with other park objectives.					
Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
To maintain sustainable predator-prey relations.	Mimic changes in carnivore survival associated with social stress and prey biomass limitations.	CSD, PM	Carnivore plan	Ongoing	



Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
To maintain sustainable predator-prey relations.	Mimic changes in carnivore fecundity by increasing the age of first reproduction and/or interval between births.	CSD, PM	Carnivore plan	Ongoing	
To maintain genetic integrity by inducing social limitations.	Identify and extract life-history characteristics of carnivore species.	CSD	Science report	Year 2	
	Mimic male and female dispersals and male dominance changes.	PM, VWS	Annual report	Ongoing	
To manage carnivore impact on stakeholders.	Identify the profile of potential human-carnivore conflict.	CSD, PM	Reports	Ongoing	
	Engage stakeholders on the development of problem animal management strategies and plans.	CSD, PM	Meeting minutes	Ongoing	
	Maintain perimeter fence to a standard adequate to secure both the safety of the large carnivores, adjacent local communities and park visitors.	CSD, PM	Report	Ongoing	
	Ensure that existing co-management agreements are aligned with the carnivore management programme and implement these.	CSD, PM	Agreements	Ongoing	
	Update carnivore LLP according to knowledge gained through feedback.	CSD, PM	Plan	Year 5	
To conduct collaborative research and monitoring to inform carnivore management.	Develop an integrated research and monitoring programme which addresses carnivore demography, impact on prey species, conflict and consequences for stakeholders.	CSD, PM	Science report	Ongoing	
	Implement an integrated research and monitoring programme.	CSD, PM	Science report	Ongoing	
	Update park management plan and LLP according to knowledge gained through feedback.	PM, CSD	Management plan	5-yearly	

### 10.2.1.5 Species of special concern programme

The purpose of this programme is to establish an understanding of the threats to species of special concern in MNP and develop management actions to allay these SANParks strives to prevent extinction, within national parks, of species on the International Union for Conservation of Nature (IUCN) global critically endangered or endangered lists, and will work with other conservation initiatives to secure and strengthen the future of such species over their historic distribution ranges. The National Environmental Management Biodiversity Act, 2004 (Act no. 10, 2004) provides for the protection of species that are threatened or in need of protection to ensure their survival in the wild. However, except in crucial instances for the survival of globally critically endangered species, that are threatened or in need of protection to ensure their survival in the wild. However, except in crucial instances for the survival of globally critically endangered species, management for system integrity and biodiversity must take precedence over species management.

Marakele National Park has both the south-eastern black rhino (*Diceros bicornis minor*) and the southern white rhino (*Ceratotherium simum simum*). Black rhino are currently globally listed as “Critically Endangered”, while white rhino is listed under the international IUCN Red List as Near Threatened (IUCN 2013). These species are under threat from the onslaught of poaching in recent years.

Wild dogs are transient in the region and will sporadically appear and disappear. Marakele National Park is particularly important in the conservation of the vulnerable Cape vulture (*Gyps coprotheres*) (Benson 1994, Brooke 1984) and support the largest breeding colony in existence, representing approximately one third of the world's breeding population.

Among the plants the Waterberg cycad *Encephalartos eugene-maraisii* is classified as ‘Endangered’. This species is listed on Appendix I of CITES and plants are protected within the boundaries of the park. Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 1 and sub-objective 1.3 on page 14.

SPECIES OF SPECIAL CONCERN PROGRAMME					
<b>High level objective:</b> To identify and manage species of special concern (e.g. black and white rhino, Cape vultures, cycads) to ensure their persistence and value within integrated regional strategies by securing their habitats, minimising human induced threats and ensuring their genetic integrity..					
<b>Objective:</b> To secure viable populations of white rhino and black rhino, as an integral part of the larger integrated national initiatives.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To secure additional ideal habitat to increase potential capacity for both rhino species.	Identify suitable rhino habitat for potential inclusion.	PM, CSD	Report	Ongoing	
	Negotiate with relevant stakeholders.	PM, CSD	Agreement	Ongoing	
	Formalise agreements for land inclusion.	CSD, PM	Agreement	Ongoing	
To develop and implement a rhino security plan to reduce, as far as possible, the impact of man-induced threats to rhino populations.	Conduct risk assessment.	PM	Rhino protection plan	Year 1	
	Develop inclusive rhino safety and security plan.	PM	Rhino protection plan	Year 1	
	Secure additional resources.	PM	Allocated funds	Ongoing	
	Provide training as required.	PM	Training register	Ongoing	
	Implement plan, monitor, assess and adapt implementation.	PM	Progress reports	Ongoing	
	Engage and co-operate with surrounding rhino owners and other relevant departments and institutions to enhance security of and sharing information regarding regional populations.	PM	Report	Ongoing	



Objectives	Actions	Responsibility	Indicators	Timeframe	References
To maintain genetic integrity and heterozygosity in both rhinos species by strategic interventions determined through a research and monitoring programme.	Assess genetic diversity of populations.	CSD, PM	Reports	Ongoing	
	Plan introductions / removals in line with best practice.	CSD, PM	WMC minutes	As required	
	Develop and implement monitoring programme.	CSD, PM	Reports, SMF minutes	Ongoing	
To understand the status and performance of both rhino populations to allow for appropriate management decisions.	Identify appropriate monitoring programmes for both species.	CSD, PM	Reports, SMF minutes	Year 1	
	Implement monitoring programmes and adapt accordingly.	CSD, PM	Reports	Ongoing	
<b>Objective: To secure viable populations of other identified species of special concern</b>					
To understand the distribution, population status and current threats of species of special concern.	Develop and implement appropriate monitoring programme for identified species (including TPC's).	CSD, PM	Plan	Year 2, ongoing	
	Assess risk profile of identified species of special concern.	CSD, PM	Scientific reports	Year 2, ongoing	
	Identify and prioritize actions to mitigate threats.	CSD, PM	SMF minutes, reports	As required	

### 10.2.1.6 Fire management programme

The purpose of this programme is to maintain the natural, cultural and biodiversity components of the ecosystem within the protected area, as specified in the particular desired state, whilst protecting life and property. Fire is recognised as a natural and necessary driver within African savanna environments (Trollope *et al.* 1991). Climatic conditions such as extended wet periods where fuel production increases and accumulates, followed by dry periods that support the burning of the veld by lightning strikes (Komarek 1971) are conducive to this system.

This programme summarises a detailed fire management protocol which is available on request. The broad fire management goals of Marakele National Park are:

- The maintenance of habitat, key landscape features (open savannas and wetlands) and healthy, viable populations of all species within the park.
- Maintain key hydrological process within the ecosystem.
- Fire safety, including the prevention of uncontrolled wildfires, protection of assets (infrastructure, cultural sites and key landscape features) within the park as well as along its borders.
- Fire monitoring and research projects to improve our understanding of the effects of fires on the landscape.

For the purpose of fire management the park is divided into four burning compartments, each with agreed ecological objectives. The delineation of the compartments was informed by vegetation characteristics, prominent landscape features, the existing road and firebreak network.

- Burning compartment A – Priority is assigned to establishing the boundary and infrastructure firebreaks early in preparation for the coming fire season.
- Burning compartment B – Fire sensitive vegetation types and landscapes in the park include: the riparian vegetation along the Matlabas River, the Widdringtonia Forest community, tree species *Blechnum attenuatum* *Widdringtonia nodiflora* and the Matlabas Wetland, consisting of vleis and grasslands (*Arundinella nepalensis*, *Aristida junciformis*, *Aristida bipartita* and *Chironia purpurascens* communities. Fire will be used strategically in these areas
- Burning compartment C – High lying (mixed and sourveld) areas. A *laissez-faire* approach to fire is adopted on the mountainous vegetation type and grasslands. This is mainly due to logistics and access to the area. Fire frequency should be every two to three years and burnt in winter or spring to prevent the grasses from becoming moribund and stimulate growth of high rainfall highland sourveld grasses. Lightning is the dominant ignition source and the area burns at the required frequency and season. Fires from external sources will be allowed to burn in this compartment, within predetermined safety parameters.
- Burning compartment D – Bush thickened or densified areas. These are areas that are considered to be encroached by woody vegetation thereby changing the tree / grass balance and altering the ecosystem properties. Various fire treatments will be used in conjunction with other clearing methods to either reverse or reduce the bush thickening process.

In compliance with the National Veld and Forest Fire Act 101 of 1998, all state owned land must voluntarily establish or become a member of Fire Protection Associations (FPA). This association allows all land owners (especially those neighbouring each other) to set, prevent, predict, manage and extinguish veld fires by ensuring that park staff are sufficiently trained (lighting and monitoring) and adequately prepared (equipment), in compliance with the registered FPA rules and regulations. The fire management strategy needs to be considered within the wider context of the park's surroundings, in close liaison with neighbours and national organisations. The park is a member of the Thabazimbi, Lephalala and Modi Molle Fire Protection Association and abides by all rules and regulations outlined by its registered FPA.

Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

FIRE MANAGEMENT PROGRAMME					
<b>High level objective:</b> To restore and maintain natural ecosystem patterns, processes and function which supports the biodiversity of MNP.					
Objectives	Action	Responsibility	Indicators	Timeframe	References
To promote fire as an ecosystem process in Marakele and to evaluate and respond appropriately to fire threats to infrastructure and human lives.	To participate meaningfully in the FPA, and exert sufficient influence on policies within the FPA to allow biodiversity aims to succeed.	PM	FPA meeting reports	Annual	
	To identify and manage fire risks.	PM, CSD	Fire management plan	Ongoing	
	Ensure that the staff has adequate fire training and equipment to conduct fires in the park.	PM	Fire audits	Annual	
	To adapt fire regimes, as appropriate, in fire-sensitive communities in Marakele, and to evaluate and learn from any such fires taking place.	PM	Fire maps	Annual	
	To experimentally utilize fire as a tool to manage bush encroachment in selected areas and to evaluate the effectiveness thereof.	PM, CSD	Regrowth vegetation transects to determine plant density	Year 3	
	Monitor the effect of fire on vegetation and revise the plan where necessary.	PM, CSD	MODIS fire scar	Annual	



### 10.2.1.7 Invasive alien species programme

The purpose of this programme is to prevent entry and control invasive alien species in order to reduce their distribution, abundance and impacts, thereby maintaining the integrity of the indigenous biodiversity of the park. Invasive alien species are accepted to be one of the largest, and fastest growing, threats to biodiversity and the ecosystem services they support. Invasive alien species can transform the structure and species composition of ecosystems by replacing indigenous species, either directly by out-competing them for resources or by changing the way nutrients are cycled through the ecosystem. Other negative impacts include, for example, changes to fire regimes, potential loss of rare or threatened species and replacement of preferred feeding areas by non-palatable species. Many international conventions call for the management of invasive alien species (e.g. the Convention on Biodiversity, Article 8H). In South Africa, the management of alien and invasive species is mandatory under the National Environmental Management: Biodiversity Act (Act 10 of 2004). The Conservation of Agricultural Resources Act (Act 43 of 1983) provides additional guidance for the management of invasive alien plants. The alien and invasive species management framework for SANParks (Hendricks and Symonds 2009) provides the context within which all management of alien and invasive species is implemented.

#### List of invasive species occurring in MNP

The actions although generally plant focused, also apply to alien animals where relevant. Twelve alien plant taxa have been recorded in MNP, of which nine have been identified to species level (Spear, McGeoch, Foxcroft, Bezuidenhout, 2011). The remaining species need to be identified urgently and the species listed assessed for any name changes or misidentifications. Three mammals, three birds and two fish species have been listed. Currently three mammals (including two extra-limitals), three birds and two fish species have been recorded for MNP; the species list and current distribution are indicated in Table 13. The likelihood of eradication or maintenance control varies considerably with species and terrain invaded, with, for example, the eradication of established fish populations is highly unlikely. As for invasive animals, rapid response is required to remove species such as Indian myna *Acridotheres tristis* before it becomes too numerous.

#### Description of the land infested, assessment of the extent of infestation

In 2014, 64 000 ha of Marakele has been mapped, and about 30 000 ha of that is infested with densities ranging from very light to dense.

#### Status report on the efficacy of past control measures

The programme relies on close collaboration between park management (with overall responsibility for park management and actions), and the Biodiversity Social Programmes / Working for Water

Table 13: List of alien species recorded in MNP.

Taxonomic group	Scientific name	Common name	Current perceived level of threat
Plants	<i>Acacia melanoxylon</i>	Black wood	High
	<i>Campuloclinium macrocephalum</i>	Pom-pom weed	High
	<i>Cereus jamacaru</i>	Queen of the night	Low – if under bio-control
	<i>Eucalyptus globulus</i>	Tasmanian blue gum	Medium
	<i>Eucalyptus</i> spp <sup>1</sup>	Blue gum	Low
	<i>Lantana camara</i>	Lantana	High
	<i>Opuntia ficus-indica</i>	Sweet prickly pear	Low – if under biocontrol
	<i>Cylindropuntia imbricata</i>	Imbricate prickly pear	Low – if under biocontrol

Taxonomic group	Scientific name	Common name	Current perceived level of threat
Plants	<i>Opuntia stricta</i>	Sour prickly pear	Low – if under biocontrol
	<i>Populus spp.</i> <sup>1</sup>	Poplars	Medium
	<i>Psidium guajava</i>	Guava	High
	<i>Rubus spp.</i> <sup>1</sup>	Bramble	High
Mammals	<i>Felis catus</i>	Domestic cat-feral	Medium
	<i>Damaliscus pygargus phillipsi</i>	Blesbuck-extralimital	None- removed
	<i>Tragelaphus angasii</i>	Nyala- extralimital	None- removed
Birds	<i>Acridotheres tristis</i>	Indian myna	Low
	<i>Columba livia</i>		Low
	<i>Passer domesticus</i>		Low
Fish	<i>Micropterus salmoides</i>	Largemouth bass	High
	<i>Cyprinus carpio</i>	Common carp	Low

programme (the major implementers of alien plant clearing in SANParks), with input from scientific services (on, for example, research and monitoring). Working for Water has been operational in MNP since April 2003. Most of the alien vegetation for MNP have been treated, with most areas having received between one and six treatments. The pompom weed *Campuloclinium macrocephalum* is a high priority species, with evidence from elsewhere in similar habitats, of having the ability to completely transform grasslands. *Campuloclinium macrocephalum* has not invaded the entire park, but new populations are being found frequently. Most areas have received at least one treatment. Owing to continuous re-infestation there is no possibility of entirely eradicating alien plant species, and an ongoing control programme will be required.

Total funding to date amounts to just over R16 million. Most of the Nbals for the park have been treated, with most areas having received between one and six treatments. Control is conducted in accordance with an Annual Plan of Operations, which is revised annually based on progress in control, new populations of alien species and budgetary constraints. Further details are provided in the BSP annual clearing plan.

**Indicators of progress and success, indications of when the programme is to be completed**

Without new infestations from adjacent lands, purchase of additional land and diligent management it should be realistic to predict that the management of most IAP within the park can be contained at a maintenance level within the next year. It is foreseen that the park will only be able to get rid of alien plants and animal in the medium to long term.

This programme links with objective 1 and sub-objective 1.5 on page 14.

INVASIVE ALIEN SPECIES PROGRAMME					
High level objective: To detect and eradicate new invasions of alien species and control current populations to reduce negative impacts on biodiversity and ecosystem services					
Objectives	Action	Responsibility	Indicators	Timeframe	References
To systematically survey and list alien species in and around MNP.	Systematically survey MNP, to determine alien species abundance and distribution, and maintain updated species lists.	PM, BSP, CSD	Alien species list, map	5-years	
	Detect new incursions of invasive species to allow for rapid response and eradication where feasible, through ad hoc monitoring and other means.	BSP, PM	Alien species list, map	On-going	
	Monitor the spread of high priority species and inform management accordingly.	BSP, PM	Reports	On-going	
To prevent the introduction of alien species.	Prohibit the use of alien species in staff quarters and tourism accommodation.	PM	Report	On-going	



Objectives	Action	Responsibility	Indicators	Timeframe	References
To prevent the introduction of alien species.	Monitor, and / or where necessary, manage previously degraded areas or farm / crop lands, to reduce the risk of invasion or post clearing reinvasion.	PM, BSP, CSD	Report	On-going	
	Determine and monitor high risk areas for invasions adjacent to MNP and ensure appropriate management action is taken.	PM, BSP, CSD	Management unit clearing plan	On-going	
To ensure the effective and timely development and implementation of integrated control strategies, in such a manner that rapid response and long-term maintenance goals are met.	Update species lists and areas requiring management attention, and ensure that these are incorporated into the appropriate clearing plans.	PM, BSP, CSD	Species list	On-going	
	Maintain an explicit focus on eradicating alien species from old farmsteads or other abandoned infrastructure.	PM, CSD	Management unit clearing plan	On-going	
	Ensure continuous maintenance control of species and areas according to the Annual Plan of Operation (APO).	BSP, PM	APO	On-going	
	Introduce biological control agents and/or other appropriate and novel methods (subject to risk-benefit evaluation) where appropriate and necessary.	PM, BSP	Reports	When necessary	
	Eradicate, where possible, all new incursions of alien species and those species whose distribution is limited and eradication is considered feasible.	PM, BSP	Management unit clearing plan	When necessary	

### 10.2.1.8 Degradation and rehabilitation programme

The purpose of this programme is to rehabilitate and conserve biodiversity and ecosystem patterns and processes. The most important areas that need to be restored in the MNP are the terrestrial field layer (vegetation and soil), redundant infrastructure, and the aquatic systems (wetlands and man-made dams). Rehabilitation is recognised as an integral part of biodiversity conservation management.

Rehabilitation within conservation areas is primarily guided by the Conservation of Agricultural Resource Act No 43 of 1983, the green paper on conservation and sustainable use of South Africa's Biological diversity 1996, National Environmental Management: Protected areas Act No 57 of 2003, National Environmental Management: Biodiversity Act No 10 of 2004 and National Action Plan: Combating land degradation to alleviate rural poverty: South Africa's response to the United Nations Convention to Combat Desertification and the Effects of Drought, particularly in Africa (UNCCD 1994).

The degradation component aims to minimise habitat degradation that will lead to a loss of structure and function and of the key processes that support the long term persistence of biodiversity and ecosystem services. The rehabilitation component aims to identify and rehabilitate areas in a structured and prioritised manner to support biodiversity and wilderness goals.

Bush encroachment constitutes an important form of degradation in the MNP. According to Regulation 16 of CARA, bush encroachment is a term used for "stands of listed plant species where individual plant species are closer to each other than three times the mean crown diameter".

Plant species in this group are not alien plant species, but indigenous plant species that tend to become abnormally abundant. The major reasons for bush encroachment / thickening stem directly from the disruption of biological control mechanisms such as (i) incorrect grazing practices, (ii) a lack or misuse of fire, (iii) absence of browsing animals, (iv) old cultivated land and (v) lack of mechanical damage by large wild animals. The consequences of bush encroachment / thickening cause a significant reduction in the grazing capacity of veld. Sickie bush, *Dichrostachys cinerea*, is considered to be a potential bush encroaching species. Where Sickie bush dominates, a grass-dominated community is changed into a woody species community.

The species in question are part of the ecosystem of that plant community so they should be thinned and not removed completely. Detailed criteria for thinning of sickie bush and other species are given in a detailed lower level plan. Monitoring in the treated areas should be undertaken annually. Species richness, abundance and diversity should be determined to detect any changes due to management interventions. Biomass should also be measured to detect herbaceous recovery in areas where grass component was eliminated by bush encroachment. Any re-growth (bush encroachers) should be treated with foliar application and fire should be applied after two to three years depending on the herbaceous biomass.

Different types of soil erosion in MNP include sheet, rill and gully erosion. Sheet erosion is pronounced in old cultivated areas where the soil is capped and vegetation is denuded. Gullies and rill are also associated with these bare patches but also mainly in areas associated with road infrastructure, dams and a result of water runoff from the hill slopes. Satellite imagery and Google Earth were used for mapping all soil degraded areas. An inventory and description was made of soil degradation types and severity. These were prioritised for (i) prevention-based management action (*i.e.*, immediate or, future, no action), (ii) monitoring to prevent a deterioration in the state or level of degradation and (iii) rehabilitation-based management action (to be rehabilitated in the same year, or considered for future rehabilitation action).

The smaller rills and gullies can be rehabilitated using silt traps, rock packing, or eco-logs. Severe gullies are rehabilitated using structured interventions such as gabions. For severely eroded areas and where gullies need re-sloping, textile materials such as biojute are used to cover sloped areas before covering with top soil and re-vegetating. Soil stability, infiltration / runoff and nutrient cycling are used as indicators to measure soil degradation and rehabilitation. Monitoring of vegetation and invertebrate diversity helps to determine directional changes in rehabilitated areas.

Unused or redundant structures scattered throughout the park, including old fences, should be prioritised for removal and rehabilitation. Active and unused borrow pits will be identified and rehabilitation plan drawn for control measures. Where suitable, consideration can be given to using the rubble from old farm buildings to fill the old borrow pits as a form of ‘sub-soil’ layer, and topsoil be sourced from other construction activities in the park. Some of the roads along the steep mountain slopes have eroded badly down to bedrock, with little or no channelling of runoff water having been provided. Consideration should be given to the ‘hard surfacing’ with either concrete or tar of at least those sections which are particularly steep and most prone to erosion. Mitigation for this erosion should involve reducing the steepness of the embankments, stabilization of soil and re-vegetation. Grading them to an angle can reduce the steepness of the embankments.

Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 1 and sub-objective 1.6 on page 14.

DEGRADATION AND REHABILITATION PROGRAMME					
<b>High level objective:</b> To identify and rehabilitate areas in a structured, prioritised manner to support biodiversity and wilderness goals					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To restore the composition, structure and function of degraded vegetation.	Map all degraded vegetation areas.	Scientific Services, PM	Map	Ongoing	
	Prioritise degraded area for rehabilitation.	Scientific Services, PM	Plan	Ongoing	
	Implement the degradation and restoration plan.	BSP, PM	Plan	Ongoing	



Objectives	Actions	Responsibility	Indicators	Timeframe	References
To restore natural soil processes and the aesthetic appeal of the landscape by combating erosion.	Monitor and evaluate progress.	CSD, PM	Report	As required	
	Map all erosion types (sheet, gully, rill).	CSD	Map	Year 5	
	Undertake assessment of site-specific drivers.	CSD	Report	Year 5	
	Prioritise sites for rehabilitation.	CSD, PM	Plan	Year 5	
	Implement appropriate rehabilitation intervention to address site-specific drivers of runoff.	BSP, CSD, PM	Plan	Year 5	
	Monitor and evaluate progress.	CSD, PM	Report	As required	
To remove undesirable infrastructure as well as unnatural features of the landscape	List and prioritise all unwanted structures.	BSP, CSD, PM	Plan	Year 2	
	Implement appropriate methods of removal.	BSP, PM	Plan	Year 2	
	Rehabilitate the affected areas.	BSP, PM	Plan	Year 2 - 5	
	Monitor and evaluate progress.	CSD, PM	Report	As required	

### 10.2.1.9 Disease management programme

The purpose of this programme is to understand the ecology of indigenous disease as a component of biodiversity within MNP, while limiting the introduction or impact of alien diseases and minimizing the spread of disease from the park to neighbouring communities and commercial agriculture. SANParks' corporate policy on animal disease management (Hendricks and Symonds 2010) provides guiding principles to maintain the natural fluxes of indigenous diseases as a component of biodiversity, to where possible avoid the introduction and / or limit the impact of alien diseases, and to minimise the spread of disease from national parks to neighbouring communities and commercial agriculture. Whilst disease management options are limited in free-ranging wildlife, emphasis is on prevention of disease introduction (in particular alien diseases like bovine tuberculosis, brucellosis and canine distemper) and to reduce the risk and impact of indigenous wildlife diseases to neighbouring communities and their livestock.

Savanna parks, such as MNP, owing to their diverse animal complement (including many large mammal species, which carry and are susceptible to several diseases) and semi-tropical climate supports a variety of different vectors and therefore has disease dynamics that differ from other parts of the country. Marakele National Park, specifically, has a mosaic of different land users surrounding the park, including commercial livestock farmers, game ranchers and subsistence agriculture making the transfer of pathogens more likely and the need for a comprehensive wildlife disease management plan essential. Wildlife are often seen as reservoirs of diseases to humans and their domestic stock.

The legal responsibilities of SANParks with regard to managing diseases, especially controlled diseases, within the national parks ranges from civil to criminal. The national and international reputation of SANParks is also at stake. Several pieces of legislation govern disease management and related issues namely, Animal Diseases Act (Act 35 of 1984), Veterinary and Para-Veterinary Professions Act (Act No. 19 of 1982) and Meat Safety Act (Act 40 of 2000).

Only five diseases have been detected in MNP namely African swine fever, malignant catarrhal fever / snotsiekte, heartwater, corridor disease and shuni virus. Another 12 diseases of economic significance are speculated to be circulating (Hofmeyr *et al.*, 2012). This is partly due to the fact that most of these diseases are “silent” in their endemic wild hosts and therefore not picked up with general observations. The two disease incidents in the park’s recent history, corridor disease in buffalo and shuni virus in warthogs, highlight why diseases can have huge implications for the park, both in terms of financial costs and stakeholder relationships.

In 2008, buffalo in the park were confirmed to be positive for *Theileria parva*, the organism responsible for Corridor Disease, a tick-transmitted rickettsial disease. The source of the infection could never be traced. In 2008, once buffalo were confirmed to be carrying the *T. parva parva* responsible for Corridor disease, SANParks was given the directive to remove all buffalo from the park by the Department of Agriculture, as this was an area outside of the Corridor positive zone in the country. In 2009, all buffalo were removed, and SANParks were issued with a two year quarantine notice, wherein no buffalo were to be introduced to the Park. In November 2011, after serving out the quarantine period, 15 sentinel bulls were introduced from Vaalbos National Park, the idea being that if the brown ear ticks (*Rhipicephalus appendiculatus*) were still infected the sentinels would become infected. The sentinel bulls remained negative a year later (April, 2013). Therefore, in October 2013, 20 additional buffalo from Vaalbos National Park were introduced. These animals remain on the Marataba Section of the park.

In April to August 2010 and then again in 2011, a neurological condition marked by progressive paralysis was seen in warthogs in the plains area of Marataba section where 40 warthogs succumbed and another 30 were detected manifesting clinical signs. The syndrome appeared to be limited to warthogs, although there were cases with a similar clinical manifestation in jackals and in blue wildebeest. All age and sex classes of warthogs were equally affected, with death occurring roughly two months after onset of clinical symptoms.

Viral isolation yielded shuni virus from the spinal cord and brain from three of the nine animals that were freshly necropsied. Arboviruses, including shuni, were also detected in farms surrounding MNP, causing significant economic losses to local game farmers. The epidemiology of the disease needs to be further investigated. However, understanding factors contributing to vector abundance distribution and diversity may provide some predictive ability to when and why these diseases emerge. Monthly surveillance of disease vectors is currently taking place in the Marataba section of MNP, with future plans to expand into other sections MNP along the Matlabas River. Arboviruses are an important zoonotic disease (potential to spread to human) and early detection in wildlife may be very important to prevent human cases.

Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 1 and sub-objective 1.1 on page 14.

DISEASE MANAGEMENT PROGRAMME					
<b>High level objective:</b> To restore and maintain natural ecosystem processes and function which supports the biodiversity of Marakele NP.					
<b>Objective:</b> To acknowledge indigenous disease as a component of biodiversity within MNP, while limiting the introduction or impact of alien diseases and minimising the spread of disease from the park to neighbouring communities and commercial agriculture.					
Sub-objectives	Actions	Responsibility	Indicators	Timeframe	References
Set up an adequate passive surveillance system for dead and dying animals using cybertracker and train staff to conduct port mortem.	Conduct refresher course to equip and train park conservation staff to conduct basic <i>post mortem</i> investigation.	CSD, VWS, Local state vet	Training register	Year 1	
	Develop park specific Cybertracker sequence for disease syndromes likely to be encountered.	CSD	Report	Year 1	
	Develop a reporting structure for disease incidence that allows for interaction between local state vet, park staff and scientific services.	PM, Local state set, CSD	Protocol	Ongoing	
	To ensure blood, tissues and associated materials are banked whenever an animal is handled or captured for veterinary or research purposes.	PM, Local state vet, CSD	Samples	Ongoing	



Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
Active monitoring of buffalo for corridor disease following management action.	Test buffalos to ensure no disease outbreaks.	VWS, Local state vet, PM	Test results	Annually	
	Implement appropriate action if disease outbreak is detected.	VWS, Local state vet, PM	Protocol	As required	
Monitor vector and disease ecology.	Extend current monitoring programme.	UP-ZRU, PM, CSD	Reports	Year 1	
	Implement recommendations.	PM, CSD	SMF minutes	As required	
	Develop a quantitative risk assessment and associated disease mitigation actions for all animal introductions.	VWS, PM, CSD	Protocol	As required	
	Train and equip staff to conduct vector surveillance.	UP-ZRU, PM	Training register	Ongoing	

### 10.3 Responsible tourism programme

The purpose of the responsible tourism programme is to act as an enabler for conservation through enhancement of the financial sustainability of the park with optimal benefit to the local communities. Not all parks will attain financial sustainability on their own, and this is therefore viewed across all parks as a whole. Marakele National Park is not currently financially sustainable on its own, however is one of parks with substantial potential, based on its proximity to Gauteng for short break stays and its extensive activity and development potential.

In accordance with the provisions under NEM:PAA and the Public Finance Management Act, Act 1 of 1999, SANParks has the legal authority to engage in nature-based tourism in national parks for the purpose of conveying conservation, public enjoyment, constituency building and income generation.

The primary attraction of the park is its diverse landscapes, topography and scenery with the impressive Waterberg Mountains, and is a part of the UNESCO Waterberg Biosphere. It boasts a wide variety of plant and animal species, as well as over 400 bird species, most notable of which would be the largest breeding colony of Cape Vulture in Southern Africa and the Black eagle.

SANParks has adopted and aligned itself to the national Responsible Tourism Strategy. Responsible Tourism aims to:

- Maximise benefits to local communities,
- Minimise negative social or environmental impacts, and
- Help local people conserve fragile cultures, habitats and species.

Responsible Tourism thus encompasses all tenants of sustainable development, where sustainability is defined by the balance between the environment, the interests of local communities and financially sound business practice. In addition to this the legality and ethics relating to these three must all work together in order to ensure long-term viability of tourism in the park. Park management endeavours to meet the minimum standards as per SANS 1162.

The diversity of landscapes and natural features in the park, as well as the various contractual arrangements that apply in certain sections, offers scope for a diverse array of tourism products. Current products range from tented accommodation, camping sites and a guesthouse operated by SANParks to luxury accommodation packages operated on behalf of Marataba safari lodge. The average unit occupancy of existing facilities has been over 70% in recent years. Future plans envisage additional facilities, including a lodge.

Activity development is anticipated to become a major source of income generation for the park, whilst at the same time removing the visitors off the roads, which is seen to be a limitation to park development due to the limited road network and infrastructure. Currently there is a limited offering available in one or more of the sections of the park, which would include interpretive game drives and day walks, bird-watching, a multi-day 4x4 eco trail and bush meals. Potential opportunities have been identified in the product development framework and a number of these may be developed, based on the outcome of the relevant feasibility studies. The cultural / heritage potential of the park, yet to be established, would result in additional points of interest or interpretation potential.

The focus for responsible tourism planning and development for 2014 – 2024 is to promote park sustainability by increasing income generation through increase of visitor numbers due to expansion of the tourism products and services sold. This can only be achieved with extensive and effective tourism planning, and reviewing and adapting the nature of engagement with contractual partners in order to ensure effective branding and marketing of a clear and concise product offering, and enhancing the sales potential through joint initiatives.

Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 4 and sub-objectives 4.1 and 4.2 on page 15.

RESPONSIBLE TOURISM PROGRAMME					
<b>High level objective:</b> To develop and implement a tourism plan that promotes MNP and surrounds as a preferred destination by providing a range of appropriate and innovative nature-based products and offer a variety of recreational and learning experiences in accordance with responsible tourism principles.					
<b>Objective:</b> To develop a responsible tourism baseline for MNP.					
Sub-objectives	Action	Responsibility	Indicators	Timeframe	References
Set responsible tourism baseline to ensure implementation of minimum standards of responsible tourism.	Measure current minimum standards of responsible tourism baseline.	GM: Strategic tourism services, PM	Responsible Tourism Baseline	Year 1	SANS 1162
	Implement a template for annual review of performance against the baseline.	GM: Strategic tourism services	Report	Year 1	
	Annual measurement and review in line with the responsible tourism baseline.	PM	Report	Ongoing	
To measure and manage key tourism performance indicators.	Measure performance against tourism performance indicators.	PM	Statistics	Annually	
	Monitor to ensure improvement in tourism performance.	PM	Statistics	Ongoing	
To promote effective visitor communication whilst creating conservation learning opportunities.	Conduct an interpretation survey.	Mgr: Visitor management and interpretation, PM	Survey results	Year 1	
	Develop an interpretation plan.	Mgr: Visitor management and interpretation, PM	Interpretation Plan	Year 1	
	Implement the findings of the interpretation plan priorities, including signage to and from the park and all interpretation within the park.	PM	Signage and site interpretation	Year 3, Ongoing	
	Align Cultural Heritage Plan with development and interpretation priorities.	PM, GM: Strategic tourism services	CHM plan	Ongoing, or as required	



Sub-objectives	Action	Responsibility	Indicators	Timeframe	References
To promote effective visitor management and flow.	Conduct a visitor management survey in accordance to the visitor management policy.	Mgr: Visitor management and interpretation	Survey results	Year 1	
	Develop and implement visitor management plan.	Mgr: Visitor management and interpretation, PM	Visitor management plan	Year 1	
	Develop and communicate the code of conduct for activities.	Snr Mgr: Tourism standards, PM	Code of conduct	Year 1	
	Classify and number all roads in the park according to revised road grading.	PM	Document	Year 1	
<b>Objective:</b> To establish an appropriate and innovative Responsible Tourism (RT) product framework for implementation					
To create the product development framework and plan	Develop a comprehensive tourism product development framework and plan.	GM: Strategic tourism services, PM	Product development framework	Year 1	
	Develop, prioritise and implement potential tourism products.	GM: Strategic tourism services, PM	Product development plan	Year 2	
	Review and maintain the tourism product development framework.	GM: Strategic tourism services, PM	Product development framework	As required	
To develop and implement the sales and marketing plan	Develop Sales and Marketing plan (including branding).	GM: Sales and marketing, Mgr Regional sales and marketing, PM	Plan	Year 1	
	Formalise the Branding, promotions and booking processes for concessionaires.	PM, GM: Sales and marketing	Marketing and sale plan	Year 1	
	Conduct market research.	Mgr: Visitor management and interpretation, PM	Report	Year 1, review annually as required	
	Review and update marketing and sale plan	GM: Sales and marketing, PM	Marketing and sale plan	Ongoing	

## 10.4 Constituency building and benefit sharing

The People and Conservation (P&C) department in SANParks was established to build constituencies among people in support of the conservation of the natural and cultural heritage assets within national parks. This is achieved through strengthening relationships with neighbouring communities, management of cultural resource and indigenous knowledge management, environmental education, awareness and interpretation, social science research, and youth outreach.

### 10.4.1 Stakeholder relations programme

The purpose of this programme is to establish and maintain meaningful and beneficial relationships between the park and a wide range of stakeholders. The stakeholder programme is a key strategy to achieve the overall desired state of a park. The current key liaison structures and focus groups of the park include the Park forum, Waterberg biosphere reserve, district and local municipalities, FPA, SAPS, relevant government departments, NGO's, Honorary Rangers, tourism authorities, local businesses, academic institutions, conservancies, neighbouring communities and landowners, as well as tourists, and tour operators.

The park also links to the integrated development plans and strategic development frameworks of the relevant municipalities.

This programme links with objective 2 and sub-objectives 2.1 – 2.4 on page 14 as well as objective 5 and sub-objective 5.2 on page 15.

STAKEHOLDER RELATIONSHIP PROGRAMME					
<b>High level objective:</b> To build a strong constituency at multiple stakeholder levels in support of MNP and to enable human benefits in the context of local and regional ecological, economic and social sustainability.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To establish and maintain meaningful and beneficial relationships with park liaison structures and focus groups (e.g. Biosphere, municipalities, FPA, SAPS, relevant government departments, NGO's, HR's and tourism authorities).	Review the current park liaison structures and its' terms of reference.	PM	Terms of reference	Year 1	
	Coordinate and or attend the relevant meetings.	PM	Meeting minutes	Ongoing	
To maintain meaningful and beneficial relationships with contractual partners.	Review contracts.	PM	Agreements	As required	
	Participate in joint management meetings.	PM	Minutes	As required	
	Honour legal obligations by implementing decisions / recommendations taken at joint management meetings and implement.	PM	Minutes	Ongoing	



#### 10.4.2 Cultural heritage programme

The purpose of the Cultural Heritage Resources Programme is to manage and sustain the significance, authenticity and integrity of the tangible and intangible cultural heritage resources in the Marakele National Park.

The management of cultural heritage resources is subject to the National Heritage Resources Act (NHRA) No 25 of 1999 (Section 9.1) which states that all state supported bodies should maintain and conserve the heritage resources under their control in accordance with standards and procedures set out by the South African Heritage Resource Agency (SAHRA). Park management will thus at all times consult with SAHRA for guidance and any permits when necessary.

During 2001 - 2002 a Cultural heritage management plan for MNP and adjacent properties was compiled. As very little prior research had taken place the emphasis was on a heritage inventory, and 130 tangible heritage sites were identified. These sites include Stone Age surface scatters, historic cemeteries, historic farmsteads and outbuildings as well as Early and Late Iron Age sites. One of the most interesting is an Early Iron Age site that has metal working artefacts such as tuyères and slag pieces as well as decorated and undecorated ceramics. Numerous historical cemeteries as well as some intangible resources were also documented, including traditional and medicinal uses for plants. As part of the plan, evaluations were made on the significance, conservation status and utilisation options of all the heritage resources identified during the study. Detailed recommendations were also made on ways for the plan to be implemented.

Details of the rationale for these objectives are not included in this management plan, but are available in a more detailed lower level plan.

This programme links with objective 3 and sub-objectives 3.1 – 3.4 on page 15.

CULTURAL HERITAGE PROGRAMME					
<b>High level objective:</b> To adaptively manage, conserve and provide appropriate/relevant access to cultural heritage resources in Marakele National Park.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To review the cultural heritage management plan.	Identify new areas for survey of cultural resources.	PM, CH Manager	List of new identified cultural heritage sites	Year 2 to 5	
	Update inventory of cultural resources.	PM, CH Manager	Updated inventory	Year 2 to 5	
	Implement prioritised management recommendations.	PM, CH Manager	Reports	As required	
To identify sites of significance and develop site specific management plans.	Identify sites of significance.	PM, CH Manager	Updated inventory	Year 3 and ongoing	
	Develop site management plans.	PM, CH Manager	Site management plans	Year 3 and ongoing	
	Implement prioritised management recommendations.	PM, CH Manager	Report	As required	
To develop baseline awareness and interpretation tools relating to cultural heritage.	Incorporate cultural heritage component into environmental education and interpretation programmes.	PM, CH Manager	EEl programmes	Ongoing	
	Provide visitor access to selected sites.	PM, CH Manager	Accessible sites	Ongoing	

### 10.4.3 Environmental education and interpretation programme

The purpose of this programme is to build constituencies amongst people in support of SANParks' conservation endeavours by playing a significant, targeted and effective role in promoting a variety of educational opportunities and initiatives. SANParks will continue to focus attention on youth development and environmental education in order to build a conservation constituency for the future.

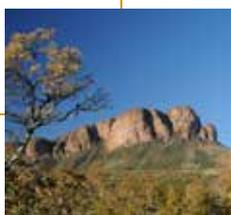
An integrated approach to environmental education and interpretation has been adopted in SANParks which includes a broader stakeholder base and develops relevant programmes addressing issues which impact negatively on the environment. The current beneficiaries of this program are school and youth groups. This approach is taking the form of organised, high quality and interactive activities which are categorised into:

- **Formal programmes:**  
These programmes will target the formal education sector and will be directed at school groups visiting the park, and through outreach programmes at communities adjacent to the park. This will form part of the beneficiation programmes.
- **Non-formal programmes:**  
The nonformal programmes are aimed at community oriented initiatives targeting specific stakeholders such as such as farmers, women and youth and the content will be conservation issue-specific.

Marakele National Park has a 128 bed overnight facility called the Thutong Environmental Learning Centre that serves as the base from where the majority of the programmes are being conducted.

This programme links with objective 5 and sub-objective 5.1 on page 15

ENVIRONMENTAL EDUCATION AND INTERPRETATION PROGRAMME					
<b>High level objective:</b> To build a strong constituency at multiple stakeholder levels in support of MNP and to enable human benefits in the context of local and regional ecological, economic and social sustainability.					
<b>Objective:</b> To build constituencies for MNP in support of the broader conservation awareness and ethic through enhancing visitor experiences and providing access and opportunities for visitor groups.					
Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
To plan, develop and present formal education programmes for organised school and other youth groups.	Develop an environmental education plan.	PM, Regional P&C Manager	EEl Plan for Marakele	Year 1&2	
	Organise and conduct applicable environmental education programmes including the special funded programmes.	PM, Regional P&C Manager	Applicable EEl programmes	Year 2 & ongoing	
	Organise and conduct outreach programmes in the area (e.g. Junior Rangers, Eco-Schools).	PM, Regional P&C	Programme reports	Ongoing	
To plan, develop and present non-formal education programmes for the broader stakeholder group of the park.	Facilitate community outreach programme initiatives targeting specific stakeholders on conservation issue-specific matters.	PM, Regional P&C	Year Planner Programme / event Reports	Ongoing	
	Coordinate scheduled environmental calendar day events with relevant stakeholder groups.	PM, Regional P&C	Year Planner Programme / event Reports	Ongoing	
	Diversify the use of the Thutong Environmental Learning Centre to include multiple user groups.	PM, Regional P&C	Operational plan for Thutong centre	Year 2	



#### 10.4.4 Local socio-economic development programme

The purpose of this programme is twofold. Firstly, the programme aims to provide and promote a range of benefits (of varying types, scales and tangibility) in accordance to national parks being viewed as national assets for all of society, not just a selected few. Secondly, through creating, facilitating and promoting benefits from the park for multiple stakeholders, the programme aims to develop a stronger societal support constituency at multiple stakeholder levels, both for the park itself and for the conservation cause in general.

The stakeholder beneficiation programme of MNP aims to provide and promote a range of benefits from MNP, for multiple stakeholders in line with the SANParks vision of connecting to society. In so doing, the programme aims to grow societal support for MNP and for the conservation cause in general. This will be done through supporting local economic development, economic empowerment and social development in communities neighbouring MNP and by contributing to the regional economy through the provision of a range of ecosystem services, permanent and temporary employment, business and capacity development opportunities. Benefits are viewed as outcomes that impact positively on human well-being, and the tradeoffs between costs and benefits are highlighted as a critical factor in achieving a positive constituency. Other important benefits locally and in the broader region include those associated with direct and indirect employment, local social and economic development initiatives, providing access and environmental education programmes. Benefits associated with basic ecosystem services are also included in this programme.

In addition to the park-based employment and small business opportunities, many people are employed, and additional business created privately through the various contractual agreements and Public Private Partnerships (PPP) between SANParks and partners. In accordance with SANParks policy, MNP takes a Broad-Based Black Economic Empowerment (BBBEE) approach to procurement with an emphasis on local beneficiation.

The BSP programme remains a major contributor to employment and capacity development in the region, through the creation of temporary jobs in the short term, and through investigating and encouraging longer-term exit strategies and entrepreneurial opportunities for local communities. The BSP programme also contributes to local skills development by supporting learnerships, implementing needs related training programmes and by forming the foundation for longer-term business opportunities.

This programme links with objective 5 and sub-objective 5.3 on page 15.

LOCAL SOCIO-ECONOMIC DEVELOPMENT PROGRAMME					
<b>High level objective:</b> To build a strong constituency at multiple stakeholder levels in support of MNP and to enable human benefits in the context of local and regional ecological, economic and social sustainability.					
<b>Objective:</b> To enable Marakele NP to contribute positively towards human livelihoods and wellbeing, focusing on both local and regional actors within the Marakele social ecological system.					
Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
To contribute positively towards human health and wellbeing through the long-term provision of ecosystem services at various levels.	Provide opportunities for sustainable extractive resource use (e.g. woody biomass from road verge clearing).	BSP, PM	Identified resources	Ongoing	
	Contribute to fresh water supply for downstream users.	BSP, PM	Scientific report	Ongoing	

Sub-objective	Actions	Responsibility	Indicators	Timeframe	References
To contribute positively towards human health and wellbeing through the long-term provision of ecosystem services at various levels.	Communicate the value of MNP in supplying ecosystem goods and services.	PM, CSD	Forum minutes, Interpretation material, environmental education material	Ongoing	
To provide social and economic benefits to local communities.	Provide preferential employment and business opportunities.	PM	Number of employees, BBBEE and SMME ratings	Ongoing	
	Promote preferential procurement from local business.	PM	BBBEE and SMME ratings	Ongoing	
	Provide appropriate capacity development through training and mentoring.	PM	Training register	Annual	

## 10.5 Effective park management

Effective park management programmes (including daily, weekly, monthly, quarterly and annual actions, reports and reviews) are geared to ensuring that the values and objectives of the park are maintained. These programmes put in place the systems and processes that enable proactive management of the park's objectives. This section outlines the management programmes, objectives and actions that assist in effective park management such as environmental management, financial management (e.g. procurement, reporting), budgeting, maintenance planning, and monitoring compliance.

### 10.5.1 Environmental management

The purpose of this programme is to minimise negative operational impacts on the park. The park will develop a system to manage their operational impacts. Such a system will provide the framework for the formulation and implementation of proper impact management that are required for all activities within the park. The purpose is to set clear guidelines for the management of environmental impacts and resource use. Proper management of development and operational activities can be achieved through appropriate planning tools and effective controls. A number of management tools are used to develop and manage the park in a manner consistent with relevant legislation and the SANParks policy framework.

Guiding principles:

- Minimise or eliminate negative environmental impacts and use of natural resources.
- Incorporate best practice environmental management into management practices.
- Comply with all relevant legislation.

Regarding new developments or upgrades the NEMA and NEM:PAA and regulations provide guidance regarding a number of activities that are either prohibited or require permits. Environmental impact assessments (EIAs) are viewed as an important management tool in identifying and managing impacts associated with a particular activity.

For certain activities, the NEMA requires that environmental authorisation be obtained from the competent authority, with the process and activities contained in the EIA Regulations. Where authorisation is not legally required, the minimum requirement will be the preparation of an Environmental Management Plan (EMP).

This programme links with objective 6 and sub-objective 6.4 on page 16.



ENVIRONMENTAL MANAGEMENT PROGRAMME					
High level objective: To develop and implement a comprehensive environmental management plan for MNP.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To ensure compliance with environmental legislation and best practice principles for all management activities in the park.	Make new legislation and regulations available to park staff and stakeholders.	PM	Information available	Ongoing	
	Review and develop best practice principles for environmental management.	PM	Document available	Ongoing	Zoning plan
	Conduct internal scoping of environmental impacts.	PM	Document available	Ongoing	Zoning plan
	Develop a comprehensive environmental management plan for the park.	PM	Plan available	Year 2,	
To implement an environmental management plan for the park.	Implement the EMP.	PM	Report	Year 2, ongoing	
	Ensure EMP is kept up to date.	PM	Report	Year 2, ongoing	
To implement best practice in terms of park activities.	Ensure that EIA's and HIA's are conducted where required.	PM	Document available	Ongoing	
	Ensure that SOP's or EMP's are developed to guide activities.	PM	Documents	Ongoing	

### 10.5.2 Risk management

The purpose of the programme is to update and maintain the park's risk profile and to manage risks accordingly. The management of business risk is regarded by SANParks as an integral part of management across all business operations. In line with corporate governance best practices and as per PFMA requirements, the board of SANParks has formalised the risk management processes by adopting a Corporate risk management framework. As its foundation, the risk management framework has an enterprise-wide risk identification and assessment process, based on thorough understanding of the environment in which the organisation operates and the strategic corporate objectives it intends to deliver on.

The main aim of the Corporate risk management framework is to instil a culture of corporate risk management and risk ownership being practised as the responsibility of all. This will provide SANParks with a comprehensive understanding of all identified risks and their potential impact on the achievement of objectives - thereby creating a good basis for the effective management of risks that are assessed as exceeding the risk appetite of the organisation. Acknowledging that all activities occurring at different levels within the organisation are exposed to various types of risks, the focus of SANParks' risk management framework is to shift the attention of the organisation towards a philosophy of optimising the balance between potential risks and the potential rewards that may emanate from both pro-active and conscious risk oriented actions. As such SANParks maintains a corporate risk profile of the identified key strategic risks the organisation faces. This profile is communicated to the board and is reviewed on an ongoing basis. The risk profile reflects among others the risks identified, how each is addressed and or monitored,

At individual park level the park manager is responsible for risk management. Being the link between the operational activities and its environment on the one hand, and the corporate support and management structure on the other, the park manager is many instances responsible for implementation of corporate initiatives, programmes, management plans and others that form part of the SANParks strategy to address or mitigate issues of risk. Examples are the implementation and roll-out of a safety and security plan, implementing and maintaining ecological monitoring systems to identify and assess the impact of environmental change, and complying with financial and cash-flow directives especially in economically depressed times.

Similarly, the park manager needs to ensure that emerging issues of risk, that can jeopardise the achievement of park (and SANParks' corporate) objectives, are timely identified and assessed in terms of possible severity. In consultation with the corporate support structure such issues are either assessed to be within the management capacity of the park and its existing resources, or the matter is elevated to a corporate level, where a specific risk management strategy is agreed upon, resources allocated where applicable, and a risk management or monitoring plan is implemented.

RISK MANAGEMENT PROGRAMME					
<b>High level objective:</b> To ensure that emerging issues of risk, that can jeopardise the achievement of MNP (and SANParks' corporate) objectives, are timely identified and assessed in terms of possible severity.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To establish and maintain effective, efficient and transparent systems of risk management.	Identify and assess risks for all business operations in the park.	PM	Risk register	Year 1	Legislation
	Develop a risk management plan including responses to address and prevent or mitigate issues of risk.	PM	Risk response plan	Year 1	Legislation
	Motivate for funding related to risk management where possible.	PM	Budget provision	Ongoing	
	Monitor effectiveness in terms of the risk response actions and improve as needed.	PM	BSC	Ongoing	

### 10.5.3 Finance and administration

The purpose of the programme is to ensure sound financial management and administration. SANParks budget policy follows the zero-based approach, which implies that every category must be critically assessed, evaluated and supported by an approved business plan. Once the budget has been determined per category, it needs to be compared to previous years and any variance in excess of budget guidelines must be motivated and explained. Annual budgets should be compiled in accordance to budget guidelines and instructions issued annually by SANParks corporate finance division.

Without incisive financial management of the park, there can be no realistic conservation effort. For the next planning cycle the park will ensure that all park operations and park projects are cost effective and financially sound. In addition particular attention will be given to developing a diverse income base and proactive financial networking to enable to the park to move towards being financially sustainable.

This programme links with objective 6 and sub-objective 6.2 on page 16.

FINANCE AND ADMINISTRATION PROGRAMME					
<b>High level objective:</b> To ensure sound financial management and administration in the park					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To attain effective financial management of the park.	Ensure less than 1% variance on cost of operations.	PM	Monthly financial statements	Ongoing	Financial management systems
	Ensure sound financial management of special projects; i.e. Working for Water; Working on Land; and others.	PM, BSP	Budget targets achieved	Ongoing	Project business plans
To grow revenue (Including alternative sources of revenue).	Identify new and align existing business opportunities within the MNP with the commercialisation programme of SANParks.	PM, Regional sales manager, RM	New income streams generated	Ongoing	Commercialisation strategy
To ensure financial accountability and align financial management systems.	Implement recommendations from annual audit report.	PM	Audit report	Ongoing	
	Ensure sound financial management according to procurement policy.	PM	Audit reports	Ongoing	
	Prepare accurate and realistic annual budgets.	PM	Annual budgets	Ongoing	Annual budgets
	Provide monthly financial reports by cost centre.	PM	Reports prepared	Ongoing	



Objectives	Actions	Responsibility	Indicators	Timeframe	References
To ensure financial accountability and align financial management systems.	Ensure effective asset and inventory management.	PM	Registers and records	Ongoing	

#### 10.5.4 Human capital development

The purpose of the human capital development programme is to ensure that the park is supported by an adequate human resources function in order to provide effective conservation, visitor and supporting services. SANParks has developed corporate human resources policies, guidelines and procedures to guide the park and its workforce in an effectively organised structure focusing its operations.

By adhering to these policies, guidelines and procedures the park will ensure that competent staff are appointed, and that current staff will be managed in an effective manner to keep them positive, proactive and committed to their tasks and responsibilities. This will also ensure that human resource management will comply with the relevant national legislation.

Park human resource capacity is not only defined by development of current staff, but requires the holistic management of the appropriate human capital. This includes the creation of a learning environment, developing leadership skills, sharing of knowledge and experiences as well as developing socially important lifestyle management programmes to help employees and their families deal with the negative effects of lifestyle diseases including HIV-AIDS.

Park administration must in a prescribed way report on deaths, new appointments, attendance registers, overtime claims, leave *etc.* A salary instruction is prepared from this and then sent to Head Office for processing and preparation of monthly salaries.

The park reviews training needs on an annual basis and submits this to SANParks Head Office for authorisation. Compilation of training needs starts off with the Individual development plans for each staff member and then finalised with performance appraisals. Management also encourages and analyses all staff to improve their levels of skills and qualifications in their relevant field of expertise on an ongoing basis.

The park has an establishment figure of 51 permanent posts. Each employee has set goals in terms of defined individual development plans. These development plans are based on the individual's training needs as agreed upon by the employee and his / her supervisor.

The use of the SETA's for funding the training will be explored both at head office and park level. A work place skills development plan is also produced for the park every year as required by legislation. This is coordinated at head office level, with input from the park and the employment equity forum. Most of the staff is involved and encouraged to make inputs into the plan.

This programme links with objective 6 and sub-objective 6.3 on page 16.

HUMAN CAPITAL DEVELOPMENT PROGRAMME					
<b>High level objective:</b> To ensure a harmonious and productive work environment with a developed and capacitated workforce in MNP.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To ensure the park attracts and retains the most suitable human capital.	Recruit staff according to corporate selection and recruitment policy.	PM	Eei plan	Year 1, ongoing	SANParks recruitment policy

Objectives	Actions	Responsibility	Indicators	Timeframe	References
To implement plans and skills development strategies to meet the strategic goals of the organisation.	Ensure that band C and higher have signed KPA's.	PM	KPA's available	Year 1, ongoing	
	Conduct skills audit.	Manager: Regional HR, PM	Plan available	Year 1, ongoing	
	Develop skills plan.	Manager: Regional HR, PM	Skills plan available	Year 1, ongoing	Training plan
	Arrange training interventions.	PM	% of budget for training	Year 1, ongoing	
	Develop human capital in the fields of conservation, P&C and ecotourism through the internship programme.	Manager: Regional HR, PM	Implementation of internship programme	Year 1, ongoing	
	Develop human capital in the field of ecotourism by introducing tourism experiences to FET and learners.	Manager: Regional HR, PM	Learner and FET groups addressed	Year 1, ongoing	
To implement plans and skills development strategies to meet the strategic goals of the organisation.	Enable staff to keep abreast of trends to positively influence the practises within the park.	PM		Year 1, ongoing	
To implement the Employment Equity Act.	Establish EE forum, design EE Plan, fill vacancies as per EE targets.	Manager: Regional HR, PM	Vacancies filled	Year 1, ongoing	EE report submitted
Implement workplace health care programmes which focus on preventative physical and mental health care.	Conduct Aids awareness workshops.	Manager: Regional HR, PM	Workshops, attendance	Year 1, ongoing	
	Ensure staff have access to ICAS.	PM	Facilities, reports	Year 1, ongoing	
	Invite professionals to the park to promote awareness on OHS and mental health issues.	PM	Attendance registers	Year 1, ongoing	
	Commemorate all events related to Wellness (e.g. Aids day, World blood donor day, days of activism on non-violence against Women).	Manager: Regional HR, PM	Attendance registers, invitations	Calendar days	
To implement and ensure compliance with all HR policies.	Ensure that staff are up to date with HR policies.	PM	Policies up to date	Year 1, ongoing	

### 10.5.5 Information Management

The purpose of the programme is to establish and then maintain a database of MNP information.

Management of the park requires that the appropriate data and information are collected, maintained and made readily accessible to staff responsible for all aspects of management. Such data are not only essential for formulating effective long-term management objectives, plans, programs and systems, but also for educating and informing residents associations, user groups, local authorities, provincial and national decision and policy makers, international organisations and aid / donor agencies.

The priorities for research will be developed through a priority needs analysis which will be articulated through the development of an overarching science plan. This plan will determine the suitable park indicators including TPC's to monitor, as well the varying mechanisms to collect the data (e.g. internal research, universities, commissioned studies, etc.).

This programme links with objective 6 and sub-objective 6.7 on page 16.



INFORMATION MANAGEMENT PROGRAMME					
High level objective: To implement best practices in the field of records and information management for MNP.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To develop and implement a records management and file plan for the park in accordance with SANParks policies and procedures.	Review the existing records management and file plans within the various areas of the MNP, and implement a single file plan.	PM	Draft records management and file plan for park	Year 1	(Act no. 43 of 1996 as amended)
	Implement the MNP records management and file plan	PM	Records and documents filed into plan	Year 1, ongoing	Corporate file plan and policy
	Ensure appropriate access to park files and records in accordance to corporate records management policy and guidelines.	PM	Access procedures recorded and implemented	Year 1, ongoing	Corporate file plan and records management policy

### 10.5.6 Infrastructure

The purpose of the programme is to provide for upgrading and maintenance (day to day and scheduled) of existing infrastructure. Infrastructure in the park consists of facilities in support of conservation (such as management roads and tracks, office facilities, staff housing, fences, bulk services, workshops and stores) and tourism (such as tourist roads and tracks, walking trails, office facilities, staff housing, bulk services, public viewing points bird hides, picnic sites and tourist accommodation). These facilities enable staff to execute the respective duties towards achieving the Parks objectives and providing a tourism product at the best possible standard.

The product development strategy, applicable legislation and limitations of the zoning shall guide new infrastructure development such that:

- Infrastructure must be developed and maintained in accordance with all applicable legislation, policies, standards and codes
- Maintenance must be undertaken in a cost effective manner
- New developments and infrastructure maintenance must:
  - As far as practicable incorporate good, cost effective environmental design;
  - As far as practicable use low maintenance designs and material;
  - As far as possible utilise existing roads and tracks and disturbed sites and to limit green field developments.

This programme links with objective 6 and sub-objective 6.1 on page 16.

INFRASTRUCTURE PROGRAMME					
<b>High level objective:</b> To maintain and upgrade existing infrastructure and develop new infrastructure in support of conservation and tourism in MNP.					
Objectives	Actions	Responsibility	Indicators	Timeframe	References
To ensure that infrastructure in the park is maintained to a desired state.	Compile an inventory of all infrastructure in the park, assess construction types and determine extent of maintenance needed.	PM	Inventory	Year 1	
	Document the scope of maintenance needs in accordance with relevant specifications.	PM	Reports	Year 1	Building and Electrical regulations
	Prioritise maintenance needs and develop a 10-year maintenance plan for the park.	PM	Maintenance plan and schedules	Year 1, ongoing	
	Implement the 10-year maintenance plan according to the annual maintenance schedules.	PM	Monthly and annual reports	Ongoing	
	Assess progress, revise annual maintenance schedules and evaluate standard of work.	PM	Annual report	Ongoing	
To ensure that all mechanical and electrical equipment is maintained to a desirable state.	Compile an inventory of all mechanical and electrical equipment in the park, determine maintenance schedules of each and list service providers.	PM	Inventory	Year 1	
	Develop an annual maintenance schedule for all equipment.	PM	Schedule	Ongoing	OHS Act, Electrical regulations
	Implement the annual maintenance schedule.	PM	Schedule	Ongoing	
To regulate all unwanted structures and facilities.	Identify and list all such structures etc.	PM	List	Year 1	
	To regulate or remove relevant structures.	PM	Reports, Notices	Year 2	

### 10.5.7 Safety and security programme

The purpose of this programme is to provide a safe and secure environment for both our visitors and SANParks employees, and to ensure that the area integrity of the natural and cultural resources of the MNP is maintained in a sustainable manner. Most potential threats are linked to illegal activities in and around the park, including trespassing, poaching, theft and illegal resource use. Daily park activities, implemented to mitigate many of these illegal activities form an important part of this plan. Issues around visitor and staff safety and security, environmental crime, cash in storage and transit, access control and infrastructure security still pose challenges. Dangers are prioritised in terms of real threat to individual visitors and staff, as well as threat to the SANParks brand. Perceptions are managed in order to protect the brand and reputation of SANParks and South African Tourism Industry at large. Directly related to this, the plan aims to secure the South African National Parks tourism income stream for Marakele National Park, as well as securing its economic role within the Waterberg Biosphere Reserve region and national tourism economy.

The implementation of the Environmental management inspector programme will assist with the implementation of law enforcement and compliance in terms of environmental legislation while the State of Area Integrity Audit (SoAIM), assessed per ranger section, highlights progress in terms of the safety and security Plan implementation and areas requiring additional attention. The safety and security strategy and operational plan will be continuously evaluated and updated from monitoring and evaluation feedback. Indicators would include measures such as number of poaching incidents, incident records and tourism perception indicators such as positive and negative media measures.

The programmes developed and stated in the Strategic safety and security plan are guided by various Acts including the following: National Environmental Management Act 107 of 1998, NEM: Protected Areas Act 57 of 2004, NEM: Biodiversity Act 10 of 2004, Criminal Procedure Act 51 of 1977, Occupational Health and Safety Act 85 of 1993, Basic Conditions of Employment Act 3 of 1997 and National Veld and Forest Fire Act 101 of 1998.



This programme links with objective 6 and sub-objective 6.5 on page 16.

SAFETY AND SECURITY PROGRAMME					
High level objective: To provide a safe and secure environment for both our visitors and SANParks employees, and to ensure that the area integrity of the natural and cultural resources is maintained in a sustainable manner in MNP.					
Objectives	Actions	Responsibility	Indicators	Timeframe	Reference
Achieve and maintain high standards amongst all staff in the park, focusing on training equipment, motivation and discipline.	Review safety and security plans.	PM	Reviewed plans (immediate action drills; Standard operating procedures; Evacuation plans; Incident management guidelines)	Ongoing	Immediate
	Develop and implement a radio communication system (hardware and procedure) for proper communication.	PM	Communication system in place.	Year 2	ICASA regulations
	Train staff in area integrity management, conservation guardianship, and readiness to react to emergency situations.	PM	Training records	Ongoing	Strategic safety and security plan
	Assess readiness of staff.	PM	Audits, drill procedures	Ongoing	IDP's
Improve overall park safety through interactions with external role players.	Align the safety and security activities to accommodate collaborative operations with internal and external partners, e.g. Non-Government Organisation Safety and Security working group, SAPS, Criminal Investigation Services.	PM	Safety and Security plans	Year 2 and ongoing	
	Conduct regular patrols to ensure that area integrity is maintained.	PM	Safety and security plan, incident reports, Cyber tracker information	Ongoing	
	To actively participate in various external safety and security related forums.	PM	Minutes	Ongoing	Inter agency and bi-lateral agreements

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## Section 11: Costing

In line with the legal requirements, the programmes of implementation to achieve the desired state have been costed.

It is important to note that the owners of the Marataba section are funding conservation operations to the amount of R16,704,128. The budget that SANParks commits to implementing this plan is discussed below.

### Guiding principles

- Responsibly manage the allocation of budget, revenue raising activities and expenditure;
- Ensure solid financial management support the achievement of the objectives of this plan;
- Compliance to the Public Finance Management Act as well as SANParks financial policy and procedures.

Using the zero based budgeting approach a funding estimate was derived based upon the activities in this management plan. When estimating the costing the following items were considered:

- Those costs and associated resources which could be allocated to specific activities and which were of a recurring nature;
- Those costs and associated resources which could be allocated to specific activities but which were of a once-off nature;
- Unallocated fixed costs (water, electricity, phones, bank fees etc);
- Maintenance of infrastructure;
- Provision for replacement of minor assets, (furniture, electronic equipment, vehicles, etc.).

### Recurring costs

The annual directly allocated cost (includes staff, travel and supplies and tools) is estimated at R 22, 040, 739 for 2014 / 2015. These ongoing costs are split according to the programmes listed in Table 14.

Table 14. The estimated annual operational costs for MNP for 2014 / 2015.

Programme	Amount	Percentage of total
Safety and security	R 5, 113, 336	23.2%
Tourism operations	R 3, 865, 906	17.5%
Rehabilitation & degradation	R 3, 044, 112	13.8%
Invasive alien species	R 2, 093, 204	9.5%
Fire	R 1, 967, 638	8.9%
Carnivore	R 1, 475, 654	6.7%
Infrastructure	R 1, 454, 342	6.6%
Species of special concern	R 616, 889	2.8%
Environmental education	R 605, 504	2.7%
Financial management & administration	R 343, 181	1.6%
Herbivory	R 306, 660	1.4%
Fresh water ecosystems	R 185, 030	0.8%
Stakeholder relationship management	R 182, 241	0.8%
Human capital development	R 168, 254	0.8%
Environmental management	R 121, 212	0.5%

Ecosystem services	R 78, 337	0.4%
Disease management	R 77, 298	0.4%
Local socio-economic development	R 66, 337	0.3%
Information management	R 66, 177	0.3%
Cultural heritage resource management	R 58, 173	0.3%
Co-operative bioregional	R 55, 502	0.3%
Risk management	R 48, 404	0.2%
Park consolidation	R47, 348	0.2%
<b>Total</b>	<b>R 22, 040, 739</b>	<b>100%</b>

### Once off costs

In addition to the above there is a further once-off cost estimated at R 135, 775, 000 over the next five years (see Table 15).

Table 15. The estimated once off cost of the various programmes in MNP.

Programme	Estimated budget
Park consolidation	R 100, 000, 000
Infrastructure	R 53, 775, 000
<b>Total</b>	<b>R 135, 775, 000</b>

### Unallocated fixed costs

The unallocated fixed costs for 2014 / 2015 are R 2, 150, 424.

### Maintenance

A breakdown of the infrastructure, both existing and new with their replacement value and an estimate of the ongoing annual maintenance for 2014 / 2015 is provided in Table 16. The projected maintenance for existing infrastructure is estimated at R2, 521, 382 in 2014 / 2015. If the new planned infrastructure is developed it will add a further R2, 530, 041 (at 2014 / 2015 rates) onto this annual maintenance budget, increasing it to R5, 051, 423. The maintenance requirement was calculated as a percentage of the replacement value.

Table 16. The estimated replacement value of the existing infrastructure and any new infrastructure required with the estimated annual maintenance budget for the existing and new infrastructure in MNP.

	Estimated replacement value			Estimated maintenance		
	Existing (R)	New (R)	Total (R)	Existing (R)	New (R)	Total (R)
Buildings	5, 724, 300	35, 200, 000	40, 924, 300	82, 430	535, 720	618, 150
Roads & tracks	35, 450, 000	14, 025, 000	49, 475, 000	1, 047, 750	1, 384, 500	2, 432, 250
Trails	380, 000	0	380, 000	7, 600	0	7, 600
Fencing	11, 210, 000	3, 800, 000	15, 010, 000	224, 200	76, 000	300, 200
Water system	765, 000	400, 000	1, 165, 000	15, 300	8, 000	23, 300
Electricity	1, 494, 600	0	1, 494, 600	3, 900	0	3, 900
Sewerage	231, 000	50, 000	281, 000	14, 430	3, 500	17, 930
Other	30, 000	300, 000	330, 000	600	30, 000	30, 600
<b>Total</b>	<b>55, 284, 900</b>	<b>53, 775, 000</b>	<b>109, 059, 900</b>	<b>1, 396, 210</b>	<b>2, 037, 720</b>	<b>3, 433, 930</b>

### Replacement of minor assets

With many of the vehicles being leased along with the computers, this will significantly reduce this requirement as these items are expensive and require frequent replacement. To calculate the replacement provision, the cost price of the assets was divided by the estimated useful life. SANParks applies certain standards in this regard. The estimated asset value for various categories based on their original purchase price and the estimated budget required annually to make provision for their replacement. Management should make provision for about R 596, 212 in 2014 / 2015, this figure is presented in Table 17.



Table 17. The total value based on the original purchase price of various categories of minor assets for MNP.

Asset type	Asset value	Provision for replacement
White goods	R 162, 774	R 23, 253
Vehicles and trailers	R 733, 782	R 104, 826
Air conditioners	R 14, 929	R 2, 133
Computer equipment	R 199, 460	R 66, 487
Firearms	R 79, 043	R 7, 904
Furniture	R 612, 548	R 87, 507
Mechanical equipment	R 2, 022, 755	R 288, 965
Office equipment	R 105, 959	R 15, 137
<b>Total</b>	<b>R 3, 931, 249</b>	<b>R 596, 212</b>

### Summary

It is estimated that the park will require an annual operating budget of R 26, 183, 585 for 2014 / 2015, increasing to R 33, 056, 173 in 2018 / 2019. In addition to this amount the park will also require R 135, 775, 000 over the next five years for once off costs. A summary is presented in Table 18.

Table 18. A summary of the annual and once off costs that is required to fully implement the activities in the MNP management plan over the next five years.

	2014 / 2015	2015 / 2016	2016 / 2017	2017 / 2018	2018 / 2019
<b>Annual operational costs</b>	<b>R 26, 183, 585</b>	<b>R 27, 754, 600</b>	<b>R 29, 419, 876</b>	<b>R 31, 185, 069</b>	<b>R 33, 056, 173</b>
<b>Once off costs over 5 years</b>	<b>R 135, 775, 000</b>				
<b>SANParks budget for MNP</b>	<b>R 25, 166, 855</b>	<b>R 26, 676, 866</b>	<b>R 28, 277, 478</b>	<b>R 29, 974, 127</b>	<b>R 31, 772, 575</b>
<b>Deficit</b>	<b>R 1, 016, 730</b>				

### The deficit can be broken down as follows:

- An amount of R 855, 730 is needed to cover the current maintenance shortfall;
  - R 94, 130 is required for buildings;
  - R 581, 896 is required for roads and trails;
  - R 179, 703 is required for fences;
- An amount of R 161, 000 is needed to supplement the allocated funds for subsidised vehicles.

### Implications:

Should the park be unsuccessful in securing the deficit amount of R 1, 016, 730 then the following programmes will be affected;

- Infrastructure: The park will not be able to maintain the current infrastructure to a high standard.
- Various programmes: Park staff will have to prioritise their kilometre allocation to the various programmes.

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## Appendix 1: Declarations

**Government Notice 248 / Government Gazette 15483 of 11 February 1994 declared the following land to be the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Farm Kransberg 593, in the KQ registration division, Transvaal, in extent 15, 742.9812 hectare;  
Farm Zwarthoek 276, in the KQ registration division, Transvaal, in extent 2, 331.5443 hectare;  
Portion 4 of the farm Elandshoek 263, in the KQ registration division, Transvaal, in extent 2, 026.7031 hectare;  
Farm Waterhoutboom 264, in the KQ registration division, Transvaal, in extent 5, 711.7851 hectare;  
Portion 2 of the farm Apiesrivierpoort 272, in the KQ registration division, Transvaal, in extent 552.0407 hectare;  
Portion 2 of the farm Vygeboomfontein 239, in the KQ registration division, Transvaal, in extent 842.2167 hectare;  
Remaining extent of portion 3 of the farm Buffelspoort 280, in the KQ registration division, Transvaal, in extent 2, 389.8034 hectare;  
Remaining extent of the farm Apiesrivierpoort 272, in the KQ registration division, Transvaal, in extent 551.0664 hectare;  
Remaining extent of the farm Blespaardspruit 275, in the KQ registration division, Transvaal, in extent 711.4923 hectare;  
Portion 5 of the farm Blespaardspruit 275, in the KQ registration division, Transvaal, in extent 50.8414 hectare;  
Portion 1 of the farm Tweeloopfontein 235, in the KQ registration division, Transvaal, in extent 505.7162 hectare;  
A portion of the remaining extent of portion 1 of the farm Duikerspan 136, in the KQ registration division, Transvaal, in extent 412 hectare;  
A portion of portion 5 of the farm Duikerspan 136, in the KQ registration division, Transvaal, in extent 355 hectare;  
Portion 1 of the farm Apiesrivierpoort 272, in the KQ registration division, Transvaal, in extent 276.0222 hectare;  
Portion 4 of the farm Geelhoutbosch 269, in the KQ registration division, Transvaal, in extent 678.5004 hectare;  
Portion 6 of the farm Geelhoutbosch 269, in the KQ registration division, Transvaal, in extent 113.0834 hectare;  
Portion 7 of the farm Geelhoutbosch 269, in the KQ registration division, Transvaal, in extent 226.1688 hectare;

**Government Notice 857 / Government Gazette 15 655 of 29 April 1994 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Portion 3 of the farm Groothoek 278, in the KQ registration division, Transvaal, in extent 624.0511 hectare;  
Portion 9 of the farm Duikerspan 136, in the KQ registration division, Transvaal, in extent 92.4852 hectare;  
Portion 1 of the farm Marakeli 437, in the KQ registration division, Transvaal, in extent 1, 026.5500 hectare;  
Portion 5 of the farm Geelhoutbosch 269, in the KQ registration division, Transvaal, in extent 113.0834 hectare;  
Remaining extent of the farm Zandfontein 315, in the KQ registration division, Transvaal, in extent 666.1830 hectare;

**Government Notice 1 037 / Government Gazette 16 527 of 14 July 1995 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Portion 4 of the farm Vygeboomfontein 239, in the KQ registration division, Transvaal, in extent 534.4720 hectare;

**Government Notice 1 372 / Government Gazette 17 372 of 23 August 1996 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Portion 3 of the farm Vygeboomfontein 239, in the KQ registration division, Transvaal, in extent 108.0759 hectare, held under Title Deed number T66756/1993;

Remaining extent of portion 1 of the farm Geelhoutbosch 269, in the KQ registration division, Transvaal, in extent 113.0834 hectare, held under Title Deed number T20087/1994 Diagram deed number T7662/1992;

Portion 3 of the farm Apiesrivierpoort 272, in the KQ registration division, Transvaal, in extent 298.5883 hectare, held under Title Deed number T3595/1946;

**Government Notice 408 / Government Gazette 22 335 of 29 May 2001 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Remainder [or portion 8?] of the farm Hoopdal 96, in the KQ registration division, Transvaal, in extent 67.9290 hectare, held under Title Deed number T21440/2001;

Portion 5 of the farm Hoopdal 96, in the KQ registration division, Transvaal, in extent 421.3876 hectare, held under Title Deed number T21441/2001;

Portion 6 of the farm Hoopdal 96, in the KQ registration division, Transvaal, in extent 42.8266 hectare, held under Title Deed number T21441/2001;

Portion 7 of the farm Hoopdal 96, in the KQ registration division, Transvaal, in extent 192.2528 hectare, held under Title Deed number T21441/2001;

Portion 11 of the farm Hoopdal 96, in the KQ registration division, Transvaal, in extent 222.6003 hectare, held under Title Deed number T21440/2001;

Portion 19 of the farm Diamant 228, in the KQ registration division, Transvaal, in extent 1, 284.7980 hectare, held under Title Deed number T96214/1999;

Portion 2 of the farm Klipdrift 231, in the KQ registration division, Transvaal, in extent 873.6626 hectare, held under Title Deed number T4635/2001;

Portion 3 of the farm Klipdrift 231, in the KQ registration division, Transvaal, in extent 873.6626 hectare, held under Title Deed number T96214/1999;

Portion 4 of the farm Klipdrift 231, in the KQ registration division, Transvaal, in extent 873.6626 hectare, held under Title Deed number T96214/1999;

Portion 5 of the farm Klipdrift 231, in the KQ registration division, Transvaal, in extent 873.6626 hectare, held under Title Deed number T96214/1999;

Remainder of the farm Waterval 267, in the KQ registration division, Transvaal, in extent 1, 708.0761 hectare, held under Title Deed number T3295/2001;

Farm Retseh 594, in the KQ registration division, Transvaal, in extent 878.9510 hectare, held under Title Deed number T4806/2001;

**Government Notice 672 / Government Gazette 22 492 of 27 July 2001 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Remainder of the farm Buffelspoort 265, in the KQ registration division, Transvaal, in extent 1, 997.5010 hectare, held under Title Deed number T30444/2001;

**Government Notice 1 493 / Government Gazette 25 562 of 17 October 2003 declared the following land to be part the Marakele National Park in terms of the National Parks Act (Act 57 of 1976)**

Portion 10 of the farm Groothoek 278 KQ, in the Limpopo province, in extent 45.8005 hectare, held under Title Deed number T68773/2000;

Portion 3 of the farm Geelhoutbosch 269 KQ, in the Limpopo province, in extent 678.5004 hectare, held under Title Deed number T46677/2001;

Portion 10 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 124.9725 hectare, held under Title Deed number T108909/1997;

Portion 4 of the farm Blespaardspruit 275 KQ, in the Limpopo province, in extent 146.1026 hectare, held under Title Deed number T33762/1997;

Portion 11 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 287.7296 hectare, held under Title Deed number T87487/1997;

Portion 9 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 139.0113 hectare, held under Title Deed number T54595/1997;

Portion 3 of the farm Zandfontein 315 KQ, in the Limpopo province, in extent 156.1240 hectare, held under Title Deed number T78232/1998;

Farm Kameeldraai 595 KQ, in the Limpopo province, in extent 2, 087.5117 hectare, held under Title Deed number T8989/2001;

Portion 9 of the farm Geelhoutbosch 269 KQ, in the Limpopo province, in extent 203.5494 hectare, held under Title Deed number T46677/2001;



Portion 2 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 137.7624 hectare, held under Title Deed number T71313/2001;  
Portion 8 of the farm Zandfontein 315 KQ, in the Limpopo province, in extent 487.1674 hectare, held under Title Deed number T85428/2001;  
Portion 6 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 0.4409 hectare, held under Title Deed number T122255/2001;  
Remainder of the farm Zandspruit 138 KQ, in the Limpopo province, in extent 791.2958 hectare, held under Title Deed number T147051/2001;  
Portion 4 of the farm Marakeli 437 KQ, in the Limpopo province, in extent 49.3317 hectare, held under Title Deed number T6630/2002;  
Farm Blespaardspruit 640 KQ, in the Limpopo province, in extent 96.6567 hectare, held under Title Deed number T54883/2002;  
Portion 2 of the farm Zandfontein 315 KQ, in the Limpopo province, in extent 151.1948 hectare, held under Title Deed number T152250/2002;  
Portion 4 of the farm Zandfontein 315 KQ, in the Limpopo province, in extent 146.9460 hectare, held under Title Deed number T152250/2002;  
Portion 7 of the farm Zandfontein 315 KQ, in the Limpopo province, in extent 211.0640 hectare, held under Title Deed number T152250/2002;  
Farm Jagtersrus 418 KQ, in the Limpopo province, in extent 1, 000.0000 hectare, held under Title Deed number T74496/1991;  
Portion 1 of the farm Waterval 267 KQ, in the Limpopo province, in extent 1, 713.0640 hectare, held under Title Deed number T74496/1991;

**Government Notice 1 058 / Government Gazette 31 461 of 03 October 2008 declared the following land to be part the Marakele National Park in terms of the National Environmental Management: Protected Areas Act (Act 57 of 2003)**

Portion 3 of the farm Blesbaardspruit 275 KQ, in the Limpopo province, in extent 291.8616 hectare, held under Title Deed number T94985/2006;  
Portion 3 of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 297.5279 hectare, held under Title Deed number T94986/2006;  
Remaining extent of the farm Kareehoek 274 KQ, in the Limpopo province, in extent 297.5279 hectare, held under Title Deed number T141653/2006;  
Portion 27 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 8.4975 hectare, held under Title Deed number T57698/2006;  
Portion 28 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 8.4975 hectare, held under Title Deed number T57698/2006;  
Portion 29 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 43.5636 hectare, held under Title Deed number T57699/2006;  
Portion 3 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 49.5928 hectare, held under Title Deed number T57699/2006;  
Portion 6 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 81.7899 hectare, held under Title Deed number T121763/2001;  
Portion 15 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 108.1972 hectare, held under Title Deed number T84228/2001;  
Portion 18 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 8, 565.0000 square meters, held under Title Deed number T84228/2001;  
Portion 20 of the farm Hartbeestfontein 281 KQ, in the Limpopo province, in extent 604.7828 hectare, held under Title Deed number T3606/2003;  
Portion 10 of the farm Groothoek 278 KQ, in the Limpopo province, in extent 45.8005 hectare, held under Title Deed number T68773/2000;  
Portion 7 of the farm Buffelspoort 280, in the KQ registration division, Transvaal, in extent 942.7279 hectare, held under Title Deed number T78654/2006;  
Portion 1 of the farm Buffelspoort 280, in the KQ registration division, Transvaal, in extent 12.5768 hectare, held under Title Deed number T78649//2006;

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## Appendix 2: Zonation

### Introduction

The primary objective of a park zoning plan is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives. A zoning plan plays an important role in minimising conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas. A zoning plan is also a legislated requirement of the Protected Areas Act, which stipulates that the management plan, which is to be approved by the Minister, must contain "a zoning of the area indicating what activities may take place in different sections of the area and the conservation objectives of those sections".

The zoning of MNP was based on an analysis and mapping of the sensitivity and value of the park's biophysical, heritage and scenic resources; an assessment of the regional context; and an assessment of the park's current and planned infrastructure and tourist routes / products; all interpreted in the context of park objectives. This was undertaken in an iterative and consultative process. This document sets out the rationale for use zones, describes the zones, and provides management guidelines for each of the zones.

### Rationale for use zones

The prime function of a protected area is to conserve biodiversity. Other functions such as the need to ensure that visitors have access to the park, and that adjoining communities and local economies derive benefits from the area, potentially conflict with and compromise this primary function. Use zoning is the primary tool to ensure that visitors can have a wide range of quality experiences without comprising the integrity of the environment.

Further, people visit a park with differing expectations and recreational objectives. Some people are visiting a park purely to see wildlife as well as natural landscapes. Others wish to experience intangible attributes such as solitude, remoteness, wildness, and serenity (which can be grouped as wilderness qualities), while some visit to engage in a range of nature-based recreational activities, or to socialise in the rest camp. Different people have different accommodation requirements ranging from extreme roughing it up to luxury catered accommodation. There is often conflict between the requirements different users and different activities. Appropriate use zoning serves to minimising conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas. Use zones serve to ensure that high intensity facilities and activities are placed in areas that are robust enough to tolerate intensive use, as well as to protect more sensitive areas of the park from over-utilisation.

### The zoning system

SANParks has adopted a dual zoning system for its parks. The system comprises:

- a) Visitor use zones covering the entire park, and
- b) Special management overlays which designate specific areas of a park that require special management interventions.

The zoning of MNP is shown in Appendix 6, Map 4, and summarised in Table 19.

### The zoning process and its linkage to the underlying environmental analysis

The park use zonation plan is a lean version of the Conservation Development Framework (CDF). The park use zonation is based on the same biodiversity and landscape analyses undertaken for a CDF. However, certain elements underlying the CDF may not be fully incorporated into the park use

zonation plan will usually not incorporate elements such as a full tourism market analysis. Typically the park use zonation approach is applied in smaller and developing parks such as Marakele National Park, though the long term objective is to have a full CDF for all parks.

The zoning for Marakele National Park was underpinned by an analysis and mapping of the sensitivity and value of a park's biophysical, heritage and scenic resources. This analysis examined the biophysical attributes of the park including habitat value (in particular the contribution to national conservation objectives), special habitat value (the value of the area to rare and endangered species), hydrological sensitivity (areas vulnerable to disruption of hydrological processes such as floodplains and wetlands), topographic sensitivity (steep slopes), soil sensitivity (soils that are vulnerable to erosion) and vegetation vulnerability to physical disturbance. In addition, the heritage value and sensitivity of sites was examined (including archaeological, historical and current cultural aspects). The visual sensitivity of the landscape was also examined in order to identify sites where infrastructure development could have a strong aesthetic impact. This analysis was used to inform the appropriate use of different areas of the park, as well as to help define the boundaries between zones. The zoning was also informed by the park's current infrastructure and tourism products, as well as the regional context (especially linkages to neighbouring areas and impacts from activities outside the park). Planned infrastructure and tourism products were also accommodated where these were compatible with the environmental informants. These were all interpreted in the context of the park objectives. This was undertaken in an iterative and consultative process.

Figure 5 shows the relationship between the use zoning and the summary products of the biodiversity and landscape sensitivity-value analysis. This indicates that the zoning in this park was highly successful in including most of the environmentally sensitive and valuable areas into zones that are strongly orientated towards resource conservation rather than tourist use. Table 20 summarises the percentage area of the park covered by each zone, as well as the percentage of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value analysis) that are in each zone. Almost 85% of the park is covered by zones that are strongly conservation orientated in terms of their objectives (*i.e.* Remote and Primitive), with just over 35% being in the most strongly conservation orientated zone (Remote). This reflects the "wilderness" orientated focus of the park's objectives very well. The correlation between the spatial distribution of environmentally sensitive habitats and the conservation orientated zones is strong in this park, with the Remote zone containing over 71% of the highly sensitive habitats even though it covers less than a third of the surface area. Conversely, the tourist orientated low intensity leisure zone covers approximately 15% of the park yet contains about 2% of the most sensitive habitats. Encouragingly, nearly 98% of the park's most sensitive habitats are contained in conservation orientated zones.

Table 19: Summary of use zone characteristics in MNP.

Zone	General characteristics	Experiential qualities	Interaction between users	Type of access	Type of activities	Type of facilities	Limits of acceptable change: Biophysical	Limits of acceptable change: Aesthetics and recreational
REMOTE	Retains an intrinsically wild appearance and character, or capable of being restored to such.	Solitude and awe inspiring natural characteristics	None to Very Low	Strictly controlled access (numbers and frequency), non-motorised	Hiking, traditional mountain climbing, potentially paragliding, all subject to safety in a big 5 game area	Established footpaths where erosion may be a problem. Essentially undeveloped and roadless	Deviation from a natural / pristine state should be minimized, and existing impacts should be reduced	Activities which impact on the intrinsically wild appearance and character of the area will not be tolerated.
PRIMITIVE	Generally retains wilderness qualities, but with basic self-catering facilities. Access is controlled. Provides access to the Remote Zone, and can serve as a buffer.	Experience wilderness qualities	Low	Controlled access (numbers and frequency of visitors). Usually 4x4 vehicles. Possibly unaccompanied foot access, subject to safety in a big 5 game area	Game viewing, 4x4 drives; possibly walking or hiking, subject to safety in a big 5 game area	Small, basic, self-catering; distributed to avoid contact between users; or limited concessions with limited numbers; 4x4 trails; hiking trails	Deviation from a natural / pristine state should be small and limited to restricted impact footprints. Existing impacts should be reduced.	Activities which impact on the intrinsically wild appearance and character of the area should be restricted, and impacts limited to the site of the facility.
LOW INTENSITY LEISURE	The underlying characteristic of this zone is motorised self-drive access with basic self-catering facilities. The numbers of visitors are higher than in the Remote and Primitive Zones. Camps are without modern facilities such as shops and restaurants.	Comfortable facilities in a relatively natural environment.	Moderate to high	Motorised self-drive access.	Motorised self-drive game viewing, picnicking; possibly walking, cycling, rock climbing, hiking, adventure activities, subject to safety in a big 5 game area	Facilities limited to basic self-catering picnic sites; ablution facilities; view sites; information / education centres; parking areas. Small to medium self-catering (incl. camping) rest camps with ablution facilities, but not shops or restaurants. Low spec access roads to provide a more wild experience.	Deviation from a natural / pristine state should be minimized and limited to restricted impact footprints as far as possible. However, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable	Although it is inevitable that activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience
HIGH INTENSITY LEISURE	The main characteristic is that of a high density tourist development node, with commercial amenities, where more concentrated human activities are allowed.	Comfortable and sophisticated facilities while retaining a natural ambiance	High	Accessible by motorised transport (car / bus) on high volume transport routes, including delivery vehicles.	As above. Additional sophisticated infrastructure. Larger, organised adventure activities. Dining at restaurants.	High density tourist camps with commercial amenities. Footpaths, transport systems, accommodation, restaurants, curio and refreshment stalls; information / education centres. High volume roads.	The greatest level of deviation from a natural / pristine state is allowed in this zone, and it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable.	Although it is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience appropriate for a national park.



Table 20: Summary of the percentage area of MNP covered by each zone, as well as the percentage of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value analysis) that are in each zone.

Zone emphasis	Use Zone	Zone as a % of park area	% of highly sensitive areas that are in a zone
Conservation orientated	Remote	35.14	71.23
	Primitive	49.49	26.69
Tourism orientated	LIL	15.33	2.07
	HIL	0.03	0.00

### Remote zone

#### Characteristics

This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such, and which is undeveloped and roadless. There are no permanent improvements or any form of human habitation. It provides outstanding opportunities for solitude with awe inspiring natural characteristics. If present at all, sight and sound of human habitation and activities are barely discernable and at far distance. The zone also serves to protect sensitive environments from development impacts and tourism pressure.

#### Visitor activities and experience

*Activities:* Access is strictly controlled and non-motorised. Groups must be small, and can either be accompanied by a guide or unaccompanied. Several groups may be in area at the same time, but if necessary densities and routes should be defined so that no signs can be seen or heard between the groups. The principles of “Pack it in Pack it out” must be applied. Activities may include hiking, traditional mountain climbing, and possibly walk in sites in the mountains to launch paragliders, subject to approval and the development of a site management plan. Specially arranged once off events such as an adventure race may involve higher visitor numbers for a brief limited period, but these events are not the norm.

*Interaction with other users:* There is no interaction between groups. The numbers of groups within the area will be determined by the ability to ensure that there is no interaction between groups.

#### Objectives of the zone (Limits of acceptable change)

*Biophysical environment:* Deviation from a natural / pristine state should be minimised, and existing impacts should be reduced.

*Aesthetics and recreational environment:* Activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) will not be tolerated.

#### Facilities

*Type and size:* No permanent facilities are provided. Should “fixed” overnight facilities be required to serve this zone, such as along established hiking trails, these should be placed in the adjoining zones.

*Sophistication of facilities:* No facilities except self carried portable tents. Guidelines for washing, ablution and cooking must be defined according to the “Pack it in Pack it out” principles. Camping is permitted only at designated sites.

*Audible equipment and communication structures:* None.

*Access and roads:* Public access is non-motorised. Vehicular access and parking is provided in the adjoining Primitive zone. Established footpaths may be provided where erosion risks occur.

### **Location in park**

In MNP, Remote areas were designated in the rugged mountain areas in the centre and eastern areas of the park. The zones were designated to include most landscapes with high environmental sensitivity and value.

### **Primitive zone**

#### **Characteristics**

The prime characteristic of the zone is the experience of wilderness qualities with the accent on controlled access. Access is controlled in terms of numbers, frequency and size of groups. The zone shares the wilderness qualities of Wilderness areas and Remote zones, but with the provision of basic self-catering facilities and access. It also provides access to the Remote zone and Wilderness Areas. Views of human activities and development outside of the park may be visible from this zone.

This zone has the following functions:

- It provides the basic facilities and access to serve Wilderness Areas and Remote zones.
- It contains concession sites and other facilities where impacts are managed through strict control of the movement and numbers of tourists, for example if all tourists are in concession safari vehicles.
- It serves to protect sensitive environments from high levels of development.

#### **Visitor activities and experience**

*Activities:* Access is controlled in terms of numbers, frequency and size of groups. Activities include hiking, 4x4 drives and game viewing. Access is controlled either through only allowing access to those with bookings for specific facilities, or alternatively through a specific booking or permit for a particular hiking trail or 4x4 route. Several groups may be in area at the same time, but access should be managed to minimise interaction between groups if necessary.

*Interaction with other users:* Interaction between groups of users is low, and care must be taken in determining the number and nature of facilities located in the area in order to minimize these interactions.

#### **Objectives of the zone (Limits of acceptable change)**

*Biophysical environment:* Deviation from a natural/pristine state should be small and limited to restricted impact footprints. Existing impacts should be reduced. Any facilities constructed in these areas, and activities undertaken here should be done in a way that limits environmental impacts. Road and infrastructure specifications should be designed to limit impacts.

*Aesthetics and recreational environment:* Activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace *etc.*) should be restricted and impacts limited to the site of the facility. Ideally visitors should only be aware of the facility or infrastructure that they are using, and this infrastructure / facility should be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts.

#### **Facilities**

*Type and size:* Facilities are small, often very basic, and are distributed to avoid contact between users. Alternatively facilities designed for high levels of luxury, but limited visitor numbers can be accommodated here (e.g. controlled access private camps or concession sites).

*Sophistication of facilities:* Generally facilities are small, basic and self-catering, though concession facilities may be significantly more sophisticated.



*Audible equipment and communication structures:* None.

*Access and roads:* Vehicular access to facilities is limited to low-spec roads, often high ground clearance or 4x4. Tourist and game viewing roads are mostly high ground clearance or 4x4. Established footpaths are provided to avoid erosion and braiding.

### **Location in park**

In MNP, Primitive areas were designated to buffer Remote areas from higher use areas and activities outside the park, as well as to protect most of the remaining sensitive areas (such as lower mountains in the west and east) from high levels of tourist activity. Almost all highly and moderately sensitive environments that were not included within the Remote zone were included in this zone. Primitive areas were also designated in valleys with relatively low environmental sensitivity to allow access to Remote areas as well as to contain the infrastructure required for management and tourist activity in these areas (e.g. trail huts and access roads). The plains in the contractual park were designated Primitive, as the controlled access associated with Primitive is compatible with the activities undertaken by the concessionaires. It is possible that these areas may be rezoned once the contracts have expired.

### **Low intensity leisure zone**

#### **Characteristics**

The underlying characteristic of this zone is motorised self-drive access with basic self-catering facilities. The numbers of visitors are higher than in the Remote and Primitive zones. These camps are without modern commercial facilities such as shops and restaurants. Relatively comfortable facilities are positioned in the landscape retaining the inherent natural and visual quality which enhances the visitor experience of a more natural and self providing experience. Access roads are low key, preferably gravel roads and / or tracks to provide a more wild experience. Facilities along roads are limited to basic self-catering picnic sites with toilet facilities. In some parks, large busses and open safari vehicles are not permitted. In smaller or developing parks, administrative or operational infrastructure may be found in this zone.

#### **Visitor activities and experience**

*Activities:* Self drive motorised game viewing, picnicking, walking, cycling, game viewing, rock climbing, hiking, adventure activities.

*Interaction with other users:* Moderate to high

#### **Objectives of the zone (Limits of acceptable change)**

*Biophysical environment:* Deviation from a natural / pristine state should be minimised and limited to restricted impact footprints as far as possible. However, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable.

*Aesthetics and recreational environment:* Although activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc.) is inevitable, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience.

## Facilities

*Type and size:* Picnic sites, view sites, information centres, ablution facilities, parking areas, education centres etc. Small self-catering (including camping) camps of low to medium density, or other self-catering accommodation such as guest houses. Additional facilities can include swimming pools. Trails for 4x4 trails can also be provided. Day visitor sites are not placed within the camps. Day visitor sites must relate to the general self-catering characteristic of the zone.

*Sophistication of facilities:* Self contained self-catering units with bathroom facilities. Camp sites will include ablution facilities. These camps are without modern commercial facilities such as shops and restaurants.

*Audible equipment and communication structures:* Cell phone coverage in vicinity of camps. Code of use for cell phones and radios are required to retain relative level of solitude.

*Access and roads:* Motorised self drive sedan car access (traditional game viewing) on designated routes which are preferably gravel roads. In some parks, large busses and open safari vehicles are not permitted. When busses are permitted some roads should be designated as accessible to self drive only. Roads are secondary gravel tourist roads or minor game viewing roads.

## Location in park

Low intensity leisure areas were designated in the current game viewing area (Kwaggasvlakte and Zandfontein) in the southwest of the park, around current accommodation and other infrastructure, and in the areas around the planned new road network. Plains areas with low environmental sensitivity south of Marakele Pty Ltd were also included in this zone to allow for potential expansion of game viewing areas north of the mountains. The existing access road to the Sentech towers was include in the Low intensity leisure zone despite it traversing highly sensitive and valuable environments, as it is a key part of the park's tourist infrastructure and the impacts associated with its construction have already been incurred. The zoning along this road was designed to reduce the possibility of expansion of infrastructure along this access road. Low intensity leisure zones were also designated around two contractual areas: for Aapiessriver, situated in the Vygeboomfontein area in the northeast, and for Wandor in the Groothoek area to the south, to accommodate existing contractual obligations.

## High intensity leisure zone

### Characteristics

The main characteristic is that of a high density tourist development node with modern commercial amenities such as restaurants and shops. This is the zone where more concentrated human activities are allowed. As impacts and particularly cumulative impacts are higher, such facilities should be placed on the periphery of the park where possible. Staff not directly associated with tourism facilities should be accommodated outside of the park if possible. All industrial type facilities such as laundries, abattoirs, maintenance depots and workshops should ideally be located outside of the park within suitably zoned adjoining urban or rural areas. It is accessible by motorised transport (car / bus) on high volume transport routes. More concentrated activities occur here than in than Low intensity leisure.

### Visitor activities and experience

*Activities:* Traditional game viewing routes associated with more sophisticated infrastructure, sight-seeing at tourist destinations, picnicking, walking, cycling, hiking, adventure activities, activities associated with commercial amenities such as dining in restaurants and curio shopping.

*Interaction with other users:* High

### Limits of acceptable change

*Biophysical environment:* The greatest level of deviation from deviation from a natural / pristine state is allowed in this zone, and, it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable. However, care must be taken to ensure that the zone still retains a level of ecological integrity consistent with a protected area.

*Aesthetics and recreational environment:* Although it is inevitable that the high visitor numbers, activities, and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc.), these should be managed and limited to ensure that the area



generally still provides a relatively natural outdoor experience.

### **Facilities**

*Type and size:* High density camps providing tourist accommodation with modern commercial amenities. Restaurants, shops, education centres, botanical gardens. Day visitor sites are provide outside of main camps. Day visitor sites or picnic sites may provide catered facilities and kiosks. In some parks it may be necessary to provide high density recreational sites with a wide range of intensive activities (education and entertainment centres) close to the periphery of the park. Additional facilities may include picnic sites, view sites, information centres, ablution facilities, parking areas, education centres *etc.* Where staff villages and administrative centres occur in this zone, these should be restricted to core staff. Non essential staff housing, administration and industrial activities positioned outside of or peripheral to the park.

*Sophistication of facilities:* Moderate to high density facilities. Self catering and catered. These camps have modern commercial facilities such as shops and restaurants.

*Audible equipment and communication structures:* Cell phone coverage in vicinity of camps. Code of use for cell phones and radios required to retain relative level of solitude.

*Access and roads:* The zone is highly motorised including busses and delivery vehicles on designated routes, which are often tarred. Care must be taken to distinguish between roads that serve as high access delivery routes to camps, link roads between camps, and game viewing roads to minimize conflict between users.

### **Location in park**

In MNP, a high intensity leisure area was designated on the periphery of the park, in an existing high usage area, from the main park entrance gate to Bontle rest camp. This will allow the park to accommodate higher visitor numbers in this area, and offer modern commercial facilities such as a restaurant and shop within this zone. SANParks is also currently investigating the feasibility of a lodge development, which would also require HIL zonation. To fulfil EIA requirements that an alternative site be available, two proposed lodge development sites are indicated, as well as the potential extent of HIL to accommodate the development at either site. Only once the EIA process has been completed and the preferred site for the lodge development has been selected, will the preferred site's potential HIL zone become officially designated as HIL, while the remaining potential site will retain its underlying zonation.

### **Park interface zone**

The park interface zone shows the area within which landuse changes could affect a national Park. The zone in combination with guidelines will serve as a basis for (i) identifying the areas in which park management and scientists should respond to EIA's, (ii) helping to identify the sort of impacts that would be important at a particular site, and most importantly (iii) serving as the basis for integrating long term protection of a national park into the spatial development plans of municipalities and other local authorities. In terms of EIA response, the zones serve largely to raise red-flags and do not remove the need for carefully considering the exact impact of a proposed development. In particular, they do not address activities with broad regional pollution impacts. These areas need to be entrenched within the park system as well as with municipal structures (SDF / IDP). Further, investigation of formal legislative protection in terms of protected natural environments or similar legal instruments needs to be undertaken.

The park interface zone for MNP has two overlaying categories, namely priority natural areas, and a visual / aesthetic zone (Appendix 6, Map 6).

## Priority natural areas

This zone aims to ensure the long term persistence of biodiversity, within and around the park, by identifying the key areas on which the long term survival of the park depends. This includes areas important to both biodiversity pattern (especially reasonably intact high priority natural habitats) and processes (ecological linkages, catchments, intact hydrological systems, *etc.*). This does not imply any loss of existing rights (e.g. current agricultural activities or legal extractive biodiversity use such as fishing). Development proposals should be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone would be perfectly suited for development. Further, very invasive developments outside this zone would also have to be considered.

Priority natural areas include areas identified for future park expansion as well as reasonably natural areas of high biodiversity value which are critical for the long-term persistence of biodiversity within the park. These include adjacent natural areas (especially high priority habitats) which function as an ecologically integrated unit with the park, as well as areas critical for maintaining ecological links and connectivity with the broader landscape.

### *Development guidelines:*

Developments within this zone area are likely to have an effect on the current and future park. Pending detailed investigation of the buffer zone, developments within this area should all be evaluated, and inappropriate developments and environmentally negative land use changes (such as additional ploughing permits for natural veld, urban expansion, intensification of landuse through golf estates *etc.*) should be opposed. Developments with site specific impacts (e.g. a lodge on a game farm) should be favourably viewed if they contribute to ensuring conservation friendly land use within a broader area. Further inappropriate developments, such as dam construction, excessive aquifer exploitation, and development resulting in the loss of riparian vegetation, should be opposed. In addition, the control of alien vegetation, the control of soil erosion, and appropriate land care (e.g. appropriate stocking rates) should be promoted.

## Viewshed protection

These are areas where developments could impact on the aesthetic quality of a visitors experience in a park. This zone is particularly concerned with visual impacts (both day and night), but could also include sound pollution.

### *Development guidelines:*

Within these areas any development proposals should be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone would be perfectly suited for development. In addition, major projects with large scale regional impacts may have to be considered even if they are outside the viewshed protection zone.

## Current status and future improvement

The current park use zonation is based on the same biodiversity and landscape analyses undertaken for a Conservation Development Framework (CDF); however certain elements underlying the CDF such as a tourism market analysis are not be fully incorporated into the park use zonation.



## Appendix 3: Stakeholder participation report

### STAKEHOLDER EVENTS AND ACTIVITIES

#### Stakeholder consultation

This table reflects the various organisations that were identified to participate in the park management plan process. The government departments are at national, provincial and local level. The intention is to show that, in terms of the spirit of co-operative governance SANParks has approached these parties.

Identified international stakeholders	Thabazimbi local municipality, Lephalale local municipality and Modimolle local municipality Waterberg district municipality
Local government	LEDET, Limpopo roads agency, Limpopo Parks Board, Department of Justice
Provincial government	SAPS, DEA (including water), Depart of Tourism, SASSA, Dept. of Labour, SANDF
Contractual partners	Marakele Pty ltd, Wandor Holdings Pty, Willie de Jager, Apiesrivierpoort cc
Park forum	Yes
Honorary rangers	Yes
Visitors to the park	Yes
Traversing rights	ESKOM, SENTEC, Telkom
Local residents/ Neighbours	Matlabas community, Kwa Motsweri etc.
Land claimants	Yes
Community organisations	Fraternal, Traditional healers
Local business	Kumba, Local flying club, Rhino mine
Business associations	Transvaal agricultural union, Business council
Media	Kwevoël
Research	SAEON
Education	DoE local circuit offices, principals
Conservation organisations	EWT, Waterberg biosphere reserve, conservancies
Non-Governmental Organisations (NGOs)	FPA, Thabazimbi development forum, SA Hunters and Game conservation association
Tourist associations	Thabazimbi tourism association
Other	Welgevonden

#### Registration as an interested and affected party

Stakeholders had the following opportunities to register as interested and affected parties.

Mechanism to register	Description
1. Media advertisements	<p>An advertisement to inform all interested and affected parties of the Desired state workshop and request to register to participate was placed in the following newspapers on 10 May 2013:</p> <ul style="list-style-type: none"> <li>· Die Kwevoel;</li> <li>· Mogol Post; and</li> <li>· Rise n Shine.</li> </ul> <p>Advertisements to inform interested and affected parties of the public day and request to register to participate was placed in the following newspapers on 02 March 2014:</p> <ul style="list-style-type: none"> <li>· Sunday Times;</li> <li>· Rapport.</li> </ul>

Mechanism to register	Description
2. Registration at meetings	Participants were also able to register at the following meetings: <ul style="list-style-type: none"> <li>Desired state workshop on 21 May 2013.</li> <li>Public meeting on 19 March 2014 in Vaalwater;</li> <li>Public meeting on 20 March 2014 in Thabazimbi.</li> </ul>

#### Desired state workshop

The Desired state workshop took place on 21 May 2013. A range of stakeholders and SANParks specialists participated in the development of the Desired state which entails developing a vision for the Park supported by higher level objectives which forms the basis of the management plan.

Activities	Description
<b>Invitations</b>	Park management, certain SANParks specialists and certain stakeholders <i>i.e.</i> the Park Forum were invited. An open invitation was also sent out via the local media.
<b>Desired State Workshop</b>	The workshop took place on 21 May at the Bioscope Hall in Thabazimbi.
<b>Attendance:</b>	Thirty eight participants (18 stakeholders and 20 SANParks staff members) partook, representing the following constituencies: <ul style="list-style-type: none"> <li>Wits and North West universities;</li> <li>Matlabas local community;</li> <li>Waterberg district municipality;</li> <li>Thabazimbi local municipality;</li> <li>Contractual partners;</li> <li>Local business;</li> <li>Guateng tourism;</li> <li>Kumba iron mine;</li> <li>SANParks.</li> </ul>

#### Focus group meetings

These are meetings called with constituencies to discuss critical issue raised during the park management plan revision process.

Group	Purpose	Attendants	Date
No focus group meetings took place			

#### Public day to allow comment on the draft management plan

Venue	Date	Number of stakeholders that attended
Dutch Reformed Church Iapa - Vaalwater	19 March 2014	0
Bioscope Hall - Thabazimbi	20 March 2014	14

#### Dissemination of documentation and feedback to stakeholders

Item	Action
Dissemination of comment and response document	Emailed, mailed, faxed and delivered by hand where no contact details were supplied.
Dissemination of finalised park management plan	<ul style="list-style-type: none"> <li>The Plans will be available on the SANParks Website once approved by the Minister;</li> <li>They will be made available to registered stakeholders by email and post;</li> <li>Copies of the management plan will be available from the Park on request;</li> </ul>

## Appendix 4: Tourism product development framework

The PDF provides park management with a guideline in order to inform the development potential of the park. Identified opportunities remain subject to comprehensive feasibility study prior to implementation, thus listing an activity does not automatically result in development.

Similarly, whilst specific products or activities may be developed within the park, they will be restricted to specific areas within the park or on the periphery (buffer zone), and may be further restricted to guided activities or events only. The park is zoned into various visitor use zones, based on its environmental sensitivity, as described in the legend below, and products are applicable to the various use zones accordingly.

### LEGEND

Visitor Use Zones	Description
1. Wilderness/ Remote	Essentially undeveloped and road less. Controlled access - only on foot visitors. Could have footpaths where erosion is a problem
2. Primitive	Almost completely natural state to be maintained. Development footprints absolute minimum. Controlled access - 4x4's horse-riding. Small basic overnight facilities.
3. Quiet	General natural state to be maintained. Only non-motorised access. Access not specifically controlled. Ablution facilities can be allowed.
4. Low-Intensity Leisure	Motorised self-drive with basic facilities. Small - medium sized camps. Infra-structure should be minimised in order to maintain natural state.
5. High-Intensity Leisure	High density tourism development node with concentrated human activities. High volume roads, high density camps with modern amenities. Park development zone (PDZ).
6. Buffer	Land adjacent to national-/ contractual parks. Products indicated are those with which SANParks is comfortable to be associated with and will promote.

For the purposes of this management plan, the focus of the framework listed in Table 21 is to indicate which products already exist, which new products may be allowed, and in which visitor use zones these may occur.

Table 21: Product Development Framework for Marakele National Park

PRODUCT CATEGORY		PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
			YES	NO	YES	NO	Within boundaries of national park					Out-side
							1	2	3	4	5	
Over-nighting / Facilities	Self-catering - Limited service (Serviced prior to arrival & after departure only)	Accommodation (budget)		√	√					√	√	√
		Accommodation (economy)		√	√					√	√	√
		Accommodation (premium) / Guest House		√	√					√	√	√
		Accommodation backpacking / Youth Hostels		√	√					√	√	√
		Dormitories / School Groups / Educational Facilities	√		√					√	√	√
		Game / Bird Hide		√	√					√	√	√
		Tree Houses / Platforms		√	√					√	√	√
	Self-catering - Serviced (Serviced daily)	Accommodation (budget)		√	√					√	√	√
		Accommodation (economy)	√		√					√	√	√
		Accommodation (premium) / Guest House	√		√					√	√	√
		Accommodation backpacking / Youth Hostels		√	√					√	√	√
		Dormitories / School Groups / Educational Facilities	√		√					√	√	√
		Houseboat (economy)		√		√					√	√
Houseboat (premium)		√		√					√	√	√	

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE						
		YES	NO	YES	NO	Within boundaries of national park					Out-side	
						1	2	3	4	5	6	
Camping	Camping (budget facilities) (power / no power)	√		√						√	√	
	Camping (premium facilities) (power / no power)		√	√						√	√	
	Camping bush rustic (protected) (budget facilities)		√	√			√		√	√	√	
	Camping bush rustic (protected) (premium facilities)		√	√			√		√	√	√	
	Camping bush rustic (unprotected) (self-sufficient)		√	√			√		√	√	√	
	Full service (Generally some/all meals and activities included)	Game / Bush lodge /Safari lodge - Under 20 Beds	√		√			√			√	√
		Game / Bush lodge /Safari lodge - 20 Beds Plus	√		√			√			√	√
		Conference lodge / Hotel - 21 - 50 Beds		√	√						√	√
		Conference lodge / Hotel - 50 Beds Plus										
		Houseboat		√		√					√	√
		Luxury tented safaris						√		√	√	√
		Remote Camp / Fly Camp / Platform / Sleep Out						√		√	√	√
		Overnight Train rides		√		√					√	√
	Additional Services	Cook and Guide Provided		√	√		√	√	√	√	√	√
		Cook, Guide and OSV Provided		√	√			√	√	√	√	√
Meal packages e.g. breakfast, half board or full board		√		√		√	√	√	√	√	√	
Leisure/ Recreational	4x4 Eco-trails (basic facilities)		√	√			√		√	√	√	
	4x4 Eco-Trails (no facilities)	√		√			√		√	√	√	
	4x4 Trails (self-drive)	√		√			√		√	√	√	
	Abseiling / Rappelling		√	√			√	√	√	√	√	
	Animal interaction activities (limited)		√	√			√	√			√	
	Archery		√	√				√	√	√	√	
	Base jumping		√	√			√	√	√	√	√	
	Bird watching	√		√		√	√	√	√	√	√	
	Boat cruises		√	√			√		√	√	√	
	Botanical sightseeing	√		√		√	√	√	√	√	√	
	Bouldering		√	√				√	√	√	√	
	Bungee / Bungy jumping		√	√				√	√	√	√	
	Cableway		√	√			√		√	√	√	
	Canoe trails (varying facilities)		√		√		√	√	√	√	√	
	Canoeing		√	√		√	√	√	√	√	√	
	Canopy tour (boardwalk)						√					
	Canopy tour / Flying fox (Tree top / Cliff to cliff)		√	√			√	√	√	√	√	
	Caving / Spelunking / Potholing		√	√		√	√	√	√	√	√	
	Clay-pigeon / Clay target shooting		√	√							√	
	Cycling		√		√		√	√	√	√	√	

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
	Diving (Scuba)		√		√	√	√	√	√	√	√
	Dog walking		√	√							√
	Elephant backed rides / safaris		√	√							√
	Fishing (catch & release)		√	√					√		√
	Funicular		√		√				√		√
	Games facilities (e.g. table tennis, pool, etc.)		√	√					√		√
	Geocaching		√	√				√	√		√
	Golf		√	√							√
	Golf club membership		√	√							√
	Green hunting / Darting safaris		√		√						√
	Hang gliding		√	√				√	√		√
	Hiking		√	√		√	√	√	√	√	√
	Hiking trails - Wilderness (full service)		√	√		√	√	√			
	Hiking trails - Wilderness (no facilities) (backpack)		√	√		√	√	√			
	Hiking trails (budget)		√	√		√	√	√	√	√	√
	Hiking trails (premium)		√	√		√	√	√	√	√	√
	Horse riding		√	√			√	√	√	√	√
	Horse riding trails (varying facilities)		√	√			√	√	√	√	√
	Jet skiing		√		√						√
	Jogging / Running		√	√							√
	Kayaking / Paddling		√		√	√	√	√	√	√	√
	Kitesurfing / Kiteboarding / Flysurfing		√		√			√	√		√
	Kloofing (guided)		√	√		√	√	√	√	√	√
	Microlight flying / Ultra-light aviation		√		√				√		√
	Mini golf / Putt-Putt		√	√					√		√
	Model aircraft flying		√	√							√
	Motorcycle trails (varying facilities)		√		√		√		√		√
	Motorcycling		√		√		√		√	√	√
	Motorised boating		√		√			√	√		√
	Mountain bike trails (varying facilities)		√	√			√	√	√	√	√
	Mountain biking		√	√			√	√	√	√	√
	Mountaineering		√	√		√	√	√	√	√	√
	Off road motorcycling		√	√							√
	Paddle boats		√	√							√
	Paddle skiing		√	√							√
	Paragliding		√	√			√	√	√	√	√
	Parasailing		√	√							√
	Park & Ride	√		√				√	√		√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
	Photography	√		√		√	√	√	√	√	√
	Picnicking (Basic facilities)	√		√					√	√	√
	Picnicking (Full facilities)		√	√					√	√	√
	Picnicking (No facilities)		√	√				√	√	√	√
	Quad biking		√	√							√
	Railway		√	√							√
	Rap jumping (Deepelling)						√	√	√	√	√
	River rafting		√		√		√	√	√	√	√
	Rock climbing		√	√		√	√	√	√	√	√
	Sailing		√		√			√	√	√	√
	Sandboarding		√		√					√	√
	Selfdrive night drives		√		√				√	√	√
	Skydiving		√	√							√
	Snorkeling		√		√	√	√	√	√	√	√
	Spear fishing		√		√						
	Sports facilities (e.g. tennis, squash, bowls, etc.)		√	√						√	√
	Stargazing	√		√		√	√	√	√	√	√
	Sunset boat cruises		√		√				√	√	√
	Surfing		√		√			√	√	√	√
	Surf skiing		√		√					√	√
	Swimming		√	√		√	√	√	√	√	√
	Trail running		√		√		√		√	√	√
	Tubing		√		√		√	√	√	√	√
	Unicycling		√	√			√	√	√	√	√
	Walking	√		√		√	√	√	√	√	√
	Wildlife/ Game viewing	√		√		√	√	√	√	√	√
<b>Airborne (implications of CAA)</b>	Flights over national parks		√		√						√
	Helicopter flips		√	√							√
	Hot-air ballooning		√	√			√		√	√	√
<b>Interpretive</b>	Archeology		√	√				√	√	√	√
	Cruise - Birding		√		√		√		√	√	√
	Endangered species breeding centre										
	Films - Amphitheatre		√	√					√	√	√
	Films - Auditorium		√	√						√	√
	Game drives - night drive	√		√			√		√	√	√
	Game drives - night drive (Night Vision aided)		√	√				√	√	√	√
	Game drives - premium	√		√				√	√	√	√
	Game drives - standard	√		√				√	√	√	√
	Game drives - universal access		√	√				√	√	√	√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
	Interpretive centres		√	√						√	√
	Trails - Horse		√	√			√	√	√	√	√
	Trails – Mountain bike		√	√			√	√	√	√	√
	Paleontology		√	√			√		√	√	√
	Theatre		√	√						√	√
	Tours - Astronomy		√	√			√	√	√	√	√
	Tours - Birding		√	√			√	√	√	√	√
	Tours - Botanical		√	√			√	√	√	√	√
	Tours - Specialist (Fauna, Flora or Birds)	√		√			√	√	√	√	√
	Tours - Tree (Dendrology)		√	√			√	√	√	√	√
	Trails - Brail		√	√					√	√	√
	Trails - Sensory		√	√					√	√	√
	Walks - Day	√		√			√	√	√	√	√
	Walks - Night		√		√						
	<b>Cultural/ Historical</b>	Cleansing ceremonies (including baptism)		√	√			√		√	√
Cultural dances			√	√					√	√	√
Cultural points of interest			√	√			√		√	√	√
Cultural village			√	√					√	√	√
Gold panning (recreational)			√		√			√	√	√	√
Historical points of interest		√		√				√	√	√	√
Mountain worship			√	√				√		√	√
Museums			√	√						√	√
Religious facilities (Prayer or otherwise)			√	√						√	√
Storytelling			√	√					√	√	√
Tours - Battlefield			√	√					√	√	√
Tours – Cultural			√	√					√	√	√
Tours - Historical			√	√					√	√	√
Tours - Medicinal Plants			√	√				√	√	√	√
Tours - Rock Art			√	√				√	√	√	√
Tours - South African struggle		√	√					√	√	√	
<b>Medical/ Health</b>	Health spa		√	√						√	√
	Gymnasium		√	√						√	√
	Wellness centres		√	√						√	√
<b>Developmental</b>	Astronomy training		√	√					√	√	√
	Birding course		√	√			√	√	√	√	√
	Botany course		√	√			√	√	√	√	√
	Bush homeopathy		√	√					√	√	√
	Bush skills		√	√			√	√	√	√	√
	Field guide training		√	√					√	√	√
	Firearm skills		√	√					√	√	√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
	First aid		√	√					√	√	√
	Game capture training		√	√					√	√	√
	Nature / Wildlife photography course		√	√			√		√	√	√
	Nature based hospitality training		√	√					√	√	√
	Offroad driving skills training		√	√					√	√	√
	Orienteering		√	√			√		√	√	√
	Rope skills course		√	√					√	√	√
	Scuba diving skills		√		√			√		√	√
	Specialised training / courses		√	√							
	Survival skills		√	√					√	√	√
	Tracking skills		√	√					√	√	√
	Training - Ranger		√	√					√	√	√
	Volunteering		√	√					√	√	√
Children/ Youth	Babysitting		√	√					√	√	√
	Child care centres in camps		√	√					√	√	√
	Children activity centres (Jungle gym)		√	√					√	√	√
	Children encounter zone		√	√					√	√	√
	Children game drives		√	√				√	√	√	√
	Children holiday programmes in camps		√	√				√	√	√	√
	Children trails		√	√				√	√	√	√
	Learner programmes		√	√				√	√	√	√
	Paint ball		√	√					√	√	√
Youth camps (Kamp Kwena, "summer" camps)		√	√					√	√	√	
Business tourism & Events	Events	√		√					√	√	√
	Festivals		√	√					√	√	√
	Lapas/ Bomas (to rent)		√	√				√	√	√	√
	MICE (Meetings, Incentives, Conventions & Exhibitions)	√		√					√	√	√
	Musical concerts		√	√					√	√	√
	Photographic shoots & filming	√		√				√	√	√	√
	Product launches		√	√					√	√	√
	Races / Competitions - Marathons / Trail Running	√		√				√	√	√	√
	Races / Competitions - Mountain-biking		√	√				√	√	√	√
	Races / Competitions - Other										
	Races / Competitions - Adventure / expedition racing		√	√			√		√	√	√
	Scientific conferences		√	√					√	√	√
	Team building		√	√					√	√	√
Weddings		√	√				√	√	√	√	
Retail / Services	Apparel outlets	√		√					√	√	√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is product currently available or under development?		Is product appropriate for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
	Airport / aerodrome / airstrip		√	√						√	√
	Banking - Bank or ATM		√	√						√	√
	Rental - Bicycle		√	√						√	√
	Camping equipment rental		√	√						√	√
	Rental – Car		√	√						√	√
	Car wash		√	√						√	√
	Casinos		√	√							√
	Clinics/ Doctor/ First Aid		√	√						√	√
	Outlets - Community curios		√	√						√	√
	Outlets – Curios	√		√						√	√
	Essential commodities in camps (Ice, Wood, etc)		√	√				√		√	√
	Fuel stations		√	√						√	√
	Gas equipment hire		√	√						√	√
	Hop-on guides		√	√						√	√
	Internet cafes		√	√						√	√
	Laundromats & laundry service		√	√						√	√
	Pharmacies		√	√						√	√
	Postal services		√	√						√	√
	Proshop		√	√						√	√
	Road emergency services		√	√						√	√
	Shuttle services		√	√						√	√
Vending machines		√	√						√	√	
Vendors		√	√						√	√	
Wifi facilities (free or charged)		√	√						√	√	
Food & Beverage	Bars	√		√						√	√
	Boma / Lapa meals		√	√				√		√	√
	Bush meals		√	√				√		√	√
	Coffee shops		√	√				√		√	√
	Fastfood outlets		√	√						√	√
	Game drives picnic baskets		√	√				√		√	√
	Local cuisine		√	√						√	√
	MICE catering		√	√						√	√
	Picnic baskets		√	√				√		√	√
	Restaurants		√	√				√		√	√
	Room service		√	√						√	√
	Sports bar		√	√						√	√
	Tea rooms		√	√				√		√	√
<b>NON TOURISM RELATED ACTIVITIES</b>											
Mining/ Exploratory	Prospecting		√		√						√
	Mining		√		√						√

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		YES	NO	YES	NO	Within boundaries of national park					Out-side
						1	2	3	4	5	6
Consumptive / Subsistence	Fishing (Non release)		√	√				√	√	√	√
	Hunting (Lethal)		√	√							√
	Sustainable harvesting of resources	√		√			√		√	√	√



## Appendix 5: Park rules

No access to the park will be granted without a permit or another form of authorisation by the management authority.

Entry into the park and the use of the park and all facilities provided in the park is at the visitor's own risk and South African National Parks will not accept liability for any damages or injuries sustained as a result.

The park cannot be accessed at any other place than the designated entry / exit gates that are authorised by the management authority.

Entering into and exiting from the park is permitted only within the designated times that are approved by the management authority.

Overnight visitors can enter and exit the park from 07:00 to 17:30 during winter (from May to September) and from 06:00 to 18:00 during summer (from October to April).

Day visitors can enter into the park from 07:00 until 16:00 and have to exit the park before 17:30 during winter and before 18:00 during summer.

Driving in the park after 17:30 and before 07:00 during winter or after 18:00 and before 06:00 during summer is not permitted.

All vehicles entering and exiting the park will be searched.

Overnight visitors can only stay at place or in facilities in the park that is designated for such purpose by the management authority.

The camping area in the park is not fenced and encounters with wild animals occurs regularly, which calls for vigilance at night and a strong recommendation to use a flash light or any other form of light that is sufficient.

Visitors are permitted to drive only on specific roads designated by the management authority and indicated as such on official maps and road signage.

Visitors are not allowed to drive on roads that are marked with no-entry signs for restricted entry.

Visitors are not allowed to drive off the designated roads and perpetrators will be fined. Off-road driving is strictly prohibited unless specifically authorised by the management authority.

Visitors are not permitted to get out of vehicles or have limbs or any body parts protruding from vehicles except at the specific areas that are designated for the purpose by the management authority and indicated as such on official maps and by means of signage.

Vehicles may only be parked in areas designated for the purpose by the management authority.

Driving in the park should be in a manner that does not constitute a nuisance, disturbance or inconvenience to other people, or is harmful to others.

Driving in the park should be in a manner that does not obstruct or block the road for management operations, emergency vehicles or any other road users.

Driving in the park should be in a manner that will not cause damage to the environment whatsoever, including, but not limited to, damage to animals, plants or roads.

The maximum speed on gravel roads in the park is 30 km/h and 40 km/h on tar roads.

It is prohibited to walk in the park, except in areas that are designated by the management authority for the purpose or as part of guided walks that are authorised by the management authority.

It is prohibited to swim or bath in the park, except in areas that are designated by the management authority for swimming or bathing.

It is prohibited to cause a disturbance or annoy any other person in the park.

It is prohibited to throw, roll or discharge stones or any other substances, especially if it is harmful to or endangers any other person or the environment, including plants and animals.

It is prohibited to paint or write on trees, rocks, gates, fences, buildings, signs or any other property, or to cut names or letters in or otherwise make marks on the same.

It is prohibited to move, deface or otherwise interfere with any notice, information or sign board in the park.

It is prohibited to film or take photographic images of the park or in the park for any use other than private use, including for commercial or marketing use, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited for any person to conduct tours or any other services in the park for which any form of income or payment is collected, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to sell, rent goods or offer goods for sale in the park, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to conduct research in the park, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to remove soil, rocks, minerals or any other materials from the park, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to remove wood, mulch or any other dead vegetation from the park, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to dig into or disturb the soil or any other substrate in the park, including termite mounds, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to dig into or disturb archaeological and paleontological sites or meteorites in the park, unless it is done with prior arrangement and in accordance with the official SANParks licence, permit and agreement procedures applicable for the park and approved by the management authority.

It is prohibited to light fires in the park, except in specifically designated areas that are approved for the purpose by the management authority.



It is prohibited to do rock climbing, mountaineering, kloofing or any other activities in the park, unless it has been authorised by the management authority.

It is prohibited to fly in the airspace of the park at altitude less than 2, 500 feet above the highest point in the park or to land in the park with any aircraft, including fixed wing aircraft, helicopters, model aeroplanes, drones, gliders or any other aircraft, unless it has been authorised by the management authority.

It is prohibited to deposit, leave or dispose of any litter or garbage anywhere in the park, except in containers that are provided for that purpose by the management authority.

It is prohibited to deposit, leave or dispose of any solid or liquid waste, including motor oil, anywhere in the park, including in any water area, except in containers or places specifically designated or provided for that purpose by the management authority.

It is prohibited to allow domestic animals to graze inside the park, unless it has been authorised by the management authority.

It is prohibited to distribute, display or place any advertisement or promotional material anywhere in the park, unless it has been authorised by the management authority.

It is prohibited to play radios, compact disc players, music systems, musical instruments, any other device or mechanism that may create a noise or in any way cause any noise in any manner likely to disturb other people or the environment, including animals.

It is prohibited to behave in the park in a manner that is offensive, improper, indecent or disorderly.

It is prohibited to be in possession of fire arms, dangerous weapons, explosives, traps or poison inside the park or to discharge any fire arm in or into the park, unless it has been authorised by the management authority.

It is prohibited to hunt, catch, capture, kill or harm any animal in the park, including species that are listed as threatened or protected, unless it has been authorised by the management authority.

It is prohibited to do fishing in the park, unless it has been authorised by the management authority.

It is prohibited to cut, damage, destroy or be in possession of any plant or any part thereof, including dry wood or firewood, unless it has been authorised by the management authority.

It is prohibited to import of any specimen of an alien or listed invasive species into the park.

It is prohibited to bring any pets or other domestic animals, including dogs, cats and birds, into the park, unless it has been authorised by the management authority, including issue of permits for guide dogs.

It is prohibited to feed or provide food to any animal in the park, irrespective of species and including reptiles and birds.

It is prohibited to use any recording of the sound of a species or specimen or imagery or scent of a species to attract animals.

It is prohibited to deface, damage or destroy any cultural heritage resource or any part thereof in the park, or to collect any cultural heritage resource or any part thereof in the park, unless it has been authorised by the management authority.

Failure to obey and adhere to any instruction, code of conduct in a national park or rules of the park may lead to prosecution or escorting out of the park.



## Appendix 6: Maps

Map 1: Regional context

Map 2: Physical features

Map 3: Land tenure and park expansion

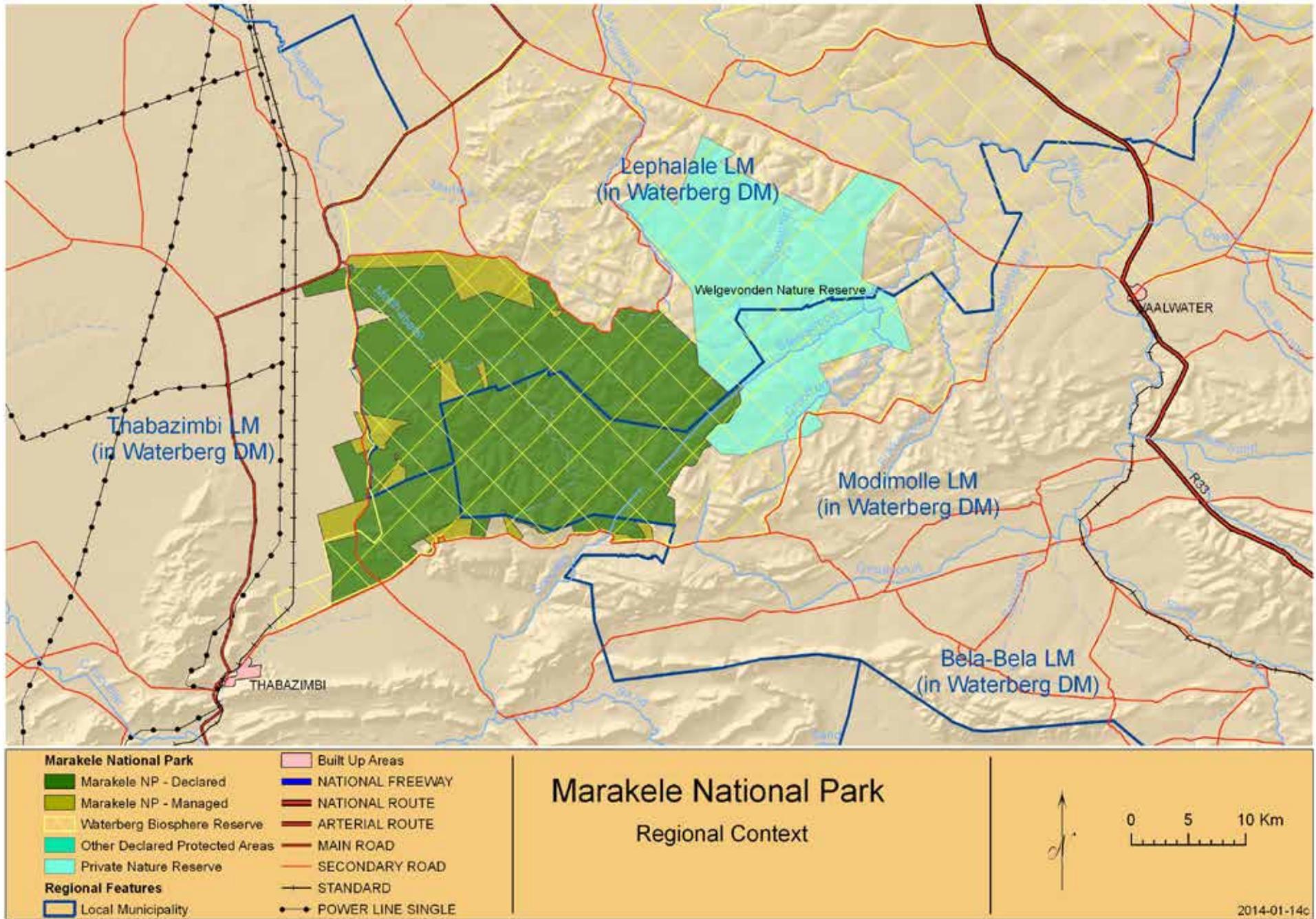
Map 4: Zoning

Map 5: Zoning with sensitivity value

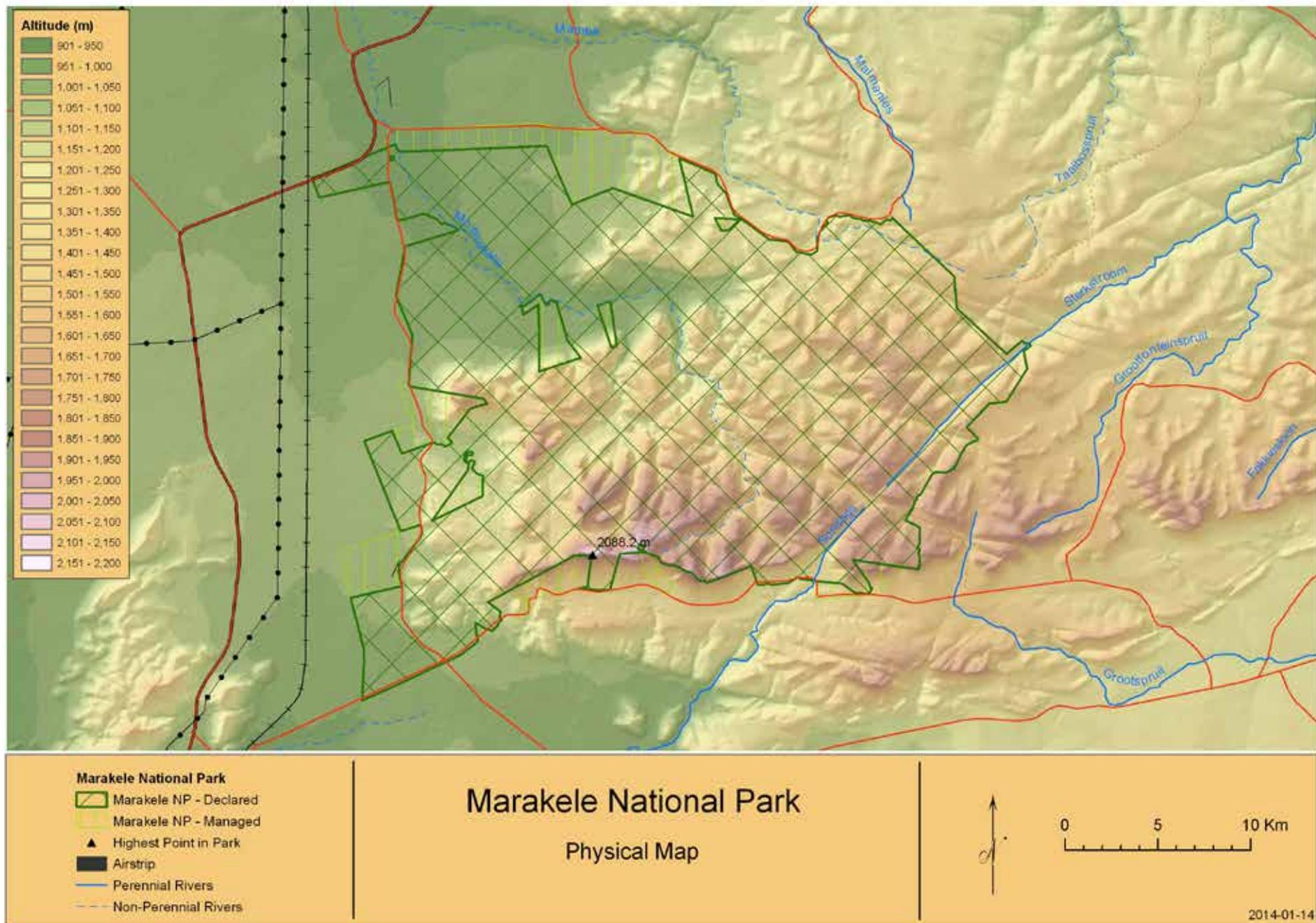
Map 6: Buffer areas

Map 7: Infrastructure and development

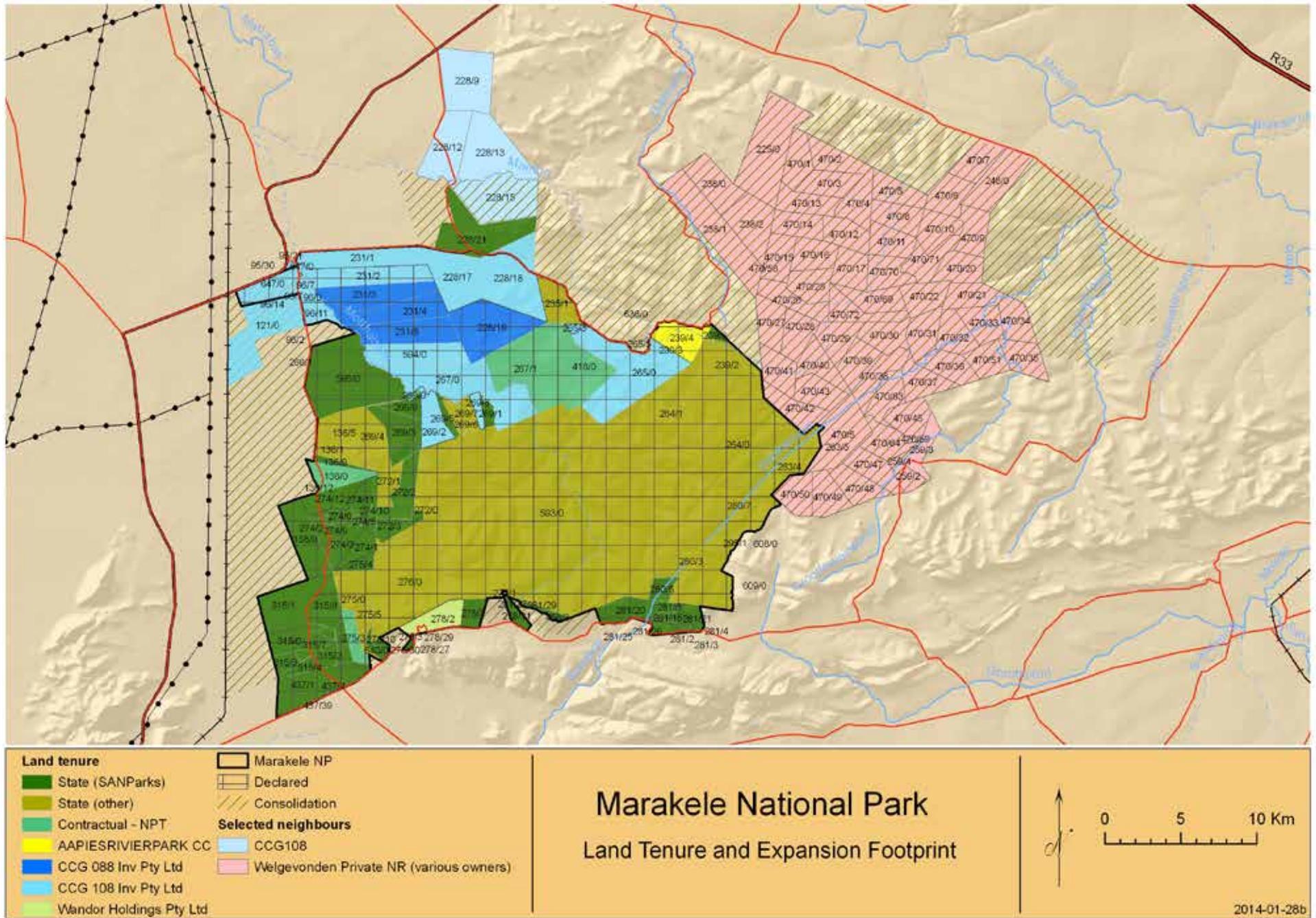
Map 8: Vegetation



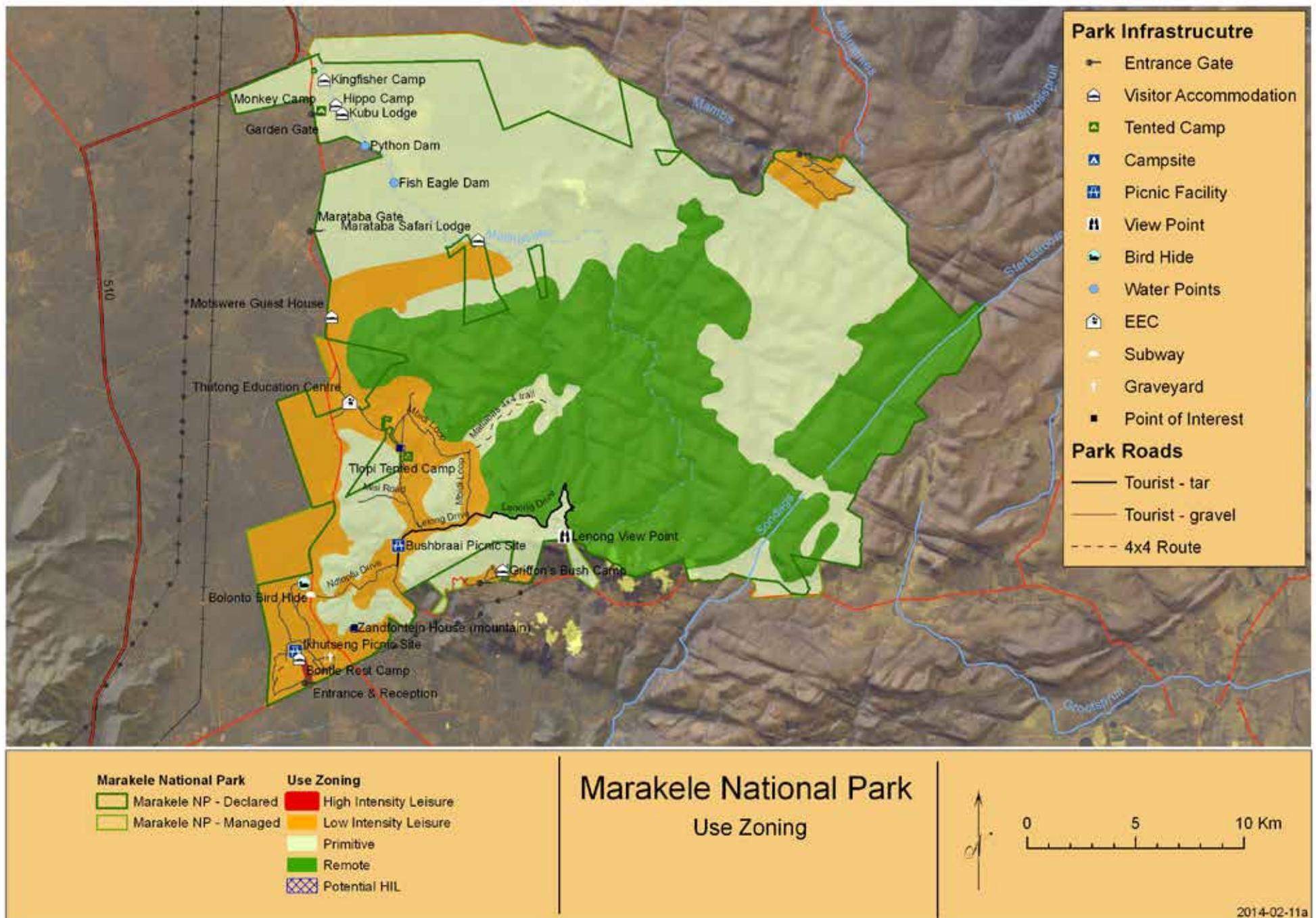
Map 1: Regional context



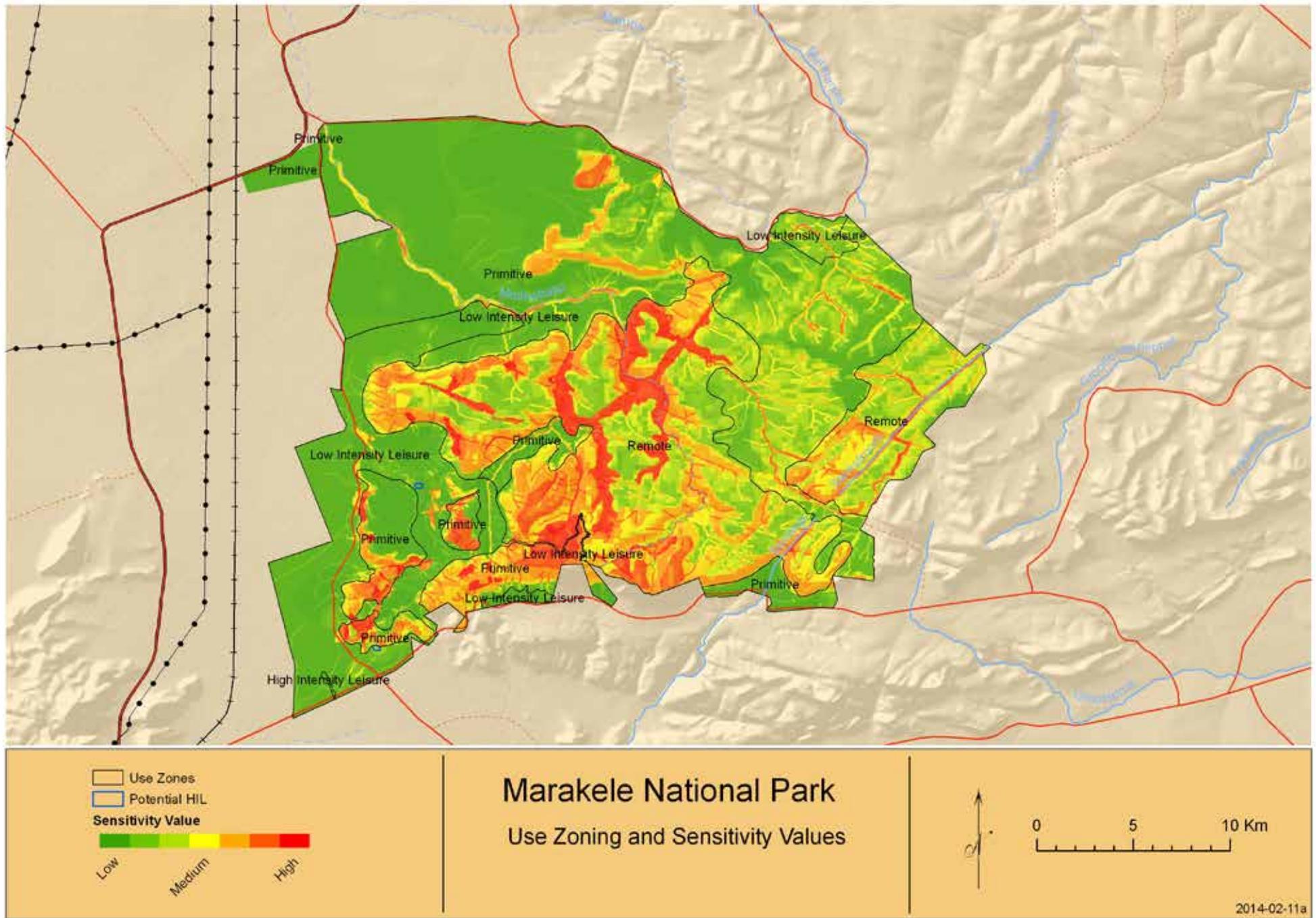
Map 2: Physical features



Map 3: Land tenure and expansion footprint

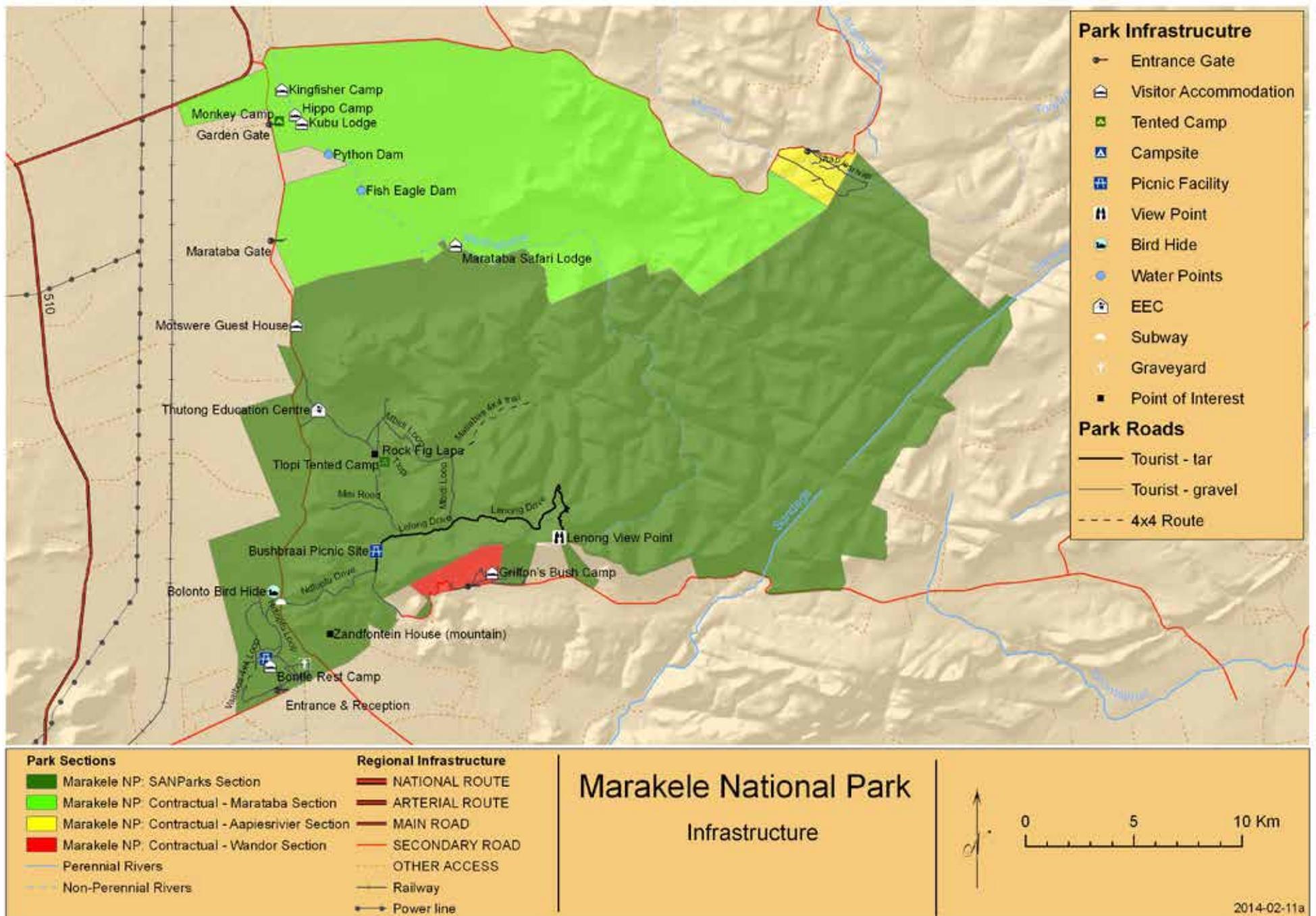


Map 4: Zoning

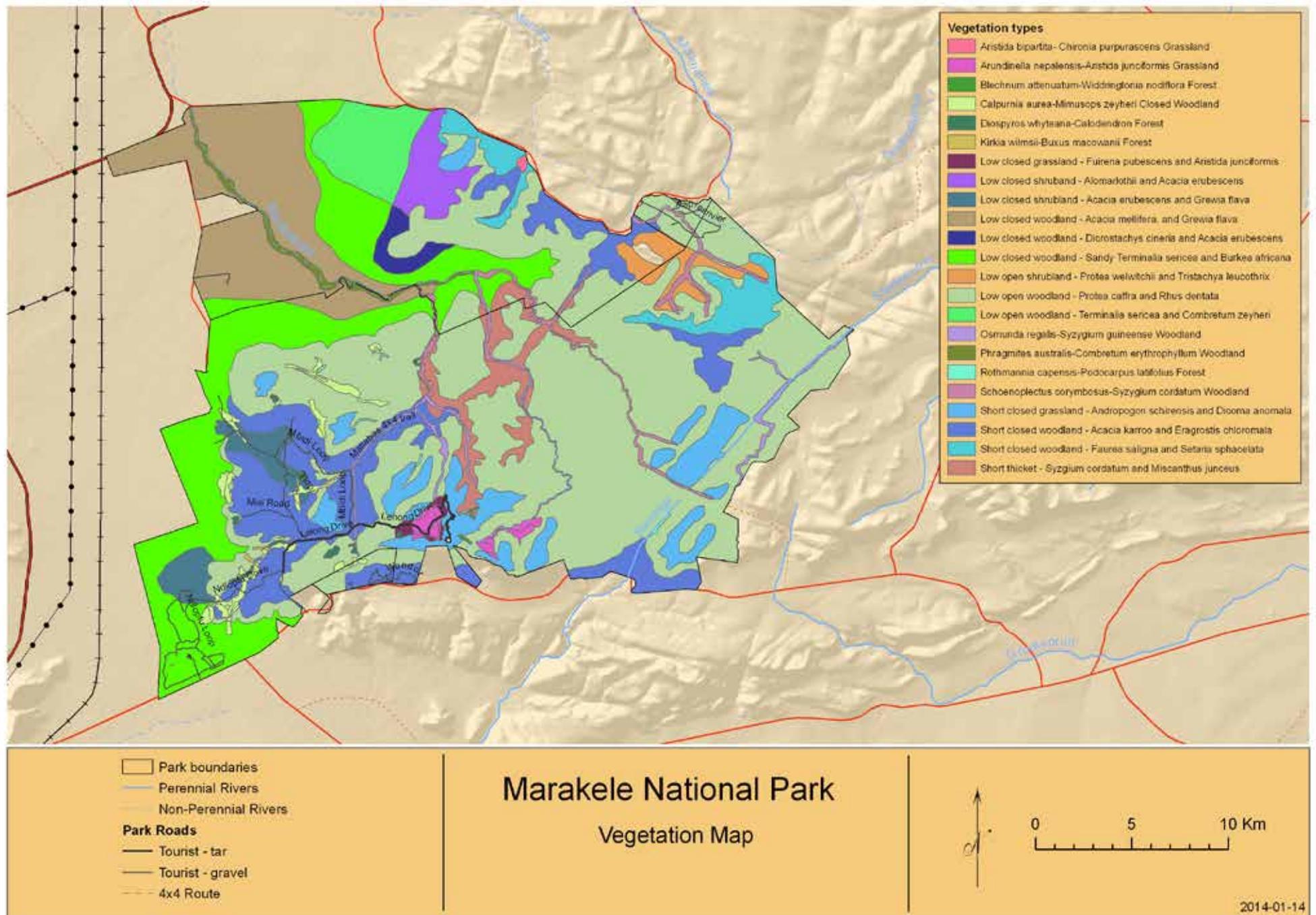


Map 5: Zoning and sensitivity





Map 7: Park infrastructure



Map 8: Vegetation