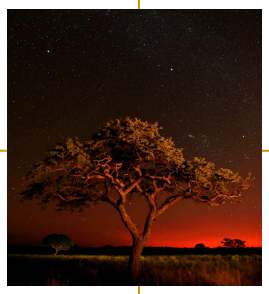
South African
NATIONAL PARKS

Mokala National Park

Park Management Plan

For the period 2017 - 2027



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Cover page image: Koos van der Lende

Section 1: Authorisation

This management plan is hereby internally accepted and authorised as required for managing the MONP in terms of Sections 39 and 41 of the National Environmental Management: Protected Areas Act No 57 of 2003 (NEM: PAA).

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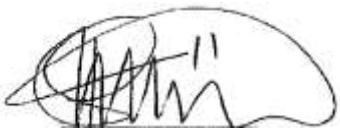

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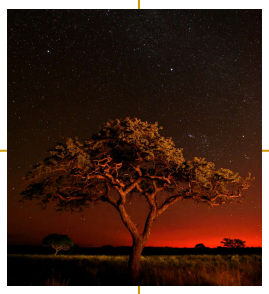
Chair: SANParks Board

Approved by the Minister of Environmental Affairs

Dr. B.E.E. Molewa, MP — Date: 30 September 2017
Minister of Environmental Affairs



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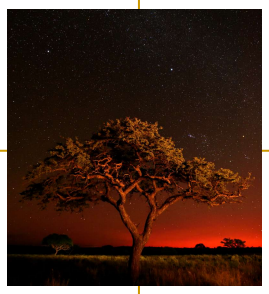

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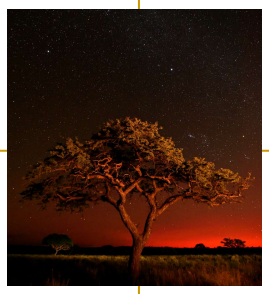
Glossary

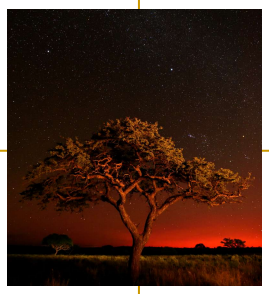
Aircraft	Means an airborne craft of any type whatsoever, whether self-propelled or not, and includes hovercraft and drones.
Dendritic drainage system	A dendritic drainage pattern occurs when the tributary systems subdivides headway like the limbs of a tree.
Desired state	The park desired state is based 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.
Dynamic pricing	Dynamic pricing, also called "real-time" pricing, is a pricing strategy in which businesses set highly flexible prices for products or services based on current market demands. The goal of dynamic pricing is to allow a company that sells goods or services over the Internet to adjust "prices" on the fly "in response to market demands".
Extra-limital	Those species occurring outside their historical distribution.
Interpretation	Interpretation is the communication of information about, or the explanation of, the nature, origin, and purpose of historical, natural, or cultural resources, objects, sites and phenomena using personal or non-personal methods.
Metapopulation	A "metapopulation" consists of a group of spatially separated populations of the same species which interact at some level.
MICE	Meetings, Incentives, Conferences and Events. Used to refer to all function types available.
Mission	An articulation of the Vision that describes why the park exists and its overall philosophy on how to achieve its Vision.
MODIS satellite imagery	The moderate-resolution imaging spectroradiometer (MODIS) is a payload scientific instrument. The instrument capture data in 36 spectral bands ranging in wavelength from 0.4 µm to 14.4 µm and at varying spatial resolutions (2 bands at 250 m, 5 bands at 500 m and 29 bands at 1 km).
Objectives hierarchy	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.
Paratenic	In parasitology, the term paratenic describes a host that is not necessary for the development of a particular species of parasite, but nonetheless may happen to serve to maintain the life cycle of that parasite.
Responsible tourism	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.
Servitude	A "servitude" shows a registered right that an entity / person has over the immovable property of another. It allows the holder of the servitude to do something with the other person's property, which may infringe upon the rights of the owner of that property.



Shale gas mining	Shale gas mining is a process that applies the technique of high-volume, horizontal, slick-water fracturing ('fracking' or 'hydraulic fracturing'). It involves pumping water, sand and chemicals into horizontally drilled wells under hydraulic pressure, to fracture the underground shale layers and release gas.
SPOT5 imagery	**SPOT** (French: *Satellite Pour l'Observation de la Terre*) is a commercial high-resolution optical imaging Earth observation satellite system operating from space.
Stakeholder	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.
Universal access	Refers to the design of products, devices, services, or environments to cater for people with disabilities.
Vision	A word 'picture' of the future, or what the stakeholders see as the future for the park.
Vital attributes	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.
V-STEEP	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	AMSL	Above Mean Sea Level
2	IAS	Invasive and Alien Species
3	APO	Annual Plan of Operations
4	BSP	Biodiversity Social Projects
5	BTB	Bovine Tuberculosis
6	CAPS	Curriculum Assessment Policy Statement
7	CARA	Conservation of Agricultural Resources Act (Act No 43 of 1983)
8	CBA	Critical Biodiversity Areas
9	CBD	Convention on Biological Diversity
10	CDF	Conservation Development Framework
11	CPF	Coordinated Policy Framework
12	CRMF	Corporate Risk Management Framework
13	CSD	Conservation Services Division
15	CSIR	Council for Scientific and Industrial Research
16	DEA	Department of Environmental Affairs
17	DEAT	Department of Environment Affairs and Tourism
18	DWS	Department of Water and Sanitation
19	DENC	Northern Cape Department of Environment and Nature Conservation
20	EDRRP	Early Detection and Rapid Repose Programme
21	EIA	Environmental Impact Assessment
22	EMP	Environmental Management Plan
23	EPWP	Expanded Public Works Programme
24	EVI	Index of Greenness
25	FEPA	Freshwater Ecosystem Priority Area
26	FPA	Fire Protection Association
27	GEF	Global Environmental Facility
28	GG	Government Gazette
29	GM: ISP	General Manager: Infrastructure and Special Projects
30	GM: VM	General Manager: Visitor Management
31	GN	Government Notice
32	HIL	High Intensity Leisure
33	ICOM	International Council of Museums
34	IDP	Integrated Development Plan
35	IUCN	International Union for Conservation of Nature
36	LFA	Landscape function analysis
37	LIL	Low Intensity Leisure
38	LLP	Lower Level Plan
39	MONP	Mokala National Park
40	NEMA	National Environmental Management Act (Act no 107 of 1998)
41	NEM: BA	National Environmental Management: Biodiversity Act (Act no 10 of 2004)
42	NEM: PAA	National Environmental Management: Protected Areas Act (Act no 57 of 2003)
43	NGOs	Non-Governmental Organisations
44	NHRA	National Heritage Resources Act (Act no 25 of 1999)
45	NPAES	National protected areas expansion strategy
46	NPTSA	National Parks Trust of South Africa
47	OHS	Occupational Health and Safety
48	OPEX	Operational Expenditure
49	PDI	Previously Disadvantaged Individuals
50	PkSDM	Pixley ka Seme District Municipality
51	PFMA	Public Finance Management Act (Act no 01 of 1999)
52	PM	Park Management
53	RBA	Risk Benefit Analyses
54	SAEON	South African Environmental Observation Network



55	SAHRA	South African Heritage Resources Agency
56	SAM	Strategic Adaptive Management
57	SANBI	South African National Biodiversity Institute
58	SANParks	South African National Parks
59	SAPS	South African Police Service
60	SCM	Supply Chain Management
61	SDF	Spatial Development Framework
62	SHEQ	Safety, Health, Environment and Quality
63	SHRs	SANParks Honorary Rangers
64	SLM	Siyancuma Local Municipality
65	SMF	Science Management Forum
66	SMO	Special Management Overlay
67	SPOT5	Satellite Pour l'Observation de la Terre
68	SSC	Species of Special Concern
69	TPCs	Thresholds of Potential Concerns
70	UV	Universal Access
71	VNP	Vaalbos National Park
72	V-STEEP	Values – Social, Technological, Environment, Economic, Political
73	WfW	Working for Water
74	WMC	Wildlife Management Committee
75	WoL	Working on Land

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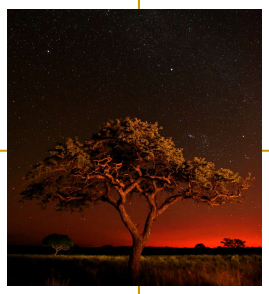


Executive summary

In compliance with the NEM: PAA, SANParks is required to develop management plans for each of its parks. In developing the management plan for this park, SANParks has attempted to integrate, implement and review the biodiversity conservation, tourism and constituency building components that make up its core business, whilst ensuring continual learning and compliance.

The park is relatively new, declared in 2007 and situated within the Kalahari bushveld Bioregion of the Northern Cape. The name Mokala means camel thorn tree *Vachellia erioloba* in the Setswana language and it is the characteristic tree in the area. The major biodiversity characteristics are the interesting habitat with the diverse ecosystem processes within a transition zone between the Karoo biomes and arid savanna bushveld, including landscape units and associated plant communities.

The desired state of the park is based on a vision, mission, vital attributes and objectives. It encompasses the characteristic Mokala biodiversity components, including ecological patterns and processes and associated cultural, historical and scenic resources while facilitating benefits to the neighbouring communities by creating job opportunities and other forms of income generation, while remaining informed and constrained by its biodiversity values. Programmes to achieve the desired state fall within four categories, *i.e.* biodiversity, Responsible Tourism, constituency building and benefit sharing, and effective park management.

An important objective for SANParks is to promote responsible opportunities for visitors to appreciate and value national parks. The priority for the conservation of biodiversity should also recognise that the park could act as a nature-based tourism destination of choice, thereby constituting an economically and culturally valuable asset to the region in which it occurs.

The first management plan for the park was completed in 2008. This first review builds on the foundation of the first plan and addresses its inadequacies. The layout of the plan follows the format provided in the Guideline drawn up by the Department of Environmental Affairs (DEA) (Cowan and Mpongoma 2010) while also incorporating the adaptive planning process adopted by SANParks. Local and district municipalities and other organs of state, as well as other stakeholders were consulted as required (Appendix 2).

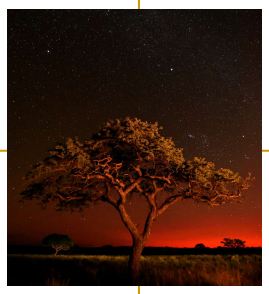
Introduction

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, park infrastructure and programmes at strategic and operational levels and costing.

This management plan will come into effect following the approval by the Minister in terms of sections 39 and 41 of NEM: PAA. It 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 contains the following sections**:**

- **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; and
- **Appendices** to this plan contain further details such as declarations, stakeholder participation report, park development framework, internal rules and maps.



Section 2: Legal status

2.1 Name of the area

Mokala National Park was initially proclaimed in June 2007 (Government Gazette No 29996 dated 19 June 2007). A full list of the declarations appears in Appendix 1.

2.2 Location

The park is located in the Northern Cape Province, 80 km south-west of Kimberley, and west of the Kimberley - Cape Town N12 road (Appendix 5, Map 1).

2.3 History of establishment

The deproclamation of the Vaalbos National Park (VNP) resulted in the establishment of MONP. The VNP consisted of two sections, the Droogeveld section (18,120 ha) situated approximately 61 km north-west of Kimberley, and the smaller, Gras-Holpan section (4,576 ha) situated about 25 km west of Kimberley. During the late 1990's reports were received of a land claim to be lodged against the VNP, the Droogeveld section in particular, by the Sidney-on-Vaal claimants. After the claim was legitimised, SANParks investigated five other possible locations to establish a new national park. All the reports indicated that the Wintershoek area, in the Plooysburg region to be the best option. This area was selected for its biological and topographical diversity, expansion potential, reduced threats from mining and development, and its economic potential. In November 2002, the land claim was officially gazetted and SANParks accepted the validity of the claim. In November 2004, the negotiation process with the landowners in the Plooysburg area was officially launched and the submission report was approved by the Minister of Land Affairs on the 30 May 2006. SANParks took over the management of the first property on 29 May 2006.

2.4 Contractual agreements

Contractual agreements remain one of the options available for private landowners to become part of the park and improve the ecological representation of the park. In this regard the National Parks Trust of South Africa (NPTSA), has made land acquired by the trust, available for inclusion into the park. As per the notarial agreements, these land parcels are fully managed by SANParks. Table 1 below provides a summary of the privately-owned land that was contractually included into the park.

Table 1. Private land included, by declaration, into the park.

Title deed	Farm name	Portion No	Extent (Ha)	Owner	GG	Declaration date	Period
T1533/2013	Wolwepan 138	9	586	NPTSA	N/A	Pending	
T638/2015	Wolwepan 138	4 a portion of portion 15	257		N/A	Pending	

2.5 Co-management agreements

There are currently no co-management agreements effective.

2.6 Total area

The park is currently 32,445 ha in size of which 26,646 ha are declared while 5,798 ha are in the process of being declared (Appendix 5, Map 3).

2.7 Highest point

The highest point in the park is Bakenskop at 1,306 m above mean sea level (AMSL). The latter is of importance, for the airspace above the park up to 2,500 feet above the highest point is also deemed National Park (Appendix 5, Map 2). Therefore, the park's airspace ranges from about 3,478 feet AMSL to 6,784 feet AMSL.

2.8 Municipalities within which the park falls

The park is situated within the following local and district authority boundaries:

- Siyancuma Local Municipality (SLM); and
- Pixley ka Seme District Municipality (PkSDM).

2.9 Land claims

There is currently (2017) no land claim registered against any portion of land within the park. However, the land claims process has been re-opened and claims can be lodged until 30 June 2019.

2.10 International, national and provincial listings

There are no relevant international, national or provincial listings.

2.11 Environmental authorisations

An environmental authorisation has been issued for 10 tree houses and associated infrastructure.

2.12 Biophysical description

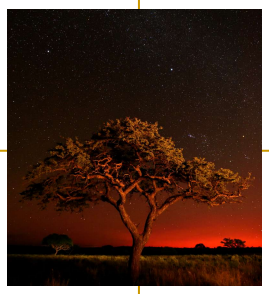
2.12.1 Climate

2.12.1.1 Historic

The park is situated in a semi-arid area that experiences frequent thunderstorm activity. Temperature and rainfall data has been recorded at Doornlaagte since the park was proclaimed in 2007. The park falls within a predominantly summer rainfall area, experiencing erratic rainfall, ranging from 233 mm per year to 558 mm. The highest rainfall occurs in the five months November to March, with a peak in February. Average annual rainfall recorded in the park was 355 mm between 2007 and 2016. The temperature is less erratic than the rainfall with cold winters (coldest months June - July), as low as - 6.61 ^{o} C (July 2011); while the summer (warmest months December - January) temperatures reach as high as 43.2 ^{o} C (January 2016). Frost occurs, with the earliest recorded frost event on 27 April, persisting to as late as 23 September (Bezuidenhout *et al.,* 2015; ARC 2016).

2.12.1.2 Future

By 2050, average temperatures in the park are expected to increase by between 1.6 ^{o}C and 2.8 ^{o}C (DEA, 2013; Driver *et al.*, 2012; Holness & Bradshaw, pers. comm.). Though these changes might sound small, they significantly increase the chance of extreme temperatures (*e.g.* if maximum temperatures increase by 1.6 ^{o}C to 2.8 ^{o}C, there would be approximately 27 to almost 50 more days in the year where the Kimberley temperature would exceed 35 degrees). Such hot extremes have negative impacts on plants and animals, tourists and staff who have to work outdoors. This park is also one of only three parks where no change, or a very slight increase in rainfall (in this case ~3 mm) is predicted by intermediate models of future conditions for 2050 (DEA, 2013; Driver *et al*., 2012; Holness & Bradshaw, pers. comm.). Under the driest scenario, a decrease of 114 mm in rainfall is predicted (DEA, 2013; Driver *et al.,* 2012; Holness & Bradshaw, pers. comm.), which would effectively halve the current rainfall, while the wettest scenario would see an increase in rainfall of 94 mm. Interestingly, an average increase in annual rainfall of approximately 134 mm has been observed at the Eureka weather station, just outside the park (van Wilgen *et al.,* 2016). Rainfall at Eureka was however more variable between years than in the past. Unpredictable rainfall could still have negative



biodiversity consequences in the future, even if on average (across years) rainfall increases or does not change. Under changed conditions of increased temperature, conditions in the park will more closely resemble those of arid savanna than Nama Karoo. Higher levels of CO_2, currently being experienced globally, favour the growth of woody plants (shrubs and trees), and give them a competitive advantage over grassy plants. The landowners in the area prior to the declaration of the national park had made use of herbicides to control 'bush encroachment', which is predicted to become more prevalent. Management may need to consider ecologically friendlier methods of controlling increasing bush density if it begins to impact on tourism and wildlife.

Some parks have explicit or dramatic climate changes predicted, while for others, like MONP, at least in the case of rainfall, the level of future change may be less certain or dramatic. The park should however contribute to climate change mitigation measures to ensure a more sustainable future. The changing climate presents SANParks with an opportunity to educate the public and showcase methods for sustainable living.

2.12.2 Topography

The physiography of the park varies from flat to gently undulating plains, with hills in the centre of the park. The following terrain types are present in the park: plateaux, crest, scarp, midslopes, valley bottomlands, drainage lines, pans and river (Land Type Survey Staff 2012; Bezuidenhout 1993). The southern part of the park is the highest and most topographically heterogeneous, with dolerite outcrops rising 50 m to nearly 100 m above the plains. To the west, north and northeast, there is a gentle decreasing slope of open plains to the Riet River which forms a crescent to the north of the park.

2.12.3 Geology and soils

The park is underlain by various geological types. Aeolian sand of Tertiary to Recent age covering the Dwyka Formation rocks extend over most of the park (SRK 2009). Outcrops of the andesitic lavas of the Allanridge Andesite Formation (the oldest rocks in the area) occur in isolated patches as rocky hills in the northern section of the park. Karoo dolerite intrusions, mostly occurring as sills and dykes, are found in the rocky hills surrounding the Mosu Lodge rest camp. The sedimentary succession mainly comprises shale of the Tierberg Formation as well as white weathering shale of the Whitehill Formation. The latter is a relatively soft rock that weathers easily, and is overlain by aeolian sand and calcrete.

Soil types vary from moderately deep (0.3 m – 0.6 m) to deep (>0.6 m) red and yellow sands (Hutton, Clovelly and Kimberley soil forms) to shallow (<0.3 m) and stony (Mispah-, Prieska- and Glenrosa soil forms). The soils of the pans are moderately deep and very clayey, >35% clay content (Arcadia, Rensburg and Willowbrook soil forms) (Soil Classification Working Group 1991).

2.12.4 Freshwater ecosystem

The Riet River is a westward-flowing tributary of the Vaal River. In precolonial times the Riet was known as the Gama-!ab (or Gmaap), a !Kora name meaning 'muddy'. Its main tributary is the Modder River with the confluence just upstream of the park. The Riet River runs along a nine km section of the park (Lilydale section), forming part of the Riet-Modder sub-catchments of the Upper Orange Water Management Area. Water availability in the sub-catchments relies heavily on surface water transfers from other areas, with ground water contributing a small percentage. Water resource development includes two major dams upstream of the park, the Kalkfontein Dam on the Riet River and the Krugersdrift Dam on the Modder River. Flow alteration and water quality issues are related to agricultural land use practices and urbanisation upstream of the park.

Within the park, significant runoff generates incremental surface flows along an ephemeral drainage feature originating within the higher lying randjiesveld in the south-east of the park. Under natural conditions, with approximately 50 mm or more of rainfall, this drainage system starts flowing, creating unique biophysical conditions within the park. However, earthen dams (and a dirt road), built for reducing erosion and for retaining water dissect this feature. The truncation of flows by the dams has altered the natural hydrological characteristics of the floodplains and the downstream Vaalbos Pan. There are 11 wetland ecosystem types in the park, of which 59% are in a good condition, 11% moderately modified and 30% which are heavily modified.

2.12.5 Terrestrial flora

According to Bezuidenhout *et al*. (2015), three vegetation types occur in the park, namely Kimberley Thornveld (Svk4) and Vaalbos Rocky Shrubland (Svk5) which are part of the Savanna Biome, and Northern Upper Karoo (Nku 3) of the Nama Karoo Biome (Mucina & Rutherford 2006). Historically, Acocks (1988) classified the vegetation of the park as Kalahari Thornveld invaded by Karoo (Veld Type 17). The interface of the Savanna Biome and the Nama-Karoo Biome (Rutherford & Westfall 1986) increases its conservation value, as this is the only protected area incorporating this ecotone. Thus, the park may also monitor potential shifts in biome boundaries in response to climate change in a relatively natural environment (Bezuidenhout 1995).

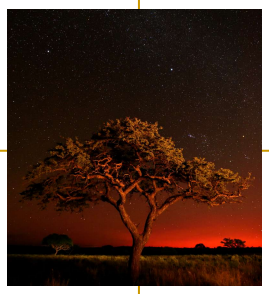
The park largely comprises savanna vegetation, varying from sparse to dense woodlands and shrublands (Bezuidenhout *et al*., 2015). Nine ecological landscape units and one degraded area were classified, mapped and described for the park, which is depicted in Table 2 below.

Table 2: Landscape units and plant communities of the park.

Landscape units	Plant communities
Undulating plains open woodland	This landscape unit is associated with undulating plains, deep well-drained sandy soil, with *Vachellia erioloba–Vachellia tortilis* open woodland.
Flat plains open woodland	This landscape unit is associated with flat plains and deep, well-drained, sandy soil with *Senegalia mellifera–Vachellia erioloba* open to closed woodland.
Flat plains sparse woodland	This landscape unit is associated with flat plains, moderately deep well-drained sandy soil, with *Schmidtia pappophoroides–Vachellia erioloba* sparse woodland.
Rolling hills open shrubland	This landscape unit is associated with rolling hills covered by a rocky, shallow rock-soil complex, with *Rhigozum obovatum–Senegalia mellifera* open shrubland.
Slightly undulating footslopes open shrubland	This landscape unit is associated with slightly undulating footslopes/midslopes covered by a rocky and shallow soil-rock complex, with *Senegalia mellifera–Vachellia tortilis* open shrubland.
Slightly undulating clayey drainage line open woodland	This landscape unit is associated with a lightly undulating major drainage line, moderately deep clayey soil, and *Cynodon dactylon–Ziziphus mucronata* open woodland.
Slightly undulating rocky drainage line open woodland	This landscape unit is associated with a slightly undulating drainage line, covered by a rocky, shallow rock-soil complex, with *Searsia lancea* open woodland.
Slightly undulating valley bottomlands open forbland	This landscape unit is associated with slightly undulating valley bottomlands, and has shallow soil with *Stipagrostis uniplumis* open forbland.
Flat Riet River open woodland	This flat landscape unit was centred on the Riet River, and has moderately deep sandy soil, with *Searsia pendulina* open woodland.
Flat cultivated lands open forbland	This landscape unit is flat and comprised old cultivated lands. It has moderately deep, well-drained, sandy soil with degraded open forbland.

2.12.6 Terrestrial fauna

After the deproclamation of VNP in 2006, certain wildlife species were relocated from VNP to MONP. The following species were relocated: white rhino *Ceratotherium simum simum*, south-western black rhino *Diceros bicornis bicornis*, giraffe *Giraffa camelopardalis*, red hartebeest *Alcelaphus buselaphus*, blue wildebeest *Connochaetes taurinus*, tsessebe *Damaliscus lunatus*, eland *Tragelaphus oryx*, gemsbok *Oryx gazelle*, plains zebra *Equus quagga*, roan *Hippotragus equinus,* brown hyaena *Hyaena brunnea* and Cape buffalo *Syncerus caffer*. Prior to the declaration of MONP, this farm, was a hunting concession and hence certain wildlife species were present when SANParks took over the management. The following wildlife



species were inherited with the property: blue wildebeest, plains zebra, red hartebeest, eland, gemsbok, giraffe, blesbok *Damaliscus pygargus*, common duiker *Sylvicapra grimmia*, steenbok *Raphicerus campestris*, kudu *Tragelaphus strepsiceros*, nyala *Tragelaphus angasii*, impala *Aepyceros melampus*, mountain reedbuck *Redunca fulvorufula*, springbok *Antidorcas marsupialis*, black wildebeest *Connochaetes gnou*, warthog *Phacochoerus africanus*, ostrich *Struthio camelus*, waterbuck *Kobus ellipsiprymnus* and lechwe *Kobus leche*. Furthermore, sable *Hippotragus niger* were introduced in 2007 and red-billed oxpeckers *Buphagus erythrorhynchus* in 2012. The park therefore protects four mammal species that are threatened, namely south-western black rhino, roan, sable and tsessebe.

The park has a bird species list of approximately 179 species, of which nine species are red listed (Taylor *et al*., 2015). The critically endangered white-backed vulture *Gyps africanus* breeds in the park and forms part of the Riet River colony, which has been breeding in this area for more than 40 years (Murn *et al.,* 2002). Other large raptor species found in the park are the secretary bird *Sagittarius serpentarius,* Cape vulture *Gyps coprotheres*, lappet-faced vulture *Torgos tracheliotus*, martial eagle *Polemaetus bellicosus*, Verreaux's eagle *Aquila verreauxii*, African fish eagle *Haliaeetus vocifer* and tawny eagle *Aquila rapax*. Smaller raptors such as the pale chanting goshawk *Melierax canorus*, gabar goshawk *Micronisus gabar*, greater kestrel *Falco rupicoloides*, rock kestrel *Falco rupicolus*, pygmy falcon *Polihierax semitorquatus* and peregrine falcon *Falco peregrinus* can also be seen in the park. In addition, four species of owls have been recorded, the Verreaux's eagle-owl *Bubo lacteus*, spotted eagle-owl *Bubo africanus*, Western barn owl *Tyto alba* and the pearl-spotted owl *Glaucidium perlatum*. The near threatened kori bustard *Ardeotis kori* is commonly found as well as the related northern black korhaan *Afrotis afraoides* and red-chested korhaan *Lophotis ruficristsa*.

The inventory list of certain fauna occurring in the park is presently incomplete and will be updated through ongoing research specifically for reptiles, amphibians and small mammals.

2.13 Archaeology and cultural heritage

Dr David Morris from the McGregor Museum carried out a survey of the original park in 2007 and compiled a heritage resources report (Morris 2007). Some sites like the Doornlaagte rock engravings were published (Fock & Fock, 1989). There are a number of rock art sites and Stone Age sites in the area surrounding the park (Wilman 1933; Morris 1988; Fock & Fock 1989; Beaumont & Morris 1990) particularly along the Riet River at Estate Biesjebult West (Driekopseiland) (Morris 2002), Schutse Kama, and Moirdale. Engraving sites are also known on properties south of the park, for example on Richmond and Lovedale. The park also has a number of precolonial and colonial cultural traces, particularly rock engravings and graves. The farms *Scholtz Fontein North* (with former homesteads known as *Wintershoek* and *Strydam*), *Doorn Laagte*, *Goede Hoop*, *Vaalbosch Pan*, and portions of *Wildehonde Pan* and *Wolve Pan*, all lie near, though to the north of, the never-properly-defined Vetberg Line which established, fairly informally, the spheres of influence of the Free State and Adam Kok's Griqua polity in 1838. The Vetberg koppies lie just north east of Salt Lake. The Vetberg line later roughly defined the northern edge of the Albania Settlement, established in the late 1860s, and *Scholtzfontein* was one of several "northern farms" disputed by the Albania Settlers, the Griquas and the Boers. It was a proposed meeting place for Commissions intended to settle the issues (Kurtz 1988).

Until the early nineteenth century the entire area would have been possessed by Khoi-San people (Morris 2002). Griqua pastoralists moved into the area at that period, and many of the local Dutch [Griqua] farm and place names represent a first episode of frontier re-naming that occurred at the time. It was a period of turbulence, the climax years of the protracted Difaqane; and records of the 1830s indicate the presence also of pockets of Sotho-Tswana and Xhosa people in the broader region. San people, the indigenous people of the region, were clearly under threat, and many may have been exterminated or evicted. In January 1835 Andrew Smith, traveling along the Riet River close to the park, told of how Bush women visited his camp to obtain tobacco, but that "by no means could we succeed in getting a glimpse of their

countrymen. The men … are always extremely shy of strangers…the men were in the hills, but afraid to come near us" (Lye 1975). "The hills" may well refer to the outcrops within the park.

A later generation of colonial naming took place from the 1860s when previous Griqua [Dutch] names were replaced with English ones. Examples include Belmont (previously *Uithaaldersfontein*) and *Hayfield*, *Richmond* and *Lovedale* (previously *Rietpan*), south of the park. The removals of Griqua people from these farms at that period, Kurtz (1988) observes, often "involved the violence and brutality so characteristic of South Africa." Huts were burnt and stock and produce confiscated. The adoption of Mokala for the park name, represents a further re-naming away from the precolonial Khoi-San usages of the area (which do nevertheless survive in a few local instances, such as *Schutse Kama*, originally a !Ora name meaning "Nine Camelthorn Trees"). Successive renaming processes reflect the dominant political and cultural imperatives of their day. They are a historical record in their own right.

In close proximity to Mokala are the Anglo-Boer War 1899-1900 battlefields of Belmont, Graspan, Modder River, Magersfontein and Koodoosberg Drift (Lundersteadt, 2001). The battle of Koodoosberg Drift (04 – 08 February 1900) had the Highland Brigade march from their camp at the Riet / Modder River junction some 30 kilometres westward, camping at Fraser's Drift both on the way to the battle and back (Lundersteadt, 2004). Fraser's Drift is very close to Lilydale. The berg itself is visible from various positions in the park.

While there was no recorded fighting on what is now Mokala there is no doubt that various Boer commandoes and British units passed through or encamped in the vicinity. One such Boer commando attacked the British blockhouse guarding the Modder River railway bridge. Heuningneskloof railway siding, the N12 turnoff to Mokala, still has at least two British redoubts, as for some time it was a storage depot. Other fortified positions can be seen on various kopjes throughout the region.

2.14 Socio-economic context

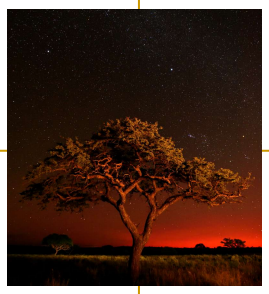
The park is situated in the Northern Cape within the PkSDM and is made up of eight local municipalities, these are: Emthanjeni, Kareeberg, Renosterberg, Siyancuma, Siyathemba, Thembelihle, Ubuntu and Umsobomvu. Twenty six towns fall under the jurisdiction of PkSDM. The SLM incorporates the towns of Beaufort West, Merweville, Murraysburg and Nelspoort. The Northern Cape Province had the lowest number of persons in 2011, with a total of 1, 145, 861 persons, which constituted only 2.2 % of the South African total population (Stats SA, 2011). Stats SA (2011) estimated that about 19.9 % or 37,076 of the people living in the PkSDM — with a total population of 186,351 — resides within the SLM. In 2011, there was a significant increase in the number of persons (both male and female) who were not economically active as compared to the years 1996 and 2001 (Stats SA, 2011).

Agriculture (in the form of crop and stock farming) and mining forms the backbone of the economy in the Siyancuma Municipal area and this sector provides the most employment opportunities. Other activities include private game farms, guest houses and tourism; all of which are becoming increasing economic drivers in the region. According to the District Growth and Development Strategy of the Pixley ka Seme district municipality (Pixley ka Seme, 2006) the district and local municipalities together with relevant provincial and national departments plan to emphasise the need to intensify mineral exploration and to update knowledge on the district's mineral resources. In addition to this the district municipality has identified steps towards diversification of the economy from one that relies on mining and agriculture, to that of renewable energy. The district has been declared as a "Renewable Energy Hub" seeking to attract foreign direct investments into solar, wind, hydro and biomass projects.

2.15 Tourism

Mokala National Park, is SANParks' newest national park, malaria free and well situated along the N12, to contribute to and capitalise from the tourism products on offer in the Northern Cape. The park is known for its rare and endangered species (specifically roan antelope and black rhino) and its aesthetic beauty and vistas, with the potential of providing visitors with an archaeological and cultural heritage experience, based on the presence of rock paintings and battle sites in and around the park.

Tourism facilities can accommodate up to 121 overnight guests, including accommodation located at Mosu Lodge (15 units, 40 guests), Lilydale rest camp (12 units, 35 guests), Haak-en-Steek cottage (four guests), Kameeldoring and Dinokeng tree top cottages (two guests each) and Stofdam bird hide (four guests). The park also provides a high-demand serviced camping experience, including private cooking and ablution facilities, at Motswedi camp site (six stands, 36 guests). In addition, the park can accommodate up to 60 guests in the Mofele environmental education centre, which has nine en-suite units, with either three or five double bunk beds. There are currently 87 km of gravel tourist roads in the park.



Mosu Lodge has a small retail outlet at the main reception and a restaurant, lounge and bar are available throughout the day, catering for breakfast, lunch and dinner, with a boma available for groups on request. The park can cater for small conferences of up to 40 people at Mosu, however these are seldom used, due to the lack of adequate accommodation to cater for conference guests.

There is a swimming pool available to overnight guests at both the Mosu and Lilydale rest camps, while visitors have the opportunity to visit the Matopi or Kameeldoring picnic areas. Bookable park activities include a variety of game drives (morning, day, sunset and night drives) or fly fishing at two spots, De Krans and Kleinbek, in the Riet River at Lilydale, which are accessible by 4x4 or high-clearance vehicles, at certain times of the year. Guests may also book a bush breakfast or braai which includes a combination guided game drive and bush dining experience under a 400-year-old camel thorn tree, which is available for a minimum of five participants.

In 2015 / 2016 Mokala experienced average tourism occupancies, with an accommodation occupancy of 63.3 % (2 % increase) and camping occupancy of 81.65 % (1.6 % increase). It showed a decline of 2.5 % in number of guests visiting the park, with a total of 17,182 visitors compared to 18,727 achieved in 2014 / 2015 and a 24.2 % decline in activities sold from 1,160 to 879.

In spite of the current occupancies, the park has been identified as a priority development park, as it presents a number of tourism opportunities due to the ease of development and park location. The current tourism profile is supported by the objectives set-out in the desired state and park objectives.

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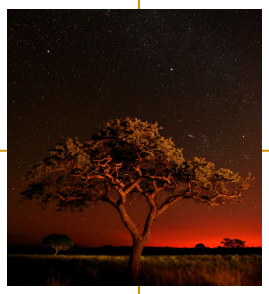


Section 3: Policy framework

SANParks, like all protected area management authorities, is subject to the constitution, international agreements, legislation, national policies and government priorities. Section 41 of the NEMA: PAA requires that management plans be nested within the context of a coordinated policy framework (CPF). The CPF can be downloaded from the SANParks website using the following link http://www.sanparks.org/conservation/park_man/.

The CPF provide the organisational guidance required by the DEA guideline for management plans (Cowan and 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; and
- 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; and
    - Research.

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 available to stakeholders.

The relationship between the park-specific adaptive management planning cycles and the SANParks CPF is outlined in Figure 1, where the planning cycle for management plans in SANParks is 10 years. The programmes and costing could be revised at shorter time intervals, as required.

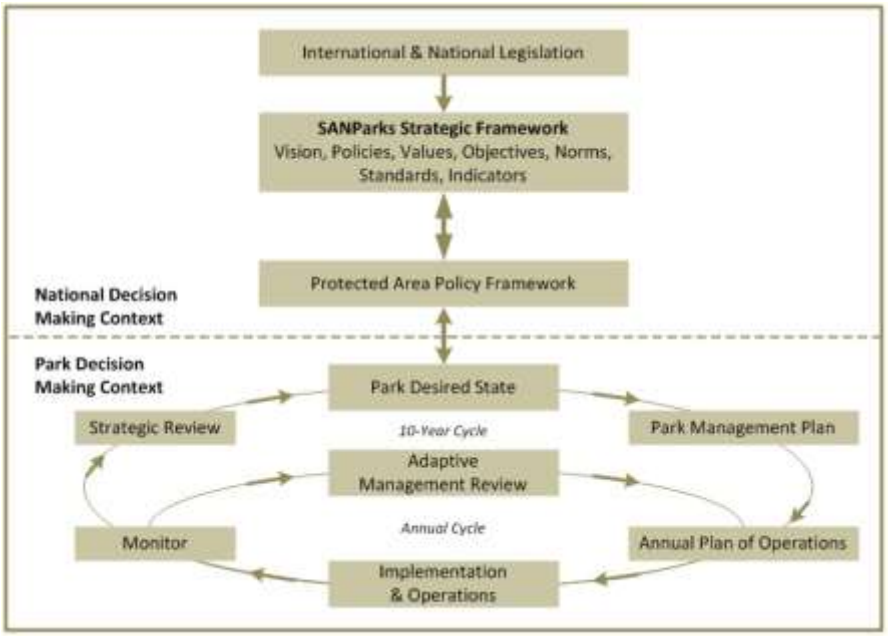


Figure 1. SANParks protected area planning framework.

3.2 Strategic adaptive management

Protected areas are increasingly viewed as complex social-ecological systems. The social-ecological coupling acknowledges multiple interactions that take place between people and natural landscapes – even fenced-off protected areas are influenced by external social issues. These systems are regarded as complex because the results of interactions between the social and ecological components, as well as between components within each of these sub-systems, are often unpredictable. A further complication in the management of protected areas is that the suite of stakeholders may have widely varying or even conflicting expectations, based on different world views and values. Under these conditions of divergent stakeholder interests and limited predictability, it might be impossible to agree on an optimal solution and similarly unrealistic to expect certainty in terms of management outcomes. Strategic Adaptive Management (SAM) has emerged as the SANParks approach of choice to deal with the complexity and multi-stakeholder tensions that characterise park management decisions (Figure 2). SAM is designed to be strategic (facilitate action with foresight and purpose), adaptive (facilitate learning whilst we are doing) and participatory (facilitate engagement and co-learning with stakeholders) (Grant *et al*., 2008).

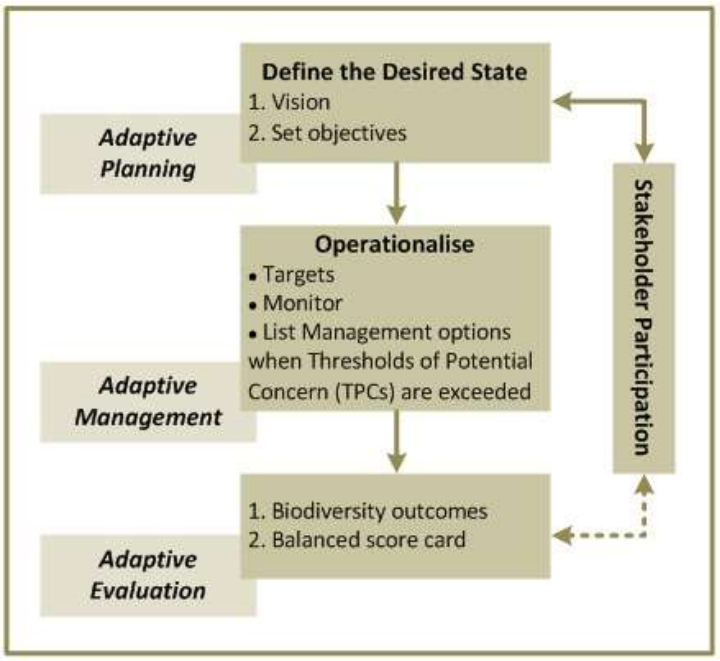
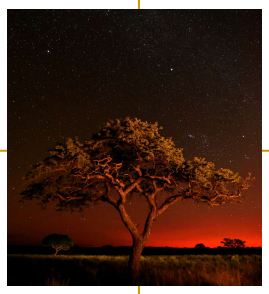


Figure 2. Steps in the adaptive management cycle as used by SANParks.



SAM begins with determining the desired future state of a particular social-ecological system (Figure 3). The aim of this step is to build a sense of common purpose among all relevant stakeholders and to develop a collective roadmap for moving from a current reality to a more desirable social-ecological system. This desired state or vision needs to be described within the context of associated stakeholders and their respective values, as well as social, environmental, ecological, technological, political and economic (V-STEEP) influences. Description of the future state is further enriched by deliberating the distinctive and special features (called vital attributes) of the park.

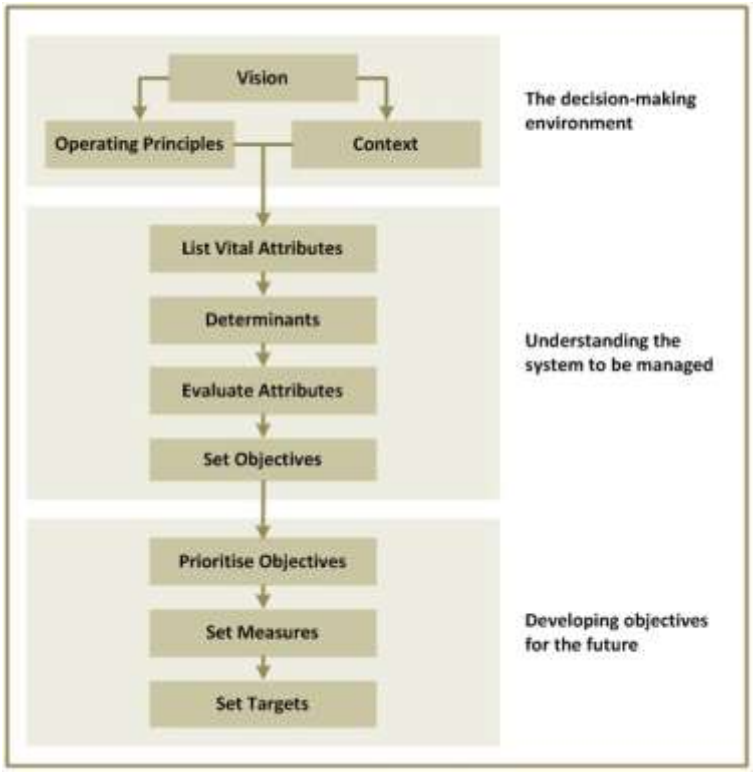


Figure 3. The adaptive planning process as used by SANParks.

The mission, together with the vital attributes of the system to be managed, informs the setting of objectives. A nested hierarchy of objectives starts with high-level objectives that are deconstructed into a series of lower-level objectives and, ultimately, management options for achieving those objectives. Alternative management options are considered by looking at resources, constraints, potential threats and risks associated with a particular management option, while anticipating likely results. From these options the most appropriate is selected, followed by a planning stage and implementation.

A critical component of SAM is to monitor and evaluate the consequences of management decisions. Constant scrutiny of emerging results and evaluation against objectives are essential to allow strategy and methodology to be adjusted as new understanding and knowledge emerges (see section 10.7). Of critical importance is the participation and engagement of all relevant stakeholders.

3.3 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 MONP, reporting is via the Regional

General Manager for the Arid Region. The park's summarised organogram (Figure 4) sets out the reporting structure in the park.

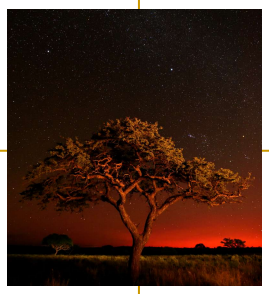
3.4 Park regulations and internal rules

In addition to the regulations for the proper administration of special nature reserves, national parks and world heritage sites, as gazetted on 28 October 2005 in GG 28181, the park has also drafted applicable internal rules in terms of Section 52 of the NEM: PAA, (Appendix 4).

3.5 Support to the park

Park management is primarily supported by head office, providing human resource, financial, marketing, review and auditing services. The regional operations office assists the park with line management support. The park also receives support from functions such as park planning and development, veterinary wildlife service, scientific services *etc.*

Figure 4. Mokala National 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 (Spies & Symonds 2011). 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 aim 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 the park, (iii) to translate the vision into management objectives that reflect the values as expressed by stakeholders and (iv) comment on the draft park management plan.

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 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, namely:

- The Constitution of the Republic of South Africa Act No. 108 of 1996;
- The 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.21 of 2014.

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; and
- Give particular attention to ensuring participation by marginalised communities, communities with specific concerns, or communities that have contractual rights in the national park.

The stakeholder participation process that was followed during the revision process of this management plan, is depicted in Figure 5 below.

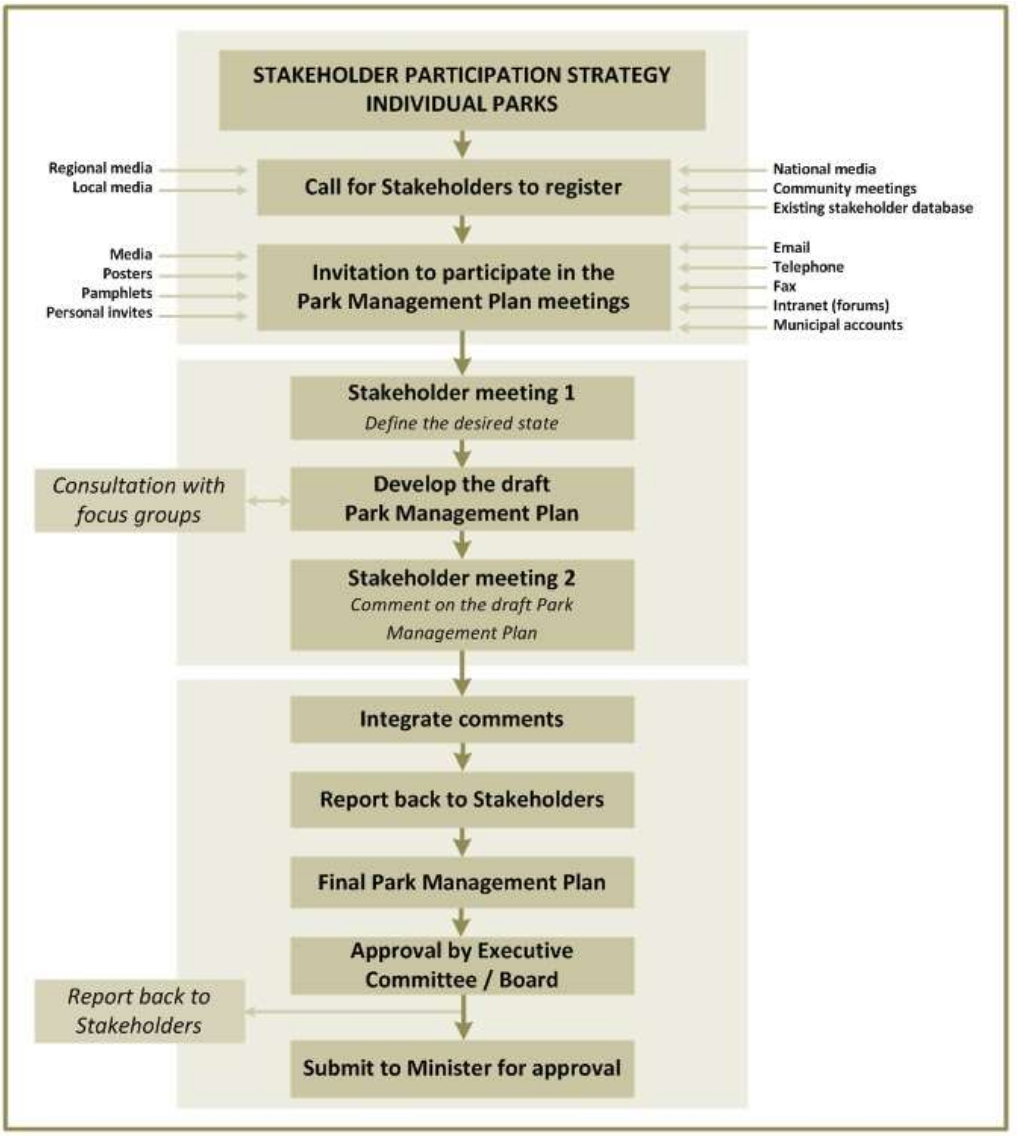
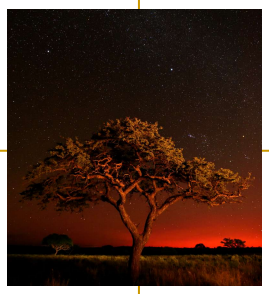


Figure 5. SANParks stakeholder participation process.

Details regarding the stakeholder process that was followed are outlined in Appendix 2.



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, it is well known that the park was declared to replace the deproclaimed VNP, with a special focus on conserving endemic rare and endangered species. 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 Desired state for the park

In order for the current and future extent of the park to be protected and managed effectively, a desired state for the park has been developed through an adaptive planning process to guide park management in its daily operations. To formulate this desired state, focus was placed on the mission, park context, operating principles and, vital attributes that make this park unique, or at least very special in its class. Each attribute was discussed along with important factors determining / strengthening or threatening / eroding these attributes. Using this information helped focus the exact formulation of the park objectives, which must strengthen positive determinants and weaken or remove negative ones so that objectives are appropriate to the uniqueness and special nature of this park. In this way, the management plan is customised according to its local context, without detracting from some of its more generic functions along with certain other parks. This framework forms a bridge between the CPF and its vision for the park, and the medium term (10 years) priorities to attain the vision and mission in co-operation with its stakeholders.

5.2.1 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 MONP, is as follows:

VISION

"A sustainable national park system connecting 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 12 April 2016:

MISSION

"To conserve a representative area of the natural and cultural heritage at the interface of the Nama-Karoo and Savanna Biomes while providing benefits to present and future generations".

5.2.2 SANParks corporate vision of the desired state

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 the park has also informed the programmes of implementation (Section 10) of this management plan:

The biodiversity value is lower than for most other parks, otherwise MONP is of moderate value for most of the desired state components. Its biggest potential is as an organism bank, generating income through wildlife sales. A moderate increase in cultural heritage value is possible in future, as well as an increase in the diversity of tourism products. The park will further develop a bank of rare wildlife species which can be utilised sustainably to generate income. It has the potential to move to surplus income generation. Infrastructure requirements include staff houses, road network, bulk services and fences. Biodiversity value is expected to remain stable over the next 20 years. Risks to biodiversity are generally low, alien invasive species being among the most important of these.

5.2.3 Operating principles or values

SANParks has adopted eleven corporate values which serve as guiding principles around which all employee behaviour and actions are governed and shaped. Stakeholders recognised and endorsed the SANParks corporate and conservation values as outlined in the CPF. These principles or values are:

Corporate values:

1. Show **leadership** in all we do.
2. Be guided by **environmental ethics** in all we do.
3. Promote **transformation** within, and outside of the organisation.
4. Strive for **scientific** and **service excellence** at all times.
5. Act with **professionalism** at all times.
6. Adopt, and encourage **initiative** and innovation by all.
7. Treat all our stakeholders with equity and **justice**
8. Exercise **discipline** at all times.
9. Show **respect** to all.
10. Act with **honesty** and **integrity.**
11. Strive for **transparency** and open **communication** at all times.

In addition to the above, SANParks has also adopted Biodiversity values as set out below:

1. We adopt a **complex systems view** of the world while striving to ensure the **natural functioning** and **long term persistence** of the **ecosystems** under our care.
2. We aim at persistent achievement of **biodiversity representivity** and **complementarity** to promote **resilience** and ensure **ecosystem integrity**.
3. We can **intervene in ecosystems responsibly and sustainably**, but we focus management on **complementing natural processes** under a **"minimum interference"** philosophy.
4. We accept with humility the **mandate of custodianship** of biodiversity **for future generations** while recognising that both natural and social systems change over time.

At the workshop that took place on 12 April 2016, the participants suggested adding additional values. SANParks agreed to adopt the following:

1. Value and respect stakeholder / community relations and cultural diversity; and
2. Value the park's unique sense of place.

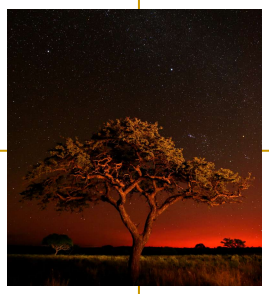
5.2.4 Park context

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. The context is summarised under sections 2.1 to 2.15.

5.2.5 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 nine attributes that are vital to the approach by which it is managed. The key attributes are:

1. Diverse range of attributes provide opportunities for a wide spectrum of visitor experiences in a safe setting, in particular wide open landscapes with beauty / aesthetic value leading to a sense of place;
2. The park has a range of cultural and heritage attributes with high associated education Potential;
3. Proximity of the park to the N12 road, City of Kimberley, prominent regional airport and tourism route (Battlefield Route);
4. The park is representative of the landscape units of the area, with a diversity of fauna and flora, including the iconic camel thorn tree;



5. The park has a combination of rare and unique biota (disease free buffalo, roan antelope, tsessebe, black rhino) some with high economic value;
6. High potential for park expansion and the incorporation of larger-scale biodiversity patterns and processes (including predators and scavengers);
7. Good provincial support for the park, providing opportunities to strengthen co-operative governance;
8. Sound park and regional capacity to generate, mobilise and integrate knowledge and good opportunities for research;
9. Some pristine river front area.

5.2.6 Determinants and risks to the vital attributes

A major component of 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.

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

1. Diverse range of attributes provide opportunities for a wide spectrum of visitor experiences in a safe setting, in particular wide open landscapes with beauty/aesthetic value leading to a sense of place.	
Determinants: Rare species, riverfront, ease of accessibility, various biomes, wide variety of game species, geological features, rock engravings (cultural heritage features), unique landscape units.	
Threats	
• Droughts • Climate change • Poaching • Subsistence fishing	• Disease • Fire • Inappropriate development • Mining

2. The park has a range of cultural and heritage attributes with high associated education potential.	
Determinants: Comprehensive inventory of cultural heritage assets, uniqueness of the asset (rock engravings).	
Threats	
• Vandalism / theft • Natural weathering • Undeveloped potential (limited exposure) • Lack of management prioritisation / protection / attention / intervention / low on the agenda	• No demarcation • No accessibility • No Cultural Heritage Management Plan and Site Management Plans

3. Proximity of the park to the N12 road, City of Kimberley, prominent regional airport and tourism route (Battlefield Route).	
Determinants: Halfway stop between Gauteng and Western Cape, rich cultural history of the area.	
Threats	
• Poor maintenance of provincial / local roads • N12 threat for poaching	• Accessibility and 'busy-ness' if a route change happens • Limited internet and cell phone connectivity

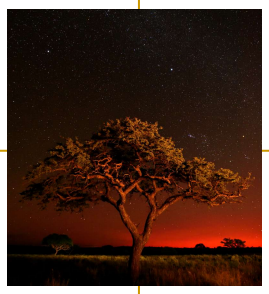
4. The park is representative of the landscape units of the area, with a diversity of fauna and flora, including the iconic camel thorn tree.	
Determinants: Vegetation / herbivory management, geomorphology, interface between the biomes, restoration, low human population density / development.	
Threats	
• Fire • Invasive species • Fungal infections • Climate change • Desertification • Mismanagement of the veld	• External developments (close to the boundary) • Economic harvesting of the camel thorn tree • Subsistence harvesting • Poaching / illegal harvesting • Over supply of artificial water

5. The park has a combination of rare and unique biota (disease free buffalo, roan antelope, tsessebe, black rhino and white rhino) some with high economic value.	
Determinants: Extreme climatic conditions, management programmes.	
Threats	
• Poisoning • Poaching • Climate change	• Introduction of predators and effect on rare biota • Disease • Fire • Small size of the park

6. High potential for park expansion and the incorporation of larger-scale biodiversity patterns and processes (including predators and scavengers).	
Determinants: Availability of suitable land for purchase, national mandate to expand conservation areas, sanctuary for rare and threatened species.	
Threats	
• Limited funding / Increased prices • Unwilling seller • Development on park periphery	• Unnecessarily drawn out negotiations and approval process • Sound and prudent financial management • Lack of support from local government

7. Good provincial support for the park, providing opportunities to strengthen co-operative governance.	
Determinants: Northern Cape Tourism sees the arid parks as part of their tourism growth opportunities / potential, MoU with the Northern Cape Department of Environment and Nature Conservation.	
Threats	
• Memorandum of Understanding being cancelled	• Change in government mandate / leadership; • Mining agenda

8. Sound park and regional capacity to generate, mobilise and integrate knowledge and good opportunities for research.	
Determinants: New park with research potential, rich biodiversity, rare and endangered species, biome interface, close proximity to Universities and the South African Environmental Observation Network [(SAEON) – (Arid node)], good collaboration with Universities, limited research accommodation.	
Threats	
• Lack of funding (internal and external)	• Possible lack of support from park management



9. Some pristine river front area.	
Determinants: Undeveloped / undisturbed riverine area, geomorphology, riparian vegetation, unique biota, water flow.	
Threats	
• Climate change • External developments • Pollution • Alien vegetation	• Sedimentation • Eutrophication; • Currently fenced off • Limited river flow • Mining

5.2.7 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 (Figure 6), 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 more detailed levels, finest level of the hierarchy is defined by achievable 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:

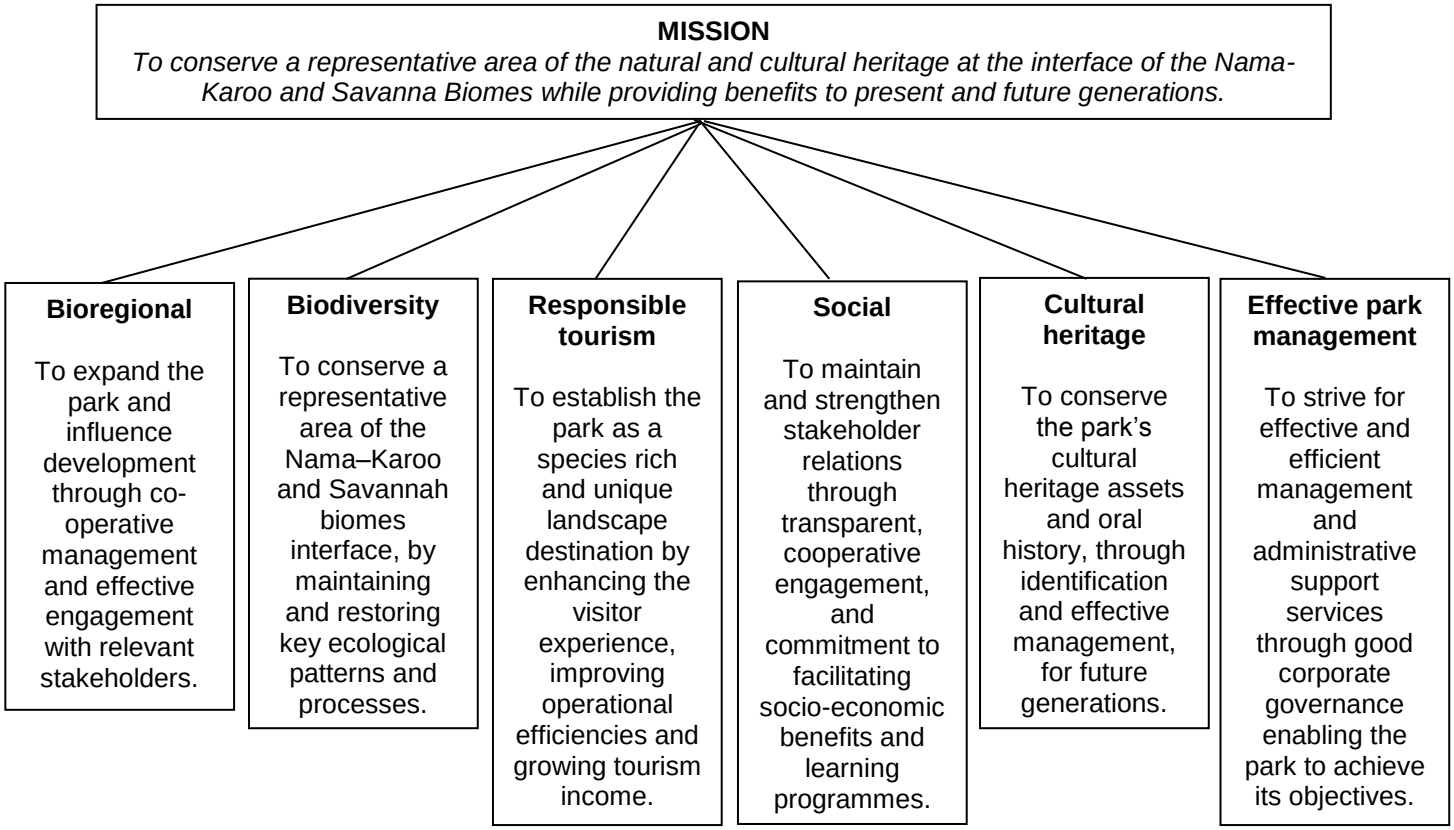
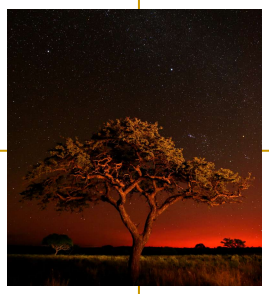


Figure 6. Park high-level objectives.

5.2.8 Unpacking the high-level objectives

The high-level objectives listed above is now progressively being disaggregated through a series of "objectives" of increasing focus. These are set out in Figures 7 – 12 below.



1. Bioregional high-level objective: To expand the park and influence development through co-operative management and effective engagement with relevant stakeholders.

- **1.1 Mainstreaming biodiversity objective:** To minimise the potential conflicts that arise from differing objectives of non-aligned land uses in the park buffer zone through responsible engagements with land owners and local authorities and development of conservation options.
- **1.2 Park consolidation objective:** To incorporate the spectrum of biodiversity patterns representative of the area, which support the long term ecological processes through conservation focused partnerships and strategic land acquisitions.

Figure 7. Bioregional high-level objective and supporting objectives.

2. Biodiversity high-level objective: To conserve a representative area of the Nama–Karoo and Savanah biomes interface, by maintaining and restoring key ecological patterns and processes.

- **2.1 Habitat and vegetation objective:** To determine potential change of plant species composition, vegetation structure and functionality and its consequences to ecological processes by monitoring, data analysis and evaluating results
- **2.2 Degradation and rehabilitation objective:** To re-establish the structure, function and composition of degraded land by restoring ecological patterns and processes
- **2.3 Fresh water objective:** To ensure the functionality of the fresh water systems (river, drainage lines, pans and boreholes) by maintaining and restoring hydrological activity and variety of aquatic habitats.
- **2.4 Species of special concern objective:** To ensure the persistence and viability of key species by contributing to national initiatives and implementing species specific management approaches.
- **2.5 Herbivore objective:** To understand and manage herbivore dynamics, maintain integrity and vegetation, by regulating herbivore populations as a modifier of biodiversity at various temporal and spatial scales.
- **2.6 Fire objective:** To promote the natural fire regime in the region by suppressing and/or managing all veld fires and participating in the establishment of the local Fire Protection Association and activities.
- **2.7 Disease objective:** To understand the incidence and impact of disease by investigating mortality events.
- **2.8 Reintroduction objective:** To maintain ecological patterns and processes by reintroducing species that historically occurred in the region.

Figure 8. Biodiversity high-level objective and supporting objectives.

3. Responsible tourism high-level objective: To establish the park as a species rich and unique landscapes destination by enhancing the visitor experience, improving operational efficiencies and growing tourism income.

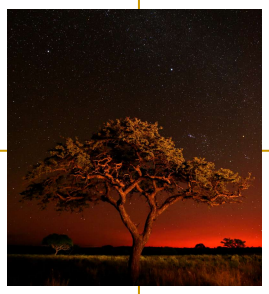
- **3.1 Responsible Tourism Performance objective:** To enable continuous improvement of the park's Responsible Tourism performance, by establishing and implementing a monitoring system, in accordance with the requirements of SANS1162:2011.
- **3.2 Visitor experiences objective:** To continually enhance the visitor experience within the park, by effective visitor engagement, management, interpretation and quality of facilities offered.
- **3.3 Service excellence objective:** To enable appropriate customer- focused service excellence, by understanding and responding appropriately to market preferences
- **3.4 Grow tourism revenue objective:** To grow income through tourism by providing visitors with an appropriate and a diverse range of products and services.
- **3.5 Operational efficiency objective:** To enable cost savings within tourism operations of the park, by implementing operational efficiencies and controls.
- **3.6 Promotion objective:** To promote the park with its species rich, unique landscapes and cultural experiences, by developing and implementing a variety of sales, marketing and communication strategies.
- **3.7 Equitable access objective:** To enable equitable (both affordable and facilitated) access to the park, by understanding local community and stakeholder interests.

Figure 9. Responsible tourism high-level objective and supporting objectives.

4. Social high-level objective: To maintain and strengthen stakeholder relations, through transparent and cooperative engagement and commitment to facilitating socio-economic benefits and learning programmes.

- **4.1 Stakeholder participation objective:** To enhance cooperation and sound relationships between neighbouring communities and other key stakeholders, by creating and facilitating formal and informal engagement.
- **4.2 Socio economic beneficiation objective:** To improve local livelihoods by facilitating skills development, business opportunities and sustainable resource use.
- **4.3 Learning programmes objective:** To create an awareness of, and support for, the park's endeavours, by facilitating formal and informal initiatives.

Figure 10. Social high-level objective and supporting objectives.



5. Cultural heritage high-level objective: To conserve the park's cultural heritage assets and oral history, through identification and effective management, for future generations.

- **5.1 Inventorisation objective:** To compile and maintain a comprehensive inventory, and grading, of all cultural heritage resources, inclusive of oral history.
- **5.2 Conservation objective:** To conserve the tangible and intangible cultural heritage assets, through effective management and, where relevant, sustainable utilisation.
- **5.3 Interpretation and awareness objective:** To enable the, interpretation and awareness of park and regional cultural heritage resources, and oral history, through research and knowledge management.
- **5.4 Capacity building objective:** To support the recording and enable effective management of all cultural heritage resources, inclusive of oral history, by developing appropriate skills.

Figure 11. Cultural heritage high-level objective and supporting objectives.

6. Effective park management high-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.

- **6.1 Environmental management objective:** To strive for best practise and ensure compliance with environmental legislation through improved governance and environmental risk management.
- **6.2 Risk management objective:** To establish and maintain effective, efficient and transparent risk management systems by creating an enabling environment for the management of risk.
- **6.3 Financial management and administration objective:** To ensure sound financial management and administration through proficient budget management, effective internal controls and compliance to corporate governance prescripts.
- **6.4 Human capital development objective:** To ensure sufficient and effective staff capacity to achieve management objectives by adhering to legislation, corporate human resource policies and guidelines.
- **6.5 Information management objective:** To achieve best practice in the field of information and records management by complying to the Records Management Legislative framework and policies and thereby ensuring care of all vital records in SANParks.
- **6.6 Infrastructure objective:** To maintain, upgrade and develop new park infrastructure through proper planning and efficient management.
- **6.7 Safety and security objective:** To provide a safe and secure environment for both visitors and SANParks employees and to ensure the protection and integrity of natural, cultural and physical assets and resources, by implementing a Park Safety and Security Plan.
- **6.8 Occupational health and safety objective:** To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Occupational Health and Safety management system.

Figure 12. Effective park management high-level objective and supporting objectives.

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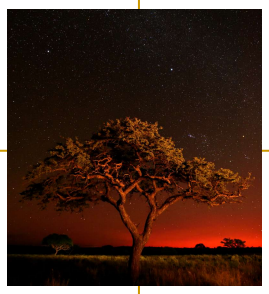


Section 6: Zoning

6.1 Introduction

The primary objective of a park zonation 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 minimise conflict between these sometimes, differing activities. A zoning plan is also a legislated requirement of the National Environmental Management: Protected Areas Act No 57 of 2003 (NEM: PAA), 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 park and the conservation objectives of those sections".

The zoning of the park was based on an analysis and mapping of the sensitivity and value of the park's biophysical, heritage and scenic resources (SANParks, 2005a); 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 the park objectives. This was undertaken in an iterative and consultative process. This section – which is guided by the Conservation Development Framework (CDF) planning manual (SANParks, 2005b) – sets out the rationale for use zones, describes the zones, and provides management guidelines for each of the zones. The use zoning of the park is shown in Appendix 4: Map 4, and summarised in Table 1 below.

6.2 Synopsis of updates to the 2016 zonation

In general, few changes were required to the previous zonation scheme. Changes included the updating of place names, roads, incorporation of new infrastructure such as the two airstrip landing sites and a toilet facility in the Doornlaagte Low Intensity Leisure (LIL) zone were included to the zonation scheme revision. In addition, the LIL zone, south of Strydam was extended slightly. The Stofdam Bird Hide Viewpoint, an office site at Lilydale, a power line, two Telkom structures, additional campsites and lodges were all incorporated into the revised zonation scheme. For the Special Management Overlay (SMO) section, a mining rehabilitation site, species site for vultures and fishing sites was also included to the updated zonation scheme.

6.3 Guiding principles underpinning the zonation

The principles underpinning park zonation, as listed below, were informed by the SANParks CDF planning manual, the Guidelines for Strategic Environmental Assessment in South Africa, Integrated Environmental Management and the National Environmental Management Act (NEMA). Accordingly, the zonation:

- Is the foundation of all planning and development within a park, with the aim of ensuring its long-term sustainability;
- Accommodates strategic, flexible and iterative planning procedures;
- Is a "framework for planning" not a "plan for implementation" (*i.e.* implementation is dealt with through lower level plans and programmes);
- Is risk-averse and promotes a cautious approach, which takes into account the limits of current knowledge about the consequences of decisions and actions;
- Recognises that the mandate of SANParks is to conserve biodiversity and heritage resources of national and international significance, in terms of both the NEM: PAA and the National Heritage Resources Act (NHRA) No 25 of 1999;
- Ensures the integrity of the park's scenic quality by limiting human intrusions into the landscape;
- Accommodates a wide range of unique opportunities for experiences of solitude and nature based recreation which do not conflict with the desired social and environmental states;
- Confines development within the park to areas that are robust enough to tolerate transformation and without detracting from the "sense of place";

- Rationalises and channels access into the park and internal movement through it;
- Sets the limits of acceptable change; to minimise the loss of biodiversity and to reduce conflict between different park uses;
- Recognises that park boundaries are not static in time and that there are factors beyond the current or future boundaries that can positively or negatively influence the park; and
- Recognises that the park cannot exist in isolation and that planning needs to ensure that the park is integrated with the surrounding landscapes as well as the economic and social structures at local and regional scales.

6.4 Rationale for use zones

The primary 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 park, could potentially conflict with and compromise this primary function. Use zoning is the primary tool to ensure that visitors could have a wide range of quality experiences without comprising the integrity of the environment.

Furthermore, the expectations and recreational objectives of individuals that visit the park may differ. Some individuals visit the park purely to see the wildlife and natural landscapes. Other individuals wish to experience the intangible attributes such as and not limited to solitude, remoteness, wildness and serenity (which can be grouped as wilderness qualities), whilst some visit to engage in a range of nature-based recreational activities, or to socialise in a 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 of different users and different activities. Appropriate use zoning serves to minimise 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 negatively impact on the park’s vital attributes 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.

6.5 The zoning system

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

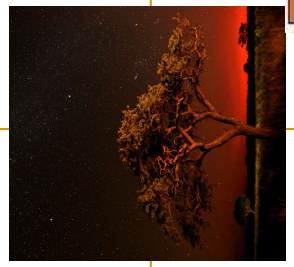
- Visitor use zones covering the entire park,
- Special management overlays; and
- A buffer zone surrounding the park.

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

The zoning for the 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 parks’ biophysical characteristics including: habitat value (in particular the contribution to national conservation objectives) and vegetation vulnerability to physical disturbance; special habitat value (the value of the area based on rare and endangered species); hydrological sensitivity (areas vulnerable to disruption of hydrological processes such as floodplains and wetlands); topographic sensitivity (steep slopes) and soil sensitivity (soils that are vulnerable to erosion). In addition, the heritage value and sensitivity of the sites were examined (mostly archaeological and cultural aspects). The visual sensitivity of the landscape was also surveyed in order to identify sites where infrastructure development could have a strong aesthetic impact. This analysis was used to inform users of the appropriate use of the different areas of the park as well as assisted in defining 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’s objectives and undertaken in an iterative and consultative process.

Table 3. Use zones and use zone characteristics for the park.

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	Guide infrastructure
REMOTE*	Retains an intrinsically wild appearance and character (essentially no infrastructure), or capable of being restored to such.	Solitude and awe inspiring natural characteristics.	None to very low	Controlled access and non-motorised.	Guided hiking in small groups.	Established footpaths where erosion may be a problem. Essentially undeveloped and roadless.	Deviation from a natural/pristine state should be minimised and existing impacts should be reduced.	Activities which impact on the intrinsically wild appearance and character of the area will not be tolerated.	Ideally there should be no management infrastructure but temporary infrastructure may be present only to limit biodiversity loss.
PRIMITIVE	Generally retains wilderness qualities, but with basic self-catering facilities. Access is controlled, or limited to 4x4 vehicles. Provides access to the remote zone and can serve as a buffer.	Experience wilderness qualities.	Low	Controlled access. Accompanied or unaccompanied. Foot and 4x4 vehicles.	Hiking; 4x4 drives and game viewing.	Small, basic, self-catering, distributed to avoid contact between users; or limited concessions with limited numbers; 4x4 trails and 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.	Small, isolated permanent but low spec (usually dirt road) infrastructure may be present. This may be to help manage biodiversity, or service tourist facilities.
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 large commercial 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; guided walking or hiking.	Facilities limited to basic self-catering picnic sites; ablution facilities; information/education centres and parking areas. Small self-catering (incl. camping) rest camps with ablution facilities. May contain small or seasonal convenience stores or tea gardens. Low spec access roads to provide a more wild experience.	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.	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.	Where this is the highest usage zone anticipated in a park, management infrastructure should be concentrated here as far as is feasible; allowing management to efficiently make use of existing high volume infrastructure. To limit impacts, management infrastructure should be placed close to the park boundary.
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 stated 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; and 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.	Where this is the highest usage zone in a park, management infrastructure should be concentrated here as far as is feasible; allowing management to efficiently make use of existing high volume infrastructure. To limit impacts, management infrastructure should be placed close to the park boundary.



Map 5 in Appendix 5, shows the relationship between the use zoning and the summary of the biodiversity and landscape sensitivity-value analysis. This indicates that in general it was possible to include most of the environmentally sensitive and valuable areas into zones that are strongly orientated towards conservation rather than tourist use. Further, in many cases the boundaries between zones are based on changes in environmental sensitivity. Table 4 below, 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. This indicates that nearly 47.3% of the park is covered by zones that are strongly conservation orientated in terms of their objectives (*i.e.* remote and primitive). Further, the table shows a good correlation between spatial distribution of environmentally sensitive areas and the conservation orientated zones, with 43.7% of highly sensitive areas in the conservation orientated zones. Further, the most conservation orientated remote zone only covers about 35.7% of the park yet contains 32.0% of the highly valuable and sensitive areas. Conversely, the tourist orientated zones covers nearly 52.7% of the park yet contains approximately 56.3% of sensitive areas.

Table 4: Summary of 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.

Zone emphasis	Use zone	Zone as a % of park area	% of highly sensitive areas that are in a zone
Conservation orientated	Remote	35.7	32.0
	Primitive	11.6	11.7
Tourism orientated	Low intensity leisure	52.2	55.8
	High intensity leisure	0.5	0.5

6.5.2 Remote zone

Objective

The objective of this conservation-orientated zone is to protect sensitive environments from almost all development impacts and tourism pressures.

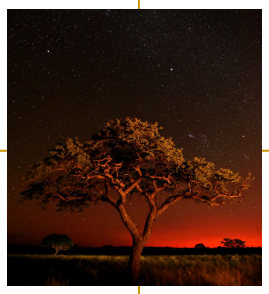
Characteristics

This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such and which is essentially undeveloped and roadless. There are no permanent improvements or any form of human habitation. Remote zone provides outstanding opportunities for solitude with awe inspiring natural characteristics. Sight and sound of human habitation and activities are barely discernible and at a far distance.

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, depending on the presence of dangerous animals. Several groups may be in an area at the same time, but if necessary densities and routes must be defined so that groups are unaware of each other. The principle of “Pack it in Pack it out” must be applied. 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 number of groups within the area will be determined by the ability to ensure that there is no interaction between groups.



Limits of acceptable change

Biophysical environment: Deviation from a natural / pristine state should be avoided, else minimised and where unavoidable, existing impacts must 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.*) is not allowed.

Facilities

Type and size: No facilities are provided. Should overnight facilities be required to serve this zone, these must be placed in the adjoining zones.

Sophistication of facilities: Except for self-carried portable tents, no other facilities are permitted. Guidelines for washing, ablution and cooking must be defined according to the "Pack it in Pack it out" principles. Camping is allowed 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 zones. Established footpaths may be provided where erosion risks occur. Limited low specification management tracks (*i.e.* not built up roads) are acceptable within this zone, though these tracks should be rationalised, and eventually removed.

Location in park

Remote areas were designated in the hilly / mountainous central and southern sections of the park. These areas contain most sites with high environmental sensitivity and value. Remote areas were also designated on the lowland plains both in the west, south (Dampoort) and in the Vaalboschpan section. This was done to ensure that a variety of habitats were protected within the remote zone, as well as to ensure that sufficient lowland habitats were kept vehicle-free in order to promote "wilderness-type" recreational activities.

Guidelines on management infrastructure and utilisation

Ideally there should be no management infrastructure, and natural processes must be allowed to function without management intervention. However, in reality, most parks are too small to allow ecological processes (fire, fecundity – particularly of large predators) to continue without management intervention, which would eventually impact biodiversity negatively. Furthermore, in young or expanding parks, farm management infrastructure might still be apparent. For this reason, concessions are made on management infrastructure in this zone, principally to prevent loss of biodiversity or restoration. Infrastructure might include footpaths where erosion might be a problem, or identified (barely) traversable management 4x4 routes for fire management or ensuring area integrity. Temporary management infrastructure, as might be used for game capture or anti-poaching activities, such as temporary bomas or helicopter landing sites would be permissible, as would vehicular access by staff for specific management interventions, although this must be exercised circumspectly.

6.5.3 Primitive zone

Objective

The objective of this conservation-orientated zone is to protect sensitive environments from development impacts by limiting the size, number and sophistication of infrastructure, and by reducing tourism pressure through controlled access and visitor numbers.

Characteristics

The primary characteristic of this zone is the experience of wilderness qualities with the emphasis on controlled access. Access is controlled in terms of numbers, frequency and group sizes. The zone shares the wilderness qualities of wilderness areas and the remote zone, but with the provision of small basic self-catering facilities with controlled access. It also provides access to areas zoned as remote or wilderness. Views of human activities and development outside of the park may be visible from this zone.

This zone serves to protect sensitive environments from high levels of development, and acts as a buffer between conservation-orientated and tourist-orientated zones, *e.g.* remote (or wilderness areas) and low intensity leisure respectively. The primitive zone may contain 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.

Visitor activities and experience

Activities: Access is controlled in terms of the number, frequency and group sizes. Activities include hiking, 4x4 drives and game viewing. In the park, access control is mostly passive, with 4x4 trails marked as restricted to 4x4 vehicles only, thus limiting visitor numbers on these routes. Access may also be 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 in more sensitive areas. Several groups may be in the 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 minimise these interactions.

Limits of acceptable change

Biophysical environment: Deviation from a natural / pristine state must be small and limited to restricted impact footprints. Existing impacts must 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 must 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.*) must be restricted and impacts limited to the site of the facility. Ideally visitors must only be aware of the facility or infrastructure that they are utilising, and this infrastructure / facility must be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts.

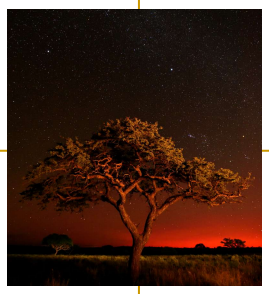
Facilities

Type and size: Facilities are small, often basic and are distributed to avoid contact between users. To achieve this, camp development must be limited to 15 beds, alternatively facilities can be designed for high levels of luxury, but with limited visitor numbers (*e.g.* controlled access 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 accesses to facilities are mostly limited to low-spec roads, often 4x4 only. Tourist and game viewing roads are usually 4x4. Established footpaths are provided to avoid erosion and braiding.



Location in park

Primitive areas were designated in the vlakte and pan areas around Vaalboschpan and west of Doornlaagte. A primitive link was designated through the hills north of the main rest camp to allow management and controlled tourist 4x4 access to alternative route to the northern vlaktes. The relatively sensitive areas south of the main rest camp was also designated primitive. In areas where remote zones border on the park boundary, a 100m wide primitive zone was designated to allow park management access to boundaries along constructed roads.

Guidelines on management infrastructure and utilisation

Permanent management infrastructure is permissible in this zone, but these should be relatively small and isolated. Park operations staff may need to service tourist facilities in this zone. Examples may include "twee spoor" management tracks, permanent bomas for wildlife, ranger camps and outposts, and possibly even permanent helipads. The responsibility is on park management to coordinate the tourist road network usage in such a way that tourists do not encounter management infrastructure in this zone, such as by using of no entry signs. Low volume access gates or entrances to access 4x4 routes could be accommodated in this zone.

6.5.4 Low intensity leisure zone

Objective

The objective of the tourist-orientated zone is to provide infrastructure for day and overnight visitors in a natural environment. While game viewing areas may be zoned low intensity leisure (LIL) to allow for flexibility of the game viewing road network, in reality, development footprints must be localised, with some areas having more of a primitive or even remote zone "feel." Impacts must be mitigated by using infrastructure to direct and manage the movement of park visitors away from the more sensitive areas that may occur within this zone.

Characteristics

The underlying characteristic of this zone is motorised self-drive access, with basic self-catering facilities. Small or seasonal commercial or catered facilities can be accommodated; however, these facilities must be small and aligned to the general ambiance of the zone. Numbers of visitors are higher in the low intensity leisure zone as compared to the remote and primitive zones. Relatively comfortable facilities are positioned in the landscape retaining an inherent natural and visual quality, which enhances the visitor experience of a more natural and mostly self-providing experience. Access roads are low key, preferably gravel roads and / or tracks to provide a more natural experience, however higher volume roads may be tarred. Facilities along roads are generally limited to basic self-catering picnic sites with toilet facilities. Large busses and open safari vehicles may be permitted subject to certain conditions.

Visitor activities and experience

Activities: Self-drive motorised game viewing, guided game drives, picnicking, walking, cycling, rock climbing, hiking around and adventure activities.

Interaction with other users: Moderate to high.

Limits of acceptable change

Biophysical environment: Deviation from a natural / pristine state must 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 it is inevitable that the activities and facilities will impact on wild appearance and reduce wilderness characteristics of the area (solitude, remoteness, wildness, *etc.*), these activities and facilities must 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 camps (including camping and caravanning) of low to medium density (up to 50 beds). Additional facilities can include swimming pools. Trails for 4x4 vehicles can also be provided. Small or seasonal (facilities are only open as required or during peak season) commercial facilities can be provided; such as kiosks, small tourist convenience stores, or tea gardens. However, these facilities must still fall within the general ambiance of the zone– and as such may make use of converted or restored farm houses.

Larger commercial facilities and larger concessional operators (*e.g*. Cattle Baron and Mug & Bean), must be placed in the high intensity leisure (HIL) zone. Day visitor sites are not placed within the camps, and must be compliant with the general self-catering or smaller-scale catered characteristics of the zone.

Sophistication of facilities: Mostly self-contained self-catering accommodation units with ablution facilities. Camp sites mostly include ablution and kitchen facilities. Tourist facilities may include modern commercial facilities such as shops, kiosks, tea gardens and small tourist convenience stores, as long as these are small.

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.

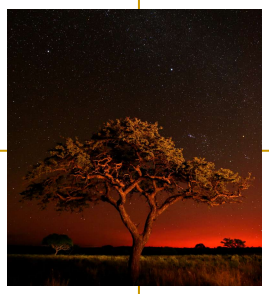
Access and roads: Motorised self-drive access (traditional game viewing) on designated routes, which are preferably gravel roads. Large busses and open safari vehicles are restricted to high volume roads designed to accommodate them, and indicated as such. Roads may be tarred, secondary gravel tourist roads, or minor game viewing roads.

Location in park

Three low intensity leisure areas were designated in a large hilly area extending northwest of the main rest camp (accommodating existing and proposed camp and picnic sites), the vlakte areas around Doornlaagte and in the south-western and north-eastern (Lilydale) sections of the park. In addition, a link between these three areas, as well as links to the main gate from the rest camp (and an adjacent tourist loop), to the airstrips at Strydam and Lillydale, were accommodated within this zone. The majority of the southern and northern sections of the park, changed from both remote and primitive to LIL to accommodate future park development. The Knietjie loop is zoned as LIL. The edges of the low intensity leisure zones were defined in terms of landscape sensitivity and value (as well as topographic) constraints, with most high sensitivity landscapes being excluded from this zone.

Guidelines on management infrastructure and utilisation

The placement of permanent management infrastructure is encouraged in this zone, particularly when it is the highest-level use zone within the park. Where HIL already exists, attempts must be made to concentrate the development of park management and operational infrastructure in the highest usage zone of the park, where feasible, and especially when this is situated close to the boundary of the park. Where it may be preferable to include non-industrial components of management infrastructure on the periphery of the park, these can be accommodated in LIL. Examples may include moderate to high volume access or main entrance gates, park reception, or park management / administration offices (which may wish to be close to park reception facilities). This will allow management and operations to make use of high volume access routes, which will be built to accommodate high traffic volume, and if positioned close to the boundary of the park, will involve shorter commuting distances, limiting disturbance to both wildlife and tourists, and limiting wear and tear to roads.



6.5.5 High intensity leisure zone

Objective

The main objective of this tourist-orientated zone is the concentration and containment of commercial, tourism, managerial, operational and industrial park activities within a restricted and designated area, which is robust enough to tolerate development, and where these diverse activities can share multi-use infrastructure (roads, plumbing, power), thus reducing their overall footprint. As impacts and particularly cumulative impacts are higher, where possible the HIL zone must be placed in areas that have low sensitivity values and are sufficiently robust to tolerate development, and idyllically be close to the periphery of the park. Staff not directly associated with tourism facilities must be accommodated outside of the park if and where possible. When inside a park, all industrial type facilities such as laundries, abattoirs, maintenance depots and workshops, must be ideally located nearby to the park boundary or, if and where possible, outside of the park but within municipally suitably zoned adjoining urban or rural areas.

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. High intensity leisure is accessible by motorised transport (car / bus) on high volume transport routes. More concentrated and commercialised (concessional) activities occur here than in than LIL areas.

Visitor activities and experience

Activities: Traditional game viewing routes with associated more sophisticated infrastructure, sightseeing at tourist destinations, picnicking, walking, cycling, rock climbing, hiking and activities associated with amenities such as dining in larger or concessional restaurants.

Interaction with other users: High

Limits of acceptable change

Biophysical environment: 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. 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 high visitor numbers, activities and facilities will impact on wild appearance and reduce wilderness characteristics of the area (solitude, remoteness, wildness, *etc*.), these must 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 diverse modern amenities. Restaurants, shops, education / information centres, view sights, ablution facilities, parking areas and botanical gardens. Day visitor sites are provided outside of rest camps. Day visitor sites or picnic sites may provide catered facilities and kiosks. Where it may be necessary to provide high density recreational sites with a wide range of intensive activities, an attempt must be made to concentrate these sites close to the periphery of the park. Staff villages and administrative centres must be restricted to core staff. Non-essential staff housing, administration and industrial infrastructure must be positioned outside of or close to the periphery of the park were possible.

Sophistication of facilities: Moderate to high density facilities. Self-catering and catered. Camps often have diverse modern facilities such as shops and restaurants, which may be concessional.

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 minimise conflict between users.

Location in park

High intensity leisure areas were designated around the main rest camp and associated staff and management facilities and the Lilydale office site, lodge and staff accommodation.

Guidelines on management infrastructure and utilisation

Management guidelines that apply to LIL apply to HIL zone as well. Generally, the presence of HIL in a park indicates higher or more intense utilisation or development, with a higher diversity and concentration of facilities, and thus may require additional management or operational facilities. As HIL is by definition a high use area, and must be located in an area of low sensitivity, the development of management and operations infrastructure in this zone must be favoured. In the park, most operations and administration infrastructure are situated in existing and well established HIL tourist node at the rest camp.

6.6 Overview of the special management overlays

Three special management overlays, which designate specific areas of the park that require special management interventions, were identified (Map 4):

Special Conservation Areas - Mining rehabilitation site: Mining rehabilitation is the process of returning the land in a given area to some degree of its former state, i.e. restoration, after the mining process resulted in the damage to the land.

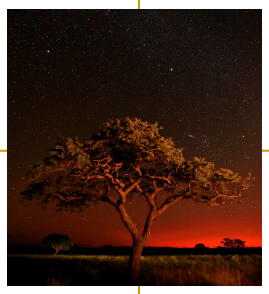
Special Conservation Areas - Species site for vultures: This area was identified for special protection to safeguard the habitat of the resident vulture breeding colony and to minimise any ongoing disturbances, which will negatively impact the species site.

Resource Use Overlay – Fishing: Indicates the area that is utilised for catch and release fishing, which extends 9 km along the northern boundary (Lilydale) of the park.

6.7 The park buffer zone

The buffer zone shows areas outside the park within which land use changes can affect the park. The buffer zone, in combination with guidelines, will serve as a basis for: (i) identifying focus areas in which park management and scientists must respond to Environmental Impacts Assessment's (EIAs), (ii) helping to identify types of impacts that will be important at a particular site, and most importantly (iii) integrating long term protection of the park into the Spatial Development Frameworks (SDFs) of municipalities and other local authorities. To this end, the park will endeavour to forge closer collaborative relationships with its neighbouring land owners and will interact with all spheres of government, whether local, provincial, or national, as required, to achieve a positive conservation outcome in the buffer zone. In terms of EIA responses, the buffer zone serves largely to raise red-flags and does not remove the need for carefully considering the exact impact of a proposed development. In particular, it does not address activities with broad regional aesthetic or biodiversity impacts *e.g.* renewable energy development projects.

In the parks case, there are three categories within the park buffer zone, the priority natural area, catchment protection and the viewshed protection area (Appendix 5, Map 6).



6.7.1 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), but rather aims to ensure the pars survival in a living landscape.

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: Inappropriate developments and negative land use changes (such as additional ploughing permits for natural veld, development beyond existing transformation footprints, urban expansion, intensification of land use through golf estates, *etc.*) must be opposed within this area. Developments with site specific impacts (*e.g.* a lodge on a game farm) must be favourably viewed if they contribute to ensuring conservation friendly land use within a broader area. Guidelines applicable for the catchment protection section will also apply to these areas.

6.7.2 Catchment protection

These are areas important for maintaining key hydrological processes (surface and groundwater) within the park.

Development guidelines: Within these areas inappropriate development such as dam construction, loss of riparian vegetation and excessive aquifer exploitation must be opposed. In addition, the control of alien vegetation, control of soil erosion, and appropriate land care (*e.g*. appropriate stocking rates) must be promoted.

6.7.3 Viewshed protection

These are areas where developments can 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 can also include sound pollution.

Development guidelines: Within these areas any development proposals must 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 will be perfectly suited for development. Further, very invasive developments outside this zone will also have to be considered.

6.8 Future improvements

No future improvements are envisaged at this stage.

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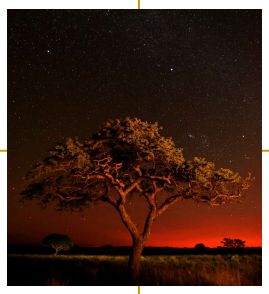


Section 7: Access and facilities

7.1 Public access and control

The park is just off the N12 with the nearest significant town being Kimberley which is approximately 80 km away. Approximate travel distances by road to the park are as follows:

- 920 km from Cape Town (N1 / N12);
- 556 km from Johannesburg (N12); and
- 215 km from Bloemfontein (N1 / N8)

The park has two entrance gates, which is located off the N12 highway. The turn off to the Lilydale gate is located approximately 38 km outside Kimberley towards Cape Town. The turn off to the Mosu gate is located approximately 57 km outside Kimberley towards Cape Town. The park includes approximately 87 km of tourist roads.

7.2 Areas with restricted access

The park has two tourist access gates, at Lilydale and Mosu, and both are manned during park opening hours. The gate opening hours are as follows:

- 16 March to 30 April: 07:00 – 18:00;
- 01 May to 31 July: 07:00 – 17:30;
- 01 August to 15 October: 07:00 – 18:00; and
- 16 October to 15 March: 07:00 – 19:00.

The Mosu rest camp, Lilydale rest camp and Motswedi camp site are enclosed by electric fencing and are access controlled.

7.3 Airfields and flight corridors

The park has a 1 km long gravel airstrip located at S29 10' 24.7'' E24 16' 07.0'', approximately 13 km from Mosu lodge and a 0.5 km long dirt airstrip located at S29 2'17.8'' and E 24 30' 0.4'' near the Lilydale lodge. No aircraft may enter the park's airspace or make use of the airstrip without getting prior permission from park management. An escort can be arranged to accompany guests to and from the lodge. There is no formal helipad located in the park, however an area at the back of the Mosu conference venue is used for official purposes.

7.4 Administration and other facilities

The facilities listed in Table 5 below are utilised for operational purposes enabling the park in fulfilling its' legal mandate. Map 7 in Appendix 5 shows all the infrastructure in the park.

Table 5. Current administrative infrastructure in the park.

Infrastructure	Current status	Zone	Proposed role by 2027
Administration complex Lilydale	Operational	HIL	Same as at present
Administration complex Mosu	Operational	HIL	Same as at present
Main gate Lilydale	Operational	LIL	Same as at present
Main gate Mosu	Operational	LIL	Same as at present
Staff housing Doornlaagte	Operational	LIL	Same as at present
Staff housing Lilydale	Operational	HIL	Same as at present

Infrastructure	Current status	Zone	Proposed role by 2027
Staff housing Mosu	Operational	HIL	Same as at present
Staff housing Strydam	Operational	Primitive	Same as at present
Staff housing Valschfontein	Operational	LIL	Same as at present
Staff housing Wolwepan	Operational	Remote	Same as at present
130 km Boundary fence	Operational	Various	May increase as park is expanded
240 km Management roads	Operational	Various	May increase as park is expanded

7.5 Visitor facilities

Visitor facilities including all non-commercial facilities and points of interest available to visitors, these are set out in Table 6 below.

Table 6. Visitor facilities and points of interest in the park.

Infrastructure / visitor sites	Current status	Zone	Proposed role by 2027
De Krans fly fishing area – Lilydale section	Operational	Primitive	Same as at present
Grootbek fly fishing area – Lilydale section	Operational	LIL	Same as at present
Kameeldoring picnic site and ablution	Operational	LIL	Same as at present
Kleinbek fly fishing area – Lilydale section	Operational	LIL	Same as at present
Lilydale – reception area	Operational	HIL	Possible conversion to primary park reception and / or tourism hub
Lilydale - swimming pool and ablutions	Operational	HIL	Same as at present
Look out point - Vaalbos loop	Operational	LIL	Same as at present
Matopi picnic site and ablutions	Operational	LIL	Same as at present
Mofele - interpretive centre	Operational	HIL	Same as at present
Mosu - conference facility	Operational	HIL	Possible conversion to accommodation
Mosu - visitor parking area	Operational	HIL	Same as at present
Mosu Lodge - swimming pool and ablutions	Operational	HIL	Same as at present
87 km Tourist gravel roads	Operational	Various	Same as at present, possible road network expansion

7.6 Commercial activities

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

7.6.1 Accommodation

Accommodation facilities in the park are currently limited, with potential for expansion. Existing facilities include those listed in Table 7, below.

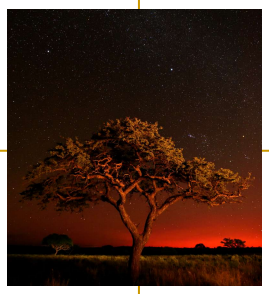


Table 7. Accommodation facilities available in the park.

Infrastructure	No of units	Current status	Zone	Proposed role by 2027
Dinokeng tree top cottage	1	Self-catering – serviced - economy accommodation, solar power and gas only	Primitive	Same as at present
Kameeldoring Pan tree top cottage	1	Self-catering – serviced - economy accommodation. Solar power and gas only	Primitive	Same as at present
Haak en Steek camping sites (only available as additional to Haak en Steek cottage)	5	Camping – budget accommodation – communal ablution facilities, no power, only solar power, no communal kitchen area.	LIL	Same as at present
Haak en Steek cottage – 1 queen and 2 single beds	1	Self-catering – serviced - economy accommodation, no power, gas and solar power only	LIL	Same as at present
Lilydale rest camp: 3 bed bungalows (3 single beds, 2 mattresses in loft)	5	Self-catering - serviced - economy accommodation.	HIL	Same as at present
Lilydale rest camp: 5 bed bungalows (3 single beds)	4	Self-catering – serviced - economy accommodation.	HIL	Same as at present
Lilydale rest camp: 3 bed chalet (1 double, 1 single bed)	2	Self-catering - serviced - economy accommodation.	HIL	Same as at present
Lilydale rest camp: universal access (UA) bungalow 3/4 bed and 1 single bed	1	Self-catering - serviced - economy accommodation.	HIL	Same as at present
Mofele Environmental Education Centre: 9 rooms with bunk beds up to 60 persons	1	Self-catering - serviced – budget accommodation, braai lapa, swimming pool, DSTV hotel bouquet	HIL	Same as at present
Mosu lodge: family bungalow (2 single, 1 queen bed and sleeper couch)	3	Self-catering - serviced - economy accommodation, DSTV hotel bouquets	HIL	Same as at present
Mosu lodge: luxury bungalow (queen bed)	2	Self-catering - serviced - economy accommodation, DSTV hotel bouquets	HIL	Same as at present
Mosu lodge: self-catering bungalow (2 single beds)	7	Self-catering - serviced - economy accommodation, semi-detached units.	HIL	Same as at present
Mosu lodge: semi–luxury bungalow (non-self-catering, 2 single beds)	2	Non-self-catering unit, economy accommodation	HIL	Same as at present, change to self-catering

Infrastructure	No of units	Current status	Zone	Proposed role by 2027
Mosu lodge: semi–luxury UA bungalow (non-self-catering, double bed)	1	Non-self-catering unit, economy accommodation	HIL	Same as at present, change to self-catering
Motswedi serviced campsites	6	Camping - economy - only solar power, gas fridge with own kitchen and ablution	LIL	Possible expansion
Stofdam bird hide	1	4-fold out beds, toilet and shower with braai area, no kitchen or self-catering facilities given	LIL	Same as at present

7.6.2 Concessions

There are no concessions in the park.

7.6.3 Retail and other facilities

The current retail facilities include:

- The park convenience store, restaurant and conference facility at Mosu, are operated by the park; and
- The bar and lounge at Lilydale, are operated by the park.

7.6.4 Activities

There are a number of year-round income generating activities available in the park, and these are listed below:

- Guided game drives (morning, day, sunset and night);
- Guided rock engraving drives;
- Guided day walks (morning and afternoon);
- Bush braai; and
- Fly fishing - catch and release at Kleinbek, De Krans and Grootbek.

There are also a number of annual events, arranged by and generating income for the SANParks Honorary Rangers (SHRs), which indirectly benefit the park through investment in park projects. These include the:

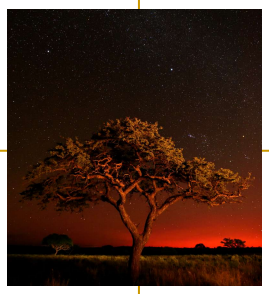
- An annual birding weekend;
- An annual mountain bike classic race; and
- An annual SANParks honorary rangers bush concert.

7.7 Cultural heritage sites

There are a large number of identified cultural heritage sites in the park, however there are currently only two sites accessible to tourists, and these are listed in Table 8, below.

Table 8. Cultural heritage sites available in the park with tourism potential.

Sites	Current status	Zone	Proposed role by 2027
Boesman Kop rock engravings site	Guided game drive and walk	Primitive	Same as at present, enhance interpretation of site and provide a proper interpretive walking trail
Kameeldoorns rock engravings site	Guided game drive and walk	Primitive	Same as at present, enhance interpretation of site



7.8 Community use

Community members or individuals are given access to grave sites or cultural sites for ritual purposes by appointment. They will be accompanied by a ranger for safety reasons. There are currently no community resource use projects active in the park. Future applications will be evaluated according to the SANParks resource use policy.

7.9 Mining

Other than gravel pits used for maintenance purposes, there is currently no commercial mining taking place in the park. No mining rights / permits have been issued on park property.

7.10 Servitudes

There are no servitudes registered against any portion of land in the park.

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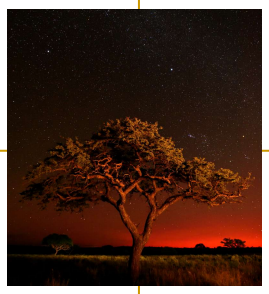

Section 8: Consolidation and expansion

The expansion and consolidation of the park remains a national priority for SANParks given its recognised biodiversity, its landscape interface and its regional social-economic importance. The expansion programme is informed by SANParks policy regarding land inclusion (SANParks 2015; Knight *et al.,* 2009), and the National Protected Areas Expansion Strategy (NPAES) (DEAT 2008), as well as the 3-year rolling land acquisition plan. It is important to note that this 3-year plan can change due to the availability of funds, willing-buyer-willing-seller concept and the negotiation process. The expansion of the park also addresses national objective SO1.1 of the National Biodiversity Strategy & Action Plan (NBSAP) (DEA 2015).

The park expansion programme aims to contribute to the NPAES that recommends expansion towards 12 % of the terrestrial area and 25 % of the marine inshore of South Africa. Effectively engaging with relevant stakeholders through collaborative interventions would contribute towards achieving co-operative management within the park's buffer zone. Expansion of the park can be achieved through direct acquisition by means of own (SANParks) funding, government funding or donation from a private or Non-Governmental Organisation donor. In the case of SANParks or state funding the acquired land becomes state land and is declared as national park (Clause 20 (2) of the NEM: PAA and its Amendment No 31 of 2004). In some cases a private entity may acquire the land for national park purposes, but retains ownership (such as World Wide Fund for Nature; National Parks Trust of South Africa) with the land declared Clause 20 (3) of the NEM: PAA. Land can also be included via contractual park agreements which refer to cases where private or communal land is incorporated into the park (and declared under the same Clause 20 (3) of NEM: PAA under agreement between the parties but they retain ownership.

The park currently has three identified vegetation units / ecosystems from two biozones namely the Nama-Karoo and Savanna biomes. The park also now has a small representative sample of the poorly protected azonal Upper Gariep Alluviums associated with the Riet River and almost no protected Highveld Salt Pans. Expansion into the greater domain would only add to the existing vegetation types. Any further inclusion of the Riet River system in the north would provide more of the important river process albeit a small section. The expanded park would offer a diversity of vegetation types characteristic of this area of the Northern Cape, ranging from rocky koppie vegetation through *Acacia* lowlands set on either nutrient rich clayey soils or poorer Kalahari sands with scattered pans, through to the Riet River (Appendix 5: Map 3).

The recent expansions of the park to its current 32,445 ha has seen a marginal increase in the representation of the Savanna vegetation types to 72 % in the park, followed by 27 % Nama-Karoo and 1 % azonal vegetation types. Although all the vegetation types, except the Upper Gariep Alluvium, are least threatened they remain poorly protected nationally with 14 % of the Highveld Salt Pans now protected with the expansion of the park, 3 % of the Upper Gariep Alluvium, 0.5 % of the Northern Upper Karoo, 4.6 % of the Kimberley Thornveld and 6 % of the Vaalbos Rocky Shrubland of the national targets. In this regard, the park plays an important role in the conservation of the Vaalbos Rocky Shrubland, Kimberley Thornveld and now the Highveld Salt Pans.

The planned expansion of the park into a 140,338 ha footprint would see the park make a significant contribution (as a percentage of the target) in the conservation of Northern Upper Karoo, Kimberley Thornveld, Vaalbos Rocky Shrubland, Upper Gariep Alluvium and Highveld Salt Pans (DEAT 2008). Given the generally poor protection status of all the vegetation types, expansion in any direction would meet conservation objectives for these under protected vegetation types. This is in accord with the general outputs of the National Spatial Biodiversity Assessment (Driver *et al.,* 2012), although more emphasis should be on freshwater systems.

The approach that SANParks will follow can be found in section 10.2.2 on page 64.

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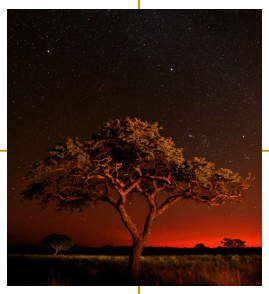

Section 9: Concept development plan

9.1 Long term development plan

Development is not considered lightly and is only embarked on in order to fulfil a real operational need or tourism opportunity. As a young, relatively small park, MONP will take time to become sustainable, however it has growth potential.

The current development planning focuses on ways to attract existing and new markets and increase their length of stay. Product expansion, visitor experience diversification and targeted marketing efforts are tourism priorities. A limitation of the current accommodation facilities is that both the Mosu and Lilydale rest camps were taken over as part of the purchase of the properties, and thus are not ideally designed, configured or located, for the required purpose. The limited availability of family accommodation impacts on visitor numbers and needs to be taken into account during future planning.

Identified development in the park, will include the expansion of some of the high demand products such as the tree top cottages and serviced camping at Motswedi, the possible addition of eco-camping and rustic eco-camping sites throughout the park, upgrading and possible expansion of the existing road network, addition of activities and conversion of existing facilities for revenue and experience optimisation.

Caution should be exercised when considering any tourism development. The zonation of the park will dictate the placement of any development and the implementation of identified projects is dependent on the availability of funds.

9.2 Development nodes

In the short term, the two primary development nodes remain Mosu and Lilydale, with the possible conversion of the Lilydale reception to the main park reception or as a tourism hub.

9.3 Communication routes

Communication needs to be improved in the park, including telephone, data network, free and metered Wi-Fi and cellular access.

9.4 Service supply routes

Existing supply routes will be used, and the upgrade of the power supply for Lilydale and Mosu has been completed. There is a need for an upgrade of the water purification plant for Lilydale, as well as sewerage systems for both Lilydale and Mosu.

9.5 Infrastructure development proposals

All infrastructure development proposals, including activity development, are presented in Tables 9 - 13 below.

9.5.1 Administration and other facilities

The facilities set out in Table 9 below will be utilised for operational purposes.

Table 9. Proposed administrative infrastructure development in the park.

Infrastructure	Current status	Zone	Proposed role by 2027	Probability
Mosu staff village sewerage system	Non-existent	HIL	Install reed bed oxidation ponds	High

Infrastructure	Current status	Zone	Proposed role by 2027	Probability
Soutbos to Strydam electrical system	In Use	Various	Replace electrical cable from Soutbos to Strydam	High
Valschfontein River asbestos pipeline	In Use	Various	Complete asbestos pipeline replacement	High

9.5.2 Visitor facilities

Visitor facilities include all non-commercial facilities and points of interest available to visitors are set out in Table 10 below.

Table 10. Proposed visitor facility development in the park.

Infrastructure / visitor sites	Current status	Zone	Proposed role by 2027	Probability
Lilydale bird hide	Non-existent	HIL	Possible bird hide on Riet River	Low
Lilydale - day visitor site	Non-existent	HIL	Ablution, braai, swimming pool, power	Low
Lilydale - entrance gate	In use	LIL	Move gate entrance to new road and create under-roof access with small office	High
Lilydale sewerage system	In Use	HIL	Implement reed bed oxidation ponds and overall upgrade	High
Lilydale water purification system	Non-existent	HIL	Implement water purification system	High
Mofele sewerage system	In Use	HIL	Addition of new bigger septic tank and soak away	High
Mofele storm water drainage system	Non-existent	HIL	Implement new storm water drainage system	High
Mosu – bird hide	Non-existent	HIL	Possible bird hide on Mosu Dam	Low
Mosu electrical	In Use	HIL	Implement generator system	High
Mosu sewerage system	Non-existent	HIL	Implement reed bed oxidation ponds and overall upgrade	High
New loop roads - game viewing Valschfontein and Lilydale	In use	LIL	Need to expand the existing tourist road network	High
Rooipad - look-out point	Non-existent	LIL	New look-out point to be developed, on one of the 4x4 tracks	Medium
Valschfontein – picnic site	Non-existent	LIL	Ablution, braai, swimming pool	Low
Tourist roads	In use	LIL	Resurface all tourist roads	High

9.5.3 Commercial facilities and activities

A number of commercial activities could be developed in the park, in order to expand the tourism product. All proposed activities will be individually investigated and their priority determined based on feasibility and income potential. Following these studies, some potential activities may be excluded from potential development. In addition, there is a large number of activities for 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 an opportunity, products may be considered based on the agreed terms and locations, as per the park product development framework (PDF) as can be seen in Appendix 4.

9.5.3.1 Accommodation

The new accommodation infrastructure that is envisaged for the park is set out in Table 11 below.

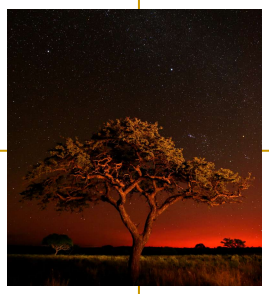

Table 11. Proposed accommodation development in the park.

Infrastructure	Current status	Zone	Proposed role by 2027	Probability
Eco-camping sites	Non-existent	Primitive	Possible development of up to three eco camping sites	Medium
Lilydale camp site	Non-existent	HIL	New campsite to be added with communal ablution and washing up facilities 20 units.	Medium
Lilydale duty managers house	In use	HIL	To be converted to a guest house	Medium
Motswedi camp site	In use	LIL	Addition of four sites	Medium
Mosu Lodge restaurant managers house	In use	HIL	To be converted to a guest house	Low
Tree top cottages	Two in use	Primitive	Possible development of up to seven sites	Medium

9.5.3.2 Concessions

No concession development is planned for this management plan cycle.

9.5.3.3 Retail and other facilities

At Mosu, the current shop and conference facilities may be considered for upgrade during this management plan cycle. The Lilydale conference facility may be converted to a convenience store and the restaurant facilities to a tea garden for the provision of baked goods and refreshments.

9.5.3.4 Activities

Leisure activities provide a mechanism for income generation, with the potential for community development and 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 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 unique selling proposition of remoteness of the park is maintained. Certain activities will also need to cater for different product grades and visitor experience levels.

Table 12. Proposed activity development in the park.

Activities	Current status	Zone	Proposed role by 2027	Probability
4x4 Eco Trails	Non existent	Primitive	4x4 routes	High

9.5.4 Cultural heritage sites

No additional sites have been identified for possible interpretation at this time (2017).

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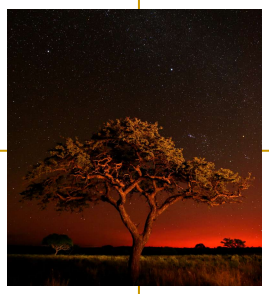


Section 10: Strategic plan

10.1 Introduction

Sections 3, 4 and 5 of this plan outlined the policy framework, the consultation process and vision, mission and high-level objectives for the park. In this section the 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 and the National Environmental Management: Biodiversity Act No 10 of 2004 (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;
- Tourism;
- Constituency building and benefit sharing; and
- Effective park management.

Each programme is presented as follows:

- **Programme name:** A name describing 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:
    - **Objectives** The various objectives derived from 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 in the planning cycle); and
    - **References**: References to relevant programmes, lower level plans (LLPs) or other documents.

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.

10.2 Bioregional

The purpose of the bioregional objective is to conserve systems and processes within and around the park to ensure a positive conservation outcome in the park and buffer zone, by influencing developmental processes in the buffer zone and by adding land to the protected area real-estate. The park recognises that partnerships could be developed with other like-minded organisations to maintain the faunal and floral assemblages and ecological processes representative of the area for the long-term beneficiation of the region and country. It aims to collaborate with relevant international, national, provincial and local government structures; non-governmental organisations (NGOs) and landowner groups.

10.2.1 Mainstreaming biodiversity programme

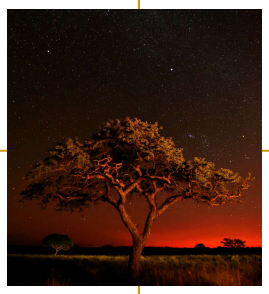
The purpose of this programme is to engage and interact with local and district municipalities, non-governmental organisations, neighbours, surrounding communities *etc.* bordering the park to ensure that biodiversity considerations are taken into account, as far as possible and as appropriate, into all developmental decisions.

Of concern is the potential for mining or shale gas mining / fracking in the larger region. Of particular concern is the amount of water required for fracking, in an already water stressed environment, as well as the potential contamination of ground and surface water from mining activities. This would not only potentially impact negatively on the park, but also on the largely agricultural landscape. All 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 oppose or minimise the negative impacts of poor conservation strategies and development along its borders, through the proactive engagement with surrounding land owners, regional planners and scientists. The primary mechanism to address these concerns is through the park's buffer zone (Appendix 5, Map 6), in accordance with the gazetted DEA Strategy on Buffer Zones. The buffer zone serves as a guide to indicate areas within which landuse changes could affect MONP, and where park management and scientists should assess, and where required, respond to EIAs as an interested and affected party. SANParks may also respond to developments with broader regional impacts, even if these occur outside the buffer zone, but are deemed to have an impact on the park. Ultimately, the park and its buffer zone should be integrated into the IDPs and SDFs of local and district municipalities.

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 national, provincial and local government structures insofar as 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 awareness of people and communities, in the buffer 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, MONP can achieve the objective of this programme.

This programme links with high-level objective 1 and objective 1.1 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

MAINSTREAMING BIODIVERSITY PROGRAMME					
High-level objective: To expand the park and influence development through co-operative management and effective engagement with relevant stakeholders.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To minimise potential conflicts that arise from the differing objectives of non-aligned land-uses in the park buffer zone through responsible engagement with land owners and local authorities and development of conservation options.	Identify land use and transformation trends in the park buffer zone, and how these may affect the park.	PM, CSD	Report	Year 2, ongoing	
	Update landuse planning databases for landuse assessment, sector plans, CBA data, SPOT5 imagery *etc.*	CSD	Data bases	Year 2, ongoing	
	Identify possible external threats from development.	CSD, PM	List of threats	Ongoing	
	Establish institutional collaboration to use the park to establish water quality baselines.	CSD, PM	Research contracts	Year 1	
	Participate in IDP and SDF processes to influence decisions.	PM	Minutes of meetings	Annually	



MAINSTREAMING BIODIVERSITY PROGRAMME					
High-level objective: To expand the park and influence development through co-operative management and effective engagement with relevant stakeholders.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To minimise potential conflicts that arise from the differing objectives of non-aligned land-uses in the park buffer zone through responsible engagement with land owners and local authorities and development of conservation options.	Respond to EIAs, scoping reports *etc.*	PM, CSD	Scoping, EIA reports	As required	
	Engage with identified landowners to achieve common conservation goals.	PM, CSD	Minutes of meetings	Ongoing	

10.2.2 Park expansion programme

The purpose of this programme is to achieve the SANParks goal of conserving ecological patterns and processes typical of the region by acquiring conservation-worthy land through purchase or by other means in line with SANParks land acquisition framework. The rational for this programme can be found in section 8 on page 56.

The immediate expansion priorities are to focus on rectifying the park's rather inefficient shape and lack of a link to the major road network. Over the next 10 years the emphasis would be on:

- Addressing the concave boundary in the north-western section of the park thus improving managerial efficiency in terms of fencing, and wildlife tension points. This expansion would add more of the limited Northern Upper Karoo vegetation and Kimberley Thornveld types; and
- Improving the accessibility and aesthetic entrance to the park through an expansion towards main road conduits in the east.

These priority expansions are in line with recommendations of the NPAES. These planned expansions entail a total of about 24,900 ha. The general large stock and game farming land use activities in the surrounding mosaic make for relatively easy assimilation of acquired land into the park. If acquisition were to be considered the main option for inclusion, it's estimated that the expansion would cost in the region of R 200 million at current prices. There are however several possibilities to include large land holdings on long-term contracts. This could potentially reduce the estimated acquisition bill by up to 50 %, but is largely dependent upon reaching consensus on park – contractual objectives with private land owners.

This programme links with high-level objective 1 and objective 1.2 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

PARK CONSOLIDATION PROGRAMME					
High-level objective: To ensure co-operative management and consolidation of the park within the buffer zone, by effectively engaging with relevant stakeholders through collaborative interventions.					
Objective: To consolidate the ecological representation and resilience of the region through advocating and implementing a variety of conservation-friendly initiatives over the next 10 years.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To acquire strategically identified properties of conservation-important land to consolidate the park.	Update the conservation expansion plan as per section 8 of this document.	CSD, PM	Plan	Ongoing	
	Motivate and prioritise acquisitions.	CSD, PM	Priority list	Year 1	
	Obtain and allocate required funding.	CSD	SANParks expansion plan	Annually	
	Target the acquisition of ~25, 000 ha over 10 years.	CSD, PM	Purchase agreements	Year 10	
	Review conservation expansion plan.	CSD, PM	Annual report	Year 3, ongoing	

10.3 Biodiversity

Biodiversity management is a core mandate of the park. The park's approach to biodiversity is in line with SANParks policies and the principles of strategic adaptive management. The primary biodiversity objective is: To conserve a representative area of the Nama-Karoo and Savanna Biomes' interface, by maintaining and restoring key ecological patterns and processes.

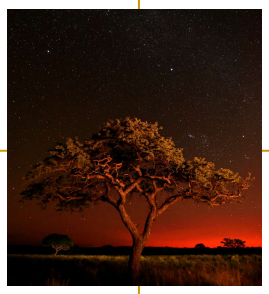
As such, a number of biodiversity management programmes were developed to conserve and restore the diversity, patterns and processes unique to the park. The key management strategies listed below cover the planning phase, in order to advance towards the park's desired state in terms of biodiversity management. The sub-objectives of the Biodiversity programme are as follows:

- To understand and manage herbivore dynamics, maintain integrity and vegetation by regulating herbivore populations as a modifier of biodiversity at various temporal and spatial scales;
- To determine potential change of plant species composition, vegetation structure and functionality and its consequences to ecological processes by monitoring, data analysis and evaluating results;
- To re-establish the structure, function and composition of degraded land by restoring ecological patterns and processes;
- To maintain ecological patterns and processes by reintroducing species that historically occurred in the region;
- To ensure the functionality of the fresh water systems (river, drainage lines, pans and boreholes) by maintaining and restoring hydrological activity and variety of aquatic habitats;
- To promote the natural fire regime in the region by suppressing and/or managing all veld fires and participating in the establishment of the local Fire Protection Association and activities;
- To ensure the persistence and viability of key species by contributing to national initiatives and implementing species specific management approaches; and
- To understand the incidence and impact of disease by investigating mortality events.

10.3.1 Habitat and vegetation programme

The purpose of this programme is to determine potential change of key habitats and plant communities and its consequences for the faunal component and aesthetic values that may affect the park's potential as a tourist attraction.

A sound understanding of the ecology of the park, contributes considerably to the compilation of an effective wildlife management programme and conservation policy. As a protected area, it also serves as a permanent reference site for wider landscape vegetation reconnaissance surveys in the Northern Cape region (Bezuidenhout *et al*., 2015). This broad classification and description of the landscape units serve as baseline data and should be followed by a detailed vegetation classification, description and mapping exercise for the park. Such a vegetation study will assist with identifying the habitat of rare, endangered and protected plant species, as well as rare and endangered plant communities that may require special



protection and management. The landscape unit description can be used to aid in the selection of sites for vegetation monitoring and serves as a basis to determine wildlife-habitat relationships (Ferreira *et al*., 2013).

Fences prevent the large-scale migration of ungulates. Therefore, in a relatively small park such as MONP, which carries localised high densities of grazing ungulates, biodiversity could be lost if large herbivore populations are not actively managed. Event driven dynamic behaviour, unpredictable and low rainfall and complicated interactions between plant and animal species make it difficult to gather sufficient information of vegetation dynamics to be able to develop guidelines for sustainable management. Long-term vegetation change in semi-arid to arid areas is usually allogenic (*i.e.* abiotic driven including disturbance) in response to geomorphological processes, and overgrazing and trampling may induce successional or degradational trends in arid plant communities (Van Rooyen *et al.*, 1984).

After the declaration of MONP, a reconnaissance visit in August 2007 revealed that in certain areas the tree and shrub layers were dead. An investigation into the cause of the large-scale mortality of woody plant species revealed that these areas were chemically treated by the previous landowners. The potential ecological effects of the herbicide applied on the ecology of the dominant shrub species, *S. mellifera* were investigated. Bezuidenhout *et al*., (2014) concluded with suggestions for future monitoring to establish the potential long-term impacts of the treated areas. Investigations should inform whether active rehabilitation measures would be required in future or whether natural recovery in the treated areas may be adequate to ensure conservation of ecological patterns and processes.

The requirement for biodiversity monitoring is specified by SANParks' own adaptive management philosophy and the SANParks' Framework for Biodiversity Monitoring which guides the structure and development of the Biodiversity Monitoring System (BMS) for SANParks (McGeoch *et al*., 2011). SANParks Scientific Services will initiate research projects or collaborate with external researchers of different tertiary organisations and government organisations. Vegetation monitoring, together with analysis of vegetation greenness and cover from satellite images, will form the basis of the monitoring for these two linked programmes. This programme is very closely linked to the Herbivore Management and Species of Special Concern (SSC) programmes, which aims to maintain patchy herbivore impacts across the park.

This programme links with high-level objective 2 and objective 2.1 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

HABITAT AND VEGETATION PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To determine potential change of plant species composition, vegetation structure and functionality and its consequences to ecological processes by monitoring, data analysis and evaluating results.	Implement research projects to assess understanding of the functioning of the different landscape units and assess the veld condition of the landscape units.	CSD, PM	Research projects (in-house and external), monitoring reports	Annually or biennially	Degradation and Restoration LLP, Fire LLP, Water Resource LLP, Species of special concern LLP.
	Implement monitoring guided by results from habitat and vegetation research.	CSD, PM	Monitoring results	As required	
To maintain and improve weather station data.	Collect, archive and analyse weather data.	PM, CSD	Reports, climate database	Ongoing	
	Maintain and improve relationships with weather station owners.	CSD	Minutes of meetings	Ongoing	

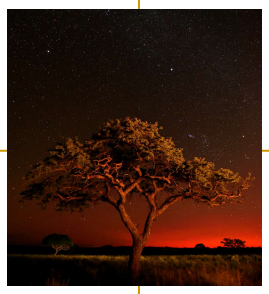
10.3.2 Degradation and rehabilitation programme

The purpose of this programme is to assess the habitat degradation status and implement mitigation measures needed to facilitate the improvement of ecological processes and enhancement of ecosystem functioning in affected areas.

The national policy on the conservation and sustainable use of South Africa's biodiversity, produced by DEA calls for the identification of key sites for rehabilitation based upon biological and socio-economic criteria, and the development and implementation of rehabilitation plans for identified sites. Similarly, the Convention on Biological Diversity lists rehabilitation as an important tool for promoting the conservation of biodiversity. Human threats are still actively affecting biodiversity due to past disturbances such as indigenous tree clearing for farming purposes or the aftermath of long periods of intensive grazing (Daemane *et. al.,* 2011). Environmental disturbances that hinder ecosystem stability and function, threaten the various benefits derived from national parks as they result in decreased species diversity and subsequent decline in ecological function and resilience (Tilman *et. al.,* 1997; Evans *et. al.,* 2001). Therefore, these anthropogenic disturbances should be mitigated and ecological processes restored to reduce undesirable impact on the biological integrity of ecosystems.

SANParks consider degradation as the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife – the generated change or disturbance to the environment is perceived to be deleterious or undesirable. During this process in some cases, the disturbed or damaged ecosystem cannot re-establish on their own without human facilitation (SER 2004; Forsythe *et. el.,* 2013). This is because the environment has been exposed to frequent or intense disturbances that hinder or delay ecosystem repair (Pullin 2002). These disturbances can be man-made or natural and still need human interventions to recover even in natural ecosystems such as national parks (Daemane *et. al*., 2013). Most degradation types in the park are human-induced such as; past agricultural practices, invasive alien species (although relatively small scale), past and present herbivory, old infrastructure, erosion and soil degradation and presence of extra-limital species. Invasive alien plants have allelopathic effects that completely exclude and hinder native vegetation presence (Sean *et. al.,* 2008; Gerber *et. al.,* 2008) by modifying nutrient formation and hydrology (Higgins *et. al.,* 1999; Zachariades & Goodall 2002). This restricts resource availability and modifies ecosystem processes. In general, degrading agents in the system lead to species loss (Oldeman *et. al.,* 1991; Nachtergaele *et. al.,* 2010). However, not all disturbances and associated change is negative for ecosystems. The impact differs with the type of disturbance and its intensity. For example, moderate grazing benefits biodiversity as it removes senescent vegetation (Read & Andersen 2000; Littlewood 2008). Generally highest diversity and conservation value result at intermediate levels of disturbance (Barnosky *et. al*., 2012; Chesson and Huntly 1997; Roxburgh *et. al.,* 2004). Apart from human-induced activities, degradation can be caused by natural disturbances (*i.e.* floods, droughts) that are too frequent or severe to allow natural ecosystem recovery in a reasonable period of time. Degradation resulting from various factors, including climate perturbations and extreme events, inappropriate fire or herbivory regimes, alien species invasion, as well as human activities, generally reduces flows of ecosystem goods and services. Although some of these are natural processes, intervention may be required to aid recovery in protected areas where natural recovery processes are retarded or prohibited as a result of fragmented habitat surrounded by alternative land use. Except for some chaotic or gradual natural events leading to land degradation, the phenomenon is mainly due to the interaction of the users with the land. Water runoff is also accelerated by road infrastructure in areas of high tourism intensities. Degradation therefore affects the capacity of the habitat to support life, thereby contributing to an unsustainable ecological system.

Vegetation assessments are undertaken at selected sites in the park to determine the variation in succession rate and factors influencing those differences. New sites undergoing rehabilitation and those serving as reference sites are included annually to allow comparative studies. Satellite images with a high temporal resolution are also used to monitor vegetation change over a given period of time. The Landscape Function Analysis (LFA) technique (Tongway and Hindley 2004) uses soil stability, infiltration / runoff and nutrient cycling as indicators to measure soil degradation. LFA surveys are undertaken in order to assess the ecological functioning of the landscape, specifically of the soil components that form the template for other ecosystem patterns and processes. Rehabilitation in areas affected by soil degradation includes gully control methods such as resloping, silt fencing, brush packing and gabion construction and the use of Biojute to retain soil moisture and seed capture (Coetzee 2005). Where sheet erosion was identified as a major degradation concern, a combination of soil ponding and brush packing is undertaken to break capped soils and facilitate sediment and seeds capture. The park still contains unwanted structures like water points, fences and house walls and where assessment has been made for removals of such, consideration will be made in compliance with SAHRA regulations.



A detailed lower level plan outlining the rationale and operational approach is available. Many of the degraded areas have also been invaded by invasive alien plants. Invasive alien clearing will be addressed in programme 10.3.3 below. This programme links with high-level objective 2 and objective 2.2 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

DEGRADATION AND REHABILITATION PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To re-establish the structure, function and composition of degraded land by restoring ecological patterns and processes.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To restore the soil functioning and associated vegetation patterns of land degraded by erosion and to restore the wilderness and aesthetic appeal of land that was previously transformed.	Rehabilitate areas affected by soil erosion.	BSP	Ha rehabilitated	Ongoing	BSP' Annual Plan of Operation
	Monitoring recovery in areas undergoing rehabilitation.	BSP, CSD	Number of monitoring sites	Ongoing	BSP' Annual Plan of Operation
	Monitor vegetation recruitment and soil chemistry in vegetation communities affected by chemical applications.	CSD	Records, publications and reports	Ongoing	Habitat and vegetation LLP
	Identify and prioritise sites, with unused infrastructure, requiring rehabilitation and remove all structures with no heritage or utility value, and associated farm infrastructure, from the park.	PM, BSP	Annual Plan of Operation listing unwanted structures	Ongoing	BSP' Annual Plan of Operation

10.3.3 Invasive and alien species programme

The purpose of this programme is to protect the biodiversity and infrastructural assets and tourism experiences within the park through supressing and where possible eradicating and preventing the re-infestation of invasive and alien species (IAS) within the park as well as the protected area buffer of the park and to protect the park from new and emergent species.

Many international conventions call for the management of invasive alien species among others the Convention on Biodiversity. In South Africa, the management of IAS is mandatory under the NEM: BA. There are sixteen national acts, provincial ordinances and municipal by-laws that govern the management of IAS. Of these, the most immediately relevant are the NEM: BA and the Conservation of Agricultural Resources Act (No. 43 of 1983) [CARA] and regulations made under these acts. The CARA provides additional guidance for the management of IAS plants. The IAS management framework for SANParks (Hendricks and Symonds 2009) provides the context within which all management of IAS is implemented. A small number of alien or extralimital animal species are found in the park, or occasionally enter the park from neighbouring properties. It is SANParks's policy that no species that were not historically present in the area are allowed to persist in a park. Consequently, all extralimital or alien animal species must be removed from the park as soon as is practically possible. CARA requires the management of listed alien invasive plants. There are three categories of plants, each with its own management and control regulations. NEM: BA provides for the protection of South Africa's biodiversity within the framework of the National Environmental Management Act (Act No. 107 of 1998) [NEMA]. This act puts in place a framework for the management of IAS, regulations governing the management of IAS was published in July 2013 (Government Gazette No. R. 506).

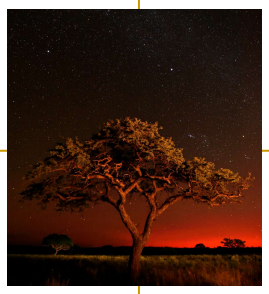
Climate change, invasive alien species, pollution and mining are amongst some of the key threats to protected areas (Alers *et al*., 2007). Invasive and alien species are accepted to be one of the largest, and fastest growing threats to biodiversity and the ecosystem services they support. These species 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. They also increase biomass which in turn changes fire regimes and fire intensity (McNeely *et.al.,* 2001). Foxcroft *et.al.* (2013) identified biological invasions as one of the greatest threats to protected areas. The development of robust decision-making tools that are based on both invasive species traits as well as ecological principles, along with effective implementation, is key to the success of invasive species management programmes. The likelihood of protecting the park from the threats of IAS is dependent on sound management strategies, adequate resources and effective engagement with key stakeholders, effective legislation and policing of legislation. The likelihood of eradication or maintenance control varies considerably with species and terrain invaded. Rapid response is required to remove species before being allowed to build up large populations.

List of invasive species occurring in the park

27 Alien plant taxa have been recorded for the park. In addition to the plant species, there is one feral cat, four extra-limital mammal and one insect species, and are listed in Table 14 below.

Table 14. List of alien and invasive plant and animal species recorded in the park.

Taxonomic group	Scientific name	Common name	NEM: BA category	Current perceived level of threat
Insect	*Cactoblastis cactorum*	Cactus moth		L
Mammal	*Aepyceros melampus*	Impala	2	L
	Felis silvestris catus	Feral cat	1b	L
	Hippotragus niger	Sable		L
	Kobus ellipsiprymnus	Waterbuck	2	L
	Tragelaphus angasii	Nyala	1b	L
Plant	*Agave americana*	Century plant	1b	L
	Agave sisalana	Sisal	1b	M
	Argemone ochroleuca	Sweet Mexican poppy	1b	L
	Atriplex lindleyi	Lindley's saltbush		M
	Atriplex nummularia	Old man saltbush	1b	M
	Cereus jamacaru	Queen of the night	1b	M
	Cirsium vulgare	Scotch thistle	3	L
	Datura ferox	Large thorn apple	1b	L
	Datura stramonium	Thorn apple	1b	L
	Echinopsis spachiana	Torch cactus	1b	H
	Eucalyptus camaldulensis	Red river gum	1b	H
	Melia azedarach	Chinaberry / Seringa	3	M
	Morus alba	Weeping mulberry	3	M
	Nerium oleander	Oleander		H
	Opuntia engelmannii	Small round leaved prickly pear	1b	M
	Opuntia ficus-indica	Sweet prickly pear		L
	Pennisetum setaceum	Fountain grass	1b	H
	Prosopis glandulosa	Honey mesquite	1b	H
	Prosopis velutina	Velvet mesquite		H
	Psidium guajava	Guava	1b	H
	Robinia pseudoacacia	Black locust tree	1b	H
	Schinus molle	Peruvian pepper		H
	Solanum elaeagnifolium	Silverleaf bitter apple		M
	Solanum pseudocapsicum	Jerusalem cherry		M



Taxonomic group	Scientific name	Common name	NEM: BA category	Current perceived level of threat
	Verbesina encelioides	Golden crown beard		L
	Xanthium spinosum	Spiny cocklebur		L
	Xanthium strumarium	Large cocklebur		L

Description of the land infested and assessment of the extent of infestation

The park is infested by various IAS plants which occur at different densities of infestation (detail below). Mitigation measures will be implemented to facilitate the improvement of ecological patterns and processes by the enhancement of ecosystem functioning in affected areas through the passive control and aggressive irradiation of invasive and alien plant species. Two management units have been identified by the BSP programme, these are (i) the park itself and (ii) the park buffer zone. Within these management units, various areas have been identified. These are:

- Park
  Woody and cacti IAS distributed across the park are recorded at relatively low densities; invasive alien annuals, however, as tends to be the norm, are recorded at higher densities. The dynamics of annuals across suitable habitats are expected to flux seasonally between wet and dry cycles. The area of park that is deemed potential habitat for invasion by alien annual species is 1,166 ha. Three landscape units have been identified as potential habitat that could be, in addition to annual species, threatened by IAS specifically, namely the; (i) Slightly undulating clayey drainage line open woodland, (ii) Slightly undulating clayey drainage line open woodland and (iii) Flat Riet River open woodland. Current mapping of IAS within the park supports this hypothesis. The slightly undulating footslopes open shrubland landscape unit associated with the moister unit types are also a concern specifically for the woody invasive species. The two flat plains landscape units; (i) open woodland and (ii) sparse woodland are both potential habitat for the cacti species and need to be, as with all landscape units, systematically monitored for IAS. The following IAS species are a concern within the landscape units identified, they include the genera; *Prosopis*, *Psidium*, *Nerium* and *Robinia*.

- Buffer zone.
  This zone has been identified in line with the South African National Biodiversity Institute's (SANBI) national vegetation layer and is critically important in preventing IAS entering the park. This area will be evaluated during 2017 / 2018 for attribute data. Post this process, prioritisation for treatment will be undertaken.

Status report on the efficacy of past control measures

The Working for Water program has been active in the park since 2008. For the period 2007 / 08 – 2015 / 16, R 2,680,080 has been invested into the control and eradication of IAS. The programme has utilised 11,526 person days and cleared an estimated 3,623 initial ha and further 2,475 follow-up ha. During this period, initial clearing primarily involved the mechanical and chemical control of the following genera: *Datura, Agave, Argemone, Morus, Prosopis, Melia, Schinus, Atriplex, Opuntia* and *Eucalyptus*. All the species listed above have been effectively treated.

Current measures to monitor, control and eradicate invasive and alien species

The SANParks invasive and alien species framework provides an integrated approach to alien and invasive species management, with the primary objective of meeting the biodiversity objectives of the park's management plan. The framework includes five vital components:

- Assessment and risk analysis;
- Priority setting;
- Early detection and rapid response;
- Control; and
- Restoration.

The spread of IAS into the park from the broader alien plant footprint and cadastral areas are a high risk. These areas will be monitored, assessed for risk of pathway movement into the park, prioritised in terms of eradication and treated accordingly. A full assessment and risk analysis of IAS in the park will enable priority setting. Prioritisation will then allow for available resources to be directed into ecologically sensitive and economically feasible areas. A generic set of criteria has been developed to prioritise areas and species. Once species and associated areas have been prioritised for treatment, this will be feed into an annual plan of operation (APO), which will form the basis of the motivation for funding annually. The APO will set out clearing schedules for each site, personnel requirements and costing. A long-term strategy will be developed for the areas within the park and adjacent buffers, which will assist in compiling an inventory, priority listing and allocation of resources over a five to ten year time frame. This long-term strategy will inform funding motivation and operations on an annual basis. Working with the SANBI Early Detection and Rapid Repose Programme (EDRRP) the park will aim to identify pathways into the park, so that new AIS introductions may be prevented and to enable a rapid response to eradicate or contain infestation. Even though a new invasion may seem insignificant, it must be evaluated for risk and potentially prioritised for treatment to ensure the threat does not spread, which could potentially require exponentially more effort and resources to clear at a later stage.

Control methods, or an integrated combination thereof are designed to suit the target species and environment in which they occur. The following methods could be used within the park, cadastral and broad alien plant footprint boundaries:

1. Initial treatment (mechanical, chemical and biological).

    - Chainsaw – fell, debranch and stack;
    - Foliar spray – application of herbicide; and
    - Biocontrol release - collection of clean cladodes, propagation of biocontrol and deployment of agent.

2. Follow up treatment (manual, chemical and biological).

    - Loppers and hand saws;
    - Foliar spray – application of herbicide; and
    - Biocontrol release - collection of clean cladodes, propagation of biocontrol and deployment of agent.

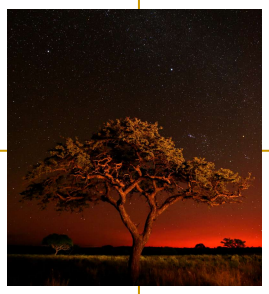
3. Integrated combination of methods.

The following species have been identified as a priority for control:

- *Atriplex nummularia;*
- *Melia azedarach;*
- *Opuntia ficus-indica;*
- *Prosopis glandulosa;* and
- *Eucalyptus spp.*

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

The success of the control programme will be determined by the results gathered from the monitoring programme. These results will highlight status of IAS infestation, densities and rate of spread. These in turn, will direct operational investment and the longevity of the programme in the park. The success of the control programme will be determined by the results gathered from the monitoring programme.



The treat of Eucalyptus species in riverine areas adjacent to the park and in isolated patches within the park is also a concern. All species are manageable with the correct control applications and management of follow-up treatments. The use of the bio-control agent *Dactylopius austrinus,* commonly referred to as cochineal to target *O. ficus-indica* specifically in the buffer areas surrounding the park need to be considered. Chemical treatment of *O. ficus-indica* as with other cacti species, is the preferred control method. With effective control methods and management of the WfW project it is projected that the five-priority species can be brought to a level of infestation that can be internally managed by the within the next five-year cycle. Management needs to be effective in their response to reinfestations or infestation by yet unrecorded IAP that may occur in the buffer areas adjacent to the park.

This programme links with high-level objective 2 and objective 2.2 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ALIEN AND INVASIVE SPECIES PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To restore the structure and function of degraded land by addressing the threats posed by soil erosion and alien and invasive vegetation.					
Sub-objective: To control and, where possible, eliminate alien vegetation.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To systematically survey and list alien species in and around the park.	Survey the park and buffer zone, in order to determine alien species (fauna and flora) abundance and distribution, and maintain updated species lists.	PM, BSP, CSD	Survey report, annual reports	Annually for park, year 2 for buffer zone	
	Through monitoring and other means, detect new incursions of invasive species (fauna and flora) and the spread of high priority species (fauna and flora).	PM, BSP	Monthly reports	Ongoing	
To prevent, where possible, the introduction of alien species.	Prohibit and where present remove alien species (fauna and flora) from staff quarters and tourism accommodation.	PM	Monthly reports	Ongoing	
	Monitor, and / or where necessary, manage previously degraded areas within the park and adjacent to the park in order to reduce the risk of invasion or post clearing reinvasion.	PM, BSP	Monitoring results	Ongoing	
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.	Maintain control of species and areas according to the current management programmes' APO.	BSP, PM	APO	Annually	
	Introduce biological control agents and / or other appropriate and novel methods (subject to risk-benefit evaluation) where appropriate and necessary.	BSP, PM	APO	Annually	
	Eradicate, where possible, all new incursions of alien species (fauna and flora) and monitor the efficiency of the eradication programme.	PM	Monthly report	Ongoing	
	Monitor the efficacy of the clearing programmes.	PM, BSP, CSD	Monthly reports	Ongoing	

10.3.4 Freshwater ecosystem programme

The purpose of this programme is to ensure the functionality of the freshwater ecosystems by maintaining hydrological activity and variety of aquatic habitats.

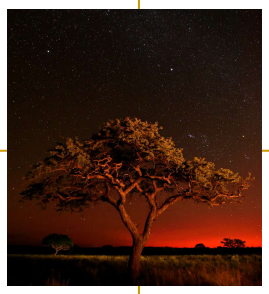
South Africa is a signatory to the Convention on Biological Diversity (CBD). Therefore, SANParks' strategic plan, management plans and conservation policies are informed by the CBD's Programme of Action on Protected Areas. In 2010, CBD member nations agreed to 20 Aichi Targets to stop loss of biodiversity by 2020. Target 11 states that, "by 2020, at least 17% of terrestrial and inland water areas and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape". South Africa was pro-active in adopting a freshwater conservation target.

This target emerged from a series of participative workshops involving several government departments and national agencies [SANParks, Council for Scientific and Industrial Research (CSIR) and SANBI], and stated that at least 20% of each inland water ecosystem type should be conserved (Roux *et al.,* 2006). The endorsement of a quantitative target was followed by a national planning exercise to identify strategic spatial priority areas for satisfying the 20% target. The resulting conservation priorities, known as Freshwater Ecosystem Priority Areas (FEPAs), comprise 22% of South Africa's river length and 38% of wetland area (Nel *et al.,* 2011). An important step is to acknowledge freshwater ecosystems as biodiversity features in their own right that are central to a protected area's conservation mandate. Even in protected areas such as national parks, freshwater ecosystems are often appreciated only for their functional utility such as game watering or providing attractive locations for tourist lodges, rest camps, lookout points and game drives. In the park, biodiversity associated with riverine habitats is driven by three main factors: (i) the climate and nature of the landscapes (*e.g.* temperature and underlying geology) that rivers drain; (ii) the flow characteristics of rivers (*e.g.* perennial, intermittent or ephemeral flows); and the geomorphological zone or slope of a river (*e.g.* mountain headwater stream, foothills or lowland river). Accordingly, conservation of rivers also depends on the conservation of their surrounding terrestrial landscapes, their natural hydrological regimes (including the magnitude, frequency, duration, timing, and rate of change in water flow) and their longitudinal connectivity between different zones.

Also at a local scale, freshwater ecosystems are highly connected systems. Hydrological connectivity mediates the transfer of matter, energy and organisms *via* water within and between elements of the water cycle. Connectivity can be viewed along three gradients: longitudinal, lateral and vertical. Longitudinal connectivity refers to the pathway across the entire length of a stream or river. Lateral connectivity refers to the links between a water body and the adjacent land. Vertical connectivity refers to the connections between surface and groundwater. In the park, we should strive to maintain, and restore where necessary, the natural connectivity associated with freshwater ecosystems. In particular, we should allow the natural and free flow (timing and magnitude) of water and sediment down river courses, protect riparian zones against development and guard against overuse of groundwater resources.

In general, the park is a water stressed park where groundwater is a valuable and finite resource. The fact that there is limited surface water available intensifies the value of the resource. The Riet River has already been heavily utilised by other water users within the catchments, and thus the integrity of this water resource is compromised. SANParks staff cannot exert direct management control over water quantity and quality impacts because these occur upstream and outside of the park. Part of the approach requires assessing the condition of biological communities (such as fish, aquatic invertebrates and riparian vegetation) as well as river habitats (drivers) to provide an integrated measure of the integrity or health of the river systems. The Eco-status (Ecological Status) will be used to illustrate the integrated ecological state of the resource, combining the drivers and responders (Kleynhans & Louw, 2007). This operational plan thus ensures involvement and integration with the Department of Water and Sanitation (DWS) integrated water resource strategy for the region, aimed at balancing water resource protection with development needs. The Thresholds of Potential Concern (TPCs) for monitoring water quantity and quality of the Riet River must align with Ecological Reserve determination and Resource Classification processes and outputs for the Riet and Modder River sub-catchments, and river health initiatives. Monitoring to assess effective compliance with gazetted Resource Quality Objectives and the Reserve (if applicable / determined) requirements should be a priority.

A long-term groundwater level monitoring programme needs to be implemented. According to Taylor & Alley (2001), ground-water systems are dynamic and adjust continually to short-term and long-term changes in climate and ground-water withdrawal. Water level measurements from supply and observation wells are the principal source of information about the hydrologic stresses acting on aquifers and how these stresses affect ground-water recharge, storage, and discharge. Long term groundwater level information is



fundamental to dealing with the issues of many complex problems related to ground-water availability and sustainability. Water level data collected over significant periods of time, from years to decades are typically required to assess the effects of climate variability, to monitor the effects of regional aquifer development, or to obtain data sufficient for analysis of water-level trends, project future conditions of supply and provide the information necessary to effectively manage the resource (Taylor *et al*., 2001). Large water-dependent herbivores that would have been transient in the area but are now sedentary due to fencing prohibiting free resource-driven movement patterns. Consequently, approximately 27 boreholes and a number of earth dams are dotted across the park landscape to provide surface water for these animals. Monitoring of groundwater abstraction volumes, groundwater levels and quality specifically boreholes providing water for human needs are identified as important. In light of the proposed diamond mining activities along the border of the park, ground water levels within the "dendritic drainage system" is identified as a critical priority.

This plan is cross-linked to the Herbivore management programme as it provides some preliminary guidelines regarding artificial surface water provision sustaining large, water-dependent herbivores. A detailed lower level plan outlining the rationale and operational approach is available. This programme links with high-level objective 2 and objective 2.3 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

FRESHWATER ECOSYSTEM PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure the functionality of the fresh water systems (river, drainage lines, pans and boreholes) by maintaining and restoring hydrological activity and variety of aquatic habitats.	Measure water-use at the main water supply boreholes for human consumption.	PM	Records	Years 1, ongoing	
	Measure groundwater quality at water supply boreholes (human consumption).	PM	Records, annual water quality reports.	Bi-annual	
	Instigate research to understand the impact of the proposed diamond mining activities along the border of the park on the unique dendritic drainage system in the park.	PM	Records	Ongoing	
	Conduct annual River Health surveys along the portion of Riet River bordering the park.	CSD	Annual report	Annually	
	Acquire a water use "Authorisation" from the relevant DWAS authority.	CSD, PM	Document	Year 1	

10.3.5 Species of special concern programme

The purpose of this programme is to ensure the persistence and viability of key animal and plant species and threatened and or sensitive plant communities-cum-habitats by contributing to national initiatives and implementing species specific management approaches.

SANParks' biodiversity values stipulate that, except in crucial instances for the survival of globally critically endangered species, management for system integrity and biodiversity must take precedence over species management. However, SANParks will strive to prevent extinction, within national parks, of species on the International Union for the 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. In addition, certain species are important for generating revenue through game sales, *e.g.* disease-free Cape buffalo. Within this context, there are 20 species currently found in the park that are regionally threatened (Table 15 below).

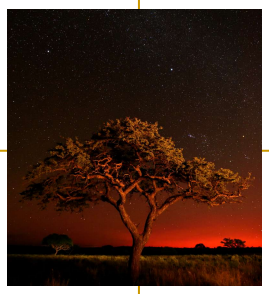
SANParks is custodian of approximately half of the white rhinos and roughly 40% of the black rhinos in South Africa (Knight *et al*., 2013), with the park being one of four national parks where the south-western black rhino currently occurs. The black rhinoceros is represented by a small population in the park, but is managed as part of a larger metapopulation across other national parks. Continentally, rhinos are facing several threats, with the onslaught of poaching in recent years, being the most serious, particularly in South Africa (Thomas 2010). The management of rhinos within MONP aligns with the National Biodiversity Management plans for black and white rhinos (Knight *et al*., 2013; Knight *et al*., 2015). As such, it is critically important to maintain an up-to-date database of individual sightings, births and deaths, as well as to track the lineages of any new calves. This necessitates individual recognition through ear-notch patterns, and therefore the maintenance of, and funding for, an ongoing ear notching programme. The Cape buffalo, while not endangered, is a SSC in the park due to its high economic value. As such, the species is harvested from time to time to contribute towards revenue generation for the organisation.

Vultures throughout Africa are declining at rates greater than 60% and are facing a range of specific threats with the most significant threats being poisoning and trade in traditional medicines (Ogada *et al*., 2015). Three threatened species of vultures occur in the park with the critically endangered white-backed vulture breeding in the park. The white-backed vulture breeding colony found in MONP forms part of the Riet River colony, which has been breeding in this area for more than 40 years (Murn *et al*., 2002). Monitoring of the large raptors, especially the white-backed vultures is ongoing through collaboration with Endangered Wildlife Trust's Birds of Prey Programme, Hawk Conservancy and the McGregor Museum.

The inventory list for reptiles and amphibians found in the park is currently incomplete, however there are no species currently recorded that are threatened (Branch 1988). Finally, there are a number of plant SSC that occur in the park that will require dedicated inventorisation, prioritisation and monitoring.

Table 15. List of species of special concern that occur in the park.

Taxonomic group	Scientific name	Common name	IUCN category - regional	IUCN category - global
Birds	*Aquila rapax*	Tawny eagle	Endangered	Endangered
	Aquila verreauxii	Verreaux's eagle	Vulnerable	Least concern
	Ardeotis kori	Kori bustard	Near threatened	Near threatened
	Ciconia nigra	Black stork	Vulnerable	Least concern
	Coracias garrulus	European roller	Near threatened	Near threatened
	Falco biarmicus	Lanner falcon	Vulnerable	Least concern
	Gyps coprotheres	White-backed vulture	Critically endangered	Critically endangered
	Gyps coprotheres	Cape vulture	Endangered	Vulnerable
	Leptoptilos crumeniferus	Marabou stork	Near threatened	Least concern
	Polemaetus bellicosus	Martial eagle	Endangered	Vulnerable
	Sagittarius serpentarius	Secretary bird	Vulnerable	Vulnerable
	Torgos tracheliotus	Lappet faced Vulture	Endangered	Vulnerable
Mammals	*Ceratotherium simum simum*	Southern white rhino	Near threatened	Least concern
	Diceros bicornis bicornis	South Western black rhino	Endangered	Vulnerable
	Damaliscus lunatus	Tsessebe	Vulnerable	Least concern
	Felis nigripes	Small spotted cat	Vulnerable	Vulnerable
	Hippotragus equinus	Roan antelope	Endangered	Least concern
	Hippotragus niger	Sable antelope	Vulnerable	Least concern
	Hyaena brunnea	Brown hyaena	Near threatened	Near threatened
	Redunca fulvorufula	Mountain reedbuck	Vulnerable	Least concern



This programme links with high-level objective 2 and objective 2.4 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SPECIES OF SPECIAL CONCERN PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To ensure the persistence and viability of key species by contributing to national initiatives and implementing species specific management approaches.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To maintain genetic integrity and heterozygosity in both rhino species by strategic interventions determined through a research and monitoring programme.	Assess genetic diversity of populations.	PM, CSD	Reports	Ongoing	
	Plan introductions / removals in line with best practice.	PM, CSD	WMC minutes	As requested	
	Develop and implement monitoring.	PM, CSD	Reports	Ongoing	
To understand the status and performance of both rhino populations to assist with informed management decisions.	Identify appropriate monitoring programmes for both species.	PM, CSD	Reports	Year 1	
	Implement monitoring programmes.	PM, CSD	Reports	Ongoing	
To understand the current threats facing identified species or plant communities / habitat of special concern and prioritise for action where appropriate.	Identify species, assess risk profile and prioritise for action.	PM, CSD	Reports	Ongoing	
	Develop detailed research projects to understand the patterns, processes and threats of the sensitive plant communities / habitats.	PM, CSD	External projects, reports	Ongoing	
To understand the distribution and population status of prioritised SSC.	Develop appropriate monitoring programme/s for identified species.	PM, CSD	Reports	As required	
	Continue with plant species inventorisation, update current status information and data.	CSD, PM	Reports	Ongoing	
	Secure funding and partnerships to monitor and implement monitoring.	PM, CSD	Reports	Ongoing	

10.3.6 Herbivore management programme

The purpose of this programme is to manage herbivore dynamics as a key driver of ecosystem integrity at various temporal and spatial scales.

Herbivore management focuses on the process of herbivory carried out by the large herbivores present in a park. Fences and water influence the way in which large herbivores, such as antelope and ostriches, use landscapes significantly more than for small herbivores, as well as insects and rodents. The effect that large herbivores have on ecosystems originates from their intensity of landscape use. This associates with where food, water and comfort, such as shade in hot days, may be located. In addition, herbivores orientate themselves on a landscape at

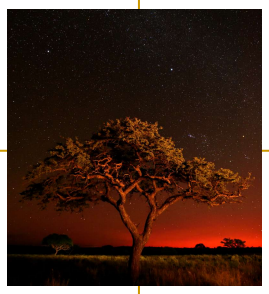
places where danger from, for instance, predation is limiting. Several of these drivers are missing at MONP – the park is surrounded by fences and even have internal fences; there are many localities where additional water is provided in places where water is not naturally abundant throughout the year; and the large carnivore guild is largely absent. SANParks seeks to maintain, restore or mimic ecological processes such as herbivory that ensure the resilience of the Savanna-Nama-Karoo ecotone.

Prior to the declaration of MONP, the farm, located in the Plooysberg area, was a hunting concession and hence some wildlife species were already present on MONP when SANParks took over the management. A number of these species are extra-limital and SANParks are steadily removing them from the park (Skead 2011). However, due to logistical capture difficulties some extra-limital species remain on MONP and will be removed in due time. When SANParks took over management of MONP both blue and black wildebeest occurred on the property. SANParks is aware of the hybridisation risk and are working in collaboration with the University of the Free State on a research project to address the possible risks are. In 2006 SANParks relocated certain wildlife species from VNP to MONP. SANParks also introduced additional species after the initial relocation from the VNP animals. Since the onset of MONP, the species-specific number of individuals of large herbivore species largely varied over time primarily because of several occasions where SANParks removed individuals of several species as part of ecological management and for generating revenue.

Decision-making for the management of herbivory is based on multiple-layers of information in an attempt to mimic the outcome of ecological processes that is not fully functional due to size and landscape constraints at MONP. These layers provide the basis for recommendations on an annual basis. The approach requires regular annual surveys of large herbivores. The landscape units are used to make decisions regarding vegetation monitoring. Vegetation monitoring plots were established, where plant species composition and density of plant species are recorded. The wheel point method is used to collect the data, and this data is used to make informed decisions on the off takes of grazers and mixed feeders found on MONP. For browsers and mixed feeders, the woody plant species composition, vegetation structure and available biomass are determined using the belt transect method as well as other associated programmes. All of the above needs to be used to assess the veld condition of each of the landscape units and to give recommendations on herbivore numbers that need to be taken off or species that need to be reintroduced. The number of herbivores to be removed or introduced is based on a joint decision-making process between scientists, veterinarians and park management, which involves an evaluation of several herbivore population models (against trends in annual aerial survey results), satellite imagery that provides a spatial and temporal indication of vegetation quality (measured as “greenness”), vegetation surveys that incorporate the compositional and structural components of vegetation condition, and climate forecasts provided by the South African Weather Service.

A detailed lower level plan outlining the rationale and operational approach is available. This programme links with high-level objective 2 and objective 2.5 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

HERBIVORE MANAGEMENT PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes’ interface, by maintaining and restoring key ecological patterns and processes.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To understand and manage herbivore dynamics, maintain integrity and vegetation by regulating herbivore populations as a modifier of biodiversity at various temporal and spatial scales.	Conduct annual aerial surveys to update population trends.	CSD, PM	Reports	Annually	
	Conduct on-going demographic profiling of the herbivore populations.	CSD, PM	Reports	Ongoing	
	Conduct a study on possible hybridisation between black and blue wildebeest.	CSD	Report	Year 4	
	Implement vegetation assessments guided by results from habitat and vegetation research	CSD, PM	Long term monitoring results	As required	Habitat and vegetation LLP
	Model population trends including removals.	CSD	Reports	Annually	Habitat and vegetation LLP
	Extract EVI from remote sensing.	CSD	EVI series updated and archived	Annually	
	Make annual wildlife management recommendations.	CSD, PM	Reports	Annually	



HERBIVORE MANAGEMENT PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To understand and manage herbivore dynamics, maintain integrity and vegetation by regulating herbivore populations as a modifier of biodiversity at various temporal and spatial scales.	Implement wildlife management recommendations.	PM, CSD	Reports	As required	
	Contribute off takes for wildlife sales.	PM, CSD	Reports	As required	
	Contribute off takes in support of restoration of other parks.	PM, CSD	Reports	As required	
	Contribute off takes in support of the wildlife economy projects.	PM, CSD	Reports	As required	

10.3.7 Fire management programme

The purpose of this programme is to determine the potential impact of fire on major landscape units and its consequences for the faunal component and aesthetic values that may affect the park as a potential tourist destination, while minimising threats to infrastructure. According to the National Veld and Forest Fire Act, No. 101 of 1998, SANParks is obliged to be a member of the local fire protection association (FPA) to gain full legal benefit thereof and stakeholder support.

Fire is a rare but quite natural phenomenon in the semi-arid Savanna Biome, occurring predominantly in above average rainfall years after sufficient fuel loads have accumulated. The estimated fire return period is approximately every eight to 10 years. Natural fires occur during the summer months due to lightning strikes associated with electric storms. Outside of this period they are normally started by humans. Fires ignited due to anthropogenic activities have in all probability also played an important role in these ecosystems since prehistoric times. However, a lack of historical records and research pertaining to fire management in the area makes it difficult to put forward appropriate conservation objectives for fire management.

Because the park doesn't have a fire management plan it's recommended that all fires that occur out of the rainy season, and which are not associated with electric storms, should be controlled as far as possible and ultimately suppressed. In the rainy season, fire should be controlled and suppressed by using internal roads as fire breaks thus allowing the natural fire (electric storms) to burn a certain block. All fires that might impact on infrastructure such as a rest camps *etc.* should be suppressed immediately. No firebreak will be made around the park perimeter except when and if it is needed in a specific area, this decision will be informed by an adaptive learning process. It is proposed that neighbours and government institutions should be approached with a view to forming a FPA in terms of Act 101 of 1998.

This programme links with high-level objective 2 and objective 2.6 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

FIRE MANAGEMENT PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To ensure the persistence of spatial heterogeneity resulting from linkages between diverse topography, soil and vegetation types by maintaining, restoring and mimicking key ecological processes.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To re-establish the function of fire as an ecological driver, minimising threats to infrastructure, by developing and implementing an integrated fire management plan.	Solicit research to understand fire ecology.	CSD	Registered research projects	Year 4	
	Develop an ecologically appropriate fire management plan, including monitoring.	CSD, PM	Document	Year 5	
	Implement the fire management plan.	PM	Monthly reports	Year 6 and ongoing	
	Establish and maintain spatial records of fires inside and adjacent to the park.	PM, CSD	GIS database, maps	Year 1 and ongoing	
	Participate in establishing a FPA.	PM	Minutes of meetings	Ongoing	

10.3.8 Disease management programme

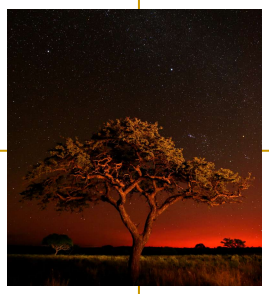
The purpose of this programme is to understand the ecology of indigenous disease as a component of biodiversity within the park, while limiting the introduction or impact of alien diseases and minimising the spread of disease from the park to neighbouring communities and commercial agriculture.

SANParks acknowledges its legal responsibilities with regard to managing diseases, especially controlled diseases, in the light of the requirements as set out in the Animal Diseases Act No 35 of 1984. Due to the dynamic nature of disease and the continuous improvement of diagnostic tests, disease management depends on making the best decisions with the data available at the time.

There have not been any recorded disease outbreaks / incidents since the park was declared in 2008. However, the park holds a large and significant population of disease-free buffalo that originated from Kruger's disease-free breeding project. This is a very valuable resource in terms of genetics and conservation value and therefore strict biosecurity is needed to maintain this disease-free status. A large number of game farms in the area are registered to keep buffalo, making good fence maintenance essential to prevent any stray buffalo breaking in and inadvertent introduction of diseases. There has also been a number of Bovine Tuberculosis (BTB) cases reported in the region and therefore good biosecurity is needed to prevent the introduction of BTB through paratenic or spill over hosts such as warthogs, kudu and mongoose.

The park is located close to what is considered one of two Anthrax endemic regions in the country, namely the escarpment of the Ghaap plateau in the Northern Cape. Although there has not been any anthrax detected in the park itself, the fact that it has a breeding population of White-back vultures, means that the potential for contamination with spores and therefore anthrax cases exists. It is therefore very important that a disease surveillance system be in place for dead and dying animals. Rift Valley Fever outbreaks have also been recorded in the surrounding area, and the role of wildlife (extensive and intensive farming systems) in the inter-epidemic period and viral-overwintering in endorheic pans is currently being investigated. Malignant Catarrhal Fever (Snotsiekte) is also becoming an important interface disease in the country. The virus is endemic in wildebeest (and sheep) with no clinical symptoms seen, but can pose a risk to cattle in surrounding farms. Research into the factors driving viral shedding and transmission is required in order to minimise contact during high risk periods.

The Northern Cape, being the most sparsely populated province in South Africa and having a climate that does not support the overwintering of many adult tick species, which means that it is generally suited to the breeding of high value game species in a relatively vector-free environment. As a result, it has seen an increase in commercial game farms, including those carrying disease-free buffalo, roan, sable, tsessebe, *etc.* However, future climate warming scenarios may support a range expansion and increase of various tick species as well as the diseases they carry, justifying the need for integrated disease monitoring system of both the vectors and their vertebrate hosts.



This programme links with high-level objective 2 and objective 2.7 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

DISEASE MANAGEMENT PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To understand the incidence and impact of disease by investigating mortality events.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To set up an adequate surveillance system for dead, dying and culled animals as well as introductions and translocation.	Conduct a training course to equip and train park conservation staff to conduct basic post mortem investigation, and collect and store appropriate samples.	CSD, local state vet	Training register	Year 5	
	Develop park-specific Cybertracker sequence for disease syndromes likely to be encountered.	CSD	Park-specific disease sequence in use	Year 1	
	Develop a reporting structure for disease incidence that allows for close interaction between local state vet, park staff, biotechnician and Scientific Services.	CSD, PM, local state vet	Local state vet and SANParks reports	Year 1	
	Develop a quantitative risk assessment and associated disease mitigation actions for all animal introductions or translocations.	CSD, PM	Completed risk assessment	Year 5	
	Ensure blood, tissues and associated materials are banked whenever an animal is handled / captured / culled for translocation and veterinary or research purposes.	CSD	Biological samples	As required	

10.3.9 Reintroduction programme

The purpose of the reintroduction programme is to strive towards re-establishing viable populations of floral and faunal species that historically occurred in the park. This not only includes reintroducing species assemblages that are still missing, but also supplementing populations that may be on a downward trend.

Reintroduction of species that historically occurred in the area and the supplementation of some species that are currently present in the park may be considered. Supplementation of present populations is necessary to enhance their genetic diversity and to improve long term viability of these populations. Reintroduction should only take place if there is good evidence that the species occurred in the area in historical times and consideration should be given to whether the original causes of extinction have been removed. However, it should be noted that the historical distribution in itself is not sufficient motivation to reintroduce species. Additional factors such as habitat suitability, and population viability are central to the success of these operations. These factors are addressed in the SANParks Policy Framework. All reintroductions need to be carefully considered against the objectives set out for MONP and in consideration of stakeholder interests, thus a risk benefit analyses (RBA) should be conducted to way up the risks and benefits of reintroductions. The reintroduction of large carnivores is anticipated, however any proposal for reintroductions needs to consider the norms and standards stipulated by DEA for the sustainable use of large predators (DEAT 2005), as well as the conditions that need to be met prior to the reintroduction according to the SANParks Policy Framework. Post release monitoring of any reintroduced species is of utmost importance to determine the success of such reintroductions.

This programme links with high-level objective 2 and objective 2.8 on page 34. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

REINTRODUCTION PROGRAMME					
High-level objective: To conserve a representative area of the Nama-Karoo and Savannah Biomes' interface, by maintaining and restoring key ecological patterns and processes.					
Objective: To maintain ecological patterns and processes by reintroducing species that historically occurred in the region.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To determine the need to reintroduce species that historically occurred in the area	Identify species for reintroductions, conduct RBA to determine feasibility of reintroduction.	PM, CSD	Reports	Ongoing	Herbivore, disease and habitat and vegetation LLPs
	Secure funding and partnerships to monitor and implement monitoring.	PM, CSD	Reports	Ongoing	
To supplement currently small populations of particular species	Establish a monitoring protocol for detecting and establishing population sizes for smaller species (*e.g.* klipspringer, Ghaap).	CSD, PM	Monitoring protocol	Year 5, 10	
	Submit proposals to WMC to source required species.	CSD, PM	Proposals	As required	
	Supplement populations as per WMC recommendation.	PM, CSD	Reports	As required	

10.4 Responsible tourism programme

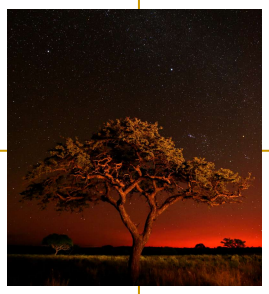
The purpose of the responsible tourism programme is to act as an enabler for conservation through enhancement of the financial sustainability of the park with optimal benefit to the local communities.

There are a number of constraints currently limiting park sustainability, for example Mokala was established with existing facilities. These have been utilised and where possible enhanced to enable tourism in the park, however do not fully meet the existing market needs *e.g.* too few family units. In addition, the limited road network, poor road access to the park from the N12 and limited activities further constrain tourism expansion. In spite of the current occupancies and financial deficit, the park has been identified as a priority marketing and development park, as it presents a number of tourism opportunities due to the ease of development and park location. The current tourism profile is supported by the objectives set-out in the desired state and park objectives.

In order to optimise the tourism experience and potential, SANParks' has adopted the national Responsible Tourism Standard, SANS1162:2011. The Responsible Tourism programme thus looks at all aspects of the current and potential tourism product and service offering in order to ensure that the park meets the required standards for environmental and financial sustainability, local community beneficiation and customer service excellence, and this starts by establishing the parks responsible tourism baseline. This baseline will need to be established in order to identify a clear point of departure from which to work. A measure for customer service excellence is measuring the customer feedback, tourism quality standards, UA standards, and then evaluating the visitor management aspects relating to the park, for example gate efficiency.

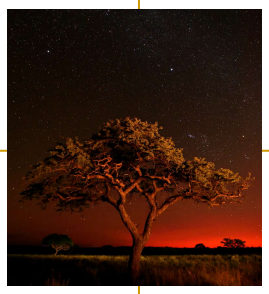
Implementation of Responsible Tourism enables operational efficiency and thus creates the environment for new product development, packaging and dynamic pricing in order to maximise yield, though dependencies such as the availability of advanced technologies do exist.

A detailed lower level plan supports this programme. This programme links with high-level objective 3 and objectives 3.1 – 3.7 on page 35.



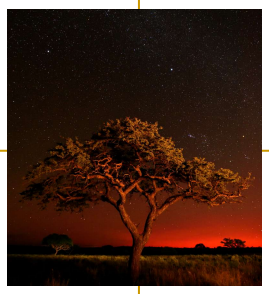
RESPONSIBLE TOURISM PROGRAMME					
High-level Objective: To establish the park as a species rich and unique landscapes destination, by enhancing the visitor experience, improving operational efficiencies and growing tourism income.					
Responsible Tourism performance objective – To enable continuous improvement of the park's Responsible Tourism performance, by establishing and implementing a monitoring system, in accordance with the requirements of SANS1162:2011.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To communicate 2022 Responsible Tourism Strategy to all park stakeholders.	Educate and motivate staff in the responsible tourism principles and enhance tourism capacity and skills base within staff complement.	Manager: Tourism Standards	Training records	Year 3	Responsible Tourism policy, Responsible Tourism strategy
	Inform the MONP stakeholders of the SANParks 2022 Responsible Tourism Strategy and potential impact on the park.	PM	Park Forum meeting minutes	Ongoing	Responsible Tourism strategy
To enable continuous improvement of Responsible Tourism performance.	Establish a baseline (gap analysis) to identify current performance iro the Responsible Tourism Standard, SANS1162:2011.	Manager: Tourism Standards	Responsible Tourism standards manual	Year 3	Responsible Tourism strategy
	Engage in Responsible Tourism assessment, in order to measure performance improvement in relation to Responsible Tourism baseline targets.	Manager: Tourism Standards	Assessment / audit report	Year 3, 6, 9	Responsible Tourism baseline targets
	Engage in Tourism Quality Assurance assessments and grading, as appropriate.	Manager: Tourism Standards	Tourism quality assessment report, Tourism grading assessment report	Year 3, 6, 9	Responsible Tourism strategy
	Engage in UA assessments.	Manager: Tourism Standards	UA assessment report	Year 3, 6, 9	UA strategy, UA protocol
Monitor and mitigate the impact of visitor activities on biodiversity, heritage and tourism resources of the park.	Assess, manage, monitor and mitigate impacts of visitor and recreational user activities on biodiversity and heritage resources.	PM	Responsible Tourism assessment / audit report	Ongoing	Thresholds of potential concern within individual EMP' s
	Implement reticulation (sewer and water systems) and hybrid energy systems within the key camps in the park.	PM	Responsible Tourism assessment / audit report	Year 5	

RESPONSIBLE TOURISM PROGRAMME					
High-level Objective: To establish the park as a species rich and unique landscapes destination, by enhancing the visitor experience, improving operational efficiencies and growing tourism income.					
Visitor experiences objective - To continually enhance the visitor experience within the park, by effective visitor engagement, management, interpretation and quality of facilities offered.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure effective visitor management in the park.	Create a park visitor management plan, including priorities for implementation.	GM: Visitor Management and Interpretation	VMP	Year 3	Visitor management protocol
	Implement the visitor management plan actions according to the prioritised list.	PM	Reports	Year 3, ongoing	
	Update the visitor management plan taking changes in the environment into account.	GM: Visitor Management and Interpretation	Updated VMP	Year 3, 6, 9	
To enable a quality visitor experience through dynamic interpretation of biodiversity, cultural and heritage value of the park.	Create a park interpretation plan, taking existing interpretation into account, and including priorities for implementation.	GM: Visitor Management and Interpretation	IP	Year 3	Interpretation protocol
	Uncover the stories and traditions of the local communities and continuously tell the stories about the park and communities.	PM, GM: Visitor Management and Interpretation	Updated IP	Year 3, 6, 9	IP
	Implement the IP actions according to the prioritised list.	PM	Monthly reports	Year 3, ongoing	IP
	Provide manual or digital interpretation guides, where relevant *e.g.* botanical interpretation.	PM, CSD	Documents	Ongoing	Visitor management plan
	Update the IP taking changes in the environment into account.	GM: Visitor Management and Interpretation	Updated IP	Year 3, 6, 9	Interpretation plan
	Prioritise the sustainable upgrade and maintenance of the existing road network.	PM	VMP	Ongoing	Visitor management plan
	Improve and then maintain the standard of visitor information centre facilities and visitor management in general.	PM	Monthly reports	Ongoing	Visitor management plan
	Identify mechanisms for improving the parks UA facilities and services, with reference to existing facilities for persons with mobility impairments and access for the aged.	Manager: Tourism Standards, PM	Monthly reports	Year 3	UA protocol
	Implement improvements to accessibility for persons with mobility impairments.	PM	Monthly reports	Year 3, 6, 9	UA plan
	Identify and implement opportunities for engaging visitors with sensory impairments, *e.g.* hearing and sight.	GM: Visitor Management and Interpretation, PM	Monthly reports,	Ongoing	UA plan
	Engage in regular UA training of customer facing staff, to enable an empathetic and appropriate response.	PM	Training register	Year 3, 6, 9	UA protocol



RESPONSIBLE TOURISM PROGRAMME					
High-level Objective: To establish the park as a species rich and unique landscapes destination, by enhancing the visitor experience, improving operational efficiencies and growing tourism income.					
Visitor experiences objective - To continually enhance the visitor experience within the park, by effective visitor engagement, management, interpretation and quality of facilities offered.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure adequate, effective and accurate visitor communication within and on approach to the park.	Create and maintain a park specific signage manual, including existing signage, required signage upgrades, including signage to the park.	PM, GM: Visitor Management and Interpretation	Document	Year 3, 6, 9	Corporate signage manual
	Ensure effective communication is implemented in order to educate and inform visitors so as to reduce the potential for human / animal conflicts and risk/impact on the parks natural and heritage assets.	PM	Information boards, placards *etc.*	Year 1, ongoing	
	Ensure clear and accurate communication of park rules, rates and facilities on all platforms, including within the park, on correspondence, and on the website.	PM	Park information on entry permit, website and reservation attachments	Ongoing	
	Ensure all staff are adequately trained (including conservation and support staff), to communicate key park, tourism and biodiversity information to visitors, and where appropriate to access information, if unknown.	PM	Regular emails, meeting minutes	Ongoing	Park rules, other visitor information
Enhance park accessibility.	Engage national, regional and/or local stakeholders to ensure the maintenance of access routes on approach to the park.	PM	Emails, minutes of meetings	Ongoing	Visitor management plan
Service excellence objective - To enable appropriate customer- focused service excellence, by understanding and responding appropriately to market preferences.					
To continually enhance customer service standards applicable to all visitors and other travellers.	Manage and resolve feedback received from the public timeously (all sources) visiting or having visited the park.	PM	Closure of customer feedback issues	Ongoing	Guest feedback
	Review and assess customer feedback received and action taken and report on these in the tourism quality assurance assessment report.	PM	Monthly reports, customer service assessment	Annually	Guest feedback
	Regularly assess facilities to ensure standards are maintained and operational procedures are optimised.	PM	Tourism quality assurance assessment results	Year 3, 6, 9	Tourism grading standards

RESPONSIBLE TOURISM PROGRAMME					
High-level Objective: To establish the park as a species rich and unique landscapes destination, by enhancing the visitor experience, improving operational efficiencies and growing tourism income.					
Grow revenue objective: To grow income through tourism by providing visitors with an appropriate and a diverse range of products and services.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure optimal development and maintenance priorities to enable revenue optimisation.	Identify events, activities and facilities that may be considered for development within the park.	PM	Product development framework	Year 10	
	Identify specific sites (including cultural heritage sites) with tourism development potential.	PM	Product development matrix	Year 5, 10	
	Review of development plan in order to ensure optimal tourism development priorities without eroding conservation values.	PM	Infrastructure development plan updated	Year 3, 6, 9	
	Conduct a feasibility study of priority opportunities in order of perceived value added and income generated.	Product Development Steering Committee	Site specific feasibility studies	As required	Product development guideline
	Review of maintenance and replacement / refurbishment priorities.	PM	Monthly reports	Year 3, 6, 9	Tourism maintenance protocol
	Implement identified development projects.	PM	Monthly reports	Year 10	
To ensure optimal returns from commercial operations.	Support retail outlet(s) and restaurant(s) promotion in order to maximise concession income generating potential.	PM	Increased income	Ongoing	
Operational efficiency objective: To enable cost savings within tourism operations of the park, by implementing operational efficiencies and controls.					
To optimise tourism operations processes.	Review tourism operational procedures and processes for possible leakage, and put processes in place to limit these.	PM	Updated procedures	Ongoing	Responsible Tourism standards
	Review staffing practices and where possible improve management of staff complement through peaks and troughs.	PM	Monthly reports	Year 3, 6, 9	
	Provide regular staff training in operational procedures and customer service.	PM	Training register	Ongoing	Training analysis
Promotion objective: To promote the park with its species rich, unique landscapes and cultural experiences, by developing and implementing a variety of sales, marketing and communication strategies.					
To market the park to SANParks' broader markets and park specific target markets.	Identify park specific markets, and devise strategies for expanding on these markets, where not included in the strategic and focus markets for SANParks.	Regional Marketing Manager	Sales and marketing plan	Year 3, 6, 9	Sales and marketing strategy
	Create opportunities to market the park to Black Middle Class and Previously Disadvantaged Individuals (PDI) markets, with specific focus on local communities.	Regional Marketing Manager	Records of marketing	Year 3, 6, 9	Sales and marketing strategy
	Create awareness for people who have never visited the park.	Regional Marketing Manager	Records of marketing	Year 3, 6, 9	Sales and marketing strategy



RESPONSIBLE TOURISM PROGRAMME					
High-level Objective: To be a leading role-player in driving the tourism economy of the region, through service excellence, hospitality, product diversity and implementation of Responsible Tourism.					
Promotion objective: To promote the park with its species rich, unique landscapes and cultural experiences, by developing and implementing a variety of sales, marketing and communication strategies.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To market the park to SANParks' broader markets and park specific target markets.	Find opportunities for media coverage and enhance existing editorials, magazines and social media to ensure maintain a high media visibility.	Regional Marketing Manager	Records of marketing, monthly reports	Year 3, 6, 9	Sales and marketing strategy
	Maintain marketing collateral for the park.	Regional Marketing Manager	Monthly reports	Year 3, 6, 9	Sales and marketing strategy
	Sponsor journalists and build relationships with journalists that will promote the park to key source and as yet untapped markets.	Regional Marketing Manager, Regional Communications Manager, GM: Sales and Marketing	Events, monthly reports	Ongoing	Sales and marketing strategy
	To enhance the research and collection of data relating to untapped tourism markets.	Tourism Research Manager	Research Outputs	As required	Research
	Where appropriate, promote park events, internally, to the customer base and/or target markets.	Regional Marketing Manager	Events, monthly reports	Ongoing	Sales and marketing Strategy
Equitable access objective: To enable equitable (both affordable and facilitated) access to the park, by understanding local community and stakeholder interests.					
To engage with stakeholders in order to enable access to the park by a variety of transport mechanisms.	Engage with local and regional government, commercial business operators and the local community to identify opportunities for improving local community (especially PDI) access to the park.	PM	Park Forum meeting minutes	Quarterly	Park Forum
To understand the desired community interaction with the park in order to encourage community visitation and interaction with the park.	Attending farmers Union meetings to communicate with neighbouring farms to keep communications open.	PM	Minutes of meetings	Quarterly	Stakeholder workshops
	Identify unexplored opportunities for encouraging visitation by communities surrounding the parks.	PM	Minutes of meetings	Annually	Community engagement

10.5 Constituency building and benefit sharing

The People and Conservation (P&C) unit 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, contributing to local socio-economic development through job creation and skills development, cultural resource and indigenous knowledge management, environmental education programmes, awareness and interpretation programmes, social science research, and

youth outreach. Stakeholders are engaged on different levels and in diverse ways according to their needs. It is of vital importance to the existence, development and expansion of the park to maintain good relations with these stakeholders.

10.5.1 Stakeholder relationship programme

The purpose of this programme is to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders supporting SANParks core business of biodiversity conservation and tourism. The stakeholder programme is a key strategy to achieve the overall desired state of the park.

The park aims to enhance biodiversity conservation through the promotion of a conservation ethic and developing healthy community custodianship for the park. Co-operative, collaborative and mutually beneficial relationships are essential to reach park objectives and ultimately to ensure the sustainability of the park. Both formal and informal partnerships are initiated, maintained and nurtured with government, conservation entities, business partners, communities, various NGOs, community based organisations, the media, customers and employees. The park / SANParks will use the media (printed media, television and online media) as a key communication tools to keep stakeholders informed and to promote a positive image of SANParks. Media relations are managed by the Regional Communication Manager and Park Manager and is subject to SANParks' communication protocols.

The park has close working relationships with various community organisations and structures to promote mutually-beneficial community relations. The park is involved with various local communities situated in or close to the towns of Kimberley, Jacobsdal, Ritchie, Galeshewe, Ratanang, Plooysberg and Salt Lake through supporting specific community projects / initiatives. These include amongst others:

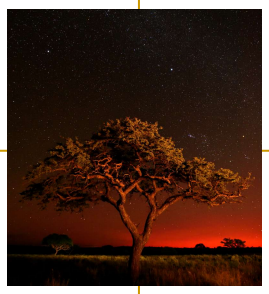
- Working with the various community development workers to collaborate on community events, outreach programmes and job creation;
- Attending the quarterly Modder River farmers' association meetings and collaborates on matters such as security and wildlife management; and
- Participating in the South African Police Service (SAPS) Forum, Disaster Management Forum, Wildlife Operations Group – Wildlife Foundation and Rhino Management Group.

The Park Forum has been constituted and is functioning as an advisory body. The Terms of Reference (TOR) and Park Forum Membership Charter provides clear guidelines for the Park Forum whilst incorporating the requirements and individual needs of the park. It is a means of providing a legitimate platform to communicate park / SANParks matters to ensure participation by all stakeholders on matters of mutual relevance affecting the park. It is expected that the Park Forum will facilitate constructive interaction between the park and surrounding communities / stakeholders and to build constituencies in support of natural and cultural heritage conservation goals of the park. The following entities are represented on the Park Forum at the time of writing but could change over time:

- Department of Water and Sanitation;
- SAPS;
- Northern Cape Department of Environment and Nature Conservation;
- Northern Cape Department of Basic Education;
- Sol Plaatjie Local Municipality;
- Siyancuma Local Municipality;
- Modder River Farmers' Union;
- Diamantveld and Free State Honorary Rangers;
- Native minds;
- McGregor Museum;
- Eskom;
- Local ward councillors; and
- South African National Parks.

The park has a close working relationship with the SHRs. They contribute both in cash and in kind to park programmes. Their vast expertise is used by the park to fulfil its vision and mission. They contribute in the following ways, to name but a few:

- Support and assist in environmental education and community outreach programmes;
- Fundraising;
- Participate in park operations during weekends when requested; and
- Participate and assist with holiday programmes.



A detailed lower level plan outlining the rationale and operational approach is available. This programme links with high-level objective 4 and objective 4.1 on page 35.

STAKEHOLDER RELATIONSHIP PROGRAMME					
High-level objective: To optimise socio-economic benefits for, and co-operation with all stakeholders, through continuous engagement, provision of employment and facilitating learning opportunities.					
Objective: To promote and nurture stakeholder relationships, through formal and informal engagement.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To improve co-operation and build sound stakeholder relationships.	Coordinate and support quarterly Park Forum meetings.	PM	Minutes of meetings	Quarterly	
	Engage with government and NGO structures on pertinent issues.	PM	Minutes or records of meetings	As required	
	Collaborate and engage with conservation entities.	PM	Minutes or records of meetings and workshops	As required	
	Engage in mutually-beneficial projects with local community representatives or organisers.	PM	Minutes of meetings, events	As required	SANParks Guidelines for Stakeholder Participation
	Maintain good visitor relations through providing a customer feedback service.	PM	Visitor book analysis, customer care logs, customer care performance	Ongoing	
	Maintain good media relations through media releases as well as active participation on social media sites.	Regional and corporate communications, PM	Media release, social media posts	As required	SANParks' Communications Protocol & Media Policy & Procedures
	Maintain liaison with SHRs, including identification of park requirements and needs.	PM	Minutes of meetings, annual wish list	Ongoing	

10.5.2 Socio-economic development programme

The purpose of this programme is to play a significant, targeted and effective role in contributing to local economic development, economic empowerment and social development in communities and neighbouring areas. This will be achieved by partnering with national and local government through participating in government programmes such as the Expanded Public Works Programme (EPWP), contributing to the municipal Integrated Development Plans (IDPs), and beneficiation and local and regional procurement.

The SANParks socio-economic development programme is aligned to Government's National Development Plan and the DEA objectives to enhance fair and equitable sharing of benefits from biological resources and to improve the socio-economic benefit flow from biodiversity

conservation. A number of programmes are being implemented throughout SANParks to contribute to the development of local communities, including, waste management, social legacy, Expanded Public Works Programme, and Environmental Protection, Infrastructure Development, the wildlife economy and blue economy. The green and blue economy programmes contribute to the development and growth of green sector industries in local communities through provision of access to and use of wildlife and marine resources in national parks. Wildlife economy initiatives include game breeding, sustainable hunting, eco-tourism and bio-prospecting whilst marine economy include fishing and related aquaculture activities. The decision on the green and blue economy initiatives to be implemented will depend on the feasibility studies conducted. The establishment of viable ecotourism enterprises for the economic benefit of the local communities is another key area for the programme. The sourcing of goods and services from the local communities is also promoted through the identification and ring fencing of opportunities for the benefit of the local enterprises.

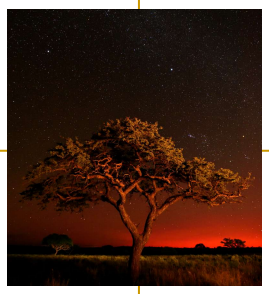
The EPWP remains a significant focus area of the organisation to effectively contribute to local socio-economic development while achieving biodiversity outcomes. The park currently manages various programmes namely Working for Water (WfW), Working on Land (WoL), Working for Ecosystem (WfE) and environmental monitors. These programmes focus on poverty alleviation and are labour intensive projects that create temporary jobs in the short term while simultaneously achieving biodiversity objectives. In 2015, 275 jobs were created and since inception the EPWP programmes has spent a total R 18,476,880 on operations and the management of these programmes. Skills development and capacity building is regarded as a cornerstone to enable economic activity. Great emphasis is placed on skills development in the above programmes. The park will continue to facilitate and encourage skills development through learnership and internship programmes in a broad range of fields (*i.e.* reception, field guiding experiential training for students).

The park continues to support and develop local initiatives or small businesses that provide services that are required during specific events or functions. Where possible, local small, medium and micro-sized enterprises, especially previously disadvantage individuals are favoured when sourcing contractors, provided that all procurement conditions as stated in SANParks procurement policy are adhered to.

The park continues to promote environmental education in the community, and enhance economic upliftment and conservation awareness of all stakeholders. A science laboratory was built at the Emang Mmogo Comprehensive School in Galeshewe Township (Kimberley) in 2013 as part of the social legacy programme. The lab will contribute towards quality learning and development of learners. The annual recruitment of female students for the South African Tourism College in Graaff-Reinet, in partnership with the park, also supports job creation in the communities.

A detailed lower level plan outlining the rationale and operational approach is available. This programme links with high-level objective 4 and objective 4.2 on page 35.

SOCIO-ECONOMIC DEVELOPMENT PROGRAMME					
High-level objective: To maintain and strengthen stakeholder relations, through transparent and cooperative engagement and commitment to facilitating socio-economic benefits and learning programmes.					
Objective: To improve local livelihoods by facilitating skills development, business opportunities and sustainable resource use.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To maintain and strengthen relationships with local government.	Ensure projects and programmes are incorporated into the local and district municipal IDPs.	PM	SLM and PkSDM IDPs	Annually	
	Collaborate with local government departments on socio-economic programmes.	PM	Events, minutes of meetings	As required	
To provide socio upliftment, employment, skills development and business opportunities for local residents, entrepreneurs and business.	Identify opportunities for and ensure effective implementation of EPWP programmes.	PM, BSP	Annual plan of operations, jobs created, person days achieved, funds invested, skills development programmes implemented	Ongoing	
	Employ permanent and temporary staff for park operations.	PM	Establishment table	As required	SANParks Recruitment Policy



SOCIO-ECONOMIC DEVELOPMENT PROGRAMME					
High-level objective: To maintain and strengthen stakeholder relations, through transparent and cooperative engagement and commitment to facilitating socio-economic benefits and learning programmes.					
Objective: To improve local livelihoods by facilitating skills development, business opportunities and sustainable resource use.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To provide socio upliftment, employment, skills development and business opportunities for local residents, entrepreneurs and business.	Provide skills development opportunities for staff.	PM, BSP	Training needs analysis, Individual Development Plans	Annually	SANParks Learning and Development Strategy
	Procure goods and services locally / regionally.	PM	BBBEE procurement report	Ongoing	SANParks supply chain policy
	Identify possible CSI opportunities and assist where required.	PM, CSI	Motivation	Ongoing	CSI policy
To demonstrate the impact of the park on local socio-economic upliftment.	Commission research on the socio-economic benefit of the park.	CSD, PM	Research contract	Year 2, 8	

10.5.3 Environmental education and interpretation programme

The purpose of this programme is to build constituencies amongst people in support of the park's conservation endeavours by playing a significant, targeted and effective role in promoting a variety of educational opportunities and initiatives.

An integrated approach to environmental education and interpretation has been adopted in SANParks. A broad stakeholder base is targeted and relevant programmes addressing a variety of issues are presented. The current beneficiaries of this programme are mainly school and youth groups and special interest groups. The approach takes the form of organised, high quality and interactive activities which are categorised into:

- Formal programmes:
  These programmes target the formal education sector and are directed at school groups and communities adjacent to the park. This is achieved through facilitating visits to the park and outreach programmes. These programmes are aligned with the school Curriculum Assessment Policy Statement (CAPS). Examples of such formal programmes are the *ad hoc* Kids in Parks programme, youth development programme, the planned junior ranger programme and calendar - and special day commemorations.

- Informal programmes:
  The informal programmes are aimed at park visitors and community-oriented initiatives targeting specific stakeholders such as the broader community and especially women, youth and people living with disabilities. The content of the programmes is conservation issue-specific. Examples of these informal programmes are information sharing (guided game drives and walks), SANParks Week, interpretive leaflets and signage and holiday programmes.

Interpretation is provided to visitors in the form of information leaflets such as species lists and visitor maps. Interpretative signage is currently limited and there is a need to develop appropriate informative signage. The Mofele interpretation centre houses interpretative displays and posters detailing the history of the Northern Cape, establishment of the park and its wildlife, and are utilised by both the visitors and school / community groups. The park further presents two school holiday programmes per year, namely in June and December. Various programmes /

activities are offered including guided walks and drives, environmental learning game, talks, PowerPoint presentations and watching DVDs.

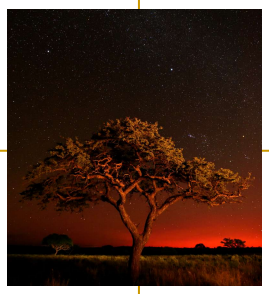
A detailed lower level plan outlining the rationale and operational approach is available. This programme links with high-level objective 4 and objective 4.3 on page 35. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ENVIRONMENTAL EDUCATION AND INTERPRETATION PROGRAMME					
High-level objective: To optimise socio-economic benefits for and co-operation with all stakeholders, through continuous engagement, provision of employment and facilitating learning opportunities.					
Objective: To create an awareness of, and support for, the park's endeavours, by facilitating a broad-based mutual formal and informal learning environment and expanding the existing knowledge base.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To plan, develop and present formal education programmes for organised school and other youth groups.	Develop an environmental education plan and update annually.	PM	Document	Year 1, annually	CAPS
	Organise and conduct environmental education programmes for schools including the special funded programmes and calendar days.	PM	Programme reports, monthly report	Ongoing	EE Plan
	Identify and where possible participate in youth development programme/s that will benefit the identified communities.	PM	Monthly report	As required	
	Organise and conduct outreach programmes in the identified communities surrounding the park.	PM	Monthly report	Ongoing	
	Develop new and update existing programme information.	PM	Documents (worksheets, presentations *etc.*)	Ongoing	CAPS
To plan, develop and present informal education programmes for the broader stakeholder group of the park.	Present presentations and talks for groups / visitors during SANParks Week.	PM	Monthly report	Annually	EE Plan
	Facilitate presentations and talks for special interest groups.	PM	Monthly report	As required	
	Present holiday programmes to visitors.	PM	Monthly report	Bi-annually	
	Review and update current materials (programmes and activities).	PM	Documents	Ongoing	EE Plan
To expand upon and improve the interpretation techniques to ensure a quality experience.	Provide relevant information to visitors for interpretation.	PM	Leaflets, signboards, display posters	Year 1 and ongoing	
	Provide interpretive services to visitors through guided activities.	PM	Guided activities	Ongoing	

10.5.4 Cultural heritage programme

The purpose of this programme is to consolidate, sustain, manage and present the significance, authenticity and integrity of tangible and intangible cultural heritage resources. The management process will involve sustaining the significance of the cultural heritage resources; maintaining the authenticity and integrity of both the immovable and movable cultural heritage resources; as well as presenting the heritage to the public in general.

The management of cultural heritage resources is guided by national legislation, policies and procedures within SANParks. The NHRA provides the framework for the maintenance and conservation of heritage resources in accordance with the standards and procedures as set out by the South African Heritage Resources Agency (SAHRA). SANParks policies such as the Cultural Heritage Policy (2011), the Heritage Objects Collections Management Policy (2011), and Guidelines for burials and scattering of ashes (2010)



and the development and maintenance of heritage sites (2011) will provide further guidance.

This programme also include oral history and the documentation of indigenous knowledge. The oral history collection project aims to build a relationship between the park and communities by recovering and interpreting information relating to cultural heritage, specifically related to the areas incorporated within the park. Management will involve sustaining the significance of the cultural heritage resources; maintaining the authenticity and integrity of both the immovable and movable cultural heritage resources; as well as presenting the heritage to the public in general. Therefor all the known sites need to be documented, managed and protected.

Surveys should be carried out to identify new sites, especially on farms that have been consolidated into the park after the 2007 survey. The results of this work should be added to the existing database to allow for monitoring and management. The process of identification of cultural heritage sites (cultural mapping) and development of site management plans will be conducted in conjunction with local community members and the organisations representing community interests, as well as relevant academic institutions and researchers. Access by visitors and local communities, interpretation, risk mitigation and monitoring of the sites are important components for the management of these sites. In order to fully comply with all management requirements for cultural heritage resources in the park, a number of initiatives have been planned and are being implemented.

This programme links with high-level objective 5 and objectives 5.1 - 5.4 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

CULTURAL HERITAGE PROGRAMME					
High-level objective: To conserve the park's cultural heritage assets and oral history, through identification and effective management, for future generations.					
Objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To compile and maintain a comprehensive inventory, and grading, of all cultural heritage resources, inclusive of oral history.	Create and update an inventory of cultural resources.	PM	Site database	Ongoing	NHRA
	Carry-out audits of collections on display in the Mofele museum.	PM, CSD	Reports	Yearly	ICOM standards and guidelines
	Carry-out preventive conservation of objects on display in the museum.	PM	Reports	Quarterly	ICOM guidelines
	Carry-out surveys for new sites.	PM, CSD	Results	Year 3 - 5	
	Establish and implement a programme to document (both audio and visual) oral history and living culture.	PM, CSD	Records	Year 5	
To conserve the tangible and intangible cultural heritage assets, through effective management and, where relevant, sustainable utilisation.	Develop a Cultural Heritage Plan.	PM, CSD	Document	Year 2 - 5	NHRA
	Develop and review site specific plans for selected sites.	PM, CSD	Documents	Year 4 - 5	DEA Guidelines
	Grade and prioritise sites according to significance.	PM	List	Year 3	NHRA, SANParks policy

CULTURAL HERITAGE PROGRAMME					
High-level objective: To conserve the park's cultural heritage assets and oral history, through identification and effective management, for future generations.					
Objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To conserve the tangible and intangible cultural heritage assets, through effective management and, where relevant, sustainable utilisation.	Develop an inspection schedule, and monitor and report on resources accordingly.	PM, CSD	Records	Ongoing	SANParks inspection forms, policies and guidelines
	Support ongoing cultural heritage research.	PM	Registered research projects	Ongoing	
To enable the, interpretation and awareness of park and regional cultural heritage resources, and oral history, through research, knowledge management and dissipation.	Incorporate cultural heritage component into environmental education and interpretation programmes.	PM, CSD	Monthly records, programmes	Ongoing	
	Provide visitor access to selected sites.	PM, CSD	Sites	Ongoing	NHRA
To promote and implement responsible tourism and other activities associated with cultural heritage	Identify and develop additional sites that are suitable for tourism.	PM	Sites	Year 2	
	Develop a guideline document for community access and benefit opportunities.	PM	Document	Year 2	NHRA, SANParks Guidelines

10.6 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, objective and actions that assist in effective park management such as environmental management, financial management (*e.g.* procurement, reporting), budgeting, maintenance planning, and monitoring compliance.

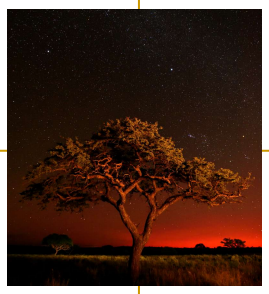
10.6.1 Environmental management programme

The purpose of this programme is to minimise negative operational impacts on the environment and set clear guidelines for the management of environmental impacts.

The Minister of the Department Environmental Affairs has, in terms of section 24(2) of the National Environmental Management Act, 107 of 1998 (NEMA), identified activities that may not commence without authorisation from the competent authority. NEMA is of general application throughout South Africa and relevant provisions therefore apply to the park.

Given the national importance of the park, it is vital to manage this park to required environmental standards. Proper management of new developments and operational activities within the park can only be achieved through appropriate planning and effective controls. A number of management tools are being used to develop and manage the park in a manner consistent with the relevant legislation and SANParks policy framework. These key tools and controls used by the park form the basis of an environmental management framework.

Further to the provisions of NEMA, the park will implement best practice to guide all operational activities that may have an impact on the environment. These activities will cover any new infrastructure development that is not listed under NEMA, general maintenance *etc.* The development of best practice operating procedures will be guided by the precautionary principal. The precautionary principal states that if an action might cause harm to the environment, in the absence of a scientific consensus that harm would not ensue, the burden of proof falls on those who would advocate taking the action.



This programme links with high-level objective 6 and objective 6.1 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ENVIRONMENTAL MANAGEMENT PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To ensure compliance with environmental legislation and best practise principles for all management activities.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To manage and reduce the impacts of park activities on the vital attributes.	Keep abreast of and implement the national climate change adaptation and mitigation strategy as applied to SANParks.	PM	Report	Ongoing	
	Make all environmental legislation available to relevant staff.	PM	Electronic / hard copy of applicable legislation	Ongoing	
	Ensure that EIAs and heritage impact assessments are completed for listed activities.	PM	Documents / reports	As required	
	Conduct internal scoping for all activities / developments that may potentially impact on the environment.	PM	Documents / reports	As required	
	Provide an environmental management plan (EMP) for events or to contractors / service providers when operating in the park.	PM	Document	As required	
	Enforce the obligations set out in the EMP.	PM	Inspections	As required	
	Develop and implement a set of best practice procedures for the identified activities.	PM	Standard operating procedures	Year 2	
	Develop and implement emergency response plan/s for identified activities.	PM	Plans	Year 2	
	Implement a water and electricity savings programme.	PM	Report	Year 3	

10.6.2 Risk management programme

The purpose of this programme is to update and maintain the park's risk profile and to manage risks accordingly. The management of business risks is regarded by SANParks as an integral part of management across all operations.

In line with corporate governance best practices and as per the Public Finance Management Act, No. 01 of 1999 (PFMA) requirements, the Board of SANParks has formalised the risk management processes by adopting a Corporate Risk Management Framework (CRMF). As its foundation, the risk management framework follows 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 CRMF is to instil a culture of corporate risk management awareness 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 all risks to remain within the risk appetite of the organisation.

Acknowledging that all activities occurring at different levels within the organisation are exposed to the various types of risks, the focus of this framework is to shift the attention of this 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 profile of the identified key strategic challenges the organisation faces. This profile is communicated to the Board and is reviewed on an on-going basis. The risk profile reflects among others the risks identified as well as 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 in 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 economic depressed times. The park may also experience extreme environmental / weather conditions from time to time (*i.e.* droughts, floods, runaway fires) as part of the normal cycle. An appropriate response to each of these events will be drafted as and when required.

Similarly, the park manager needs to ensure that emerging issues of risk, that can jeopardise 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.

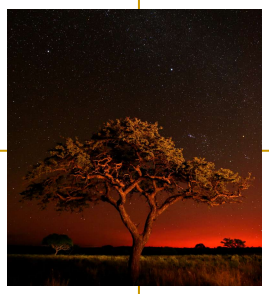
This programme links with high-level objective 6 and objective 6.2 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

RISK MANAGEMENT PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To establish and maintain effective, efficient and transparent systems of risk management.	To identify and assess risks for all operations in the park.	PM	Risk register	Quarterly	CRMF
	To develop responses to address and prevent or mitigate issues of risk.	PM	Risk response plan	Annually	PFMA, OHS Act, NEM: PAA, NHBRC regulations
	To monitor effectiveness in terms of the risk response plan and improve as needed.	PM	Report	Quarterly	Park risk profile

10.6.3 Financial management and administration programme

The purpose of this programme is to ensure sound financial management and administration. As a public entity, SANParks manages the public funds entrusted to the organisation in accordance with the Public Finance Management Act, Act 1 of 1999 (as amended by Act 29 of 1999), and it is listed as Schedule 3 Part A: 25 public entity. Financial management and administration encompasses the following, trade income, staff debtors, creditors, financial administration and supply chain management (SCM). Support is also provided by the regional financial and administration manager and the regional CSM practitioner that's based in MONP. Without incisive financial management of the park, there can be no realistic conservation effort.

Trade income manages all income received by the park which includes monthly billing of staff debtors, restaurant and retail and confirming payments received. The administration and finance unit will verify and



ensure that all transactions captured in the financial system correspond with the income received and expenditure incurred. The administration and finance unit ensures capturing of invoices on the system to ensure payment of all suppliers and service providers and the follow up of outstanding invoices and queries received from suppliers. The Park Manager, Finance and Human Resource and Administration Officers are responsible to supervise, guide and provide the necessary assistance with the budget process, asset management and related administration. SANParks budget policy dictates a zero-based approach, which implies that every category must be critically assessed, evaluated and supported by an approved business plan. Annual budgets should be compiled in accordance with budget guidelines and instructions issued by the Corporate Finance Division. The Park Manager, in collaboration with middle management will ensure sound and proper budget management.

Middle management is responsible for procuring goods and services, as well as ensuring compliance and managing contracts with the assistance of the Finance and Human Resources and Administration Officers and the Regional SCM Practitioner. Middle management, with the support of the Human Resources and Administration Officers are responsible for asset control and manage a wide range of assets in support of the park. 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 maintain and improve the financial sustainability of the park.

This programme links with high-level objective 6 and objective 6.3 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

FINANCIAL MANAGEMENT AND ADMINISTRATION PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To ensure sound financial management and administration.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To attain effective financial management.	Ensure less than 1% variance on cost of operations.	PM	Statements with <1% variance	Ongoing	
	Ensure sound financial management of special projects - WfW, WoE.	BSP	Budget targets achieved	Ongoing	
	Participate in the independent audit of financial records.	PM	Audit report	When required	
	Address audit findings.	PM	Audit findings report	When required	
To grow revenue (Including alternative sources of revenue).	Identify new and align existing business opportunities within the commercialisation programme of SANParks.	PM	Opportunities identified in line with policy	Ongoing	
	Identify possible external funding to supplement current income streams.	PM	Funding proposals submitted	Ongoing	
To improve the management of financial resources.	Prepare accurate and realistic annual budgets in consultation with management team that are in line with the sound management plan objectives.	PM	Annual budgets prepared	Annually	
	Provide monthly financial reports timeously by cost centre.	PM	Financial reports	Monthly	

FINANCIAL MANAGEMENT AND ADMINISTRATION PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To ensure sound financial management and administration.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure proper asset and SCM.	Verify and manage assets registers.	PM	Asset register	Bi-annually	
	Assist with the procurement of goods and services.	PM	Monthly reports	Ongoing	
	Manage and maintain existing contracts for the supply of goods and services.	PM	Contract register	Ongoing	
	Ensure sound management of vehicle fleet (*i.e.* logbooks, services, licencing, fuel management).	PM	Logbooks, service records, fuel card statements	Monthly	

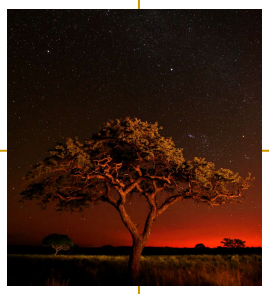
10.6.4 Human capital development programme

The purpose of this human capital development programme is to ensure that the park has an adequate human resources function to render 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 while delivering the outputs of the management plan.

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 making staff wellness programmes available to employees and their families. This will assist staff in dealing with the negative effects of lifestyle diseases and other lifestyle challenges (*i.e.* financial planning). The Human Resources and Administration Officers must report on new appointments, resignations, attendance registers, overtime claims, leave *etc.* A salary instruction is prepared from this for processing and preparation of monthly salaries. The park reviews training needs on an annual basis and submits the training need analysis and requirements for approval to Head Office. Compilation of training needs starts off with the Individual Development Plans for each staff member and is then followed by training, skills development and performance appraisals. Park management encourages all staff to improve their levels of skills and qualifications in their relevant field of expertise through study bursaries and training on an on-going basis.

The park currently (2017) has 61 permanent positions, 115 contract positions (including internships, temporary workers, BSP and EPWP workers). Additional management functions and infrastructure, especially in tourism and conservation departments as outlined in this plan, will make it necessary to investigate the need to grow the staff establishment.

This programme links with high-level objective 6 and objective 6.4 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.



HUMAN CAPITAL DEVELOPMENT PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To ensure sufficient and effective staff capacity to achieve management objectives by adhering to corporate human resource policies and guidelines.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure the park attracts and retains the most suitable human capital	Preparation and processing of monthly salaries, employee benefits and leave management.	PM	Salary instructions	Ongoing	
	Ensure implementation of the prescribed disciplinary code and procedures.	PM	Reports	As required	
	Conduct regular employment equity and skills development forum meetings.	PM	Minutes of meeting	Quarterly	EE report submitted
	Fill vacancies as per employment equity targets.	PM	EE statistics	Ongoing	
To implement plans and skills development strategies to meet the strategic goals of the organisation.	Identify training needs and conduct training interventions within budget allocation.	PM	Training plan in place, % of employees trained, and of budget spent on training	Annually	
	Assist employees with applications with regard to study bursaries, staff accommodation bookings, changes in medical status, banking changes and assist with queries to medical aid regarding unpaid medical accounts.	PM	Documents	Ongoing	
	Participate in the internal and independent audit of human capital documentation.	PM	Audit report	As required	
	Address audit findings.	PM	Audit findings report	As required	
To ensure the park attracts and retains the most suitable human capital	Develop human capital in the fields of tourism, conservation, cultural heritage and administration through the internship programme.	PM	Implementation of internship programme	Annually	
	Develop human capital in the field of people and conservation and ecotourism by introducing tourism and conservation experiences to learners, students and community groups.	PM	Learner, student and community groups addressed	Annually	

HUMAN CAPITAL DEVELOPMENT PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To ensure sufficient and effective staff capacity to achieve management objectives by adhering to corporate human resource policies and guidelines.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To implement workplace wellness programmes.	Conduct wellness awareness events.	PM	Events	Annually	Wellness policy
	Provide private facilities within the park to enable employee's access to health risk management programme.	PM	Facilities	Ongoing	Wellness policy
	Identify and refer employees that require assistance through the employee assistance programme.	PM	Number of referrals	As required	Wellness policy
	Invite professionals to the park to promote awareness on OHS and health issues.	PM	Attendance registers	Ongoing	OHS Act
	Commemorate events related to wellness (*e.g.* AIDS day, world blood donor day, days of activism on non-violence against women).	PM	Attendance registers	Annually	Wellness policy
	Administer injury on duty cases.	PM	Injury on duty report	As required	OHS Act

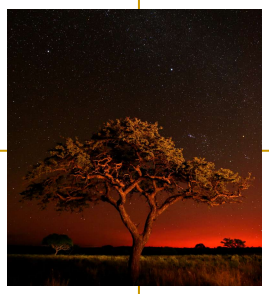
10.6.5 Information management programme

The purpose of this programme is to establish and maintain a database of park information.

Management of the park requires that appropriate data and information is collected, maintained and made readily accessible to staff responsible for all aspects of management. Data is 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.

This programme links with high-level objective 6 and objective 6.5 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

INFORMATION MANAGEMENT PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To implement best practices in the field of records and information management.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
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 plan of the park, and implement a single file plan.	PM	File plan	Year 2	National Archives and Records Services of SA Act
	Implement the records management and file plan.	PM	Records and documents filed	Year 2, 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	Ongoing	Corporate file plan and records management policy



10.6.6 Infrastructure programme

The purpose of this programme is to provide guidance for the upgrading and maintenance (day-to-day and scheduled) of infrastructure. This is primarily to ensure that the park's infrastructure (buildings, roads, fences *etc.*) and services infrastructure (provision of water, electricity and waste management) is well maintained and its capacity is continually improved in order to provide safe, reliable, increasingly environmentally friendly and affordable products to its clients and visitors. The technical department's key responsibility is the delivery and implementation of departmental programmes and to ensure the realisation of set goals regarding the above.

Infrastructure in the park consists of facilities in support of conservation (such as management roads and tracks, office facilities, staff housing, fences, bulk services, airstrip, workshops and stores) and tourism (*i.e.* tourist roads and tracks, office facilities, staff housing, bulk services, public viewing points, bird hide, picnic sites, tourist accommodation and swimming pools). These facilities enable staff to execute their respective duties towards achieving the park's objectives and providing a tourism product at the best possible standard.

Management policies and procedures ensure that infrastructure is maintained, renovated, upgraded and replaced at the required intervals and specifies design norms and standards, including national construction regulations, "green building" and "touch the earth lightly" principles as well as electricity, water saving measures and minimising waste. The 5-year rolling maintenance plan addresses issues related to securing funding for upgrading, renovation / maintenance and replacement. The technical department continues to periodically review and assess performance in an attempt to align activities and allocate resources.

This programme links with high-level objective 6 and objective 6.6 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

INFRASTRUCTURE PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To upgrade and maintain existing infrastructure and develop new infrastructure in support of conservation and tourism in compliance with the zonation.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
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 the extent of maintenance needed.	PM	Inventory	Year 1	
	Document the scope of maintenance needs in accordance with relevant specifications.	GM: ISP, PM	Reports	Year 1	Building and Electrical regulations
	Prioritise maintenance needs (including upgrades) and develop a 5-year rolling maintenance plan for the park.	PM	Maintenance plan and schedules	Year 1	
	Implement the 5-year rolling maintenance plan according to the annual maintenance schedules.	PM	Monthly reports	Annually	

INFRASTRUCTURE PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To upgrade and maintain existing infrastructure and develop new infrastructure in support of conservation and tourism in compliance with the zonation.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To ensure that infrastructure in the park is maintained to a desired state.	Implement green infrastructure principles in new buildings design and upgrades to current facilities.	PM	Installed devices	As required	
	Assess progress, revise annual maintenance schedules and evaluate standard of work.	PM	Annual report	Annually	
	Appoint contractors as needed to provide maintenance support.	PM	Scope of work or contract	As required	
	Document the scope of maintenance needs in accordance with relevant specifications to guide contractors.	PM, Parks technical office	Specification guideline	As required	Building and electrical regulations, civil engineering guideline / specifications
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 and implement annual maintenance schedule for all equipment.	PM	Schedule	Annually	OHS Act, Electrical regulations
To regulate all unwanted structures and facilities.	Identify and list all such structures *etc*.	PM	List	Year 1	
	Regulate or remove relevant structures.	PM	Reports, Notices	Year 5	
To assist with planning and provide support to developmental infrastructure projects.	Provide input / support to the parks technical section during the planning and development phases of new infrastructure projects.	PM	Minutes of meeting, monthly reports	As required	

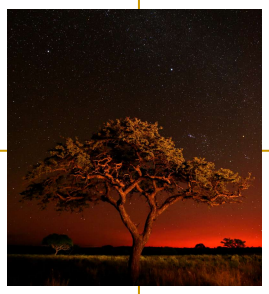
10.6.7 Safety and security programme

The purpose of this programme is to provide a safe and secure environment for both visitors and SANParks employees and to ensure area integrity.

SANParks implement and enforce the requirements contained in legislation and organisational policies. The primary legislation and organisational policies include, amongst other:

- NEMA;
- NEM: PAA and regulations;
- SANParks Code of Conduct; and
- Internal rules.

The safety and security plan comprehensively addresses both the strategic and operational aspects of visitor and staff safety as well as area integrity. A SWOT analysis of issues affecting safety and security in the park has been developed and the resulting strengths, weaknesses, opportunities and threats have



been converted into achievable objectives and actions. Proactive consideration is given to issues such as working hours, law and order, high risk areas, personnel, infrastructure, resources, equipment, staff training, reporting, data capture, record keeping, monitoring, information and intelligence. In addition to this a number of reactive measures have been developed, including immediate action drills, emergency procedures and evacuation plans. All staff must be familiar with the above procedures and will receive regular relevant training.

The overall perceived poaching risk is high. The security of the park's rhinos is at risk due to the rampant nationwide rhino poaching. A rhino protection plan has been developed that addresses the specific security needs in order to safeguard the park's rhino population. Certain plant species known for their medicinal qualities could also be at risk. Any compromise with regards to safety and area integrity would negatively impact on tourism, biodiversity conservation and SANParks reputation.

A detailed lower level plan supports this programme. This programme links with high-level objective 6 and objective 6.7 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SAFETY AND SECURITY PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To provide a safe and secure environment for both visitors and SANParks employees and to ensure that the integrity of the natural and cultural resources and assets is secured.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To provide a high level of safety and security for visitors, SANParks employees, natural and cultural resources and assets.	Review the safety and security plan and relevant emergency action drills.	PM	Updated documents	Annually	Safety and security plan
	Conduct regular interventions *i.e.* patrols to ensure that area integrity is maintained.	PM	Monthly reports	Ongoing	
	Implement the rhino protection plan.	PM	Monthly reports	Ongoing	Rhino protection plan
	Train staff in area integrity management, conservation guardianship and readiness to react to emergency situations.	PM	Training needs analysis	Annually	
	Develop and implement "a stage of readiness" for emergencies related to floods and veld fires to ensure visitor safety.	PM	Documents	As required	
	Assess readiness of staff and functionality of equipment.	PM	SoAIM audits	Annually	
	Properly equip staff to effectively carry out their safety and security functions.	PM	New equipment purchased	As required	
To improve overall park safety through interactions with external role players.	Align safety and security activities to accommodate collaborative operations with external partners, *e.g.* SAPS, DENC, neighbouring landowners.	PM	Safety and security plan, monthly report	Ongoing	

SAFETY AND SECURITY PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To provide a safe and secure environment for both visitors and SANParks employees and to ensure that the integrity of the natural and cultural resources and assets is secured.					
Sub-objectives	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To improve overall park safety through interactions with external role players.	To participate in external safety and security forums.	PM	Minutes of meetings	Quarterly	

10.6.8 Safety, health, environment and quality programme

The purpose of the current occupational health and safety (OHS) programme is to prevent, minimise and manage occupational accidents and occupational illnesses and diseases. This programme is required by the Occupational Health and Safety Act No 85 of 1993, to ensure that workplace hazards are managed and controlled in order to ensure a safe working environment at all times, including contractor activities on site. The OHS programme is guided by the SANParks SHEQ (Safety, Health, Environment and Quality) policy and framework and includes the elements required by the occupational health and safety legislation as a minimum, but is also based on the ISO 45001 Occupational Health and Safety management system standard.

SANParks has made the decision to move away from the generic OHS management model to an internationally recognised and best practice system called the ISO 45001 standard. Under this standard, the park is expected to align with and implement best practice processes and norms. The environment and quality components of the SHEQ programme will be developed over the next 5 to 8 years.

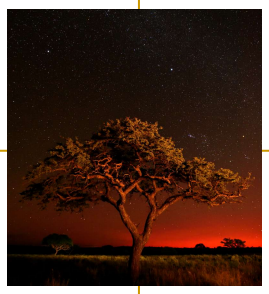
The ISO 45001 standard consists of six elements namely:

- Identifying hazards and risks;
- Identifying legal and other requirements;
- Establishing objectives and programmes;
- Operational control;
- Emergency preparedness and response; and
- Internal audit.

The implementation of the ISO 45001 system will be done in a phased manner. The first phase (2016/17 – 2020/21) will focus on the first three bullets as listed above. Phase two (2021/22 – 2025/26), will focus on the last three bullets as listed above.

This programme links with high-level objective 6 and objective 6.8 on page 36. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SAFETY, HEALTH, ENVIRONMENT AND QUALITY PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Occupational Health and Safety management programme.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To implement the ISO 45001 standard.	Identify hazards and risks.	OHS Manager, PM	Risk register	Year 2, ongoing	
	Identify legal and other requirements.	OHS Manager, PM	Legal register	Year 2, ongoing	



SAFETY, HEALTH, ENVIRONMENT AND QUALITY PROGRAMME					
High-level objective: To strive for effective and efficient management and administrative support services through good corporate governance enabling the park to achieve its objectives.					
Objective: To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Occupational Health and Safety management programme.					
Sub-objective	**Actions**	**Responsibility**	**Indicators**	**Timeframe**	**Reference**
To implement the ISO 45001 standard.	Establish, implement and maintain programmes to mitigate identified hazards and risks.	PM, OHS manager	Training register and other records	Year 2, ongoing	
	Develop and implement standard operating procedures to manage identified hazards and risks.	PM, OHS Manager	Training register, checklists, SOPs	Year 6, ongoing	
	Develop and implement emergency preparedness and response plans.	PM, OHS Manager	Emergency plans, corrective action plans	Year 6, ongoing	
	Conduct regular self-audits.	PM	Internal audit plan, audit reports	Year 6 and thereafter annually	
	Support internal audits.	OHS Manager, PM	Internal audit plan, audit reports	Year 6 and thereafter annually	
	Support external audits.	OHS Manager, PM	Internal audit plan, audit reports	Year 7 and thereafter bi-annually	

10.7 Evaluation and learning

10.7.1 Introduction

Section 5 has dealt with the jointly-agreed desired state, and section 10 with all the specific programmes which are necessary to achieve this. However, the desired state cannot be effectively maintained without explicit attention being given to prioritisation, integration, operationalisation, and above all, reflection and adaptation according to the principles in the SANParks biodiversity custodianship framework (Rogers 2003).

The need for reflection and adaptation (*i.e.* adaptive learning) comes from acknowledging that the world of conservation is complex and that the existing knowledge base is imperfect. Complexity implies that feedbacks between components of the conservation system are likely to change in unpredictable ways and the only way to stay abreast of such changes is through ongoing learning and adaptation. Lack of effective feedback and reflection is the commonest underlying cause of failure of strategic adaptive management, and hence of reaching the desired outcomes of the park. Evaluation should furthermore test the appropriateness of an intervention and monitoring, the predictive capacity, societal acceptability and accomplishment of broad goals (Kingsford & Biggs 2012; Figure 13).

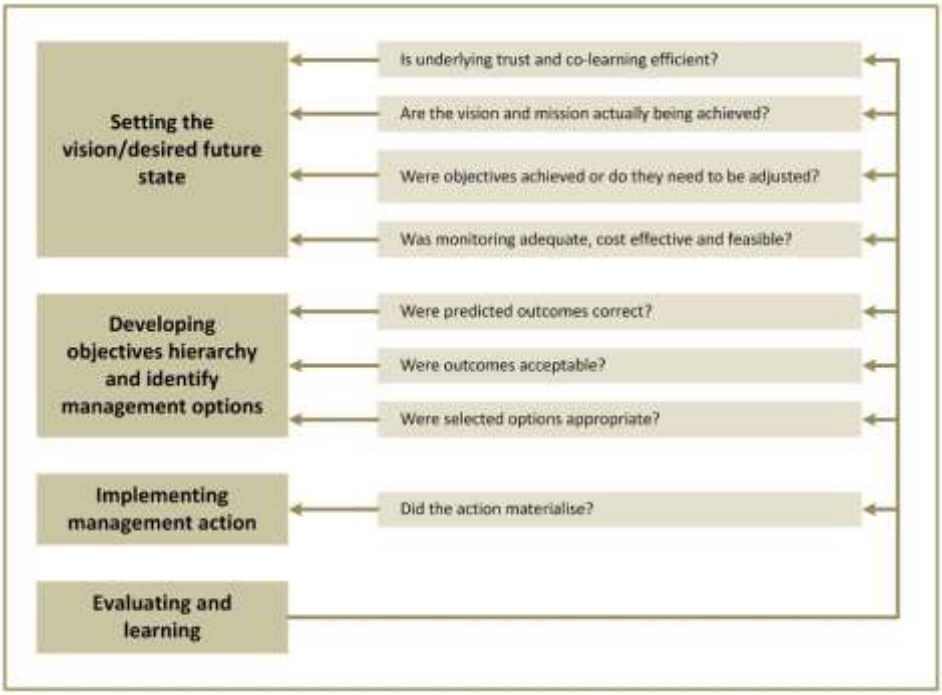


Figure 13. Feedback questions essential for adaptive learning (from Kingsford and Biggs, 2012).

10.7.2 Operationalisation

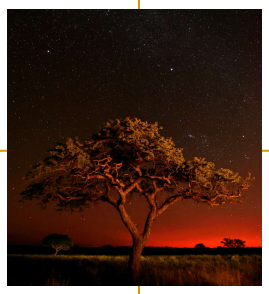
Given the desired state, and the programmes outlined in Section 10, specific action and operational plans need to inform the Key Performance Areas of staff members (applicable personnel working in the Park', CSD and Tourism Divisions) to ensure that the outcomes are achieved. In addition, explicit reflection and co-learning opportunities need to be maintained and honoured to facilitate an adaptable, learning approach that can cope with unexpected events or surprises. An example are those opportunities provided by the science-management forum engagements at park or regional level.

A critical component of strategic adaptive management is to monitor and evaluate the consequences of management decisions and actions. This involves assessment of the outcome of management interventions, but also frequent evaluation of early warning signals (referred to in SANParks as TPCs) of whether the intervention is on an appropriate trajectory for achieving the particular objective. Ongoing evaluation of emerging results against objectives is essential to allow strategy and methodology to be adjusted as new understanding and knowledge emerges. Continuous evaluation and learning is facilitated by making time for reflecting on the following questions (Roux and Foxcroft, 2011):

- Has the intended plan of operation materialised?
- Were the selected options appropriate?
- Were the predicted consequences correct and, if not, why?
- Is the monitoring adequate, cost effective and feasible?
- Were the consequences actually acceptable?
- Even if the predicted consequences were correct and are acceptable, are the objectives and vision being met?

Science-Management Forum discussions are aimed at ensuring that feedbacks take place, best available knowledge and understanding is incorporated into decision-making and TPCs are timeously flagged and considered. In addition, annual reflection workshops involving managers and scientists will evaluate what has been learnt in each programme, and what should be adjusted.

If this process is effectively honoured, it is believed that the park will be practicing strategic adaptive management, and in accordance with our overarching values around complex systems, will have the best chance of achieving the desired state in a sustainable way.



Section 11: Costing

11.1 Introduction

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

The park will adhere to the guiding principles listed below:

- Responsibly manage the allocation of budget, revenue raising activities and expenditure;
- Ensure that solid financial management supports the achievement of the objectives in 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.*).

11.2 Income

SANParks manages a number of national parks as part of the national park system, currently twenty in total. Not all of these parks are financially viable, currently only five national parks *i.e.* Addo Elephant National Park, Augrabies Falls National Park, Kalahari Gemsbok National Park, Kruger National Park and Table Mountain National Park make a surplus. SANParks receives an annual grant from the DEA to carry out its mandate, but this is not sufficient to cover the management costs. The organisation utilises its own revenue derived from commercial activities to subsidise the shortfall. The surplus generated by the aforementioned parks is used to fund management costs across all national parks. An organisation of this magnitude also has overhead costs relating to support services such as human resources, tourism and marketing, finance, conservation support *etc.* which is not allocated to individual parks and must also be funded by the revenue generated in financially viable parks.

The income is categorised as follows; accommodation, conservation fees, concession fees, activities, other tourism income and wildlife sales. Total projected income for 2017 / 2018 is budgeted at -R 8,143,536 increasing to -R 10,281,027 in 2021 / 2022. A summary is presented in Table 16 below.

Table 16. A summary of the total estimated income budgeted for the park management plan over the next five years.

	2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022
Total income	-R 8,143,536	-R 8,632,148	-R 9,150,077	-R 9,699,082	-R 10,281,027

11.3 Expenditure

11.3.1 Recurring costs

The annual directly allocated cost (includes staff, travel and supplies and tools) is estimated at R 19,909,871 for 2017 / 2018. These ongoing costs are split according to the programmes listed in Table 17 below.

Table 17. The estimated annual operational costs for the park for 2017 / 2018.

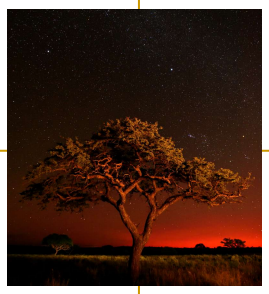
Programme	Amount	Percentage of total
Responsible Tourism	R 6,851,101	31.6%
Degradation and rehabilitation	R 5,143,312	23.8%
Infrastructure	R 2,338,000	10.8%
Safety and security	R 2,094,265	9.7%
Invasive and alien species	R 1,609,388	7.4%
Herbivore management	R 799,744	3.7%
Species of special concern	R 725,261	3.3%
Human capital development	R 373,605	1.7%
Finance and administration	R 299,886	1.4%
Freshwater ecosystem	R 257,291	1.2%
Reintroduction	R 180,589	0.8%
Environmental management	R 146,064	0.7%
Environmental education and interpretation	R 143,555	0.7%
Stakeholder relationship	R 117,023	0.5%
Cultural heritage	R 96,962	0.4%
Fire management	R 92,634	0.4%
Disease management	R 90,348	0.4%
Habitat and vegetation	R 72,731	0.3%
Mainstreaming biodiversity	R 68,317	0.3%
Safety, health, environment and quality	R 50,117	0.2%
Socio-economic development	R 43,968	0.2%
Park expansion	R 32,359	0.1%
Risk management	R 16,561	0.1%
Information management	R 10,492	0.0%
Total	**R 21,653,573**	**100%**

11.3.2 Once-off costs

In addition to the above there is a further once-off cost estimated at R 266, 656, 300 over the period 2017 / 2018 – 2021 / 2022 as can be seen in Table 18.

Table 18. The estimated once-off cost of the various programmes.

Programme	Estimated budget
Park expansion	R 200,000,000
New infrastructure	R 66,206,300
Reintroduction	R 250,000
Cultural heritage	R 150,000
Fresh water	R 50,000
Total once-off costs	**R 266,656,300**



11.3.3 Unallocated fixed costs

The unallocated fixed costs applicable but not allocated in Table 16 above for 2017 / 2018 amounts to R 2,851,669.

11.3.4 Maintenance

A breakdown of the infrastructure, both existing and new with their replacement value and an estimate of the ongoing annual maintenance for 2017 / 2018 is provided in Table 19 below. The projected maintenance for existing infrastructure is estimated at R 2,872,484 in 2017 / 2018. If the new planned infrastructure is developed it will add a further R 665,184 (at 2017 / 2018 rates) onto this annual maintenance budget, increasing it to R 3,537,668. The maintenance requirement was calculated as a percentage of the replacement value.

Table 19. 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 the park.

	Estimated replacement value			Estimated maintenance		
	Existing (R)	New (R)	Total (R)	Existing (R)	New (R)	Total (R)
Buildings	97,368,900	20,110,000	117,478,900	1,402,112	289,584	1,691,696
Roads and tracks	22,510,000	25,105,500	47,615,500	450,200	11,519	461,719
Trails	0	0	0	0	0	0
Fencing	39,773,000	11,038,000	50,811,000	795,460	220,760	1,016,220
Water system	11,471,000	440,000	11,911,000	165,182	6,336	171,518
Electricity	2,904,000	2,582,800	5,486,800	42,538	37,192	79,730
Sewerage	900,000	6,930,000	7,830,000	12,960	99,792	112,752
Other	280,000	0	280,000	4,032	0	4,032
Total	**175,206,900**	**66,206,300**	**241,413,200**	**2,872,484**	**665,184**	**3,537,668**

11.3.5 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 1,117,441 in 2017 / 2018, this figure is presented in Table 20 below.

Table 20. The total value various categories of minor assets and replacement thereof (based on the original purchase price).

Asset type	Asset value	Provision for replacement
Air conditioners	R 77,901	R 11,796
Aircraft	R 362,692	R 25,630
Computer equipment	R 593,356	R 209,652
Firearms	R 16,159	R 1,713
Furniture	R 664,206	R 100,580

Mechanical equipment	R 2,780,961	R 421,117
Office equipment	R 171,437	R 25,960
Vehicles and trailers	R 788,750	R 119,439
White goods (*i.e.* stoves, fridges)	R 950,721	R 201,553
Total	**R 6,406,181**	**R 1,117,441**

11.4 Summary

It is estimated that the park will require an annual operating budget of R 25,622,683 for 2017 / 2018, increasing to R 32,348,047 in 2021 / 2022. In addition to this amount the park will also require R 266,656,300 over the next 5-year period for once-off costs. A summary is presented in Table 21 below.

Table 21. A summary of the annual and once-off costs that is required to fully implement the activities in the management plan over the next five years.

	2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022
Annual operational costs	**R 25,622,683**	**R 27,160,044**	**R 28,789,647**	**R 30,517,025**	**R 32,348,047**
Once-off costs over five years	**R 266,656,300**				
SANParks budget for MONP	**R 22,695,322**	**R 24,057,041**	**R 25,500,464**	**R 27,030,492**	**R 28,652,321**
Shortfall	**R 2,927,361**				

The shortfall can be broken down as follows:

- An additional amount of R 1,850,860 is required to cover the current maintenance shortfall;
- An additional amount of R 863,112 is required for the replacement of assets;
- An additional amount of R 163,389 is required for additional tourism and conservation OPEX to manage additional responsibilities; and
- An additional amount of R 50,000 is required for collars for the monitoring of SSC.

11.5 Implications

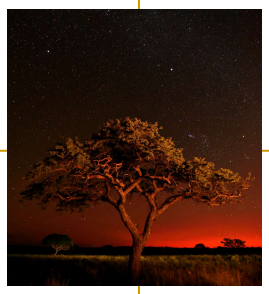
Should the park be unsuccessful in securing the shortfall amount of R 2,927,361 then the following programmes will be affected;

- Infrastructure programme: The park will be unable to maintain the current infrastructure to a high standard;
- Responsible tourism programme: The park will be unable to develop new products and inability to maintain the tourism infrastructure to the required standard, resulting in a possible decline in business volumes;
- Assets: The park will be unable to replace assets that have reached the end of their life span, operations will be adversely affected.
- SSC programme: The research objectives and security of SSC could be compromised.

There are various ways in which the shortfall could be covered, options include:

- To request additional funding from Head Office;
- To approach donors; or
- To except the shortfall.

Depending on the priority and urgency of the various requirements, management will make a decision regarding the most appropriate action to take.



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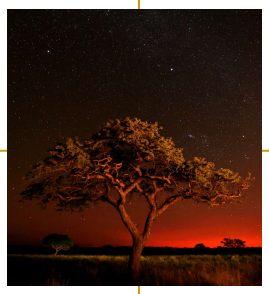

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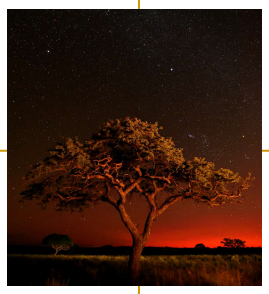

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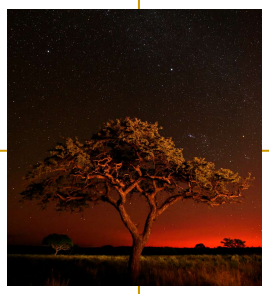

Appendix 1: Declarations

1. Land declared

Government Notice 505 / Government Gazette 29996 of 19 June 2007 declared the following land as part of the Mokala National Park in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

1. Remainder of the farm Scholtzfontein 137, in extent of 1,712.5523 ha, situated in the division of Herbert and held by Title Deed No. T 24/1988;
2. Portion 1 of the farm Scholtzfontein 137, in extent of 856.5320 ha, situated in the division of Herbert and held by Title Deed No. T 342/1991;
3. Portion 15 of the farm Scholtzfontein 137, in extent of 1,712.5522 ha, situated in the division of Herbert and held by Title Deed No. T 3138/1996;
4. Remainder of the farm Goede Hoop 119, in extent of 985.5759 ha, situated in the division of Herbert and held by Title Deed No. T 1061/1999;
5. Portion 2 of the farm Goede Hoop 119, in extent of 985.5755 ha, situated in the division of Herbert and held by Title Deed No. T 294/1989;
6. Portion 1 of the farm Goede Hoop 119, in extent of 51.2891 ha, situated in the division of Herbert and held by Title Deed No. T 446/2002;
7. Remainder of the farm Wolwe Pan 138, in extent of 584.2794 ha, situated in the division of Herbert and held by Title Deed No. T 342/1991;
8. The farm Doorn Laagte 116, in extent of 6,283.5572 ha, situated in the division of Herbert and held by Title Deed No. T 446/2002;
9. The farm Vaalbosch Pan 116, in extent of 2,156.1451 ha, situated in the division of Herbert and held by Title Deed No. T 446/2002;
10. Portion 2 of the farm Wilde Honde Pan 117, in extent of 1,284.8094 ha, situated in the division of Herbert and held by Title Deed No. T 446/2002;
11. Remainder of portion 13 the farm Scholtzfontein 137, in extent of 856.7692 ha, situated in the division of Herbert and held by Title Deed No. T 4213/2001;
12. Remainder of portion 4 the farm Scholtzfontein 137, in extent of 1,285.0806 ha, situated in the division of Herbert and held by Title Deed No. T 4213/2001; and
13. Portion 19 the farm Scholtzfontein 137, in extent of 856.6270 ha, situated in the division of Herbert and held by Title Deed No. T 4213/2001.

Government Notice 812 / Government Gazette 32471 of 03 August 2009 declared the following land as part of the Mokala National Park in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

1. Remainder of the farm Knoffelfontein 104, in extent of 796.3877 ha, situated in the division of Herbert and held by Title Deed No. T 545/2008;
2. Portion 1 of the farm Knoffelfontein 104, in extent of 1,696.3617 ha, situated in the division of Herbert and held by Title Deed No. T 545/2008; and
3. Portion 2 of the farm Knoffelfontein 104, in extent of 904.1381 ha, situated in the division of Herbert and held by Title Deed No. T 545/2008.

Government Notice 158 / Government Gazette 35073 of 02 March 2012 declared the following land as part of the Mokala National Park in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

1. Remainder of the farm Valch Fontein 105, in extent of 2,805.4578 ha, situated in the division of Herbert and held by Title Deed No. T 737/2010; and
2. Portion 2 of the farm Valch Fontein 105, in extent of 88.8566 ha, situated in the division of Herbert and held by Title Deed No. T 737/2010.

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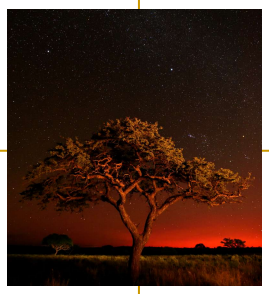

Appendix 2: Stakeholder participation report

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.

Local government	Pixley Kasema District Municipality, Siyancuma Local Municipality, Sol Plaatjie Local Municipality
Provincial government	Northern Cape Departments of Environment and Nature Conservation, Education
National Government	South African Police Service, Departments of Justice, Agriculture, Forestry and Fisheries, Tourism, Water and Sanitation
Park forum	Yes
Education	Environmental Education Forum
Local residents / neighbours	Modderrivier Farmers Union, Plooysburg Farmers Union, community leaders from Ritchie, Salt lake and Plooysburg
Research	McGregor Museum, SAEON
Conservation organisations	Northern Cape Raptor Forum, EWT, WESSA
Business associations	NOCCI
Media	DFA, Volksblad
SANParks Honorary Rangers	Diamantveld SHR's, Free State SHR's

Desired state workshop

A range of key 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
Invitations	Park management, certain SANParks specialists and key stakeholders were invited.
Desired state workshop	The workshop took place on 21 April 2016 at the Horseshoe Inn in Kimberley.
Attendance:	29 Participants (12 stakeholders and 17 SANParks staff members) partook, representing the following constituencies: • Department of Agriculture, Forestry and Fisheries; • Department of Water and Sanitation; • Department of Environmental Affairs; • Modderrivier Farmers Union; • SANParks Honorary Rangers (Diamantveld region); • SANParks Honorary Rangers (Free State region); • Sol Plaatje Local Municipality; • South African Police; and • SANParks • Volksblad.

Media platforms used to invite stakeholders to register and participate

A variety of media platforms were used to engage stakeholders in an effort to inform them of the revision of the park management plan and invite stakeholders to participate.

Mechanism to register	Description
Media advertisements	Advertisements to inform interested and affected parties of the public days and request to register to participate was placed in the following national newspapers on 19 February 2017: • Sunday Times; • Rapport. An advertisement to inform interested and affected parties of the public days and request to register to participate was placed in Diamand Fields Advertiser local newspaper on 22 February 2017.
Government Gazette	Government Notice 136 / Government Gazette 40637 of 24 February 2017
Registration at meetings	Participants were also able to register at the following meetings: • Desired state workshop on 12 April 2016 in Kimberley; and • Public meetings on 02 March 2017 in Kimberley and Modderrivier.
Internet	Stakeholders were ask to register via the SANParks website from 19 February 2017.
Public information boards	Official notices were place at 5 public venues, namely: • Kimberley Interpretation Centre • Sol Plaatje local municipality office; • Jacobsdal Kwik Spar; • Letsemeng local municipality office; and • GWK Modderrivier.

Public days to allow comment on the draft management plan

Two public day meetings were held.

Venue	Date	Number of stakeholders that attended
Horseshoe Inn, Kimberley	02 March 2017	16
GWK Hall, Modderrivier	02 March 2017	19

Dissemination of documentation and feedback to stakeholders

Item	Action	Date
Draft park management plan for comment placed in public venues.	• Letsemang local municipal office, Andries Pretorius Street, Jacobsdal; • Sol Plaatje tourism information centre, 121 Bultfontein Street, Kimberley; and • Sol Plaatje local municipal office, Sol Plaatje Drive, Kimberley.	22 February 2017
Draft park management plan for comment placed on SANParks website.	https://www.sanparks.org/conservation/park_man/	20 February 2017
Dissemination of comment and response document	The document will be available on the SANParks website, or emailed, mailed, faxed or delivered by hand where no contact details were supplied.	N/A
Dissemination of approved park management plan	The plan will be available on the SANParks website once approved by the Minister.	N/A

Appendix 3: Tourism product development framework

The product development framework 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

No.	Visitor use zones	Description
1	**Wilderness / remote**	Pristine natural environment, essentially undeveloped and roadless. Controlled non-motorised access - usually on foot visitors. Could have paths where erosion is a problem or for safety.
2	**Primitive**	Almost completely natural state to be maintained. Development footprints absolute minimum. Controlled access - 4x4's horse-riding. Small basic / semi luxury / luxury 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. Infrastructure 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.
6	**Buffer / adjoining**	Land in the buffer zone or adjacent to national parks. Products indicated are those with which SANParks is comfortable to be associated with.

For the purposes of this management plan, the focus of the framework listed in Table 22 is to indicate which products already exist, which new products may be allowed, and in which visitor use zones these may occur.

Table 22: Tourism product development framework for the park.

PRODUCT CATEGORY		PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
							Within boundaries of national- / contractual park					Buffer / adjoining
			YES	NO	YES	NO	1	2	3	4	5	6
Over-nigh facilities	Self-catering - limited service (serviced prior to arrival and after departure only)	Accommodation (budget)		√	√					√	√	√
		Accommodation (economy)	√		√			√		√	√	√
		Accommodation (premium) / guest house		√	√			√		√	√	√
		Accommodation backpacking / youth hostels		√	√					√	√	√
		Dormitories / school groups / educational facilities	√		√					√	√	√
		Game / bird hide	√		√					√	√	√
		Military bunker / fort / gun sites		√		√						√
		Tree houses / platforms	√		√					√	√	√
		Fly camp / platform / sleep out		√	√					√	√	√
	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)		√		√						√
	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 / self-sufficient)		√	√					√		√

PRODUCT CATEGORY		PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
							Within boundaries of national-/ contractual park					Buffer / adjoining
			YES	NO	YES	NO	1	2	3	4	5	6
Over-nigh facilities	Camping	Camping bush rustic (unprotected) (self-sufficient)		√	√			√		√		√
	Full service (generally some/all meals and activities included)	Game / bush / safari / boutique lodge - under 20 beds		√	√							√
		Game / bush / safari / boutique 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 (multi-day, self-drive, basic facilities)		√	√			√		√	√	√
		4x4 Eco-trails (multi-day, self-drive, no facilities)		√	√			√		√	√	√
		4x4 trails (full-day / half-day / guided or unguided)	√		√			√		√	√	√
		Abseiling / rappelling		√	√							√
		Animal interaction activities (limited)		√		√		√				√
		Animal tracking activities		√	√							√
		Archery		√	√					√	√	√
		Base jumping		√		√						√
		Bird watching	√		√			√		√	√	√
		Boat cruises		√	√							√
		Boat cruise - birding		√	√							√
		Boat cruises - sunset		√	√							√
		Botanical sightseeing	√		√			√		√	√	√
		Bouldering		√		√						√
		Bungee / bungee jumping		√		√						√
		Cableway		√		√						√
		Canoe trails (Varying facilities)		√	√			√		√	√	√
		Canoeing		√	√			√		√	√	√
		Canopy tour (acrobranch)		√		√						√
		Canopy tour (boardwalk)		√		√						√
		Canopy tour / flying fox (tree top / cliff to cliff)		√		√						√
		Caving / spelunking/ potholing		√		√						√
		Clay-pigeon / clay target shooting		√		√						√
		Coasteering		√		√						√
		Cruise - birding		√		√						√
		Cycling		√		√						√
		Cycling (downhill cycling)		√		√						√
		Cycling (BMX track area)		√		√						√
		Diving (scuba)		√		√						√
		Dog walking		√		√						√
		Elephant backed rides / safaris		√		√						√
		Fishing (catch and release)	√		√			√		√	√	√
		Funicular		√		√						√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
						1	2	3	4	5	6
		YES	NO	YES	NO						
Leisure / recreational	Game drives - night drive	√		√			√		√	√	√
	Game drives - night drive (Night Vision aided)		√	√			√		√	√	√
	Game drives - premium		√	√			√		√	√	√
	Game drives - standard	√		√			√		√	√	√
	Game drives - UA		√	√			√		√	√	√
	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		√	√			√		√	√	√
	Kayaking / paddling trails		√	√			√		√	√	√
	Kitesurfing / kiteboarding / fly surfing		√		√						√
	Kloofing (guided)		√		√						√
	Mini golf / putt-putt		√	√					√	√	√
	Model aircraft flying		√		√						√
	Motorcycle trails (varying facilities)		√		√						√
	Motorcycling		√		√						√
	Motorcycling - off-road		√		√						√
	Motorised boating		√		√						√
	Mountain bike trails (varying facilities)		√		√						√
	Mountain biking		√	√			√	√	√	√	√
	Mountain biking - unicycling		√		√						√
	Mountaineering		√		√						√
	Paddle boards		√		√						√
	Paddle boats		√		√						√
	Paddle skiing		√		√						√
	Paragliding		√		√		√	√	√	√	√
	Parasailing		√		√						√
	Park and ride		√	√			√		√	√	√
	Photography	√		√		√	√	√	√	√	√
	Picnicking (basic facilities)	√		√					√	√	√
	Picnicking (full facilities)		√	√					√	√	√
	Picnicking (no facilities)		√		√						√
	Quad biking		√		√						√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
		YES	NO	YES	NO	1	2	3	4	5	6
Leisure / recreational	Railway		√		√						√
	Rap jumping (deepelling)		√		√						√
	River rafting		√		√						√
	Rock climbing		√		√						√
	Sailing		√		√						√
	Sandboarding		√		√						√
	Self-drive night drives		√		√						√
	Skate boarding / roller blading		√		√						√
	Skate boarding / roller blading (downhill)		√		√						√
	Skydiving		√		√						√
	Snorkelling		√		√						√
	Spear fishing		√		√						√
	Speed gliding		√		√						√
	Sports facilities (*e.g.* tennis, squash, bowls, *etc.*)		√		√						√
	Stairway (via ferrata / ironway)		√		√						√
	Stargazing	√		√					√	√	√
	Surf Skiing		√		√						√
	Surfing		√		√						√
	Swimming	√		√					√	√	√
	Trail running		√		√						√
	Trail running (night time)		√		√						√
	Tubing		√		√						√
	Vessels (cruise boats, yachts, river/paddle boats)		√		√						√
	Walking		√	√					√	√	√
	Walks - day	√		√			√		√	√	√
	Walks - night		√		√						√
	Wildlife / game viewing	√		√			√		√	√	√
	Wingsuit flying / wingsuiting		√		√						√
Airborne (Implications of CAA)	Drones over national parks		√		√						√
	Flights over national parks		√		√						√
	Helicopter flips		√		√						√
	Hot-air ballooning		√		√						√
	Microlight flying / ultra-light aviation		√		√						√
Interpretive	Archaeology		√	√					√	√	√
	Endangered species breeding centre		√	√		√	√	√	√	√	√
	Films - amphitheatre		√	√					√	√	√
	Films - auditorium		√	√					√	√	√
	Interpretive centres	√		√						√	√
	Palaeontology		√	√		√	√	√	√	√	√
	Theatre		√	√					√	√	√
	Tours - astronomy		√	√				√	√	√	√
	Tours - birding		√	√				√	√	√	√
	Tours - botanical		√	√				√	√	√	√
	Tours - specialist (fauna and flora)		√	√				√	√	√	√
	Tours - tree (dendrology)		√	√				√	√	√	√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
						1	2	3	4	5	6
		YES	NO	YES	NO						
Interpretive	Trail - mobility impaired		√	√					√	√	√
	Trails - brail		√	√					√	√	√
	Trails - sensory		√	√					√	√	√
Cultural / historical	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 / military		√		√						√
	Tours - cultural		√	√					√	√	√
	Tours - historical		√	√					√	√	√
	Tours - medicinal plants		√	√					√	√	√
	Tours - rock art	√		√					√	√	√
	Tours - South african struggle		√		√						√
Medical / health	Health spa		√	√					√	√	√
	Gymnasium		√	√					√	√	√
	Wellness centres		√		√						√
Developmental	Astronomy training		√	√					√	√	√
	Birding course		√	√					√	√	√
	Botany course		√	√					√	√	√
	Bush homeopathy		√	√					√	√	√
	Bush skills		√	√					√	√	√
	Field guide training		√	√		√	√	√	√	√	√
	Firearm skills		√	√			√		√	√	√
	First aid		√	√					√	√	√
	Game capture training		√	√					√	√	√
	Nature / wildlife photography course		√	√					√	√	√
	Nature based hospitality training		√	√					√	√	√
	Off-road driving skills training		√	√			√		√	√	√
	Orienteering		√	√					√	√	√
	Rope skills course		√	√					√	√	√
	Scuba diving Skills		√		√						√
	Specialised training / courses		√	√					√	√	√
	Survey and mapping skills		√	√					√	√	√
	Survival skills		√	√					√	√	√
	Tracking skills		√	√					√	√	√
	Training - ranger	√		√		√	√	√	√	√	√
	Volunteering		√	√					√	√	√
	Wilderness search and rescue		√	√					√	√	√
Children / youth	Babysitting		√	√					√	√	√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
						1	2	3	4	5	6
		YES	NO	YES	NO						
Children / youth	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 (KampKwena, "summer" camps)		√	√					√	√	√
Business tourism and events	Events - any	√		√		√	√	√	√	√	√
	Events - adventure	√		√		√	√	√	√	√	√
	Festivals		√	√					√	√	√
	Fundraising events *e.g.* WWF Swim for Nature	√		√					√	√	√
	Lapas / bomas (to rent)	√		√					√	√	√
	MICE (Meetings, Incentives, Conventions and Exhibitions)	√		√					√	√	√
	Musical concerts	√		√					√	√	√
	Photographic shoots and 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		√	√						√	√
	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.*)	√		√					√	√	√
	Fast moving consumer goods (FMCG) outlets		√	√					√	√	√
	Fuel stations		√	√					√	√	√
	Gas equipment hire		√	√					√	√	√
	Hop-on guides		√	√					√	√	√
	Internet café / Wi-Fi hotspot		√	√					√	√	√
	Laundromats and laundry service		√	√					√	√	√
	Pharmacies		√		√						√
	Photo booth		√		√						√

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under develop-ment?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
		YES	NO	YES	NO	1	2	3	4	5	6
	Pop-up retail		√		√						√
	Postal services		√		√						√
	Proshop		√		√						√
	Road emergency services		√		√						√
	Shuttle services		√	√						√	√
	Vending machines		√	√					√	√	√
	Vendors		√		√						√
	Wi-Fi facilities (free service)		√	√					√	√	√
Food and beverage	Bars	√		√					√	√	√
	Boma / lapa meals	√		√					√	√	√
	Bush meals	√		√					√	√	√
	Coffee shops / tea rooms		√	√					√	√	√
	Fast-food outlets		√	√					√	√	√
	Game drives picnic baskets		√	√					√	√	√
	Local cuisine	√		√					√	√	√
	MICE catering	√		√					√	√	√
	Picnic baskets		√	√					√	√	√
	Pop-up food, retail		√		√						√
	Restaurants	√		√					√	√	√
	Room service	√		√					√	√	√
	Sports bar		√		√						√
Non tourism related activities											
Mining/ Exploratory	Prospecting		√		√						√
	Mining		√		√						√
Consumptive / Subsistence	Fishing (non release)		√		√						√
	Hunting (lethal)		√		√						√
	Sustainable harvesting of resources		√	√		√	√	√	√	√	√

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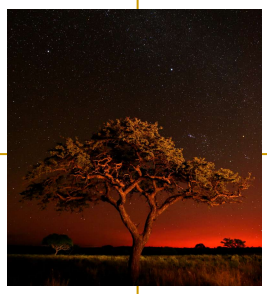

Appendix 4: Internal rules

The following internal rules are applicable to all visitors in terms of Section 52 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

General

1. No pets are allowed in the park with the exception of guide dogs. However, this must be discussed with park management before arriving at the park;
2. Visitors may only exit their vehicle in designated areas;
3. All persons need to be in the vehicle at all times, no persons permitted on the back of an open vehicle;
4. Do not drive or park anywhere except on designated roads and areas;
5. Collection of firewood is strictly prohibited;
6. Feeding of any wildlife is strictly prohibited;
7. Open fires are only allowed in designated areas (camping sites and picnic area);
8. Do not deposit or leave any litter except in containers for that purpose;
9. No noise is allowed at any time of the day or night;
10. Please be considerate of other guests at all times;
11. The use of drones inside (and over) national parks is strictly prohibited; and
12. To ensure the safety of both humans and wildlife, the speed limit on roads in the park is 40km/h. Motorbikes and quad bikes are not allowed.

Non-adherence to these rules and regulations constitutes an offence, and offenders will be liable to a fine or prosecution.

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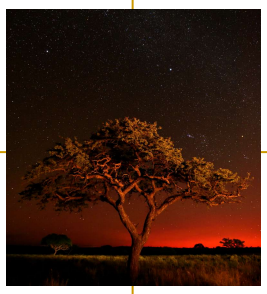


Appendix 5: Maps

Map 1: Regional context

Map 2: Physical features

Map 3: Land tenure and park expansion

Map 4: Zoning

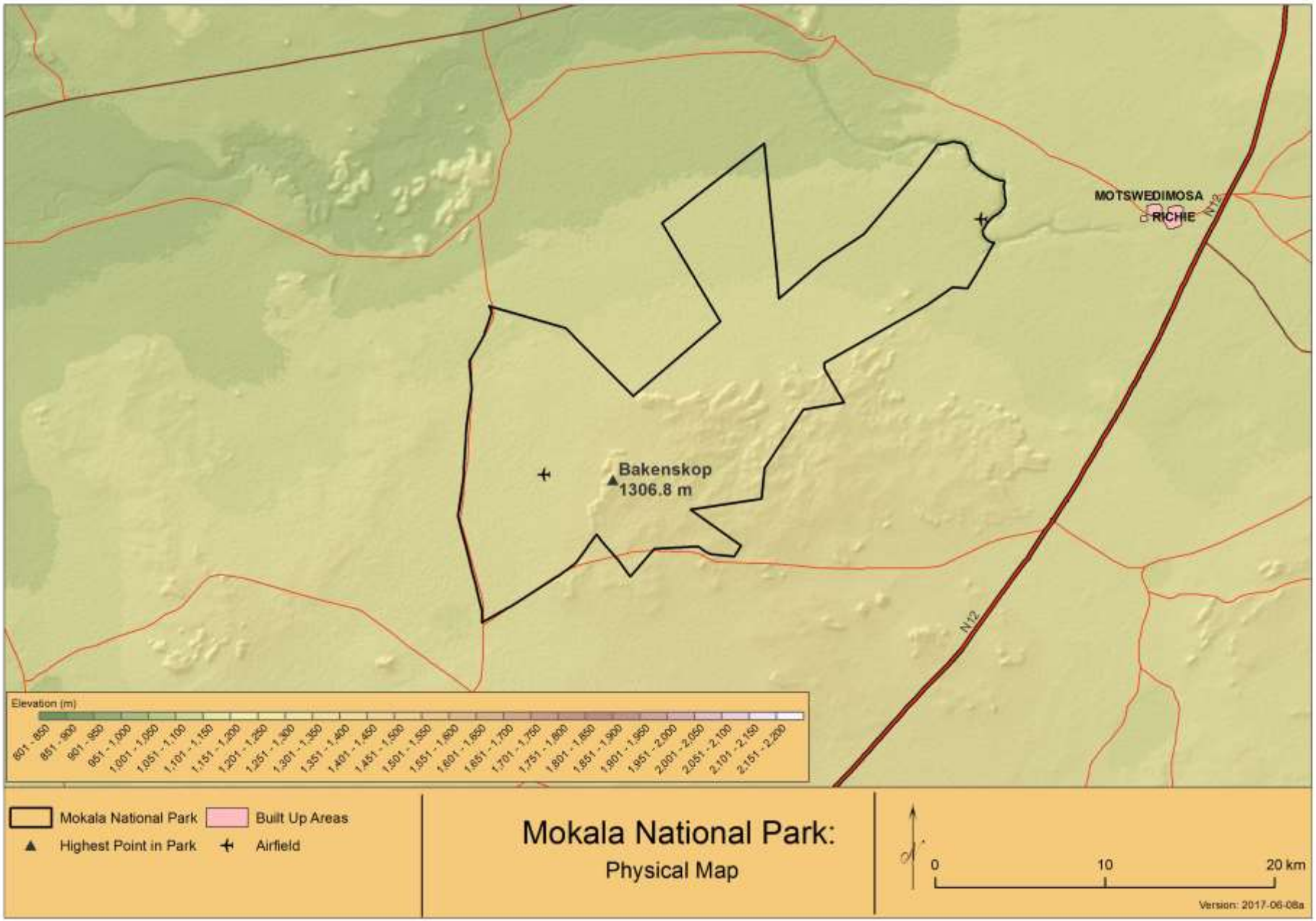
Map 5: Zoning with sensitivity value

Map 6: Buffer areas

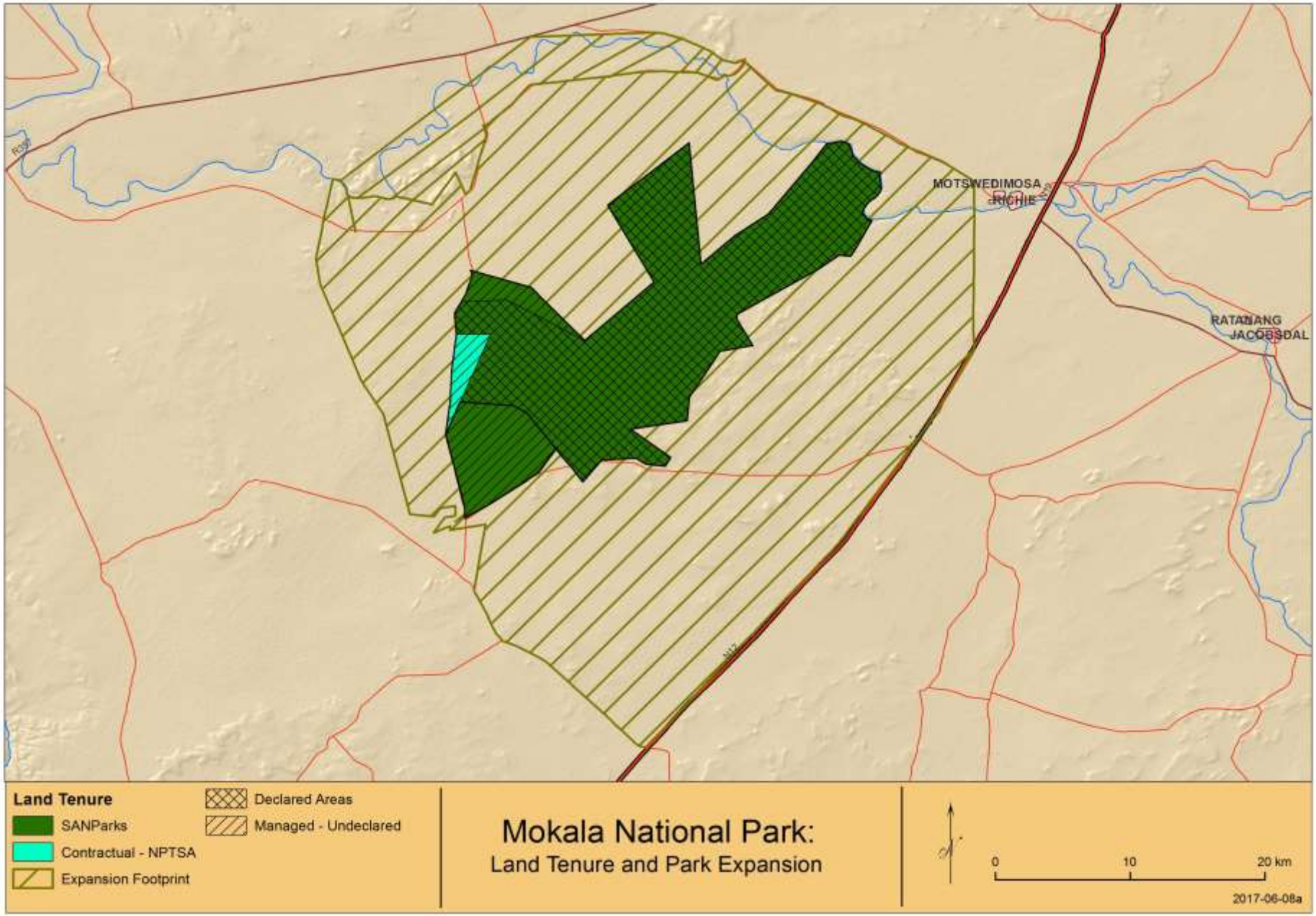
Map 7: Infrastructure and development

Map 8: Vegetation

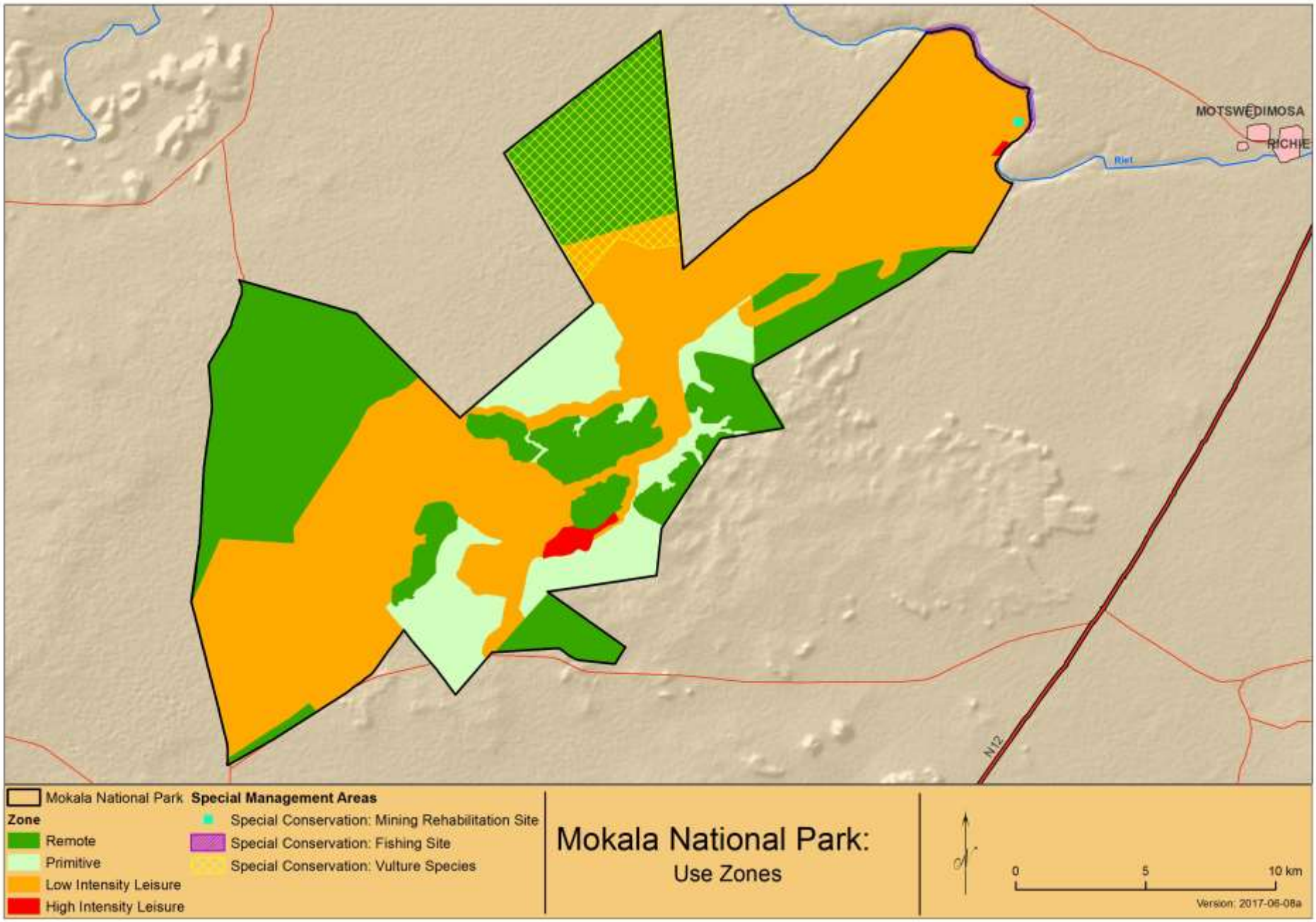
Map 1: Regional context



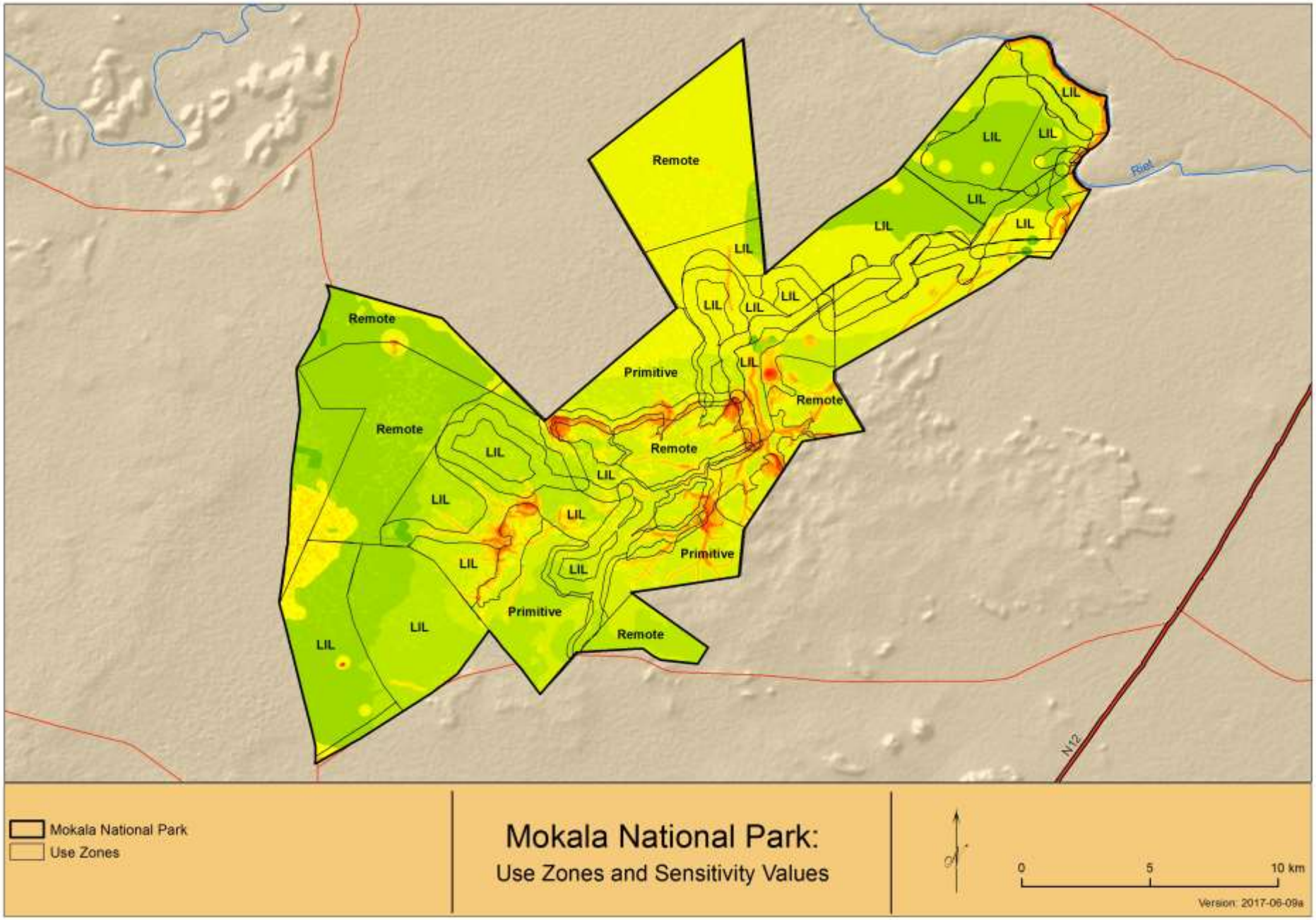
Map 2: Physical features



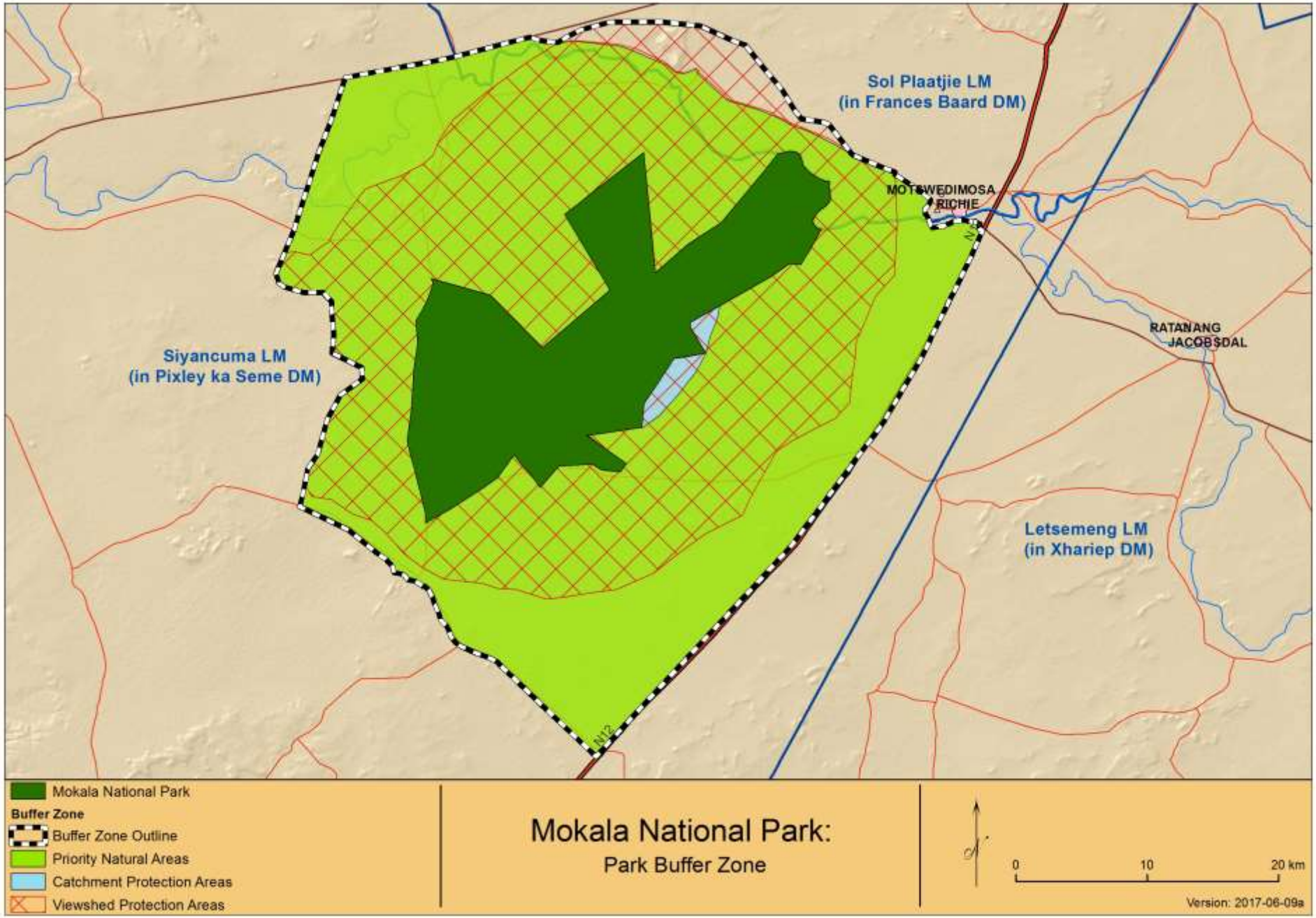
Map 3: Land tenure and potential expansion


MOTSWEDIMOSA
RICHIE
Riet
N12
Mokala National Park
Zone
Remote
Primitive
Low Intensity Leisure
High Intensity Leisure
Special Management Areas
Special Conservation: Mining Rehabilitation Site
Special Conservation: Fishing Site
Special Conservation: Vulture Species
Mokala National Park:
Use Zones
0
5
10 km
Version: 2017-06-08a

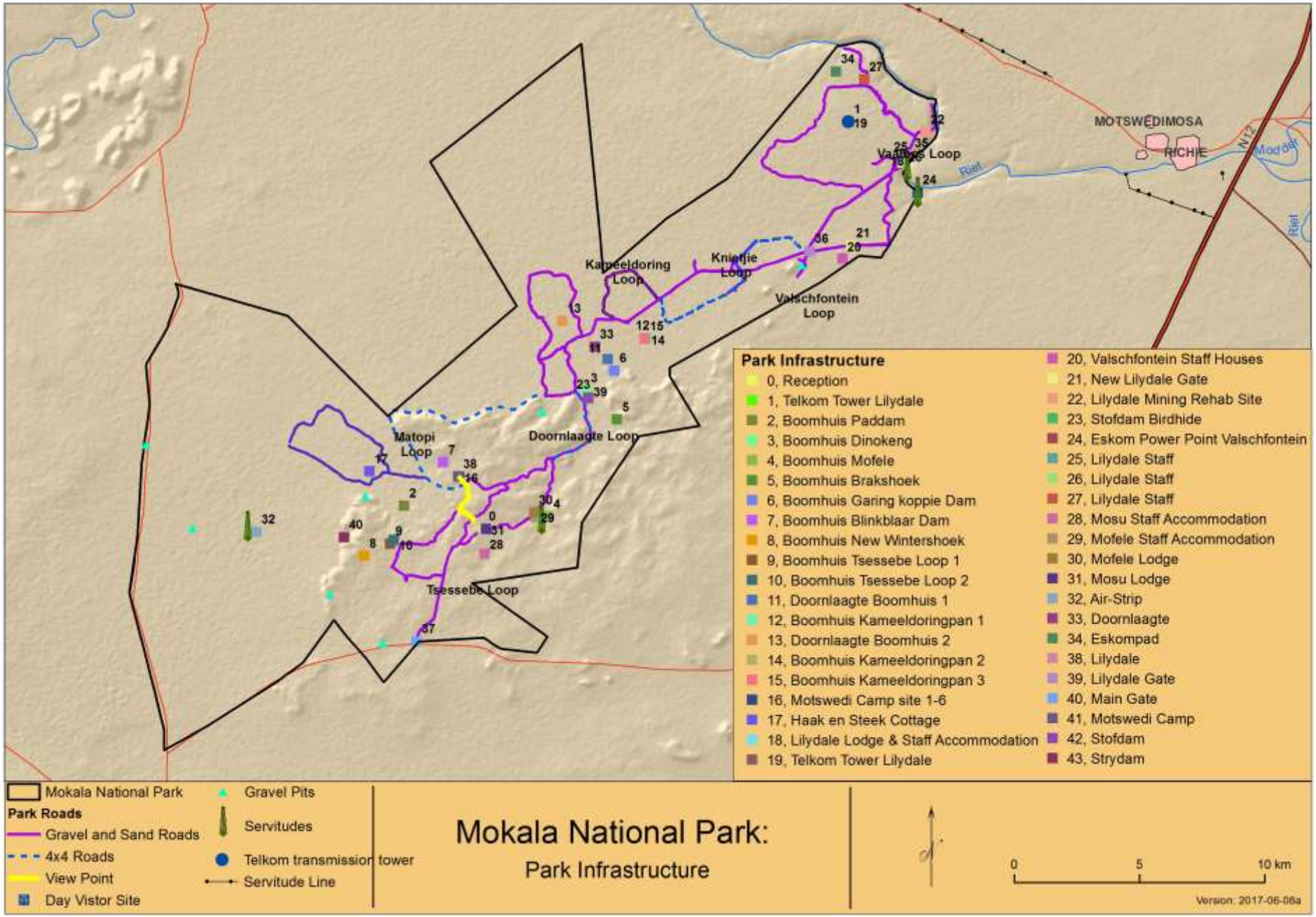
Map 4: Zoning



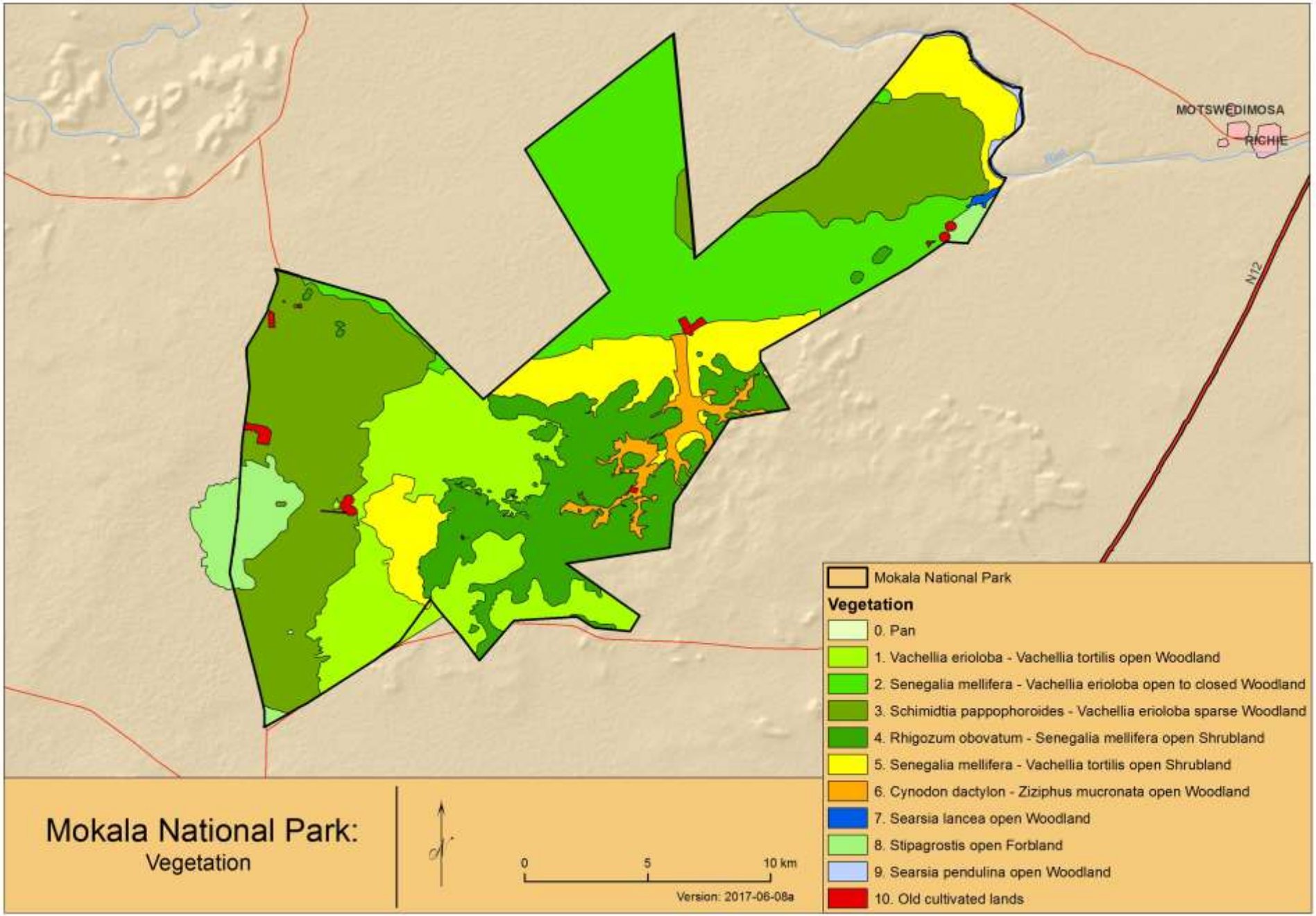
Map 5: Zoning and sensitivity



Map 6: Buffer zone



Map 7: Park infrastructure



Map 8: Vegetation