

Augrabies Falls National Park

Management plan

For the period 2013-2023



Section 1: Authorisation

This management plan is hereby internally accepted and authorised as required for managing the Augrabies Falls National Park in terms of Sections 39 and 41 of the National Environmental Management: Protected Areas Act (Act 57 0f 2003).

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Date: 10 June 2013

Approved by the Minister of Water and Environment Affairs

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Date: 05 September 2013

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Glossary

Balanced scorecard	The performance management tool used by SANParks to ensure feedback and effective implementation of various management objectives
Desired state	The overall conditions of the park (across the full V-STEEP range) that stakeholders desire
Endemism	Confined to a specific place or area
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
Mission	An articulation of the Vision that describes why the park exists and its overall philosophy on how to achieve its desired state
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
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.
NEM:PAA	National Environmental Management: Protected Areas Act (Act 57 of 2003)
Guidelines	DEAs Guidelines for the development of a management plan for a protected area in terms of NEM:PAA (Cowan & Mpongoma 2010)



Acronyms and abbreviations

1	AFNP	Augrabies Falls National Park
2	BMP	Biodiversity monitoring programme
3	BSP	Biodiversity social projects
4	BMS	Biodiversity monitoring system
5	BSC	Balanced scorecard
6	CARA	Conservation of Agricultural Resources Act (Act 43 0f 1983)
7	CDF	Conservation development framework
8	CPF	Coordinated policy framework
9	CSD	Conservation services division
10	DEA	Department of Environment Affairs
11	EE	Environmental Education
12	EIA	Environmental Impact Assessment
13	EMP	Environmental Management Plan
14	EMS	Environmental Management System
15	EPWP	
		Expanded Public Works Programme
16	GEF	Global Environmental Facility
17	GG	Republic of South Africa Government Gazette
18	GN	Government notice
19	HIA	Heritage impact assessment
20	HR	Human resources
21	IDP	Integrated development plan
22	ISCU	Invasive species control unit
23	MPA	Marine protected area
24	MSK	Melkbosrandsamewerkingskomitee
24	NBSAP	National Biodiversity Strategy and Action Plan
25	NEMA	National Environmental Management Act (Act 107 of 1998)
26	NEM:BA	National Environmental Management: Biodiversity Act (Act 10 of 2004)
27	NEM:ICMA	National Environmental Management: Integrated Coastal Management Act (Act 24 of 2008
28	NEM:PAA	National Environmental Management: Protected Areas Act (Act 57 of 2003)
29	NNP	Namaqua National Park
30	NPT	National Parks Trust
31	OHS	Occupational health and safety
32	P&C	People and Conservation
33	PDI	Previously Disadvantage Individual
34	PM	Park manager
35	PPP	Public private partnership
36	RM	Regional manager
37	RMM	Regional marketing manager
38	SANBI	South African National Biodiversity Institute
39	SANDF	South African National Defense Force
40	SANParks	South African National Parks
41	SAPS	South African Police Service
42	SDF	Spatial development framework
43	SMME	Small, medium and micro enterprises
44	SKEP	Succulent Karoo Ecosystem Programme
45	SR	Section ranger
46	SSC	Species of special concern
47	ТО	Tourism officer
48	TPC	Threshold of potential concern
	WftC	Working for the Coast
49		
49 50	WfW	Working for Water

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Appendix 1: Declarations

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Appendix 3: Zoning Plan

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Introduction

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

This first review of the management plan builds on the foundation of the first plan and addresses its inadequacies. The layout of the plan follows the format provided in the Guidelines drawn up by the DEA (Cowan & Mpongoma 2010) while also incorporating the adaptive planning process adopted by South African National Parks (SANParks). Local municipalities, the district municipality and other organs of state as well as other stakeholders were consulted as required (Appendix 2). Relevant aspects of local authority plans were considered in the compilation of the plan.

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

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

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

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

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

Section 2: Legal status



2.1 Name of the area

The Augrabies Falls National Park (AFNP) was proclaimed in Government Notice 216 in Government Gazette 1506 of 5 August 1966. A full list of proclamations is given in Appendix 1.

2.2 Location

The park is located in the Northern Cape, approximately 120 km west of Upington and 40 km west of Kakamas, along the southern edge of the Kalahari Desert and the eastern border of Namibia (Appendix 4, Map 1). It was initially proclaimed in order to conserve a small area of geological interest around the Augrabies Falls, which is the largest waterfall on the Orange River. The gorge below the falls is 18 km long and offers breathtaking views.

2.3 History of establishment

The first European to "discover" the falls was a Swedish-born soldier named Hendrik Wikar, who was in the service of the Dutch East India Company. Having deserted his post at the Cape, he came across the site and drew the first maps of the river and gorge. He was the first one to give the falls the name Augrabies, derived from a Nama word, 'Aukoerebis', which means "place of great noise" (Mossop 1935).

In 1954, the Publicity Society of Upington approached the then National Parks Board with a request to proclaim the falls as a national park. However, it was only after 12 years of negotiations that the Park was proclaimed in 1966.

In 1973 the area of Riemvasmaak, which lies to the north the Park, was declared a "black spot" by the apartheid government - local communities living there were forcibly removed and relocated to the Eastern Cape, Namibia and the surrounding areas. The South African Defence Force (SANDF) then earmarked the land for its use.

In 1982, after negotiations with the SANDF, a piece of land of some 4270 ha that forms part of the greater Riemvasmaak area was incorporated into the AFNP. This piece of land constitutes the current Melkbosrand. By 1988 about 54,000 ha of Riemvasmaak was jointly managed by the then National Parks Board and the SANDF.

With the new political dispensation in 1994, and the commitment that land would be returned to the previously dispossessed, those who had been relocated to Namibia and the Eastern Cape returned to Riemvasmaak in 1995. The returning communities established the Riemvasmaak Trust, which subsequently lodged land claims on behalf of the community soon after their return. Consequently, in 2004, Portion 1 of farm 498, known as Melkbosrand, was deproclaimed. As noted (Section 2.3), negotiations on the management of Melkbosrand between the community and SANParks are ongoing, while claims on other properties are in process.

2.4 Contractual agreements

There is currently no private land included through contractual agreements.

2.5 Co-management agreements

There is currently a draft co-management agreement relating to Melkbosrand (a section of the old AFNP that was deproclaimed and returned to the community) which is still in the

process of negotiation. The draft agreement recognises the Riemvasmaak Community as the owners of the land, and agrees that the land will only be used in ways that are compatible with nature conservation. The community has access to graves and other sites of historical value. A committee, the *Melkbosrandsamewerkingskomitee* (MSK) has been established to achieve consensus on the management of the area north of the Orange River.

2.6 Total area

The park currently covers 52, 898 ha, with most (38, 888 ha) lying south of the Orange River and a smaller portion of (14, 010 ha) to the north of the falls. 47, 405 ha are proclaimed while 5, 493 ha is not proclaimed.

2.7 Highest point

The highest point in the Park is Spieëlkop (904 m; Appendix 4, Map 2).

2.8 Municipalities within which the park falls

The local municipalities in which the park is situated are the (i) Siyanda District Municipality and the (ii) Kai! Garib Municipality. Integrated Development Plans (IDP) and Spatial Development Frameworks (SDF) exist and the IDPs acknowledge the AFNP as one of the popular tourism attractions for the area. The municipalities are represented on the Park Forum, and the park is represented on the Tourism Forum of the Kai! Garib Municipality. The socioeconomic objective of the Park management plan (see Section 10) is designed to relate to the social analysis (poverty situation and gender specific issues) with specific reference to the tourism sector as stated in the IDP of both municipalities.

2.9 Land claims

Land claims on the following properties are still in process:

- 1. Portion 1 and the remainder of the farm Waterval No. 497
- 2. Portion 5 of the farm Omdraai No. 492

Discussions with the claimants and the Land Claims Commission are ongoing with the aim of finding innovative approaches towards mutually beneficial co-management arrangements.

Negotiations are in progress to contractually include private land, namely Daberas 8 portion 5, 3 and 6 and Narries 7 portions 7 and 10 in the western section of the park, as requested by the current landowners. This will increase the park by approximately 5 392 ha.

2.10 International listings

2.11 Environmental authorisations

There are no authorisations.

2.12 Biophysical and socio-economic description

2.12.1 Climate

Rainfall, which falls mainly during summer, is erratic and can be as high as 348.4 mm, as was measured in 1976, and as low as 8.4 mm, as was measured in 1951. The average annual rainfall of 126.5 mm is based on the South African Weather Bureau records since 1946.

Temperature is less erratic with cold winter temperatures (coldest months June - July) as low as -2.9 °C, while the summer temperatures (warmest months December, January and February) are as high as 42.9 °C (Bezuidenhout 1996).

2.12.2 Topography

Large rock domes are scattered in a landscape with an otherwise very low relief. Flat areas between the domes are composed of gently undulating pink gneiss. Drainage lines are sandy and usually dry. A range of steep rocky hills in the central portion of the park is formed by dark-weathering, quartz-rich granulite, which is invariably white on fresh surfaces, but becomes black due to weathering. A fairly large flat, sandy area occurs north and west of the black hills. Recent river terrace gravel and alluvium consisting of silt and fine sand occurs along the Orange River. The alluvium also forms large islands in the river (Werger & Coetzee 1977).

2.12.3 Geology and soils

The geological formations are reconstituted sedimentary rocks of the Kheis System and are part of the Archaean Complex. These sediments have undergone large-scale metamorphism, which changed them into crystalline gneiss and granulite. Most of the park is composed of red biotite granite gneiss, which is one of the three types of granite gneiss called pink gneiss. It typically has a brown colour on weathered surfaces. The pink gneiss resembles granite mineralogically and in chemical composition (Werger & Coetzee 1977).

The granite and metagabbro of the Augrabies landscape have been shaped by interesting weathering patterns. Granite is a light grey rock consisting of quartz, feldspar, and dark minerals. Due to intense pressure during the metamorphic event, dramatic zigzag folds are visible in the granite throughout the park. Metagabbro is а metamorphosed igneous rock, which contains no quartz and is made up entirely of dark ferromagnesian minerals and feldspar.

There are no international listings.



This rock is found in the western part of the park in an area known as the "Swartrante" (Black Ridges).

Different weathering patterns can be seen in the park, such as hollows in the rock, exfoliation domes, and 'pop ups', which appear when thin slabs of rock detach from the rock surface due to extreme changes in the rock, pop up, and lean against another thin slab, forming an 'A-tent' shape. Hollows occur when decomposing feldspar causes hard granite to become crumbly, and wind and rainwater wear away parts of the rock. Exfoliating domes are created by chemical weathering stress along sub horizontal joints, which causes thin slabs of rock to detach from the rock surface. The falls were formed about 1.8 million years ago, progressively cutting back eastwards along faults in the pink gneiss (Werger & Coetzee 1977).

From June 2010 up to March 2012 frequent earth tremors were experienced in the park. The worst tremor occurred on the 21 December 2011 and measured 5 on the Richter scale. The epicentre was believed to be inside or very near the park boundaries. Research on this phenomenon is being conducted by the University of Pretoria in collaboration with the Council of Geo Science.

Seven land types have been identified in the park (Land Type Survey Staff 1986). The delineation of an area into land types at a 1: 250 000 scale indicates that the land type displays a marked degree of uniformity regarding terrain form, soil pattern and climate. Three major geomorphologic features are recognised, namely:

- (i) The mountain veld;
- (ii) The plain veld and
- (iii) The Orange River and adjacent floodplain

2.12.4 Hydrology

The park is drained by the perennial Orange River. Between Kakamas and the AFNP, a distance of approximately 35 km, the River flows through a wide, flat, cultivated valley. From the 56 m high falls it flows into a deep, 100 m wide gorge which extends 18 km. The main incision of the peneplain to form the Orange River gorge and the evolution of the Augrabies Falls are associated with the continental uplift during the late Tertiary (see Werger & Coetzee 1977 for details).

The dramatic increases in the flow rate of water experienced from time to time are not the result of local climatic conditions but originate upstream. Especially high water flow rates were experienced in 1988 (7,800 m³/s - the highest in recent time), 2006 (1,983 m³/s), February 2010 (2, 936 m³/s), January 2011 (4, 779 m³/s) and after it subsided somewhat it increased again to 4, 102 m³/s on 2 February 2011. The highest water flow rate after February 2011 was on 18 June 2011 at 1, 237 m³/s. The average is roughly 50 to 70 m³/s.

2.12.5 Vegetation

Five major vegetation units have been identified in the Park (Bezuidenhout, 1996; Werger & Coetzee 1977), namely:

1. Aloe dichotoma woodland: Sparse woodland that is strongly associated with the hills.

2. *Schotia afra* open woodland: Open woodland occurring in the undulating rocky hills.

3. *Acacia mellifera* open shrubland: Open shrubland that is associated with the undulating rocky plains.

4. *Stipagrostis* grassland species: Open grassland restricted to the sandy plains.

5. *Ziziphus mucronata* closed woodland: Closed woodland that grows in the wetter drainage lines of the floodplains and islands in the Orange River.

The park currently has representation of Lower Gariep broken veld, Bushmanland arid grasslands, Blouputs thornveld, Lower Gariep alluvial vegetation and Kalahari karroid shrubland. These five vegetation types might later be increased to eight by including the Eastern Gariep Plains Desert, Eastern Gariep Rocky Desert and Bushmanland sandy grassland if the parks planned western extension area of the footprint becomes a reality. These vegetation types are from two biomes, namely primarily the Nama Karoo, and peripherally the Desert Biome in the western fringes of the park's planned expansion area, as well as a zonal riverine type (Mucina & Rutherford 2006). The vegetation is also representative of Einiqua plains, rocky desert types and Bushmanland sandy grassland. A broad scale vegetation map can be found in Appendix 4, Map 8.

The riparian vegetation type has been identified as a threatened habitat that needs to be monitored. Habitat destruction of riparian vegetation caused by invader species, including *Prosopis glandulosa*, is a concern. The effect of herbivory on quiver trees is a major concern, and a monitoring program has been implemented.

2.12.6 Fauna

On the species checklists of the park are 49 mammal species, 186 bird species, 41 reptile species, six amphibian species and 12 fresh-water fish species. The fauna is adapted to arid conditions. conspicuous species includina Hartmann's mountain zebra quus zebra hartmannae and black rhino Diceros bicornis (to be reintroduced). The park is a "hotspot" for reptiles, including the well-known Augrabies flat lizard Platysaurus broadleyi which is endemic to the region, as well as for scorpions. The Marbled rubber frog, Phrynomantis annectens is endemic to the park. The lower Orange River also has threatened ichthyofauna, including the Red-listed Namaqua barb Barbus hospes (Skelton and Cambray 1981). Other fauna includes dassie Procavia capensis, giraffe Giraffa camelopardalis, klipspringer Oreotragus oreotragus, honey badger Mellivora capensis, springbok Antidorcas marsupialis, hartebeest Alcelaphus red buselaphus, kudu Tragelaphus strepsiceros, gemsbok Oryx gazella, eland Tragelaphus oryx, caracal Caracal caracal, leopard Panthera pardus, African wildcat Felis silvestris cafra, brown hyena Proteles cristatus, aardvark Orycteropus afer and bat-eared fox Otocyon megalotis. Bird species include Verreaux's Aquila verreauxiiand and African fish eagles Haliaeetus vocifer, as well as eight species of swallows and swifts.

A game count by helicopter on 29 February and 1 March 2012 revealed the following numbers.

	Red Hartebeest	Gemsbok	Ostrich	Eland	Kudu	Giraffe	Springbok	Zebra
Northern section	0	91	0	44	15	3	114	6
Central section	19	46	0	56	17	10	5	19
Western section	61	199	300	150	70	25	188	50
Total	80	336	300	250	102	36	307	75



2.12.7 Cultural heritage

From September 1999 to March 2001, a project was undertaken to compile a Cultural heritage management plan. In line with park policy and the concept of a cultural landscape, neighbouring areas such as Riemvasmaak were also included. As very little prior research had taken place, considerable time was spent on compiling a heritage inventory. The fieldwork identified 155 tangible heritage sites, of which 106 were within the park boundaries while the remaining 49 were adjacent to the park. These sites include graves and burial grounds, Stone Age surface scatters, historic homesteads, military structures and rock engravings. The research showed that the AFNP and surroundings possesses a rich heritage, which includes a diversity of cultures and historic events.

One of the more interesting sites within the park is a quiver tree that was inscribed two days before the worst drought in living memory was broken. The inscription reads, "*Die weer is Mooi 11 Des 1933. Daar is hoop*" (*"The weather is beautiful 11 Dec 1933. There is hope*"). Another interesting site is located on one of the Orange River islands falling within the Park boundaries. It consists of two small rock shelters associated with Later Stone Age lithics, elongated grinding surfaces as well as two possible Later Stone Age graves. At least one ceramic fragment has also been found. The occupation of the islands in the vicinity of the Augrabies Falls was recorded by two of the earliest known European visitors to the area, namely the Swedish deserter Hendrik Jacob Wikar in 1778 as well as Colonel Robert Jacob Gordon who visited the falls shortly thereafter on 15 October 1779 (Morris 1992, Mossop 1935). Although Wikar indicates only a pastoralist group (referred to as the *Namnykoa*) residing on the islands, Gordon found both pastoralists (he calls them *Namneiqua*) and hunter-gatherers (referred to as *Anoeeis*) on the islands.

Intangible resources have also been documented, and include mythical creatures such as the water snake and lesser-known *Dassie-adder* (described by some as a small creature with the body of a snake and the head of a wrinkled old man).

2.12.8 Socio-economic context

The park lies within the Kai Garib Municipal Area which consists of nine wards. The Kai !Garib Municipality is situated between the 28° 20´ SL (southern latitude) and 20° 00´ EL (eastern longitude) as well as between 29° 30´ SL and 21° 30´ EL and is bordered by the Municipal Boundaries of //Khara Hais Municipality in the Northeast. It also borders Namibia in the northwest.

The Kai! Garib Municipal area falls within the Siyanda District Municipality's Area and consists of three large towns, *i.e.* Kakamas, Keimoes and Kenhardt. Since the municipal elections in 2011 Riemvasmaak (Sending and Vredesvallei) is also part of the Kai !Garib area. Between these towns, 6 former settlements are found, previously administrated by the "*Benede-Oranje*" district council. The park is \pm 40 km west of Kakamas which is situated in the midst of an intensive irrigation farming community stretching from Groblershoop in the east up to Blouputs in the west.

The Orange River is the biggest economic driving force for the region, stimulating significant expansion of economic activities especially over the last two decades. It provides water for the extensive cultivated lands on both sides of the river, which is the mainspring of the local economy.

Job and business opportunities in the community are mainly provided through agriculture and tourism. The "Quiver tree, food and wine route" attracts visitors to the area, of which the park is an important component. The formal business sector also shows great potential for growth which will contribute to the economy in the Kai !Garib municipal area. Recently requests to buy land for solar plant development have increased as this areas shows great potential for this source of energy.

The informal business sector in the municipal area is complex and unorganised posing great challenges for interventions and incentives towards future development. Concern was also raised during community meetings regarding the growing domination of foreign traders.

The dominant economic sector, agriculture, contributed 51.8 % to the economy of Kai !Garib in 2010. This sector is also a major employer in the municipality, providing 66.5% of all formal employment. It is the sector with the largest potential for growth. Commercial farmers produced mainly grapes for export, raisins and wine, while citrus is becoming more prevalent. Three wine cellars in the Kai !Garib municipal area have created numerous jobs, as have two major raisin export companies. Emerging farmers focus on small livestock, lucern, cotton, corn, and nuts which are cultivated under irrigation from the Orange River. Opportunities in the agricultural sector include the expansion of the production of lucern and citrus fruits as well as the possible establishment of ostrich farming. The potential for agri-tourism remains to be explored.

From the Stats SA Census 2001, Community Survey 2007 and the Annual Household Survey 2010 the total population of Kai !Garib Municipality may be estimated at about 60, 380. Currently there is an estimated 24, 407 households in the area serviced by the municipality. The unemployment rate is around 24.0%, while 83.0% of households earn less than R3, 200 per month in Kai !Garib (Kai Garib IDP 2012-17). The majority of residents are still dependant on government grants, implying that many residents earn less than R 1,800.00 per month. Unemployment is high among the youth. Income disparities are significant, to the disadvantage of the majority in the Municipal Area.

During the past ten years the park contributed to the creation of temporary jobs in the municipal area through the Expanded public works programme (EPWP). These projects included electrical fencing of the park boundary, upgrading of a number of chalets, construction of boardwalks and view points, as well as the eradication of alien plant species.

Over the next five years the park will continue to play a significant role in contributing to local economic and social development.

Section 3: Policy framework



3 Introduction

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

This CPF is currently being revised and updated (SANParks in preparation). The CPF will provide the information required by the DEA guidelines for management plans (Cowan & Mpongoma 2010). This document will summarise the institutional, ecological, economic and social environment for park management and includes:

- (1) 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.
- (2) SANParks as an organization: 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.
- (3) Policies and guiding principles
 - a) Finances and commercialisation
 - b) Tourism
 - c) Zoning system in parks
 - d) Stakeholder relationships
 - e) Management to maintain biodiversity and ecosystem processes.
 - f) Risk management
 - g) Safety and security
 - h) Cultural heritage resources
 - i) Resource use
 - j) Research

The CPF can be downloaded from the SANParks website using the link <u>http://www.sanparks.org/conservation/park man/</u>. A revised and updated CPF is due in 2013.

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

The planning cycle for management plans in SANParks is 10 years, although programmes and costing will be revised at a more regular basis, normally every five years but more often if needed.

3.1 Park specific framework

All park managers (except for Kruger) report to the Managing executive: Parks through a Regional general manager. In the case of the AFNP this is via the Regional general manager for the Arid region. The park's organogram (Figure 1) sets out the reporting structure in the park.

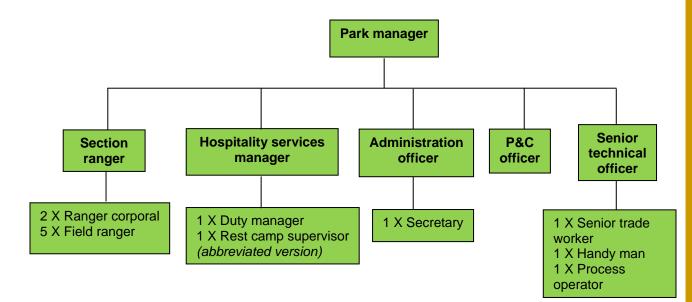


Figure 1: Park organogram

Section 4: Consultation



SANParks recognises that parks must serve societal values and that they need to be part of and interrelate with the broader landscape and socio-economic context within which they are situated. The goal of the park within the public participation process is to work directly with stakeholders to ensure that the stakeholder concerns and aspirations are consistently understood and considered. Therefore stakeholders, both interested and affected, were included in the revision process of the park management plan by notifying them of participation processes through mechanisms suitable for the different stakeholder groups. These processes provided the opportunity for input from all stakeholders within reasonable timeframes, with the emphasis on sharing of information and joint learning. Processes also aimed to recognise all knowledge, indigenous, ordinary and expert, as well as the diversity of values and opinions that exist between stakeholders. Feedback was provided on the outcome of the processes to stakeholders which demonstrated how their inputs were captured and considered in the decision making process. The commitment to the incorporation of public opinion into this plan is rooted in the parks' 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 (a) help stakeholders express opinions and values in a structured way, (b) to use the opinions and expressed values to formulate a vision for AFNP, and (c) to translate the vision into management objectives that reflect the values as expressed by stakeholders.

The development of the desired state, vision and mission for AFNP was guided by a stakeholder workshop held on 10 and 11 May 2011 in the Masekane Hall, AFNP (SANParks 2011). Detail of the stakeholder participation process to the review of the Park management plan is recorded in a Stakeholder participation report (Appendix 3).

To facilitate ongoing consultation between parks management and stakeholders a Park Forum was established in 2006 which represents key stakeholders (*i.e.* communities, municipalities, tourism forums, business, formalised agriculture and relevant local and provincial government departments). The establishment and activities of the park forum are guided by terms of reference. Formal meetings of the park forum take place quarterly.

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Section 5: Purpose and vision



5.1 Purpose of the park

NEM:PAA requires that the park be managed in accordance with 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 (Appendix 1). Earlier management plans (pre-dating NEM:PAA) stated that the park was originally proclaimed to protect the spectacular falls, surrounding landscape and geology and to keep it in a pristine state. This objective is consistent with the vision, mission and objectives hierarchy that was derived through recent consultation with stakeholders, as set out in this section. Hence SANParks will manage the AFNP in accordance with the objectives derived at the stakeholder workshop of May 2011.

5.2 Vision and mission

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

VISION

"South African National Parks connecting to society"

The mission defines the fundamental purpose of the park, succinctly describing why it exists and what it does to achieve its vision. The mission of each park is developed in consultation with stakeholders. The following mission was developed at the AFNP stakeholder workshop:

MISSION

"Augrabies Falls National Park will manage and conserve the biodiversity, geology and cultural heritage as part of the functional and sustainable patchwork of different land uses within the Benede-Oranje region, through collaboration and education, to promote better livelihoods, as well as benefits and enjoyment for all."

5.3 SANParks corporate vision of the desired state of Augrabies Falls National Park

Examined from the perspective of the entire system of national parks, SANParks has identified a broad vision and strategic direction for each individual national park. This corporate strategic direction is intended to enable each park 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 Augrabies Falls National Park has also informed the programmes of implementation (Section 10) of this management plan:

Over the next 20 years it is predicted that the relative biodiversity value of AFNP will be stable, and biodiversity risks are low compared to other parks. The components that are currently strong, namely the high scenic value of the park and its potential to generate income, will be maintained and strengthened. Cultural heritage, environmental education and diversity of tourism products have moderate scope for improvement, and there are good prospects for moderate surplus income generation.

5.4 Operating principles or values

The stakeholders at the meeting of May 2011 recognised and mostly endorsed the SANParks corporate and SANParks conservation values (as set out in the SANParks CPF). The following additional values are based on inputs at the stakeholder meeting.

- 1. Maintain hospitality to ensure outstanding customer service at all times.
- 2. Apply transparency and consistency in the application of values.
- 3. Focus all approaches on needs, addressing the cause of the problem.
- Build positive relationships with all stakeholders and constituencies by transferring knowledge and recognising public input.
- 5. Ensure that training, education and awareness is ongoing, with special emphasis on previously disadvantaged groups.
- 6. Develop human capital as a vital part of the management of the park.
- 7. Make decisions that are fair, transparent and informed by best available information and in accordance with relevant legislation, policy and regulations.
- 8. Manage with respect and gratitude to people, without harming biodiversity.

5.5 Vital attributes

The vital attributes of the park are the important characterises 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. The presence of a well-known and spectacular waterfall.
- 2. A major perennial river and key life support system in an arid region.
- 3. Unique and spectacular geomorphological landscape.
- 4. Unique biodiversity.
- 5. Diverse history, culture and heritage.
- Location of the park easy access to the park and associated tourism products and activities.
- 7. Excellent relationship with schools regarding environmental education.
- 8. Existing infrastructure.
- 9. Diverse land use.

5.6 High level objectives

Objective hierarchy

The desired state is achieved by means of a hierarchy of objectives, starting with an overall objective aligned with SANParks' organisational structure and the park's Vision and Mission statements, then broad, high level objectives (this section) and then to finer and finer levels of detail, ending with specific operational or management actions (section 10).

Ecological integrity objective:

To ensure the persistence and representativeness of unique biodiversity in the park, by collaboratively enabling and restoring natural processes across a patchwork of different land uses and by doing so providing for learning and research opportunities.

Tourism objective:

To promote the park as a value-for-money destination providing a range of diverse products and activities offering a variety of recreational and learning experiences in accordance with responsible tourism principles, with special focus on the attractions of the waterfall and surrounding geomorphology.

People-centered, co-operation and relationships objective:

To promote conservation compatible land use in the region, through collaboration between the park and its neighbours, partners and potential partners, while at the same time mitigating impacts of competing activities.

Effective park management (an enabling objective):

To enable effective management and administrative support services. This will ensure that the park can deliver its objectives.

Section 6: Zoning plan



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

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

In addition to internal use zoning, the zoning plan also describes how the park interacts with the processes which control land use and activities in the Buffer zones around national parks (e.g. SDFs and municipal IDPs). The Buffer zones identify the area within which activities such as landuse change may have an influence on the park (current and future extent), describe responses at a strategic level, and serve to define the Buffer zone in terms of the DEA policy on buffer zones for national parks and the SANParks buffer zone policy.

Overview of the use zones of Augrabies Falls National Park

The summary of the use zoning plan for AFNP is shown in Map 4. Full details of the use zones (including high resolution maps), the activities and facilities allowed in each zone, the conservation objectives of each zone, the zoning process, the Park Buffer zone (detailing park interaction with adjacent areas) and the underlying landscape analyses are included in Appendix One: Augrabies Falls National Park Zoning Plan.

Remote zone: This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless (although limited unimproved management tracks are allowed). There are no permanent improvements or any form of human habitation. It provides outstanding opportunities for solitude, with awe inspiring natural characteristics with sight and sound of human habitation and activities barely discernable and at far distance. The conservation objective is to maintain the zone in a natural state with no impact on biodiversity pattern or processes. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimised. The aesthetic / recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) will not be tolerated. In AFNP, Remote areas were designated in five rugged areas with high environmental sensitivity.

Primitive Zone: The prime characteristic of the zone is the experience of wilderness qualities with access controlled in terms of numbers, frequency and size of groups. The zone has wilderness qualities, but with limited access roads (mostly 4x4) and the potential for basic small-scale self-catering accommodation facilities or small concession lodges (which would generally have more sophisticated facilities). Views of human activities and development outside of the park may be visible from this zone. The conservation objective is to maintain the zone in an almost completely natural state with little or no impact on biodiversity processes, and very limited and site specific impacts on biodiversity pattern. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimised. The aesthetic / recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness,

wildness, serenity, peace etc) should be restricted and impacts limited to the site of the facility. Ideally visitors should only be aware of the facility or infrastructure that they are using, and this infrastructure / facility should be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts. In Augrabies Falls NP, Primitive areas were designated to protect most of the remaining sensitive areas that were not incorporated into Remote zones from high levels of tourism activity. In addition, Primitive areas were designated along the southern boundary to buffer the core of the park from external impacts, and around the Remote areas to buffer them from higher use tourist areas. In areas where Remote zones border on the park boundary, a 100 m wide Primitive zone was designated to allow park management access to boundaries. Primitive areas were also designated to allow management and controlled tourist 4x4 access through Remote areas north of the Gariep River. In areas where remote zones border on the park boundary, a 100 m wide primitive zone was designated to allow park management access to fences.

Low intensity leisure zone: The underlying characteristic of this zone is motorised self-drive access with the possibility of small basic camps. Facilities along roads are limited to basic picnic sites with toilet facilities. The conservation objective is to maintain the zone in a largely natural state that is in keeping with the character of a Protected Area, mitigate the biodiversity impacts of the relatively high levels of tourism activity and infrastructure that are accommodated within this zone through careful planning and active management, and to ensure that both the negative effects of the activities and infrastructure are restricted to the zone. The aesthetic / recreational objectives for the zone specify that although activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc) is inevitable, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience. In AFNP, Low intensity leisure areas were designated along the current tourist access routes and game viewing areas west of the falls. 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.

High intensity leisure zone: The main characteristic is that of a high density tourist development node with amenities such as shops, restaurants and interpretive centres. This is the zone where more concentrated human activities are allowed, and is accessible by motorised transport on high volume transport routes. The main focus is to ensure a high quality visitor experience, however the conservation objectives still require that the high levels of tourism activity and infrastructure that are accommodated within this zone are planned and managed to minimise the effect on the surrounding natural environment, and that the zone must still retain a level of ecological integrity consistent with a protected area. The aesthetic / recreational objectives for the zone specify although the high visitor numbers, activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc) is inevitable, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience. In Augrabies Falls NP, High intensity leisure areas were designated around the main tourist precinct around the falls and gorge, as well as the main entrance road to the park.

Overview of the special management overlays of Augrabies Falls National Park

Special management overlays which designate specific areas of the park that require special management interventions were identified (Map 4). Two types of area were designated:

Special conservation area- Visual protection: Areas with extremely high sensitivity to visual impacts were included in this overlay. This area needs to be carefully managed to minimise or eliminate any aesthetic or visual intrusion of development and tourism activities. These areas were concentrated along the gorge and falls, as well as highly visible mountainous areas both north and south of the Gariep River.

Special conservation area – Closed woodland Zizyphus mucronata: This vulnerable and rare vegetation type was identified for special protection to minimise risk of any further loss of habitat as well as to prioritise rehabilitation work.

Summary of the Buffer zones around Augrabies Falls National Park

This section describes how the park interacts with the processes which control land use and activities in the Buffer zones around national parks (e.g. SDFs and municipal IDPs). The Buffer zone section identifies the area within which activities such as landuse change may have an influence on the park (current and future extent), describes responses at a strategic level, and serves to define the Buffer zone in terms of the DEA policy on Buffer zones for National Parks and the SANParks Buffer zone policy.

The current extent of the AFNP is included in a conservation focused category in the land use maps included in the SDFs of the local and district municipalities in which the park is located.



These SDFs are the spatial components of municipal IDPs. The park interacts with the appropriate local government processes such as SDF and IDP development on an ongoing basis as part of the Bioregional programme, in order to ensure that issues such as appropriate development of Buffer zones around parks are also incorporated into proactive land use planning instruments such as SDFs and IDPs.

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

Augrabies Falls National Park has two Buffer zone categories (Map 6), which can overlap each other.

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

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

Current status and future improvements

The current park use zonation is based on the same biodiversity and landscape analyses undertaken for a Conservation Development Framework (CDF); however certain elements underlying a CDF such as a tourism market analysis are not be fully incorporated into the park use zonation. A full CDF will be developed for Augrabies Falls National Park within the current update cycle. Remote areas will be investigated for possible formal designation as Wilderness Areas in terms of Section 22 of the NEM:PAA.

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In accordance with the Guidelines for the preparation of management plans (Cowan & Mpongoma 2010) Section 7 provides information on the current access to the protected area, access controls, air fields, visitor and administrative facilities, commercial activities, community use and servitudes. Appendix 4, Map 7 shows the distribution of infrastructure in the park.

7.1 Access points and restrictions

There is only one public access point to the park, which is controlled on a 24-hour basis by a manually operated access control boom. For day visitors gate hours are 07h00 to 18h30 from 1 April to 31 August, and 06h30 to 19h00 from 1 September to 31 March. A security company is employed to provide 24-hour security controlled access for overnight visitors, subject to special arrangement with management. Park management may from time to time close certain roads to certain types of vehicles, depending on conditions. Quad bikes and motorcycles are allowed on the entrance road only.

Current restricted areas include:

- Access to the Klipspringer Hiking Trail and overnight huts by regular visitors is prohibited to protect the quality of experience of hikers that booked the trail, and also to protect the regular visitors (should they get lost on the trail management would not know about it)
- Access to disused mines is prohibited for safety reasons;
- Roads that require maintenance may be closed temporarily to sedan and non 4x4 vehicles, these are indicated by signage.

The road OP124 and the road previously known as AP3275 in the western section of the park will be temporarily made available to the Blouputs farming community during times of flooding of the Orange River to ensure that the farmers have access to the town of Augrabies and elsewhere.

7.2 Airfields, flight corridors and their restrictions

There is an unregistered gravel helipad (S28°35.628' E 020°20.296') next to the rest camp and reservoir for use by SANParks aircraft only. There are no flight corridors applicable to AFNP.

7.3 Visitor facilities

Tourism infrastructure in the Park consists of:

- Fifty nine chalets in the rest camp
- Fourty camping sites in the rest camp
- Overnight accommodation with three swimming pools, as described in the table below
- Conference centre for up to 70 participants
- Laundry facility
- Two hiking trails, the 40 km Klipspringer Trail (three days and two nights) and the seven km Dassie Trail close to the rest camp.
- View sites at Moonrock, Echo corner, Ararat and Oranjekom.

Description of tourist accommodation in the AFNP

Description	Number of beds per unit	Number of units	Total number of beds
Camping	-	40	-
Chalets (single)	2	40	80
Chalet (double)	2	10	10
Cottage (single)	4	3	12
Cottage (two single + one double)	3	6	18

The following facilities are available for day visitors:

- A picnic site in the rest camp, with a swimming pool, braai and ablution facilities;
- A remote picnic site with braai and ablution facilities in the game area.
- Filling station.
- Boardwalks giving access to viewing decks.
- Shop and restaurant.
- Tourism road network of 82 km for sightseeing and game viewing.

In addition there is a weather station at the rest camp and five rain gauges at different locations in the park.

7.4 Administrative facilities

Management infrastructure is located in the rest camp and comprises:

- Administrative office building with seven offices
- Laundry
- Workshop
- Store
- Eighteen single staff accommodation units
- Twelve bachelor flats
- One park home
- Twenty-two family staff houses
- Five outpost houses for Rangers
- Masakhane hall complex

Bulk infrastructure consists of:

- Approximately 82 km of tourism roads and 200 km management roads
- 150 km of fence lines
- A reed bed sewage treatment plant
- A water treatment plant
- An unregistered gravelled helipad
- Board walks, totalling 250 m, accessing six viewpoints

7.5 Mining

Several disused quarts mines and one tungsten mine exist, however there is no active mining taking place in the park. SANParks will investigate options to rehabilitate these disused mines.

7.6 Commercial activities

The park has entered into the following outsourced commercial activities:

- The restaurant and shop are being managed as a public private partnership (PPP). A new ten year contract will be awarded in 2012.
- Kalahari Adventures operates a cano adventure trail on the Orange River above the falls.

7.7 Community use

No community based natural resource use is currently taking place.

7.8 Servitudes

There are servitudes registered against title deed for secondery roads and Escom transition lines traversing the park. The park has initiated a process to deregister the servitudes applicable to the secondery roads.



Section 8: Consolidation and expansion

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

The park is situated on the eastern fringe of the Gariep Centre of Endemism which has the richest variety of succulent plants on earth (Van Wyk & Smith 2001). Although it does not fall within one of the nine nationally recognised priority conservation areas (Driver *et al.* 2005), it remains important to expand the park to meet the objective of furthering the conservation of under-represented vegetation types in accordance with the national objective.

The expansion and consolidation programme has a number of objectives:

- To conserve a representative sample of the ecological patterns and processes (river land interface, perennial and ephemeral river processes, granite expanses, herbivory and others) associated with the Lower Orange River and its adjacent hinterland.
- Diversifying the tourism experience beyond the iconic Augrabies Falls, as an integral part of a broader ecological, geological and cultural landscape.
- Establishment of an economically sustainable park, with diverse, year-round ecotourism attractions.
- To use a diversity of inclusion methods (particularly contractual inclusions) to expand the park in the process diversifying opportunities for economic development of the park's ecological assets;
- Developing a park that is socially sustainable.

The park currently covers 52, 898 ha. A total of 47, 405 ha have been proclaimed as national park, with the remainder in different stages of declaration given some consolidation options.

The expansion footprint for the park focuses on the following sections (see also Appendix 4, Map 3):

- **Eastern section,** aiming to acquire a 1, 073 ha area on the north bank of the Orange River, so as to straighten the park boundary (subject to affordability of this property which is currently under cultivation).
- **Central section**, to acquire three small portions of land collectively totalling 1, 056 ha on the northern boundary of the park. Including these portions will allow placing of the boundary fence on a service road, thus facilitating management.
- Western section, attempting to extend the park over 1, 832 km² westwards towards the important *Aloe dichotoma* forest to the south of Onseepkans, to link with the biologically important Bushmanland-Augrabies node, and to include the unprotected Eastern Gariep rocky and Plains desert vegetation types (Mucina & Rutherford 2006). This expansion would remain south of the productive viticulture areas on the bank of the Orange River. Most of this land would need to be included under some form of contract depending upon land owner willingness. Costs associated with these contractual relationships would relate mainly to transaction costs.

As noted in Section 2.3, negotiations towards this western expansion are currently in progress to contractually include private land, namely Daberas 8 portion 5, 3 and 6 and Narries 7 portions 7 and 10. This is initiative, which may increase the park by approximately 5, 392ha, was proposed by the current landowners.

In the next five year period, the focus will be on the central consolidations and the contractual inclusion of land immediately to the west of the park boundary. Also important will be the engagement of the Land claims commissioner to resolve the land claims to the benefit of both parties (see Section 2.3).



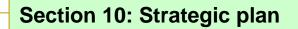
Section 9: Concept development plan

9.1 Long term development plan

The development plan for AFNP will constitute a second phase upgrading of existing tourism infrastructure, subject to the availability funds (estimated cost R8 million). A new conference centre will be funded and built by BMW South Africa. The feasibility of two new developments will be explored: a hanging bridge over the gorge, and overnight facilities at Oranjekom. Development of these projects will subject to the availability of funds.

Any new products or activities developed in future will follow the zonation and nature based responsible tourism principles, as well as all legal requirements governing development.

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10 Introduction

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

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

- Bioregional
- Biodiversity
- Tourism
- People and Conservation
- Effective park management

Each programme is presented as follows:

- **Programme name:** A name describing the programme.
- High level objective: Stating the overall goal of the programme.
- **Background:** Overview of intent, guiding principles, description, outcome, research and monitoring and risk (all where applicable).
- **Tables:** Outline of objectives, initiatives and management actions within the scope of the objective with an indication if the programme is once odd, continuing or conditional on the availability of resources. These tables have the following headings:
 - **Initiatives or objectives** The various initiatives or 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.
 - o Indicator: A measure whereby the achievement of the objective can be evaluated.
 - **Timeframe**: An indication of when the action is likely to be completed (indicated by year over the planning cycle).
 - **References**: References to relevant programmes, Lower level plans (LLPs) or other documents.

10.1 Bioregional

The purpose of the bioregional goal is to conserve systems and processes within and around the park by establishing corridors and buffer zones and consolidating the park by acquiring appropriate land for the conservation of threatened biodiversity. It aims to collaborate with relevant international, national, provincial and local government structures, NGO's and land owner groups. Currently there are plans for and developments around the park from urban and industrial sectors. Partnerships with local government require more interaction and working closer on joint issues.

10.1.1 Mainstreaming biodiversity

The objectives of this programme are (1) to ensure that SANParks registers as an interested and affected party and makes inputs into the scoping reports and EIAs of relevant developments in the buffer zone of the park and (2) to maintain compatibility and harmony between the park buffer zone and the municipal IDP.

	MAINSTREAMING	G BIODIVERSITY	PROGRAMME				
High level objective: To mainstream biodiversity issues in local and other planning frameworks							
Objectives	Actions	Responsibility	Indicators	Timeframe	References		
To minimize potential conflicts that arise from the different objectives of non-aligned land uses through responsible engagement	Engage with municipalities to harmonise the IDP, SDF and the park buffer zone	Park manager	Annual report, correspondence with the municipalities	Ongoing	IDP's SDF's		
	Contribute strategically in collaboration with relevant local, provincial and national authorities on any relevant developments within or affecting the park.	Park manager	Correspondence, minutes	Ongoing			
	To comment on land use change and development applications within the buffer zone and adjacent areas	Park manager, Park planning and development unit	SANParks comments as Interested and affected party	Ongoing			
	Participate in EIA and other processes regarding proposed land use changes both inside and outside the park	Park manager, Park planning and development unit	SANParks comments as Interested and affected party	Ongoing			

10.1.2 Land consolidation / expansion

This programme aims to expand the park without undue negative impacts on the adjacent rural community. As noted in Section 8, park expansion will progress mainly through contractual inclusion of the properties of willing landowners, with only a few key properties identified for purchase, depending on affordability.

	LAND CONSOLIDATION AND EXPANSION PROGRAMME						
High level obje	ctive: To mainstream biodiversity issues	in local and other p	lanning framework	(S			
Objectives	Actions	Responsibility	Indicators	Timeframe	References		
To promote ecological linkages across the landscape through appropriate land partnerships and land purchase	Negotiate with willing land owners for inclusion of their land as contractual sections of the park	Park planning and development unit, Regional manager, Park manager	Contracts	Ongoing dependent on agreement with landowners	To promote ecological linkages across the landscape through appropriate land partnerships and land purchase		



Objectives	Actions	Responsibility	Indicators	Timeframe	References
To promote ecological linkages across the landscape through appropriate land partnerships and land purchase	Engage with the Land claims commissioner towards resolution of all land claims	Manager: land claims; Park planning and development unit, Regional manager, Park manager	Resolved land claims	Ongoing	
	Negotiate the purchase of identified properties	Park planning and development unit	Purchase agreements	Ongoing, dependent on agreement with landowners	

10.2 Ecological integrity

10.2.1 Species and habitats of special concern

To address the risk of species losses, there is a need for information on species of special concern in the park starting with inventorisation and baseline information to understand the diversity of species. This has been done for plants, and needs to be expanded to other species, especially the reptiles and amphibians. The quiver tree has been identified for specific monitoring because it is impacted by browsers, particularly giraffe, eland and kudu. This tree has also been shown to be sensitive to climate change. A group of black rhino will shortly be re-introduced, and the success of establishment will need to be monitored. The riparian vegetation type was identified as an especially threatened habitat that needs to be monitored.

Important factors that can threaten the persistence of species are (1) limited availability of suitable habitat and (2) invasive alien species. Therefore the park consolidation programme (Section 8) and the invasive alien clearing programme (see below) will also contribute to the Species Persistence Sub-objective.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
Promote the persistence of species and habitats of concern in the park.	Collect baseline information on species and habitats of concern	Section ranger and Conservation services	Database	Ongoing	
	Formulate and implement management interventions for identified species and habitats (<i>e.g.</i> quiver trees, black rhino, riparian vegetation)	Section ranger and Conservation services	Management guidelines	Ongoing	
	Monitor the outcome of management interventions.	Section ranger; Conservation services	Monitoring results	Ongoing	
	Re-introduce black rhino and monitor the outcome.	Veterinary wildlife services; Section ranger	Successful re- introduction; monitoring results	Ongoing	

Responsibility

Indicators

Time-

				frame
Promote the persistence of species and habitats of concern in the park.	Conduct five yearly aerial census of large herbivores	Regional ecologist	Census report	Year 4
To mitigate the loss of riparian vegetation due to fire and invasion by alien	Conduct research on <i>Prosopis</i> invasion, especially seed sources	Conservation services	Research reports	Year 1
species	Create awareness of <i>Prosopis</i> invasion of riparian vegetation	People and conservation	Monthly reports	Ongoing
	Conduct research on consequences of loss of riparian vegetation on broader biodiversity and systems resilience.	Conservation services	Research reports	Year 1
	Prevent fires in the riparian vegetation	Section ranger	Monthly reports	Ongoing
	Develop a monitoring programme for riparian vegetation	Conservation services	Monitoring programme	Year 2

10.2.2 Water cycle (fresh water systems)

Since the waterfall plays such an important role in terms of tourism in the park, the decrease in water quality and quantity and inappropriate flows were listed as a concern. This programme involves a cross linking to various interest groups and stakeholders. This programme will be about lobbying; influencing and assisting government agencies were listed as some of the actions that the park can take. Therefore this objective is linking strongly with relationship building between stakeholders and farmers.

High level objective: To prom	ote and participate in sustair	nable water use practice	es		
Objectives / Initiatives	Objectives / Initiatives	Objectives / Initiatives	Objectives / Initiatives	Objectives / Initiatives	Objectives / Initiatives
To identify and mitigate the impacts of inappropriate actions affecting water flow in the Orange River.	Identify threats associated with water use and define needs of stakeholders by collating information through established forums and linkages with relevant authorities	Conservation services, Park manager	Assessment report	Year 2	
	Minimise the effects of identified threats on vital attributes associated with the river by actively engaging with water management authorities and key stakeholders thereby ensuring sustainable water use	Conservation services, Park manager	Minutes of relevant meetings, correspondence	Year 1	
	Monitor and evaluate the effectiveness of management on vital attributes associated with the river through collaboration with stakeholders	Park manager through stakeholder interaction, Conservation services	Annual reports	Ongoing	



10.2.3 Habitat degradation and rehabilitation

This objective - to restore natural ecological processes and degraded farmland - needs to focus on the prevention of erosion due to floods, physical removal of old infrastructure, and the impact of tourism and management activities on the geomorphological features and processes. This needs an understanding of the drivers of erosion, especially the role of heavy rainfall events which merits special consideration. Remaining old infrastructure consists mainly of fencing material of which most has been moved to strategically placed scrap yards. Other old infrastructure that needs attention includes redundant telephone lines and water provision infrastructure such as reservoirs with associated water pipelines, some of which are above ground. A number of redundant windmills still need to be removed. Some existing stock proof fences still need to be removed in the western section.

High level objective: To restore natural ecological processes					
Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To control erosion resulting from human activities	Identify areas of erosion and assess the need for remedial actions	Section ranger	Monthly reports	Ongoing	
	Undertake remedial action as required.	Section ranger	Monthly reports	Ongoing	
To remove unwanted and redundant infrastructure and material	List unwanted infrastructure and material	Section ranger	List	Year 1	
	Compile guidelines for removal and disposal methods, with cost implications.	Section ranger	Guidelines	Year 2	
	Implement removal within financial constraints.	Section ranger	Monthly reports	Ongoing	
To rehabilitate transformed land	Identify and map transformed land	Section ranger	Мар	Year 1	
	Compile rehabilitation plans for individual sites	Section ranger	Plans	Year 2	
	Implement rehabilitation plans within financial constraints.	Section ranger	Monthly report	Ongoing	
	Monitor success of rehabilitation plans	Section ranger	Monthly report	Ongoing	

10.2.4 Invasive species control and eradication

Augrabies Falls National Park is subject to recurrent invasions by alien species due to neighbouring land uses as well as unpredictable disturbance events (particularly floods). In compliance with Section 76 (1) of NEM:BA, this management plan includes an invasive species control and eradication strategy. The specific requirements of Section 76 of NEM:BA are provided below.

10.2.4.1 List of invasive species occurring in AFNP

The Minister has not yet published a national list of invasive species in terms of Section 70 (1)(a) of NEM:BA, therefore invasive alien plant species in AFNP are listed in accordance with Conservation of Agricultural Resource Act (CARA) (Act 43 of 1983). There are 26 identified alien plants listed in the park.

Botanical name	Common name	CARA status	
Argemone mexicana	Mexican poppy	DW 1	
Arundo donax	Giant reed	DW 1	
Atriplex nummularia	Old man's salt bush	DI 2	
Cortaderia jubata (Lem.) Staph	Pampas grass	DW1	
Cylindropuntia fulgida & tunicata		na	
Datura species		DW 1	
Echinopsis spachiana	Torch cactus	DW 1	
Eucalyptus camaldulensis	Red river gum	DI 2	
Melia azederach	Syringa	DI 3	
Nicotiana glauca	Wild tobacco	DW 1	
Opuntia aurantiaca, O. imbricata, O. engelmanni and O. ficus-indica	Cacti	DW 1	
Parkinsonia aculeata	Jerusalem thorn	n/a	
Pennisetum clandestinum	Kikuyu grass	n/a	
Prosopis glandulosa and P. vellutina	Mesquite	DI 2	
Ricinus communis	Castor-oil plant	DI 2	
Salix fragilis	Crack willow	DI 2	
Salsola kali	Russian tumbleweed		
Schinus molle	Pepper tree	(proposed invader 3)	
Solanum elaeagnifolium	Satan's bush	DW 1	
Tephrocactus articularis	Cacti		
Xanthium spinosum	Boetebos	DW 1	

CARA refers to species listed, by category, in the Conservation of Agricultural Resource Act (Act 43 of 1983), and regulations as amended in 2001. DI = declared invader; DW = declared weed

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

Infestations of alien invasive species (AIS) in the AFNP occur mainly along the northern border of the park, along the Orange River, and also along some seasonal dry river beds in the interior of the park. The extent of infestation is shown in Appendix 4, Map 4. The riparian zones are prone to infestations mainly by Prosopis glandulosa Torr. var. glandulosa, Ricinus communis and Nicotiana glauca spp which follow the moisture gradient of the drainage lines. It has also been noted that flood events often cause aggravated infestations of the above species, and sometimes also lead to new species infestations along the banks of the Orange River and the islands within the river.

Infestations of AIS on private/ communal land bordering the park, or situated upstream from the park are also seen as potential threats. Infestations of AIS occurring on the farm 'Daberas' and areas around the town Augrabies are therefore also included in the AIS clearing plan. These areas are included to decrease the threat posed by episodic floods of the Orange River (Bezuidenhout & Jardine 2001). High rainfall events often cause seasonal or dry riverbeds to flow, resulting in the dispersion of AIS seed from upstream areas outside the park to downstream areas inside the park.

10.2.4.3 Status report on the efficacy of past control measures

A Working for Water alien clearing project has been implemented by SANParks Biodiversity Social Projects (BSP) (previously known as ISCU- Invasive Species Control Unit) in AFNP since 2008. Clearing of Prosopis glandulosa was the priority, with Nicotiana glauca second. Standing infestations of these species along the Orange River (covering 299.65 ha) were cleared by 31 March 2012. A follow-up schedule is currently in place to eradicate any coppicing / re-sprouting plants. Ricinus communis densities along the Orange River banks and islands increased drastically since the 2011 flood. Extensive Ricinus infested areas along the river will be cleared and followed-up within the next operational cycles.



Infestations covering 1, 142 ha's have been mapped in the AFNP (and adjacent infested land) to date. Some new areas have been reported and will be included in the Park's AIS infested areas mapping database during 2012/13. As there are prospects of expanding the park, the mapping and inclusion of AIS infested areas will be ongoing.

The programme as so far achieved the following:

- i) clearing about 80% of high density initial *Prosopis glandulosa* infestations in the park;
- ii) Since 2008 it provided sustainable jobs for 12 beneficiaries and developed one contractor. The social development and training component of the project contributed greatly to the advancement of these people's livelihoods.

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

The SANParks Alien invasive 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 six vital components:

- 1. Assessment and risk analysis
 - 2. Priority setting Prevention
 - 3. Early detection and rapid response
 - 4. Control
 - 5. Restoration

Full assessment and risk analyses for AIS in AFNP are necessary to enable priority setting. The overall goal of prioritisation is to direct the available resources in a way that will minimise the ecological damage caused by AIS, while minimizing the workload necessary to achieve this. A generic set of criteria has been developed for prioritising areas and species that could be applied across all national parks. Once park specific-prioritisation criteria for AFNP have been completed, priorities will be set regarding particular alien invasive species and areas of infestation. This prioritisation will then feed into an APO (Annual plan of operation) for the project which will also be the basis of the motivation for funding.

Until the prioritisation process has been completed, the AIS clearing prioritisation for the AFNP will focus mainly on maintaining previously cleared sites. New areas of infestation (including newly acquired land) will be mapped and included in the database.

Prevention is the most cost effective way of protecting AFNP against the negative impacts of AIS. Entry pathways into the Park will be identified so that new AIS introductions into the park may be prevented. Also important is early detection of a new invasive species in the park and a rapid response to eradicating or containing the infestation. Established invasions are much more costly to eradicate. Even though a new invasion might seem insignificant, it must be prioritised to ensure it does not spread and require exponentially more effort and resources to clear.

Clearing strategies for areas in AFNP that have established / high density AIS stands should have a long term control strategy as opposed to a once off eradication. The need for follow-up operations in cleared sites is assessed annually in AFNP. These assessments inform the Annual plan of operations, which sets out clearing schedules for each site, as well as financial and other supplementary information.

Control methods, or combinations thereof, are designed to suite the target species and the environment in which it occurs. The following methods are used the park (including riparian zones along the Orange River, terrestrial areas and drainage lines):

- Chainsaws
- Loppers and hand saws
- Bio-control
- Chemical (herbicides)
- A combination of the above methods

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

- Datura ferox (large thorn apple/ grootstinkblaar)
- Pennisetum clandestinum (kikuyu grass)
- Prosopis glandulosa Torr. var. Glandulosa (mesquite tree/ suidwesdoring/heuningprosopis)
- Nicotiana glauca Graham (tobacco tree/ jan)
- twak) - Cortaderia jubata (Lem.) Staph (pampas
- gras)
 Ricinus communis L. (castor-oil plant / kasterolieboom)
- Arundo donax L. (giant reed/ spaanse riet)
- Prosopis vellutina Wooton (velvet mesquite/ fluweelprosopis)

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

By the end of the 2013/14 financial year all existing *Prosopis*-infested areas should be cleared. The interior of the park will need annual follow-up operations until at least 2017. As periodic flooding of seasonal rivers may bring further infestations from outside the park, this estimate may need revision.

Unless all alien invasive species are cleared from the banks of the Orange River upstream of the park the riparian habitats within the park will undergo regular re-infestation. The monitoring and control programme is therefore unlikely to ever reach completion.

Objectives	Actions	Responsibility	Indicators	Timeframe	References
Monitor infestation of alien species including new	Continuous evaluation during ranger patrols	Section ranger	Monthly reports, maps	Ongoing	
invasions	Update list of alien plants as required	Section Ranger	Monthly reports	Ongoing	
	Monitor extent of invasion and effectiveness of control programmes (including area covered by each invasive alien species).	Biodiversity Social Projects (BSP) Area manager, Section ranger	Annual reports, maps, Prioritisation models	Annual	
To develop and implement an alien control plan	Develop and successfully implement Annual plans of operations and allocate budgets	Biodiversity Social Projects Area manager	Documented plan	Annual	
	Identify and develop partnerships to address Alien Plant Control on a landscape level, especially Orange River	Park manager	Partnership agreements; MoU's	Year 1 and ongoing	
	Secure future funding for alien control, based on prioritization.	Park manager, Biodiversity Social Projects Area manager	Budgets	Ongoing	



10.3 Tourism and marketing

This objective includes two sub-objectives:

- 1. Nature based responsible tourism
- 2. Waterfall and geomorphology, which focuses on interpretation of these features as the central attraction of the park.

The AFNP attracts 50, 000 to 100, 000 visitors annually. This wide variation in numbers depends largely upon the fluctuating Namaqua wild flower displays and the high levels of the Orange River. The influx of tourists into the Northern Cape offers the opportunity for day and overnight visitors at AFNP. Although the falls are the main attraction, there is much more to experience. It is a priority to evaluate the possibility of new tourism activities; two currently under consideration include a 4X4 trail and a short trail near the rest camp. Marketing is a key aspect of the programme with a particular focus on marketing the tourism route of which the park is a component. To ensure day visitors have a unique experience the park has implemented a daily limit of 150 day visitors.

High level objective: To promote the park as a value-for-money destination providing a range of diverse products and activities offering a variety of recreational and learning experiences in accordance with the principles of nature based responsible tourism.

Objectives	Actions	Responsibility	Indicators	Timeframe	References
To determine visitor needs and expectations directed	Conduct annual park visitor surveys.	Research partner /Regional tourism manager	Annual survey	Annually	
at increasing business volumes	Conduct a regional market analysis to understand the requirements and demands of the current and potential future market demands.	Research partner/ Regional tourism manager	Market survey /analysis report	Annually	
To promote the Park as a regional tourism hub and value for money destination	Conduct regular surveys to determine the market demand for additional tourism packages	Regional tourism manager / Hospitality services managers	Feedback report	Annually	
through focussed marketing and sales (<i>e.g.</i> Namibia/ flower/ Kgalagadi/ adventure and local and	Maintain and strengthen media relationships that play an important role in the flood warning	Regional marketing manager /Hospitality services manager	Media reports Visitor stats	Third quarter	
regional)	Continue with targeted marketing to the existing market share, with a focus on marketing the tourism route.	Regional marketing manager / Regional tourism manager	Media reports	Quarterly	
	Implement targeted marketing initiatives to emerging markets.	Regional tourism manager/ Hospitality services manager /Park manager	Visitors stats	Quarterly	
	Develop a cost effective way to measure the effectiveness of the marketing drive through guest feedback	Regional tourism manager/ Hospitality services manager	Feedback statistics report	Quarterly	
To improve the visitor experience by promoting the conservation values of the park through focussed awareness programmes	Improve the signage and information boards.	Park manager/ Hospitality services manager /Duty manager	Feedback reports	Ongoing	
	Develop, print and distribute quality pamphlets and brochures.	Park manager / Hospitality services manager	Feedback reports	Ongoing	

To improve the	Develop an interpretation control	Dark managar	Establishmont	Ongoing	
visitor experience by promoting the conservation values of the park through	Develop an interpretation centre to improve the current signage and interpretation.	Park manager, Hospitality services manager, Corporate social investment	Establishment of centre	Ongoing	
focussed awareness programmes	Tourism awareness training	Corporate social investment, Field guide, Hospitality services manager	Number of training sessions	Ongoing	
To collaboratively maintain, develop and diversify tourism activities and products as per	Implement and maintain the Nature Based Responsible Tourism Standards.	Regional tourism manager, Park manager, Hospitality services manager	Evaluation report	Quarterly	
the market research, in and around the park	Develop an activity desk, identify and implement new activities	Park manager, Hospitality services manager /Field guide	No of activities	Quarterly	
	Explore partnerships and models to deliver these services and activities with private sector, community, and other partners.	Business development unit, Regional tourism manager, Park manager	Number of SMME initiatives	Quarterly	
	Refurbish the remainder of accommodation units	Hospitality services manager , Field guide, Public relations, Regional tourism manager , Park manager	Feedback Report	Quarterly	
To optimise tourism revenue	Staff training	Hospitality services manager, Duty manager	KPA's	Ongoing	
	Yield management	Regional tourism manager, Park manager, Hospitality services manager	Financial reports	Annually /monthly	
To monitor and responsively manage key tourism performance indicators	Conduct regular responsible tourism assessments	Regional tourism manager, Hospitality services manager	Audit /inspection report	Quarterly	To monitor and responsively manage key tourism performance indicators
	Capture and analyse tourism statistics	Regional tourism manager, Hospitality services manager	Visitor statistics	Monthly	
	Conduct regular surveys to determine the customer satisfaction index	Regional tourism manager	Electronic guest feedback	Ongoing	
	Conduct regular camp standard audits	Regional tourism manager	Inspection reports /Audit report	Quarterly	



10.4 People-centered, co-operation and relationships

10.4.1 Stakeholder engagement

SANParks is required to build constituencies at international, national and local levels, in support of the conservation of the natural and cultural heritage of South Africa. It has to ensure that a broad cross-section of South Africans participate and get involved in biodiversity initiatives. It also recognises that its operations have a synergistic existence with neighbouring or surrounding communities for their educational and socio-economic benefit. Stakeholder engagement mechanisms, such as the Park Forum, and other committees are established to facilitate stakeholder and community participation in mutually beneficial programs and projects.

The Park Forum, which was formed in 2004 is representative of many stakeholders in the area. Quarterly meetings are held. A terms of reference has been drafted and approved and forms part of the Park Forum Charter.

Interaction with various other stakeholders takes place continuously, including with governmental and non-governmental agencies, public-private partnerships as well as the local and broader community. These stakeholders are involved in either the celebration of special calendar days, environmental education or representation on the Park Forum.

Good relations exist with the local Kai Garib Municipality, the South African Police Services (SAPS) and with the Department of Basic Education, Siyanda District. Both the municipality and the SAPS are represented on the Park Forum and the park is also represented on the Kai! Garib Tourism Forum.

The park aims to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders supporting SANParks core business. The stakeholders include:

- Government national, provincial and local spheres of government such as Departments of Environmental Affairs, Tourism, Education, Social Development, Water Affairs, Agriculture, Forestry and Fisheries, South African Police Services
- (ii) Conservation entities national and international conservation agencies, institutions and universities, and relevant conservation non-governmental organisations
- (iii) Business partners concessionaires, contracted commercial operators, suppliers of key products and services
- (iv) Communities those comprising the Kai!Garib Local Municipality, and Siyanda District Municipality
- (v) Employees all employees, individually and collectively, employee representative bodies and unions
- (vi) The media local newspapers and radio stations
- (vii) Customers visitors, internal staff, external staff, tourists, government, stakeholders and local communities.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To build beneficial relationships with local	Review and update the stakeholder engagement plan, with norms and standards	People and Conservation	Stakeholder engagement plan	Ongoing	
stakeholders through joint initiatives	Build relationships with stakeholders in accordance with the plan	People and Conservation	Terms of reference	Ongoing	
	Monitor and evaluate the implementation of the plan	People and Conservation	Annual reports	Ongoing	
To strengthen and activate relationships with	Review the terms of reference of the Park Forum, including representation	People and Conservation	Frequency of engagement	Ongoing	
stakeholders through the Park	Arrange and facilitate Park Forum meetings.	People and Conservation	Minutes of meetings	Ongoing	
Forum	Monitor and evaluate effectiveness of the Park Forum	People and Conservation	Quarterly reports, minutes of Park Forum meetings	Ongoing	
To coordinate and support volunteer groups	Identify park requirements and ensure that these are communicated to the groups	Park manager	List of park needs	Ongoing	
	Ensure that volunteer activities are aligned with park activities.	Park manager	Reports	Ongoing	
	Monitor and guide activities	Park manager	Reports	Ongoing	

10.4.2 Socio-economic opportunities and growth

Aligned to the corporate strategic objective, CSI is required to initiate viable, community-based socioeconomic projects. The programme will also facilitate the development of entrepreneurial skills and participation of local entrepreneurs in procurement and business opportunities presented through the national parks system.

The park's contribution will be conducted mainly through EPWP projects and by exploring partnerships and models to contribute to local skills development and by creating business opportunities. Future projects include the upgrading of the remaining chalets and continuous alien clearing. A local socio-economic initiative, namely the Nama Kappie Project, is in process with the aim to capacitate jobless women by providing an opportunity to participate in the local economy. The tourism sector has a lot of potential and the park is regarded as a popular tourism attraction on the "Quiver tree, food and wine route". A tourism community initiative between the park and members of this route was already engaged into. The aim is to enhance the tourism experience of the park's visitors by unlocking possible tourism opportunities which can probably benefit the local communities.

The opportunity exists to utilise the natural treasures of the Kalahari Desert on the one side and the Orange River on the other side, in order to draw tourists to the area in tandem with the rich cultural heritage of the area. Although the tourism accommodation aspect is an area where previously disadvantaged individuals (PDI) could get involved in, not only as labourers, but also as product owners (community tourism) this still proves to be a challenge.

High level objective: Facilitate regional socio-economic opportunities and growth								
Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References			
To promote and facilitate the development of SMMEs	Implement the Nama Kappie project	People and Conservation	PMO report	Year 1				



Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To promote and facilitate the development of SMMEs	Identify other feasible initiatives	People and Conservation	Project list	Year 2 and ongoing	
	Develop implementation guidelines for the identified initiatives	People and Conservation, Regional P&C Manager	Guidelines	Year 1	
	Implement identified initiatives	People and Conservation, Hospitality services manager	Monthly reports	Ongoing	
	Monitor success of initiatives	People and Conservation	Reports	Ongoing	
To facilitate expansion of EPWP	Identify opportunities to implement additional EPWP programmes	Regional P&C manager, Park manager	List of opportunities	Year 1	
programmes	Motivate for funding	Regional P&C manager	Business plan	Year 2	
	Align EPWP project deliverables with park operations	Regional P&C manager, Park manager	EPWP Annual plan of operations	Dependent on funding	
	Implement projects	Park manager	Project reports	Dependent on funding	

10.4.3 Cultural heritage

The primary objective of the cultural heritage management programme is to enhance the conservation of heritage resources in the park and to develop sites and resources with high heritage value. Cultural tourism initiatives where applicable, will be facilitated and supported.

A survey of the park was undertaken and compiled in a Cultural heritage management plan. As part of the plan, evaluations were made on the significance, conservation status and utilisation options of all the heritage resources identified during the study. Detailed recommendations were also made on ways to implement the plan.

As tabled below through responsible management, the conservation and accessibility of one cultural site will be explored and the promotion of the diverse cultural heritage of the area will be encouraged. Risks and threats include a lack of interest and participation of community members, together with financial and human resource constraints.

High level objective: To encourage the continuous effective management and promotion of the cultural heritage resources including living heritage, that characterise all the people of the region.								
Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References			
To promote the continuation of the diverse cultural heritage that characterises the people of the region, including living heritage	Identify opportunities to promote cultural heritage, <i>e.g.</i> Mother Language Day.	People and Conservation	Identified opportunities	Ongoing				

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To promote the continuation of the diverse cultural heritage that characterises the people of the region, including living heritage	Plan and execute identified cultural heritage initiatives.	People and Conservation	Monthly reports	Year 2	
	Updating of cultural displays (including the promotion of indigenous languages and cultures) and other relevant information	People and Conservation; Hospitality services manager	Displays	Ongoing	
	Facilitate sustainable cultural tourism initiatives	People and Conservation; Hospitality services manager;	Cultural tourism initiatives	Year 2 and ongoing	
To manage cultural heritage sites	Identify appropriate sites for SAHRA declaration (Blouputs)	People and Conservation, Section ranger	Site mapping	Year 1	
	Develop a monitoring system for cultural sites	People and Conservation	Monitoring programme	Year 1	
	Prioritize sites for monitoring within financial and other constraints.	People and Conservation	Status report	Year 2	

10.4.4 Environmental awareness, education and interpretation

As an overall strategy SANParks aims to extend environmental and cultural education from its existing focus on the youth to include a broader stakeholder base, and to develop relevant programmes to address issues which impact negatively on the environment. The approach to environmental education will be twofold:

a) Formal EE Programmes

These programmes will target the formal education sector and will be directed at school groups visiting national parks, and through an outreach programme, to learners in schools adjacent to national parks.

b) Non-formal EE Programmes

These programmes are aimed at groups such as farmers, communities, women and youth, and their content will be issuespecific.

In the past the park engaged in the national Kids in Parks programme, and current participation has been restricted mainly due to the destructive behaviour of damage causing animals specifically baboons and monkeys to tented accommodation. The Kids in Augrabies programme, transports learners from all 14 local schools, providing them with the opportunity for free access to the park and environmental education with the emphasis on knowing your park and promoting a strong environmental ethic.

Non-formal EE takes place continuously through community interactions with all groups including youth and adults who are physically and / or mentally challenged. These groups not only include the local community, but also groups from the Siyanda District, other provinces and Namibia. Holiday programmes are conducted within time and human resource constraints.

Annually the park hosts numerous environmental campaigns in commemorating environmental calendar days like National Water Week, World Environment Week, Arbor Week, World Aids Day *etc.* with extensive community participation.

The identified risk associated with this programme includes reliance on external funding to drive projects in the park and limited human resource capacity for effective implementation of the programme.



High level objective: To ensure the park and its facilities are accessible and affordable to educational centres, especially local schools, in order to promote awareness and encourage ownership of the unique biodiversity, culture and heritage of the region through education.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To raise awareness through environmental	Facilitate access to the park for environmental education purposes	People and Conservation; Regional People & Conservation	Number of EE learners to the park	Ongoing	
education and interpretation	Plan and implement campaigns to enhance environmental awareness, <i>e.g.</i> Special calendar days	People and Conservation	Monthly reports	Ongoing	
	Support and encourage youth development programs <i>e.g.</i> Junior honorary rangers,	People and Conservation	Monthly reports	Ongoing	
	Strengthen cooperative relationships with other initiatives, <i>i.e.</i> LoveLife, Conservation Soccer, Land Care, <i>etc.</i>	People and Conservation	Monthly reports	Ongoing	
To update interpretation material in order to enhance visitors' experience.	Review and update current material	People and Conservation and Regional marketing manager	Updated interpretation material	Ongoing	
	Maintain an effective field- guide activity service desk.	Hospitality services manager	Tourism statistics	Ongoing	
	Enhance and implement holiday programmes e.g. PowerPoint Presentations	People and Conservation	Holiday programmes	Ongoing	

10.5 Effective park management

10.5.1 Safety and security

The purpose of this programme is to provide a safe and secure environment for both our visitors, SANParks employees and concessionaires, to ensure that tourist perceptions are managed in order to protect the brand and reputation of SANParks as well as to ensure that the area integrity of the natural and cultural resources of the park is maintained in a sustainable manner. The current approach focuses on two spheres namely, planning to provide for the safety and security of visitors and staff involved in the management of AFNP and the operational planning directed at the protection of the natural resources of the park or the maintenance of the ecological and physical integrity of AFNP. The context of this safety and security plan must be seen as personal safety and does not address all aspects of the occupational health and safety requirements. While AFNP has a low level of risk with respect to visitor safety, the security of natural resources presents many and varied challenges. All conservation staff must be fully trained in safety and security and anti-crime strategies, as well as anti-poaching work, especially once black rhino have been re-introduced.

High level objectiv	e: To minimize threats to the	park, its staff and vis	itors by implementing a sat	fety and secur	ity plan.
Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To provide a high level of safety and security to staff and visitors	Review relevant safety and security plans.	Section ranger	Reviewed safety and security plan and SoAIM audit report	Biannual	Safety and security plan
	Train staff in area integrity management, conservation guardianship, and readiness to react to emergency situations.	Section ranger	Training records	Ongoing	
	Assess readiness of staff and functionality of equipment.	Section ranger	SoAIM reports	Ongoing	
To improve overall park safety through interactions with external role players	Align the safety and security activities to accommodate collaborative operations with external partners, <i>e.g.</i> SAPS when required.	Section ranger	Safety and security plan	Ongoing	
	Conduct regular patrols to ensure that area integrity is maintained.	Section ranger	Annual reports	Ongoing	
	To actively participate in various external safety and security related forums when required.	Section ranger	Minutes	Ongoing	

10.5.2 Environmental management programme

The purpose of this programme is to set clear guidelines for the management of environmental impacts and internal consumptive resource use *i.e.* making use of gravel. Proper management of development and operational activities within the park can only be achieved through appropriate planning tools 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 the SANParks policy framework. These key tools and controls used by the park forms the basis of an Environmental management framework.

The Minister of The Department of Water and 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 AFNP. Further to the provisions of NEMA, the park will develop standards of best practice to guide all operational activities that may have an impact on the environment. These activities will include any new infrastructure development that is not listed under NEMA; as well as general maintenance. The development of best practice standards will be guided by the precautionary principle. The precautionary principle 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.



Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To ensure compliance with environmental legislation and best practice principles for all management	Make all relevant environmental legislation available to park management.	Park manager	Updated environmental legislation and best practice principles available	Ongoing	
activities in the AFNP	Review and develop a set of best practice principles for identified activities as required.	Park manager	Best practice principles developed	Ongoing	Zonation Plan; EMS
	Conduct internal scoping of all activities that may potentially impact on the environment and ensure that EIAs and Heritage impact assessments are conducted where required and that EMPs are developed to guide activities	Park manager	Compliance as required	Ongoing	Zonation Plan

10.4.3 Human capital development programme

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

The park strives for the effective management of human capital through the recruitment and selection of highly qualified individuals to meet the strategic objectives of the organisation. We seek to promote lifelong learning within the organisation by implementing a skills development programme informed by a skills audit. The park furthermore seeks to maintain a healthy workforce within a supportive environment, and specific objectives include inculcating a sense of wellness, to maximise work performance and to develop an institutional culture that is sensitive to the needs of those in need of help. Transformation will be enhanced by implementing the Employment equity plan and ensure the attainment of the set equity targets.

The park has an establishment figure of 41. Each employee has set goals in terms of defined individual development plans. These development plans are based on the individual's training needs as agreed upon by the employee and his/her supervisor. The use of the Section education and training authorities for funding the training will be explored both at head office and park level. A Work place skills development plan is also produced for the park every year as required by legislation. This is coordinated at head office level, with input from the park and the Employment equity forum. The park reviews training needs on an annual basis and submits this to SANParks Head Office for authorisation. Compilation of training needs starts off with the Individual development plans for each staff member and then finalised with performance appraisals. Management also encourages and analyses all staff to improve their levels of skills and qualifications in their relevant field of expertise on an ongoing basis.

The administration of procurement, human resource issues, bookings and finances are implemented through the park's offices and all are governed and directed through SANParks' standard processes and procedures. The park currently has 41 permanent staff and four temporary staff on its establishment. This is expected to grow as a result of the park's expanding business operations due to the expansion of the tourism function to service the newly introduced tourism products.

The management actions would typically involve:

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 Conducting a skills audit and aligning staff development with both park expansion and development objectives. Training needs are also established in this way.

- Annual training calendars are drawn up for implementation (dependant on funding and management issues such as travel restrictions).
- SANParks has established Employment equity and skills development forums in which the park should participate.
- Individual development plans are drawn up for every staff member.
- Study bursaries are annually made available for employees.
- Various training interventions are assessed and considered for implementation, such as Abet.

A challenge is to source funding as the budget has been centralised.

<u> </u>	High level objective: To ensure a harmonious and productive work environment with a developed and capacitated workforce							
Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References			
To ensure the park attracts and retains the most suitable human capital	Implement the corporate selection and recruitment policy	HR administration officer	Procedures followed for appointments	Ongoing	SANParks recruitment and selection policy			
To implement the performance management system	Ensure category C and D have signed balance score cards	HR administration officer, Park manager	Balance score card documents	Ongoing				
To implement plans and skills development	Conduct skills audit	HR administration officer	Training plan in place	Ongoing	AFNP training plan			
strategies to meet the strategic goals of the organisation	Develop skills plan	HR administration officer	Skills plan	Ongoing	AFNP training plan			
	Conduct training interventions	HR administration officer	%of budget spent on training	Ongoing	AFNP training plan			
	Develop human capital in the fields of conservation, social ecology and ecotourism through the internship programme	HR administration officer	Implementation of Internship Programme	Ongoing				
	Enable staff to keep abreast of trends in conservation science and the tourism industry to positively influence the practises within the Park.	HR administration officer, Section ranger,	Affiliation to relevant bodies, Attendance of relevant meetings	Ongoing				
Promote the Employment equity act to attain the set organisational targets	Participate in the EE forum	HR administration officer, Park manager	Meetings	Ongoing	EE report submitted to Dept of Labour			
	Design EE Plan	HR administration officer, Park manager	EE Plan	Ongoing				
	Fill vacancies as per EE targets	HR administration officer, Park manager	Vacancies filled	Ongoing				



Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
Implement workplace health care programmes which focus on	Conduct Aids awareness workshops	HR administration officer	Workshops, attendance registers	Ongoing	Corporate HIV policy
preventative physical and mental health care	Provide private facilities within AFNP to enable employees access to ICAS	HR administration officer	Facilities, reports	ongoing	
	Invite professionals to the AFNP to promote awareness on OHS and mental health issues	HR administration officer	Attendance registers	Ongoing	
	Commemorate all events related to Wellness (e.g. AIDs day, World blood donor day, days of activism on non- violence against Women)	HR administration officer	Attendance registers, invitations	Ongoing	
Implement all HR policies and ensure compliance	Conduct educational training to staff on all HR policies	HR administration officer	Attendance registers, invitations	Ongoing	

10.5.4 Information management programme

The management and dissemination of information plays a significant role in ensuring the efficient management of the park. Such data is not only essential for formulating effective long-term management objectives, plans, programmes 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. It is vital that the appropriate data and information is collected, maintained and made readily accessible to staff responsible for all aspects of management. As such the park requires integration with SANParks national information systems, *i.e.* financial, human resources and reservations while acting as a source of spatial and research information for both SANParks and research institutions. In order to keep the information in SANParks databases current, pertinent information systems and management support needs to be setup for the park.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To develop and implement a records management and file plan for the park in accordance with SANParks policies and procedures	Implement the corporate file plan	Park manager, Administration officer	Records and documents filed in terms of plan	Ongoing	Corporate file plan and policy
	To establish a park based GIS capacity	Park manager	GIS software	Year 1	
	Ensure appropriate access to park files and records in accordance to corporate records management policy and guidelines.	Park manager, Administration officer	Access procedures recorded and implemented	Ongoing	Corporate file plan and records managemer policy

10.5.5 Risk management programme

The management of business risk is regarded by SANParks as an integral part of management across all business operations. In line with corporate governance best practices and as per PFMA requirements, the Board of SANParks has formalised the risk management processes by adopting a Corporate risk management framework. As its foundation, the risk management framework has enterprise-wide risk identification and an assessment process, based on a thorough understanding of the environment in which the organisation operates and the strategic corporate objectives it intends to deliver on. The main aim of the Corporate risk management framework is to instil a culture of corporate risk management and risk ownership being practised as the responsibility of all. This will provide SANParks with a comprehensive understanding of all identified risks and their potential impact on the achievement of objectives - thereby creating a good basis for the effective management of those risks that are assessed as exceeding the risk appetite of the organisation.

Acknowledging that all activities occurring at different levels within the organisation are exposed to various types of risks, the focus of SANParks' risk management framework is to shift the attention of the organisation towards a philosophy of optimising the balance between potential risks and the potential rewards that may emanate from both pro-active and conscious risk oriented actions. As such SANParks maintains a corporate risk profile of the identified key strategic risks the organisation faces. This profile is communicated to the Board and is reviewed on an ongoing basis. The risk profile reflects among others the risks identified, how each is addressed and or monitored.

At individual park level the park manager is responsible for risk management. Being the link between the operational activities and its environment on the one hand, and the corporate support and management structure on the other, the park manager is in many instances responsible implementation of corporate initiatives, for programmes, the management plan and others that form part of the SANParks strategy to address or mitigate issues of risk. Examples are the implementation and roll-out of a safety and security plan, implementing and maintaining ecological monitoring systems to identify and assess the impact of environmental change, and complying with financial and cash-flow directives especially in economically depressed times. Similarly, the park manager needs to ensure that emerging issues of risk, that can jeopardise the achievement of park (and SANParks' corporate) objectives, are timely identified and assessed in terms of possible severity. In consultation with the corporate support structure such issues are either assessed to be within the management capacity of the park and its existing resources, or the matter is elevated to a corporate level, where a specific risk management strategy is agreed upon, resources allocated where applicable, and a risk management or monitoring plan is implemented.

Objectives	Actions	Responsibility	Indicators	Timeframe	References
To establish and maintain effective, efficient and	To identify and assess risks for all business operations in the park.	Park manager	Risk register	Ongoing	
efficient and transparent systems of risk management	To develop and implement responses to address and prevent or mitigate issues of risk.	Park manager, Section ranger, P&C officer, HR administration officer	Risk response plan	Ongoing	PFMA, OHS Act, NEM:PAA, NHBRC regulations and other
	To monitor effectiveness in terms of the risk response plan and improve as needed.	Park manager, Section ranger, P&C officer, HR administration officer	BSC	Ongoing	



10.5.6 Financial management and administration programme

As a public entity, SANParks is also governed by 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. SANParks adopted the 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 to budget guidelines and instructions issued by SANParks Corporate finance division. The budget period is for one financial year starting on 1 April and end on 31 March the following year. Without incisive financial management of the park, there can be no realistic conservation effort. For the next 10 years the park will ensure that all park operations and park projects are cost effective and financially sound. In addition particular attention will be given to developing a diverse income base and proactive financial networking to enable to the park to move towards being financially sustainable.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To attain effective Financial Management of the AFNP	Ensure less than 1% variance on cost of operations	Park manager, Financial manager	Monthly financial statements reflecting less than 1% variance	Ongoing	Financial management systems
	Ensure sound financial management of special projects; <i>i.e.</i> Working for Water and others	BSP (Biodiversity Social Projects), Project manager	s),		Project business plans
	Identify possible external funding to supplement current income streams	Park manager, Financial manager	Funding proposals submitted	Ongoing	Partnership contracts signed
	Develop support mechanisms and procedures to receive grants and donations.	Park manager, Financial manager	Mechanisms and procedures in place	Year 1	
To ensure financial accountability and align financial management systems	Facilitate an annual independent audit of financial records	Park manager, Financial manager	Audit report	Ongoing	
	To ensure sound asset management	Park manager, Heads of departments	Asset register	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 management plan objectives	Financial manager, Park manager, Heads of departments	Annual budgets prepared	Ongoing	Annual budgets
	Provide monthly financial reports timeously by cost centre	Financial manager	Financial reports prepared	Ongoing	

10.5.7 Infrastructure programme

The purpose of this programme over the next ten years will be on the upgrading and maintenance (day to day and scheduled) of existing infrastructure. Infrastructure in the park consists of facilities in support of conservation (such as management roads and tracks, office facilities, fences, bulk services, workshops and stores), staff accommodation and tourism (such as tourist roads and tracks, walking trails, bulk services, lookout points, picnic site, and tourism accommodation). These facilities enable staff to execute the respective duties towards achieving the parks objectives and providing a tourism product at the best possible standard. Tourist roads and tracks need urgent upgrading and maintenance.

The Conservation development plan for the park (once completed), applicable legislation and limitations of the zonation shall guide new infrastructure development.

Objectives / Initiatives	Actions	Responsibility	Indicators	Time- frame	References
To ensure that infrastructure is maintained to a desirable state	Compile an inventory of all infrastructures in the park, assess construction types and determine extent of maintenance needed.	Park manager, Technical officer, Regional infrastructure project manager	Inventory	Year 1	
	To document the scope of work for each maintenance need in accordance with the relevant specifications.	Park manager, Technical officer, Hospitality services manager	Maintenance specs	Ongoing	NHBRC Building regulations, SANS 0142 Electrical regulations
	To prioritize maintenance needs and develop a 5-year maintenance plan within approved financial resources.	Park manager, Technical officer, Hospitality services manager	Maintenance Plan, Annual schedules	Ongoing	
	To implement the 5-year maintenance plan according to the annual maintenance schedules	Park manager, Technical officer, Hospitality services manager	Monthly and Annual reports	Ongoing	
	To assess progress, revise annual maintenance schedules and evaluate standard of work.	Park manager, Technical officer, Hospitality services manager	Annual report	Ongoing	
	Facilitate the development of the BMW centre	Park manager	Contract and plans	Year 2	
To ensure that all mechanical and electrical equipment is maintained to a desirable state	To compile an inventory of all mechanical and electrical equipment in the park, determine maintenance schedules of each and list service providers.	Park manager, Technical officer, Hospitality services manager	Inventory	Year 1	
	To develop an annual maintenance schedule for all equipment.	Park manager, Technical officer, Hospitality services manager	Annual maintenance schedule	Ongoing	OHS Act, SANS 0142 Electrical regulations
	To implement the annual maintenance schedule.	Park manager, Technical officer, Hospitality services manager	Annual maintenance schedule	Ongoing	

All infrastructure in AFNP are listed in Section 7.

Section 11: costing



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

Guiding principles

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

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

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

Recurring costs

The annual operating cost (includes man days, travel, non-park funding and shortfall, where applicable) is estimated at R 7, 468, 902 for 2012/2013. These ongoing costs are split according to the programmes listed in Table 3.

Table 3. The estimated annual operational costs for 2012/2013.

Programmes	Estimated budget	Percentage of total
Tourism	R 3, 113, 755	41.5%
Infrastructure	R 1, 610, 530	21.5%
Alien plants	R 744, 636	9.9%
Safety and security	R 348, 627	4.6%
Finance and administration	R 331, 714	4.4%
Environmental education	R 298, 095	4.0%
Human capital	R 294, 372	3.9%
Rehabilitation	R 196, 140	2.6%
Species of special concern	R 194, 958	2.6%
Socio economic	R 118, 012	1.6%
Stakeholder relations	R 96, 659	1.3%
Fresh water management	R 43, 208	0.6%
Environmental management	R 39, 983	0.5%
Cultural heritage management	R 30, 451	0.4%
Risk management	R 20, 843	0.3%
Information management	R 16, 076	0.2%
Total	R 7, 498, 060	100%

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Once off costs

In addition to the above there is a further once-off cost estimated at R10, 444, 000 over the next five years (see Table 4).

Table 4: Estimated once off cost of the various programs.

Activity	Estimated budget
New infrastructure and major upgrades	R10, 444, 000
Total	R10, 444, 000

Unallocated fixed costs

The unallocated fixed costs for 2012/2013 are R1, 262, 277.

Maintenance

A breakdown of the infrastructure, both existing and new with their replacement value and an estimate of the ongoing annual maintenance for 2012/2013 is provided in table 5. The projected maintenance for existing infrastructure is estimated at R1, 381, 078 in 2012/2013. If the new planned infrastructure is developed it will add a further R155, 680 (at 2012/2013 rates) onto this annual maintenance budget, increasing it to R1, 536, 758. The maintenance requirement was calculated as a percentage of the replacement value.

Table 5: Estimated replacement value of the existing infrastructure and any new infrastructure required with the estimated annual maintenance budget for the existing and new infrastructure.

Estimated re	placement value	•	Estimated maintenance			
	Existing (R)	New (R)	Total (R)	Existing (R)	New (R)	Total (R)
Buildings	48, 316, 500	9, 500, 000	57, 816, 500	695, 758	136, 800	832, 558
Roads	11, 630, 000	0	11, 630, 000	241, 600	0	241, 600
Trails	3, 582, 500	0	3, 582, 500	71, 650	0	71, 650
Fencing	14, 240, 000	904, 000	15, 144, 000	284, 800	18, 080	302, 880
Water system	870, 000	40, 000	910, 000	35, 400	800	36, 200
Electricity	2, 303, 500	0	2, 303, 500	46, 070	0	46, 070
Other	200, 000	0	200, 000	4, 000	0	4, 000
Sewerage	90, 000	0	90, 000	1, 800	0	1, 800
Total	81, 232, 500	10, 444, 000	91, 676, 500	1, 381, 078	155, 680	1, 536, 758



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 making provision for their replacement. Management should make provision for about R485, 389 in 2012/2013, this figure is presented in Table 6.

Table 6: Total value based on the original purchase price of various categories of minor assets.

Asset type	Asset value	Provision for replacement
Computer equipment	R332, 350	R110, 783
Firearms	R9, 912	R991
Furniture	R907, 746	R129, 678
Machinery and equipment	R1, 016, 843	R145, 263
Office equipment	R70, 421	R10, 060
Vehicles and watercraft	R158, 817	R22, 688
White goods	R461, 479	R65, 926
Total	R2, 957, 567	R485, 389

Summary

It is estimated that the Park will require an annual operating budget of R9, 897, 894 for 2012/2013, increasing to R12, 495, 863 in 2016/2017. In addition to this amount the Park will also require once off cost of R10, 444, 000 over the next five years. A summary is presented in table 7.

Table 7: Summary of the annual and once off operational costs (based on actual expenditure) that is required to fully implement the activities in the management plan over the next five years.

	2012/2013	2013/2014	2014/2015	2015/016	2016/2017
Recurring costs	R9, 897, 894	R10, 491, 768	R11, 121, 274	R11, 888, 550	R12, 495, 863
Once off costs			R10, 444, 000		
SANParks budget	R9, 086, 127	R9, 631, 295	R10, 209, 172	R10, 821, 723	R11, 471, 026
Deficit	R811, 767	R860, 473	R912, 101	R966, 827	R1, 024, 837

The deficit can be broken down as follows:

- An additional amount of R651, 767 is required to cover the current maintenance shortfall.
 - o An additional R417, 131 is required for buildings;
 - An additional R123, 836 is required for roads;
 - \circ $\,$ An additional R110, 800 is required for fences.
- An additional amount of R60, 000 is required in support of rhino monitoring.
- An additional amount of R50 000 is required in support of the human capital programme.

• An additional amount of R50 000 is required in support of the tourism programme.

Implications:

- Should the park be unsuccessful in securing the amount of R651, 767 then the maintenance of infrastructure will be negatively affected.
- Should the park be unsuccessful in securing the amount of R60, 000 then the future rhino monitoring in support of the reintroduction of rhino would be negatively affected. This will increase the risk of rhino poaching.
- Should the park be unsuccessful in securing the amount of R50, 000 then the training of staff would be negatively affected.
- Should the park or region be unsuccessful in securing the amount of R50, 000 then the park / region would not be able to initiate a tourism research project.

Income

SANParks fund the operational and capital expenditure through several income streams. Tourism income is the main contributor; however Government also contributes towards the management of SANParks through various grant schemes. It must be stressed that these grants are allocated based on the project prioritisation, project scale and might differ from year to year. In AFNP's case grant funding contribute toward alien clearing,

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Appendix 1: Declarations



Government Notice 216 / Government Gazette 1506 of 5 August 1966 defined the extent of the land that formed the Augrabies Falls National Park in terms of the National Parks Act, 1962.

Government Notice 231 / Government Gazette 3650 of 15 September 1972 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976)

Remainder of Portion 1 of the Farm Rooipad 15

Government Notice 231 / Government Gazette 3650 of 15 September 1972 excluded the following land from the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976)

Portion 6 of the Farm Rooipad 15.

Government Notice 44 / Government Gazette 8125 of 26 March 1982 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976)

An area situated in the Administrative District of Gordonia, Province of the Cape of Good Hope, in extent 4 270 hectares, as represented and described in Diagram SG 208/76 Cape Town.

Government Notice 2856 / Government Gazette 11084 of 31 December 1987 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976)

Portion 31 of the Farm Blouputs 10, in extent 18,2688 ha; Portion 10 (portion of Portion 9) of the farm Rooipad 15, in extent 173,3459 ha Portion 30 of the farm Blouputs 10, in extent 0,1191 ha Portion 11 (portion of Portion 9) of the farm Rooipad 15, in extent 4,0826ha Portion 12 (portion of Portion 9) of the farm Rooipad 15, in extent 18,2496 ha

Government Notice 2856 / Government Gazette 11084 of 31 December 1987 excluded the following land from the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976)

Portion 14 (portion of Portion 1) of the farm Rooipad 15, in extent 25,5022 ha Portion 15 (portion of Portion 1) of the farm Rooipad 15, in extent 40,5703 ha Portion 13 (portion of Portion 10 of the farm Rooipad 15, in extent 1,8979 ha Portion 16 of the farm Rooipad 15, in extent 35,4444 ha.

Government Notice 1520 / Government Gazette 12597 of 6 July 1990 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976):

Bokvasmaak Native Reserve 498 in extent approximately 4, 677 ha (later amended to 73, 700 ha see below)

Lot 495, in extent approximately 750 ha (later amended to 791 ha see below).

Government Notice 1211 / Government Gazette 13273 of 30 May 1991 made the following amendments to Government Notice 1520 / Government Gazette 12597 of 6 July 1990:

"73, 700 ha" to be substituted for the expression "approximately 4, 677 ha", and the substitution of "791 ha" for the expression "approximately 750 ha".

Government Notice 2202 / Government Gazette 15262 of 19 November 1993 excluded the following land from the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976):

The land described as Bokvasmaak Native Reserve 498, in extent approximately 73, 700 ha and Lot 495, in extent approximately 791 ha.

Government Notice 2202 / Government Gazette 15262 of 19 November 1993 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976):

Unsurveyed portion of the Farm 498, in extent approximately 70, 928 ha, situated in the Division of Gordonia, Province of the Cape of Good Hope.

Government Notice 1350 / Government Gazette 15892 of 5 August 1994 declared the following land to be part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976):

Portion 1 of the Farm Waterval 497, situated in the Division of Gordonia, Northern Cape Province in extent 5, 803,3145 ha.

Government Notice 599 / Government Gazette 17093 of 12 April 1996 excluded the following land from the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976): The land described as Bokvasmaak 498, in extent 70, 928 ha, situated in the Division of Gordonia, Northern Cape Province.

Government Notice 657 / Government Gazette 26374 of 28 May of 2004 excluded the following land from the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976): Remainder of the Farm 498 (Melkbosrand), in extent 4, 137 ha, from the Augrabies Waterfall National Park, situated in the Administrative District of Gordonia, Northern Cape Province.

Government Notice 907 / Government Gazette 26615 of 30 July 2004 declared the following land as part of the Augrabies Falls National Park in terms of the National Parks Act (Act 57 of 1976): Portion 2 of the Farm Deberas No. 8, Kenhardt Registration Division, Northern Cape Province, measuring 2, 121.3428 ha in extent and held by Title Deed T2456/2004.

Government Notice 28 / Government Gazette 27167 of 21 January 2005 amended Notice 657 published in Government Gazette No. 26374 of 28 May 2004 by:

Deleting reference to the Remainder of Farm No. 498 in the Schedule, and replace it with Portion 1 of the Farm Riemvasmaak No. 498.

Government Notice 1054 /Government Gazette 31461 of 3 October 2008 declared the following land to be part of the Augrabies Falls National Park under the National Environmental Management: Protected Areas Act, 2003:

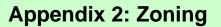
Portion 56 (a portion of portion 48) in extent of the farm Zeekoe-Steek No.9, Kenhardt Registration Division, Northern Cape Province, measuring 1.1991 hectares in extent and held by Title Deed No. T3239212006;

Portion 13 of the farm Rooipad No.15, Kenhardt Registration Division, Northern Cape Province, measuring 1.8979 ha in extent and held by Title Deed No. *T7926712005;*

Portion 14 of the farm Rooipad No.15, Kenhardt Registration Division, Northern Province, measuring 25. 5022 ha in extent and held by TItle Deed No. T79267/2005;

Portion 5 of the farm Omdraai No.492, Kenhardt Registration Division, Northern Cape Province, measuring 3 001.6988 ha in extent and held by Title Deed No. T302711995;

Portion 2 of the farm Nelshoop No.12, Kenhardt Registration Division, Northern Cape Province, measuring 1 775.0263 ha in extent and held by Title Deed No. T89880/2002





Introduction

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

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

In addition to internal use zoning, the zoning plan also describes how the park interacts with the processes which control land use and activities in the Buffer zones around national parks (e.g. SDFs and municipal IDPs). The Buffer zones identify the area within which activities such as landuse change may have an influence on the park (current and future extent), describe responses at a strategic level, and serve to define the Buffer zone in terms of the DEA policy on Buffer zones for national parks and the SANParks Buffer zone policy.

Rationale for use zones

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

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

Park use zonation system

The zoning system

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

a) Visitor use zones covering the entire park, and

b) Special management overlays which designate specific areas of a park that require special management interventions.

The zoning of Augrabies Falls National Park is shown in Map 4, and summarised in Table One.

The zoning process and its linkage to the underlying environmental analysis

The park use zonation plan is a lean version of the Conservation Development Framework (CDF). The park use zonation is based on the same biodiversity and landscape analyses undertaken for a CDF. However, certain elements underlying the CDF may not be fully incorporated into the park use zonation. In particular, the park use zonation plan will usually not incorporate elements such as a full tourism market analysis. Typically the park use zonation approach is applied in smaller and developing parks such as AFNP, though the long term objective is to have a full CDF for all parks.

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

Map 5 shows the relationship between the use zoning and the summary products 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 resource conservation rather than tourist use. Further, in many cases the boundaries between zones are based on changes in environmental sensitivity. Table 2 summarises the percentage area of the park covered by each zone, as well as the percentage of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value analysis) that are in each zone. Almost 85% of the park is covered by zones that are strongly conservation orientated in terms of their objectives (i.e. remote and primitive), though less than 15% is zoned in the most strongly conservation orientated zone (Remote). Fortunately, the correlation between the spatial distribution of environmentally sensitive habitats and the conservation orientated zones is reasonably strong, with the Remote zone containing 30% of the highly sensitive habitats even though it only covers 14% of the surface area Conversely, the tourist orientated Low intensity leisure zone covers approximately 14% of the park yet contains only 3% of the sensitive habitats.

7		Experential	Interaction between	T	T				Aesthetics and Recreational Conservation
Zone	General Characteristics	Qualities	users	Type of Access	Type of activities	Type of Facilities	Conservation Objectives	Biophysical Conservation Objective	Objective
REMOTE*	Retains an intrinsically wild appearance and character, or capable of being restored to such.	Solitude and awe inspiring natural characteristics	None to very low	Controlled access, only on foot for visitors	Hiking in small groups	Established footpaths where erosion may be a problem. Essentially undeveloped and roadless	Maintain the zone in as near to a natural state as possible with no impact on biodiversity pattern or processes. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimized.	The zone should be kept in as near to a natural state as possible with no impact on biodiversity pattern or processes. Deviation from a natural/pristine state should be minimized, and existing impacts should be reduced.	The area should be kept in a natural state, and activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) should not be allowed.
PRIMITIVE	Generally retains wilderness qualities, but with basic self-catering facilities (concession facilities may be more sophisticated). Access is controlled. Provides access to the Remote Zone, and can serve as a buffer.	Experience wilderness qualities	Low	Controlled access. Accompanied or unaccompanied. Foot; 4x4 vehicles	Hiking; 4x4 drives; game viewing; horse riding	Small, basic, self-catering; or limited concessions with limited numbers (concession facilities may be more sophisticated); 4x4 trails; hiking trails	Maintain the zone in an almost completely natural state with little or no impact on biodiversity processes, and very limited and site specific impacts on biodiversity pattern. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimized.	The zone should be kept in an almost completely natural state, and deviation from a natural/pristine state should be small and limited to restricted impact footprints. Any facilities constructed in these areas, and activities undertaken here should be done in a way that limits environmental impacts. Road and infrastructure specifications should be designed to limit impacts.	The area should be kept in a natural state, and activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) should be restricted and impacts limited to the site of the facility.
LOW INTENSITY LEISURE	The underlying characteristic of this zone is motorised self- drive access with basic facilities. The numbers of visitors are higher than in the Remote and Primitive Zones.	Comfortable facilities in a relatively natural environment.	Moderate to high	Motorised self-drive access.	Motorised self-drive game viewing, picnicking, walking, cycling; rock climbing; hiking; adventure activities.	Facilities limited to basic picnic sites; ablution facilities; information/education centres; parking areas. Small to medium (incl. camping) rest camps with basic facilities. Low spec access roads to provide a more wild experience.	Maintain the zone in a largely natural state that is in keeping with the character of a Protected Area, mitigate the biodiversity impacts of the relatively high levels of tourism activity and infrastructure that are accommodated within this zone through careful planning and active management, and ensure that the negative impacts of the activities and infrastructure are restricted to the zone.	The zone should be kept in a largely natural state. Deviation from a natural/pristine state should be minimized and limited to restricted impact footprints as far as possible. However, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable.	The zone should be maintained in a largely natural state from an aesthetics point of view. Although it is inevitable that activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience.
HIGH INTENSITY LEISURE	The main characteristic is that of a high density tourist development node, with modern amenities, where more concentrated human activities are allowed.	Comfortable and sophisticated facilities while retaining a natural ambiance	High	Accessible by motorised transport (car/bus) on high volume transport routes, including delivery vehicles.	As above. Additional sophisticated infrastructure. Larger, organised adventure activities (orienteering, fun runs). Dining at restaurants.	High density tourist camps with modern amenities. Footpaths, transport systems, accommodation, restaurants, curio and refreshment stalls; education centres. High volume roads.	The zone needs to be managed to ensure that the overall objectives and purpose for proclamation of the park are not compromised by the very high levels of tourism activity and infrastructure that are accommodated within this zone. Activities and infrastructure in this zone should be managed to ensure there is a minimal effect on the surrounding natural environment.	The zone must retain a level of ecological integrity consistent with a protected area. 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 no activities or infrastructure should be allowed which compromise the overall objectives and purpose for proclamation of the park.	The area should be managed to provide a relatively natural outdoor experience. Although, it is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), the aesthetics of the zone still need to be maintained in a sufficiently natural state to ensure that the overall objectives and purpose for proclamation of the park are not compromised.

Table 1: Summary of Use zone characteristics

*Wilderness areas need to be investigated and officially designated.



Table 2: 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 as a percentage of park area	Percentage of highly sensitive areas that are in the zone
Augrabies Falls Nati	ional Park		
Conservation	Remote	14.3	29.8
orientated zones	Primitive	70.5	65.3
Tourism orientated	Low Intensity Leisure	13.8	3.0
zones	High Intensity Leisure	1.5	2.0

Remote zone

Characteristics

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

Visitor activities and experience

Activities: Access is strictly controlled and on foot. Groups must be small, and can either be accompanied by a guide or unaccompanied. Several groups may be in area at the same time, but if necessary densities and routes should be defined so that no signs can be seen or heard between the groups. The principles of "Pack it in Pack it out" must be applied.

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

Conservation objectives of the zone

The conservation objective is to maintain the zone in as near to a natural state as possible with no impact on biodiversity pattern or processes. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimised. The zone should be managed within the following specific objectives:

Biophysical environment: The zone should be kept in as near to a natural state as possible with no impact on biodiversity pattern or processes. Deviation from a natural / pristine state should be minimised, and existing impacts should be reduced.

Aesthetics and recreational environment: The area should be kept in a natural state, and activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) should not be allowed.

Facilities

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

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

Audible equipment and communication structures: None.

Access and roads: Public access is nonmotorised. Vehicular access and parking is provided in the adjoining Primitive zone. 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 should be rationalised, and eventually removed.

Location in park

In AFNP, remote areas were designated in five rugged areas with high environmental sensitivity.

Primitive zone

Characteristics

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

This zone has the following functions:

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

Visitor activities and experience

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

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

Conservation objectives of the zone

The conservation objective is to maintain the zone in an almost completely natural state with little or no impact on biodiversity processes, and very limited and site specific impacts on biodiversity pattern. Existing impacts on biodiversity either from historical usage or originating from outside the zone should be minimised. The zone should be managed within the following specific objectives:

Biophysical environment: The zone should be kept in an almost completely natural state from a biodiversity perspective, and deviation from a natural / pristine state should be small and limited to restricted impact footprints. Existing impacts should be reduced. Any facilities constructed in these areas, and activities undertaken here should be done in a way that limits environmental impacts. Road and infrastructure specifications should be designed to limit impacts.

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

Facilities

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

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

Audible equipment and communication structures: None.

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



Location in Park

In AFNP, primitive areas were designated to protect most of the remaining sensitive areas that were not incorporated into remote zones from high levels of tourism activity. In addition, primitive areas were designated along the southern boundary to buffer the core of the park from external impacts, and around the remote areas to buffer them from higher use tourist areas. In areas where remote zones border on the park boundary, a 100 m wide primitive zone was designated to allow park management access to boundaries. Primitive areas were also designated to allow management and controlled tourist 4x4 access through remote areas north of the Gariep River. In areas where remote zones border on the park boundary, a 100 m wide primitive zone was designated to allow park management access to fear the park boundary, a 100 m

Low intensity leisure zone

Characteristics

The underlying characteristic of this zone is motorised self-drive access with basic facilities. The numbers of visitors are higher than in the remote and primitive zones. Relatively comfortable facilities are positioned in the landscape retaining the inherent natural and visual quality which enhances the visitor experience of a more natural and self providing experience. Access roads are low key, preferably gravel roads and or tracks to provide a more wild experience. Facilities along roads are limited to basic self-catering picnic sites with toilet facilities. In some parks, large busses and open safari vehicles are not permitted.

Visitor activities and experience

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

Interaction with other users: Moderate to high

Conservation objectives of the zone

The conservation objective is to maintain the zone in a largely natural state that is in keeping with the character of a Protected Area, mitigate the biodiversity impacts of the relatively high levels of tourism activity and infrastructure that are accommodated within this zone through careful planning and active management, and to ensure that both the negative effects of the activities and infrastructure are restricted to the zone. The zone should be managed within the following specific objectives:

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

Aesthetics and recreational environment objectives: The zone should be maintained in a largely natural state from an aesthetics point of view. Although it is inevitable that activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), these should be managed and limited to ensure that the area 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 (including camping) camps of low to medium density 25-35 beds. Additional facilities can include swimming pools. Trails for 4x4 vehicles can also be provided. Day visitor site are not placed within the camps.

Sophistication of facilities: Self contained units with bathroom facilities. Camp sites will include ablution facilities.

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

Location in park

In AFNP, Low intensity leisure areas were designated along the current tourist access routes and game viewing areas west of the falls. 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.

High intensity leisure zone

Characteristics

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

Visitor activities and experience

Activities: Traditional game viewing routes with associated more sophisticated infrastructure, sight seeing at tourist destinations, picnicking, walking, cycling, rock climbing, hiking, adventure activities (orienteering, fun runs), activities associated with amenities such as dining in restaurants.

Interaction with other users: High

Conservation objectives of the zone

The zone needs to be managed to ensure that the overall objectives and purpose for proclamation of the park are not compromised by the very high levels of tourism activity and infrastructure that are accommodated within this zone. Activities and infrastructure in this zone should be managed to ensure there is a minimal effect on the surrounding natural environment. The zone should be managed within the following specific objectives:

Biophysical environment objective: The zone must retain a level of ecological integrity consistent with a protected area. 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 inevitable, however no activities be or should allowed infrastructure be which compromise the overall objectives and purpose for proclamation of the park.

Aesthetics and recreational environment objective: The area should be managed to provide a relatively natural outdoor experience. Although, it is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), the aesthetics of the zone still need to be maintained in a sufficiently natural state to ensure that the overall objectives and purpose for proclamation of the park are not compromised.

Facilities

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

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

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

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



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Location in park

In AFNP, High intensity leisure areas were designated around the main tourist precinct around the falls and gorge, as well as the main entrance road to the park. The two public roads which currently cut through the park were also zoned High intensity leisure (despite the fact that these transport routes are inappropriate for the park and disrupt its zoning and land use scheme) to accommodate currently unavoidable high levels of activity.

Overview of the special management overlays of Augrabies Falls National Park

Special management overlays which designate specific areas of the park that require special management interventions were identified. Two types of area were designated (Map 4).

Special conservation area- Visual protection: Areas with extremely high sensitivity to visual impacts were included in this overlay. This area needs to be carefully managed to minimise or eliminate any aesthetic or visual intrusion of development and tourism activities. These areas were concentrated along the gorge and falls, as well as highly visible mountainous areas both north and south of the Gariep River.

Special conservation area – Closed woodland Zizyphus mucronata: This vulnerable and rare vegetation type was identified for special protection to minimise risk of any further loss of habitat as well as to prioritise rehabilitation work.

The park buffer zone

This section describes how the park interacts with the processes which control land use and activities in the Buffer zones around national parks (e.g. SDFs and municipal IDPs). The Buffer zone section identifies the area within which activities such as landuse change may have an influence on the park (current and future extent), describes responses at a strategic level, and serves to define the Buffer zone in terms of the DEA policy on Buffer zones for national parks and the SANParks Buffer zone policy.

The current extent of AFNP is included in a conservation focused category in the land use maps included in the SDFs of the local and district municipalities in which the park is located. These SDFs are the spatial components of municipal IDPs. The park interacts with the appropriate local government processes such as SDF and IDP development on an ongoing basis as part of the Bioregional programme, in order to ensure that issues such as appropriate development of Buffer zones around parks are also incorporated into proactive land use planning instruments such as SDFs and IDPs.

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

The Buffer zone for AFNP has two overlaying categories, namely priority natural areas, and a visual / aesthetic zone, depicted in Map 6.

Priority natural areas

This zone aims to ensure the long term persistence of biodiversity, within and around the park, by identifying the key areas on which the long term survival of the park depends. This includes areas important to both biodiversity pattern (especially reasonably intact high priority natural habitats) and processes (ecological intact linkages, catchments, 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 parks 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 of natural veld, development beyond existing transformation footprints, urban expansion, intensification of landuse through golf estates etc) should be opposed within this area. Developments with site specific impacts (e.g. a lodge on a game farm) should be favourably viewed if they contribute to ensuring conservation friendly land use within a broader area. Further inappropriate developments, such as dam construction, excessive aquifer exploitation, and development resulting in the loss of riparian vegetation, should be opposed. In addition, the control of alien vegetation, the control of soil erosion, and appropriate land care (e.g. appropriate stocking rates) should be promoted.

Viewshed protection

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

Development guidelines

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

Current status and future improvements

The current park use zonation is based on the same biodiversity and landscape analyses undertaken for a CDF; however certain elements underlying a CDF such as a tourism market analysis are not be fully incorporated into the park use zonation. A full CDF will be developed for Augrabies Falls National Park within the current update cycle. Remote areas will be investigated for possible formal designation as Wilderness Areas in terms of Section 22 of the NEM:PAA.

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Objectives

The objectives of the stakeholder participation process are to:

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

Approach

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

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

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

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

The stakeholder participation strategy for Augrabies Falls National Park

The various stakeholder events and activities carried out during the process are summarised in the tables below.

STAKEHOLDER EVENTS AND ACTIVITIES

Stakeholder consultation

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

Identified international stakeholders	BMW Germany; Global Vision International
	(GVI)
Local government	Siyanda District Municipality; Kai Garib
	Municipality (Health Services, etc); Local
	Department of Social Development (CDWs).
Provincial government	Northern Cape Departments such as DEA Dept.
	of Education (DoE), Labour, Arts & Culture,
	Provincial Public Protector.
Park forum	All members.
Visitors to parks	All visitors that have completed registration
	forms and are reflected on the park database.
Local residents/ Neighbours	Communities of Augrabies, Noudonsies,
	Marchand, Alheit, Kakamas, Cillie, Lutzburg,
	Riemvasmaak, Vredesvallei, Blouputs, Rooipad,
	Keimoes, Upington, Kenhardt, Schuitdrift,
	Onseepkans and Pofadder
Land owners	Farmer's unions and all landowners bordering
	the park
Land claimants	Riemvasmaak Trust
Community organisations	Youth Groups, Elderly Groups, Women's
	Groups, HIV/Aids Oriented Groups, Church
	Groups, Youth Against Crime (South African
	Police Services)
Local business	All current local suppliers and other interested
	businesses in neighbouring communities
Business associations	Kakamas Besigheidskamer
Media	Die Gemsbok, Radio Riverside
Research	Kimberley Scientific Services
Education	Schools, institutions and colleges in the
	neighbouring communities
Conservation organisations	GVI
Non-Governmental Organisations (NGOs)	Other NGOs active in neighbouring
	communities.
Tourist associations	Khara Hais Tourism; Green Kalahari Forum;
	Northern Cape Tourism Board.
Tour operators	Kalahari Outventures, Khamkirri, Daberas
	Adventures, Liquid 360
Other	Regional Land Claims Commission
	All stakeholders reflected on the park database

Registration as an interested and affected party

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

Mechanism to register	Description	
1. Media advertisements	An advertisement to inform all interested and affected parties of the Desired state workshop and request to register to participate was placed in the following newspaper:	
	Die Gemsbok advertiser on 22 April 2011.	
	Advertisements to inform interested and affected parties of the public day and request to register to participate was placed in the following newspapers:	
	Rapport and Sunday Times on 29 July 2012.Die Gemsbok on 08 August 2012.	



Mechanism to register	Description	
2. Registration at meetings	 Participants were also able to register at the following meetings: Desired state workshop on 10 and 11 May 2011. Public day on 23 August 2012. 	

Desired state workshop

The Desired state workshop took place on the 10 and 11 May 2011. A range of stakeholders and SANParks specialists participated in the development of the Desired state which entails developing a vision for the Park supported by higher level objectives which forms the basis of the management plan.

Activities	Description
Invitations	Park management, certain SANParks specialists and certain stakeholders <i>i.e.</i> the Park Forum were invited. An open invitation was also send out via the local media.
Desired State Workshop	The workshop took place on 10 and 11 May at the Masekane Hall in AFNP.
Attendance:	 Twenty three participants (14 stakeholders and 9 SANParks staff members) partook representing the following constituencies: Various secondary schools located in the surrounding area; Northern Cape provincial department of Conservation; Daberas Adventures; Local Kokerboom tourism route; Local Church; Dundi lodge; Riemvasmaak community development trust; SANParks.

Focus group meetings

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

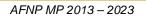
Group	Purpose	Attendants	Date
No focus group meetings took place			

Public day to allow comment on the draft management plan

Venue	Date	Number of stakeholders that attended
Martin Oosthuizen High School Hall, Kakamas	23 August 2012	31 Stakeholders attended and 39 comments were registered.

Dissemination of documentation and feedback to stakeholders

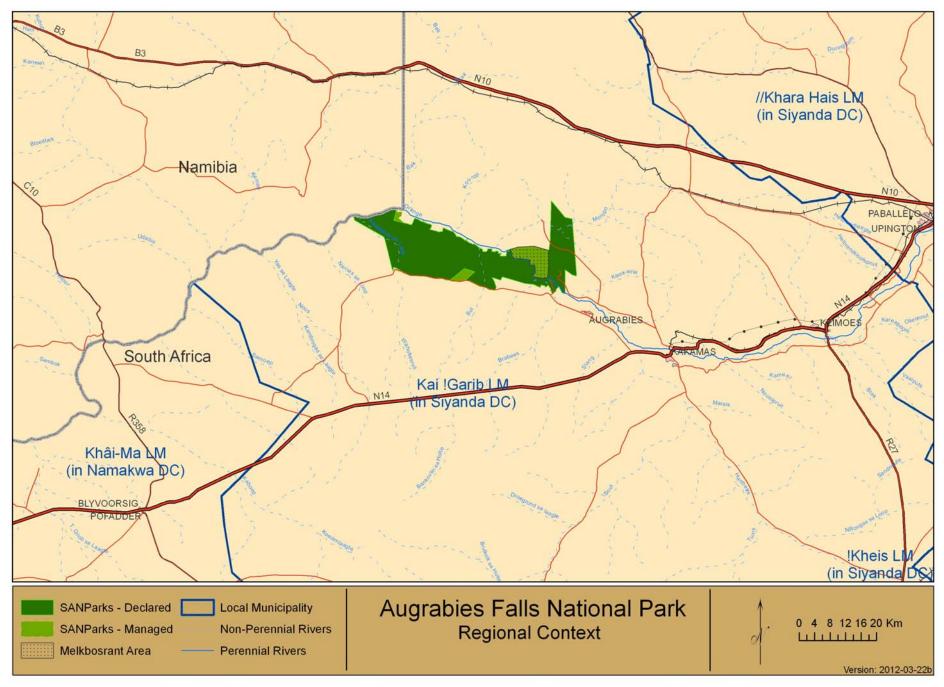
Item	Action
Dissemination of comment and response document	Emailed, mailed, faxed and delivered by hand where no contact details were supplied.
Dissemination of finalised park management plan	 The Plans will be available on the SANParks Website once approved by the Minister; They will be made available to registered stakeholders by email and post; Copies of the management plan will be available from the Park on request;



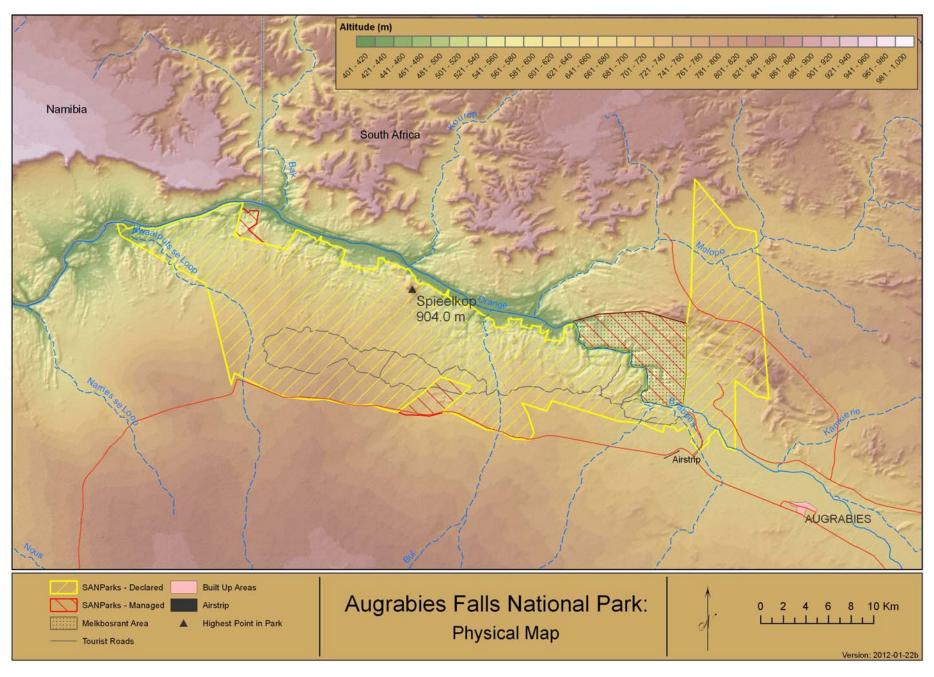


Appendix 4: Maps

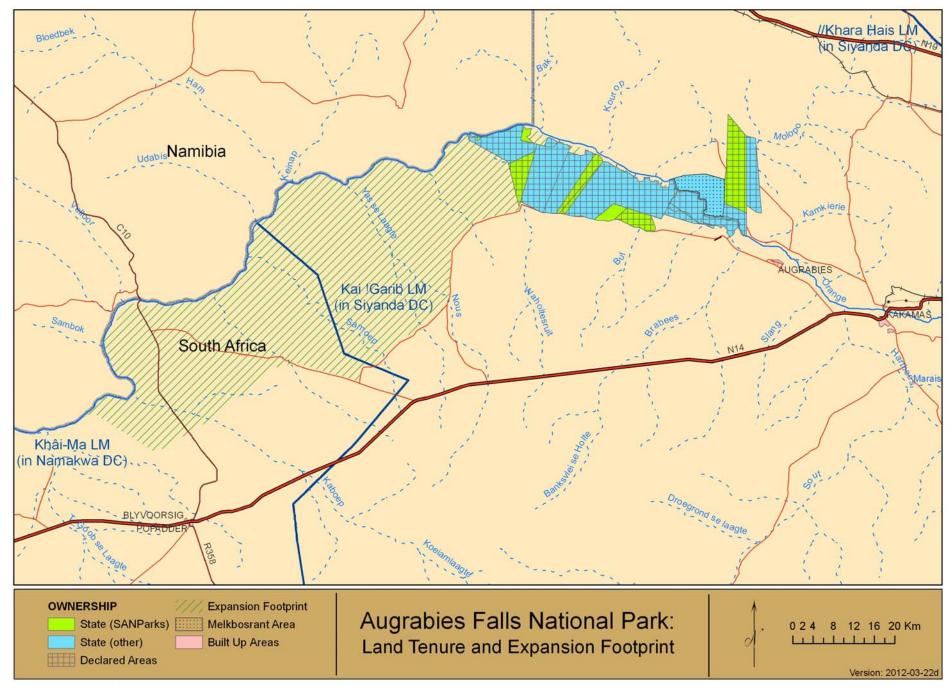
Map 1: Regional context Map 2: Physical features Map 3: Land tenure and park expansion Map 4: Zoning Map 5: Zoning with sensitivity value Map 6: Buffer areas Map 7: Infrastructure and development Map 8: Vegetation



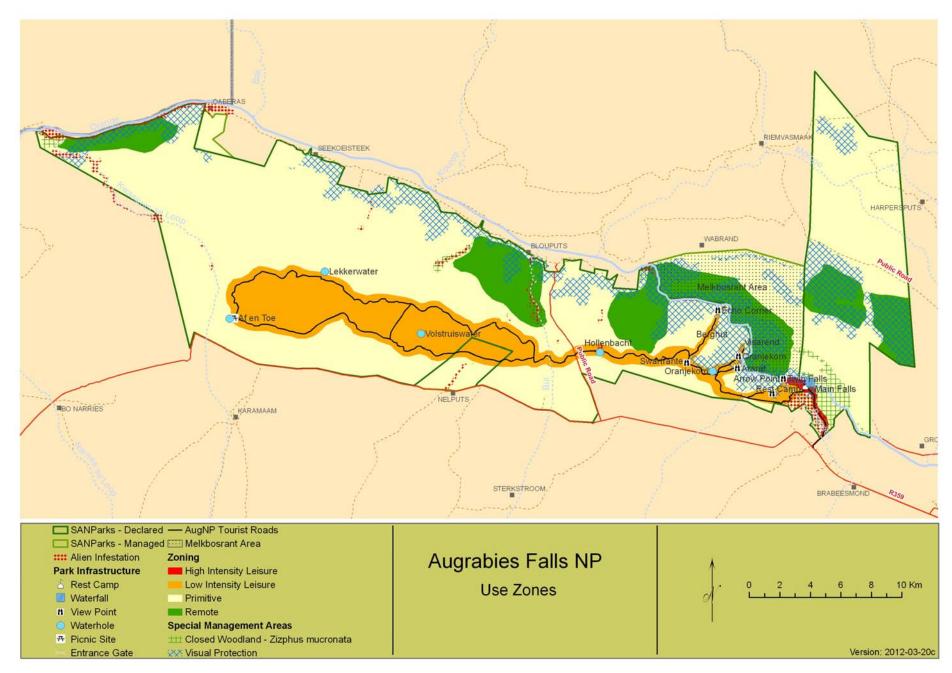
Map 1: Regional context



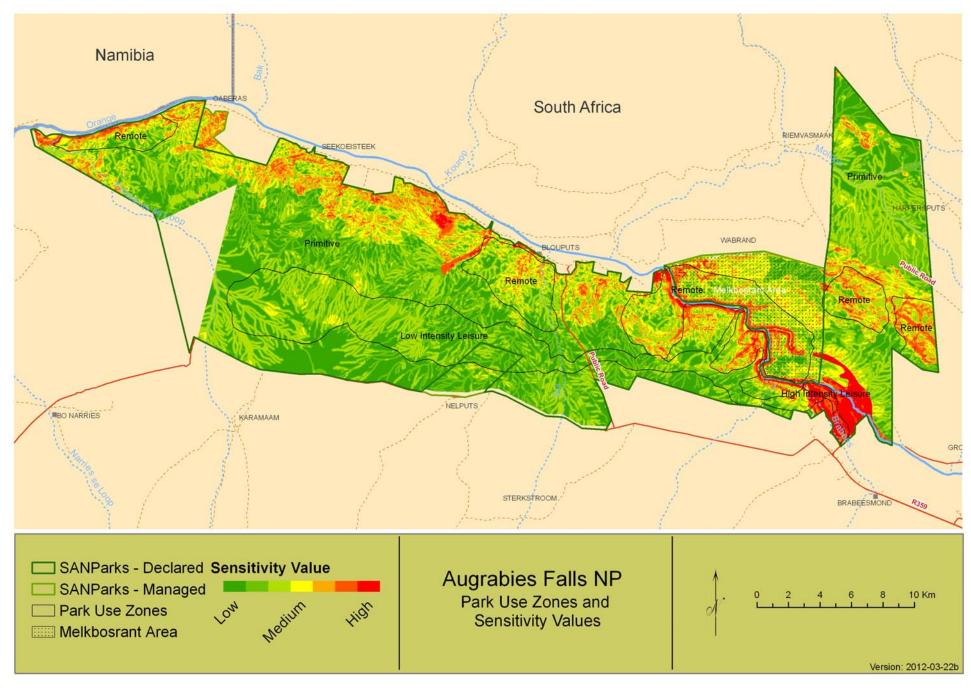
Map 2: Physical features



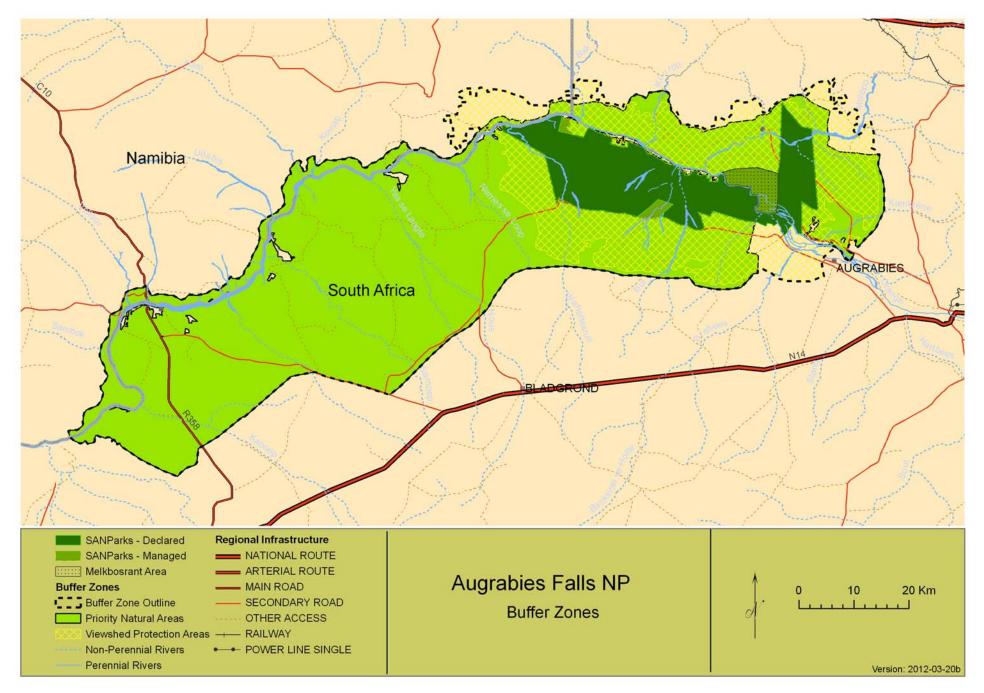
Map 3: Land tenure and potential expansion



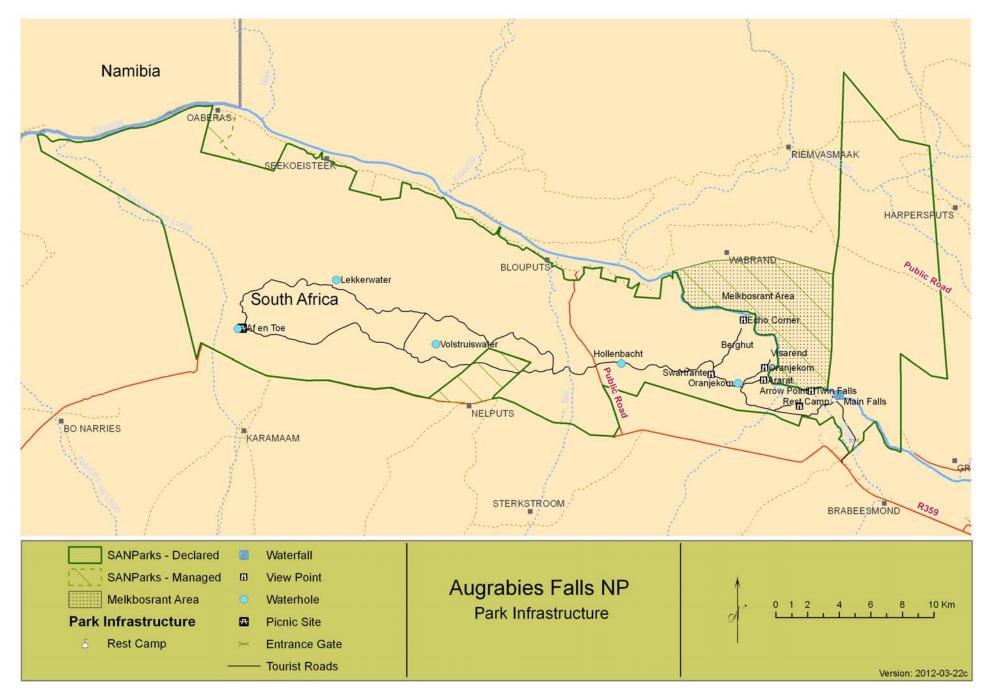
Map 4: Zoning

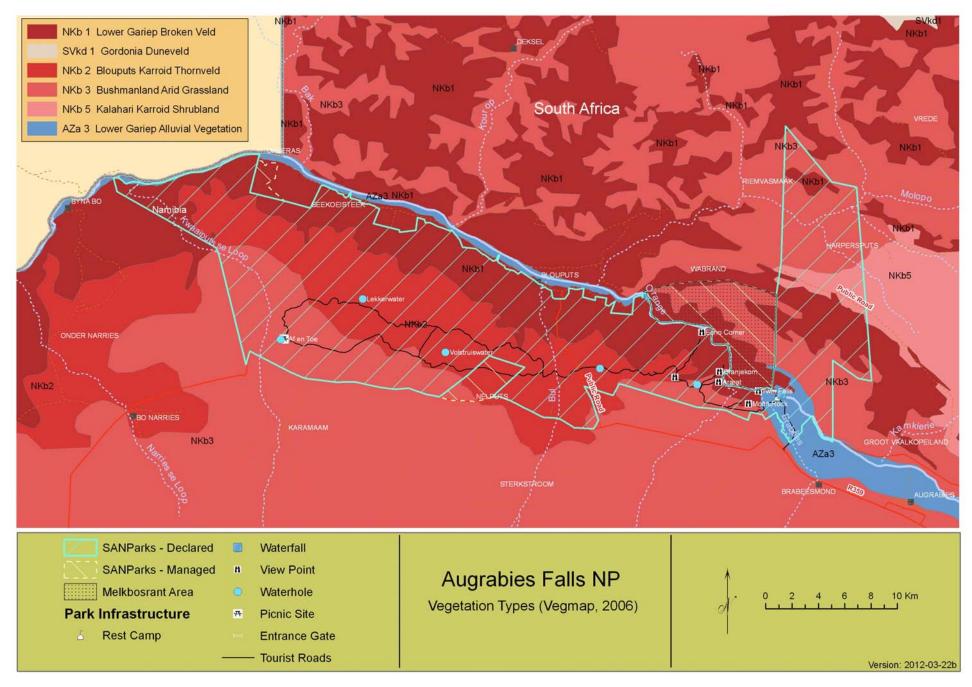


Map 5: Zoning and sensitivity



Map 6: Buffer zone





Map 8: Vegetation