



South African
NATIONAL PARKS

CAMDEBOO NATIONAL PARK

Draft Park Management Plan
for the period 2025 - 2034



Invitation to comment

South African National Parks (SANParks) hereby invites you to express your opinion and provide information on how the Camdeboo National Park (CNP) will be managed over the next 10 years.

How to make effective comments

It is important to indicate with which management objectives and actions you strongly agree or disagree. Stakeholders are requested to provide reasons for concerns, and to provide constructive inputs and relevant information in support of the inputs.

To ensure your submission is as effective as possible, please provide clear and concise inputs:

- List your points according to the subject sections and page numbers in the management plan, as per the template that can be downloaded;
- Briefly describe each subject or issue you wish to comment on;
- Indicate whether you agree or disagree with any of the aims or objectives within each subject or just those of specific interest to you – clearly state your reasons (particularly if you disagree) and provide supportive information where possible; and
- Suggest alternatives to deal with issues with which you disagree.

Where to send your comments:

The due date for written submissions is 22 March 2024. These must be submitted to:

Manager: Park Planning
PO Box 787
Pretoria
0001

Submissions can also be emailed to andre.spies@sanparks.org

Cover page photograph by:

Section 1: Authorisation

This management plan is hereby internally accepted and authorised as required for managing the CNP in terms of Sections 39, 40 and 41 of the National Environmental Management: Protected Areas Act No. 57 of 2003 (NEM: PAA).

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Approved by the Minister of Forestry, Fisheries and the Environment

Ms. B.D. Creecy, MP
Minister of Forestry, Fisheries and the Environment

Date:

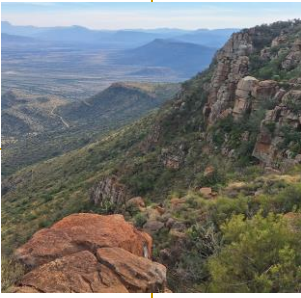
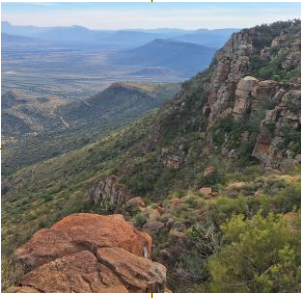


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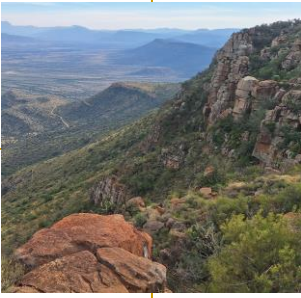
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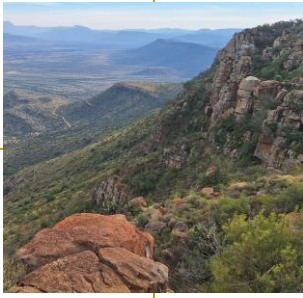
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Glossary

Climate change	Any significant long-term change in the expected pattern of temperature, precipitation, wind and/or other measures of climate in a particular region, because of changes in the earth's atmosphere.
Climate change adaptation	Anticipating the negative effects of climate change (e.g. uncertain rainfall, increased temperatures) and taking appropriate action to reduce vulnerability, i.e. preventing or minimising the damage of predicted change, or taking advantage of opportunities that may arise.
Contractual park	An area which has been declared as National Park through the Minister and which contributes to the objectives of a National Park, but of which SANParks is not the landowner. Contractual National Park agreements and/or co-management agreements are signed, and SANParks may be assigned to be part of a joint management authority through a range of possible institutional arrangements.
Desired state	The park desired state is based on a collectively developed vision and set of objectives of the desired future conditions (that are necessarily varying, across the full V-STEEP range) that stakeholders desire.
Interpretation	Interpretation is the communication of information about, or the explanation of, the nature, origin, and purpose of historical, natural, or cultural resources, objects, sites and phenomena using personal or non-personal methods.
MICE	Meetings, Incentives, Conferences and Events. Used to refer to all function types available.
Mission	An articulation of the Vision that describes why the park exists and its overall philosophy on how to achieve its Vision.
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.
Responsible tourism	Tourism that maximises benefits to local communities, minimises negative social or environmental impacts, and helps local people conserve fragile cultures, habitats and species.
Servitude	A servitude refers to a registered right that an entity / person has over the immovable property of another. It allows the holder of the servitude utilise the other person's property, which may infringe upon the rights of the owner of that property.
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 the National Environmental Management: Biodiversity Act, (Act No. 10 of 2004) (NEM: BA).
Strategic adaptive management	Strategic adaptive management integrates research, planning, management and monitoring in repeated cycles of learning how to better define and achieve goals. Built on the assumption that natural systems are complex, our knowledge is imperfect, but we can learn from purposeful goals and actions.
Universal access	Refers to the design of products, devices, services, or environments to cater for people with disabilities.
Vision	A word 'picture' of the future, or what the stakeholders see as the desired long-term 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 – including cultural heritage, technological, ecological, economic 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 aspects provide context and are used to develop a broadly acceptable vision for the future.



Acronyms and abbreviations

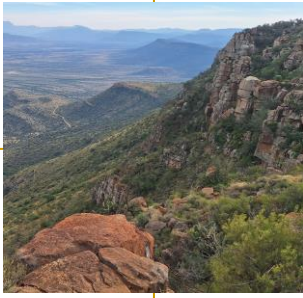
AENP	Addo Elephant National Park
AIP	Alien and Invasive Plants
AIS	Alien and Invasive Species
AMSL	Above Mean Sea Level
APO	Annual Plan of Operations
APP	Annual Performance Plan
BSP	Biodiversity Social Projects
CAPEX	Capital Expenditure
CBA	Critical Biodiversity Area
CBD	Convention on Biological Diversity
CARA	Conservation of Agricultural Resources Act (Act No. 43 of 1983)
CSIR	Council for Scientific and Industrial Research
DBNLM	Dr Beyers Naudé Local Municipality
CDF	Conservation Development Framework
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNP	Camdeboo National Park
CPF	Co-ordinated Policy Framework
CRMF	Corporate Risk Management Framework
CSIR	Council for Scientific and Industrial Research
DEA	Department of Environmental Affairs
DEAT	Department of Environment Affairs and Tourism
DFFE	Department of Forestry, Fisheries and the Environment
DM	Duty Manager
DWS	Department of Water and Sanitation
EC	Electrical Conductivity
EIA	Environmental Impact Assessment
EDRR	Early Detection and Rapid Response
EMP	Environmental Management Plan
EPWP	Expanded Public Works Programme
ESA	Ecological Support Area
EVI	Enhanced Vegetation Index
FEPA	Freshwater Ecosystem Priority Area
GRTFPA	Graaff-Reinet Fire Protection Association
HIL	High Intensity Leisure
HOD	Head of Department
HSM	Hospitality Services Manager
IBA	Important Bird and Biodiversity Areas

IDP	Integrated Development Plan
IWRM	Integrated Water Resources Management
IUCN	International Union for Conservation of Nature
KBA	Key Biodiversity Area
km	Kilometer
LFA	Land Function Assessment
LIL	Low Intensity Leisure
LLP	Lower-Level Plan
LUMS	Land use Management Scheme
METT	Management Effectiveness Tracking Tool
MoA	Memorandum of Agreement
MZCPE	Mountain Zebra Camdeboo Protected Environment
MZNP	Mountain Zebra National Park
NGO	Non-Governmental Organisation
NBSAP	National Biodiversity Strategy and Action Plan
NDVI	Normalized Difference Vegetation Index
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEM: BA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEM: PAA	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NPAES	National Protected Area Expansion Strategy
NPTSA	National Parks Trust of South Africa
NTSS	National Tourism Sector Strategy
OHS	Occupational Health and Safety
OPEX	Operational Expenditure
PFMA	Public Finance Management Act (Act No. 1 of 1999)
PM	Park Manager
PoE	Portfolio of Evidence
PPD	Park Planning and Development
RCM	Regional Communication Manager
RHP	River Health Programme
RT	Responsible Tourism
SAM	Strategic Adaptive Management
SANF	South African Nature Foundation
SANParks	South African National Parks
SANS	South African National Standard
SAPIA	South African Plant Invader Atlas
SAPS	South African Police Service
SAWS	South African Weather Service
SBDM	Sarah Baartman District Municipality
SCM	Supply Chain Management
SDF	Spatial Development Framework
SET	Socio-Economic Transformation



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Executive summary

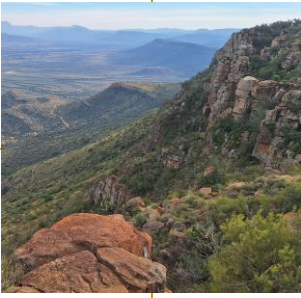
In compliance with the NEM: PAA, SANParks is required to develop a management plan for each of its protected areas. The aim of a management plan is to ensure the protection, conservation and management of the protected area concerned in a manner which is consistent with the objectives of the NEM: PAA and for the purpose for which it was declared. During the revision of the current management plan for the park, SANParks has reviewed the biodiversity conservation, Responsible Tourism (RT) and socio-economic components that make up its core business, whilst ensuring increased emphasis on strengthening stakeholder relationships and communication, continual learning, adaptive management and good governance.

An important objective for SANParks is to promote responsible experiential opportunities and products for visitors to appreciate and value national parks. Whilst the primary mandate of SANParks is that of the conservation of biodiversity, it recognises that RT also offers SANParks the best possible opportunity to supplement much needed funding for operational needs while also providing South Africa with an internationally recognised nature-based tourism destination of choice, further constituting an economically and culturally valuable asset to the region in which it occurs.

The desired state of the park is based on its vision, mission, vital attributes and objectives, whilst fully acknowledging that the park is embedded within a broader land use mosaic. It encompasses the characteristic biodiversity components, including ecosystem services, processes and associated cultural, historical and scenic features while facilitating the sharing of benefits with the neighbouring communities by creating a range of consumptive and non-consumptive benefits such as job opportunities, other forms of income generation, access to resources and other opportunities, whereas it remains informed and constrained by its biodiversity values. Programmes to achieve the desired state fall within eight categories, i.e. Regional Integration, Biodiversity Conservation, RT, Cultural Heritage, Stakeholder Engagement, Access and Benefits and Effective Park Management.

The focus on integrated land use over the next 10 years will seek to deliver on the consolidation and development of the park in pursuit of resilient ecosystems and the protection of the cultural and historic heritage associated with the park. Major focus will also be placed on rehabilitation to ensure sustainable ecosystem services and the unlocking of socio-economic benefits, as well as to continue providing a quality tourism experience as one of the iconic destinations in the region and Eastern Cape, subsequently, complementing the offering in Graaff-Reinet and the Mountain Zebra Camdeboo Protected Environment (MZCPE). Equally important will be the emphasis placed on stakeholder engagement to improve communications, co-operation and mutually beneficial relationships with communities and all spheres of government where applicable. Simultaneously the park will strive to improve access to the park and diversified benefit in the region resulting from the park's existence in the Camdeboo region. Heritage tourism opportunities, both natural and cultural, have been identified and the park will endeavour to improve the current products and activities, while also aiming to launch new and upgraded products and activities within the next ten years.

The first management plan for the park was submitted to and approved by the Department of Environment Affairs and Tourism (DEAT) in 2008. The first revised management plan was approved by the Department of Environmental Affairs (DEA) in 2013. This second review builds on the foundation of the previous plans and seeks not only to improve it but also to ensure that it remains relevant in a continually changing society. The layout of the plan follows the format provided in the guideline drawn up by the DEA (Cowan & Mpongoma, 2010), whilst also incorporating the adaptive planning process adopted by SANParks. Stakeholders from local and district municipalities, other organs of state, traditional authorities, non-governmental organisations (NGOs), local and metropolitan areas were consulted through public meetings, focus group meetings, and written inputs (Appendix 3).



Introduction

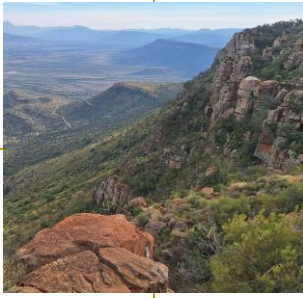
This management plan will provide the broad strategic and operational framework for the management of the park, thereby ensuring the protection of the SANParks values and achievement of the goals and objectives of the park within the context of the broader regional landscape over the next 10 years. The plan serves as the key driving document and 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, programmes at strategic and operational levels and costing.

This Management Plan will come into effect following the approval by the Minister of the Department of Forestry, Fisheries and the Environment (DFFE) in terms of sections 39, 40 and 41 of the NEM: PAA and chapter 4 of the WHCA (please refer to Ministerial approval date on cover page). The Plan is intended to be implemented over a timeframe of 10 years after commencement. SANParks will review this plan no later than 10 years after the commencement date but if required, it may be reviewed and replaced earlier via Ministerial approval. . The revision process will be guided by the SANParks framework for developing and implementing management plans (2008) and the SANParks guideline for stakeholder participation in developing management plans (2011).

The plan contains the following sections:

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

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Section 2 – Legal status

2.1 Name of the area

The Camdeboo National Park (hereafter referred to as the park), was proclaimed in Government Notice 1070 in Government Gazette 28185 on 28 October 2005. A chronological list of the declarations can be found in Appendix 1.

2.2 Location

The park is situated in the Eastern Cape Province, approximately 250 km north of Gqeberha (Port Elizabeth). It virtually surrounds the historic town of Graaff-Reinet - often referred to as the “Gem of the Karoo” - lies at the junction of the R63 to Murraysburg, the N9 to Middelburg - Aberdeen and the R75 to Gqeberha. The park is effectively divided by the R75 and N9 roads into an eastern section of ±8,022 ha and a western section of ±11,030 ha (Appendix 6, Map 1).

2.3 History of establishment

The area around the Valley of Desolation was proclaimed a scenic national monument in 1939. In September 1974, Dr. Anton Rupert of the South African Nature Foundation (SANF), suggested the idea of a Karoo Nature Park with the valley as its core. A campaign was launched to raise funds, whereby schoolchildren could buy a symbolic piece of the proposed park. The contributions of 300,000 schoolchildren from all over the country made possible the funding of a 14,500 ha Karoo Nature Reserve, stretching west of the town towards the valley. This nature reserve was officially handed over to the Cape Administrator, Dr. L.A.P.A. Munnik, by Dr. Rupert on 24 August 1976. The area was proclaimed a provincial nature reserve in terms of the provisions of the Nature Conservation Ordinance no. 19 of 1974. During 1993 the SANF purchased the Graaff-Reinet golf course in a move to consolidate the Karoo Nature Reserve and provide facilities for field ranger training. Legal title to the land constituting the Karoo Nature Reserve was finally transferred from the Camdeboo municipality to the World Wildlife Fund South Africa (WWF-SA) in 2003 after being in abeyance for 27 years. Subsequently, legal title of the land was transferred to SANParks, and the park was proclaimed on 28 October 2005. To assist with the expansion of the park the National Parks Trust of South Africa (NPTSA) purchased seven properties totalling 4,489 ha in 2006, which were declared in 2013. In 2023, a property belonging to the State totalling 106 ha was also declared.

2.4 Contractual agreements

The NPTSA acquired land for inclusion into the park. As per the notarial agreement, this property is fully managed by SANParks. Table 1 below provides a summary of the land parcels that were contractually included into the park.

Table 1. Private land included, by declaration and still to be declared, into the park.

Title deed	Property description	Extent (ha)	Owner	Government Gazette No	Proclamation date	Period
T71460/2006	Remaining extent of the Farm Winterhoek No 269	3,983.2293	NPTSA	36951	25/10/2013	99 years

2.5 Co-management agreements

There are currently no co-management agreements effective.

2.6 Total area

The park is currently 19,052.6838 ha in size, all of which had been declared (Appendix 6, Map 3).

2.7 Highest point

The highest point in the park is Hangklip in the southeastern corner of the park at 1,541 m (5,054 feet) above mean sea level (AMSL). The latter is of note, for the airspace above the park, which is up to 2,500 feet above the highest point, as per legislation (NEM: PAA section 47), and is also deemed national park (Appendix 6, Map 2). Therefore, the park's airspace ranges from ground level to 7,554 feet AMSL.

2.8 Municipalities within which the park falls

The park is situated within the Sarah Baartman District Municipality (SBDM) and the Dr Beyers Naudé Local Municipality (DBNLM).

2.9 Land claims

There is no land claim registered against any of the properties constituting the park.

2.10 International, national and provincial listings

The Valley of Desolation was proclaimed by Notice 2215 in Government Gazette 2716 dated 22 December 1939, as a national monument of geological and scenic significance.

2.11 Environmental authorisations

There are no developments planned that require an environmental authorisation.

2.12 Biophysical description

2.12.1 Climate

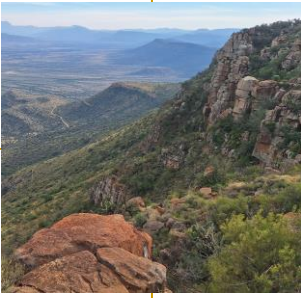
2.12.1.1 Historic

The climate is semi-arid, with 32 % of the average annual rainfall of 336 mm falling between February and April. Fog occurs frequently over the higher areas, predominantly from February to April, and contributes to moisture availability in these areas. Frost is usually experienced from April to September, and snow occurs sporadically in winter on the high plateau. Maximum air temperatures during summer may exceed 43 °C, with winter minima falling below -3 °C. Although there is no evidence of drying at Graaff-Reinet, rainfall is known to be variable - <200 mm in some years, with >600 mm in others (van Wilgen & Herbst, 2017).

2.12.1.2 Future

While local trends in temperature have not been analysed, increases of between 1.5 and 2.8 °C is predicted by 2050 (Le Roux *et al.*, 2019). Although the predicted changes seem small, a 2.8 °C increase could see an additional 25 days annually that exceed 35 °C, a temperature considered the threshold for human comfort tolerance, therefore resulting in an increase in heat stress. The naturally high variation in rainfall makes predicting future conditions particularly difficult. While it is likely that rainfall will remain variable year-on-year, rainfall changes could be quite large, with wetter periods up to mid-century and drier later (Le Roux *et al.*, 2019). Predictions of the type of biome that will be favoured in the future are therefore also highly variable, with the hottest and driest scenario encompassing conditions more frequently associated with savanna rather than Karoo (Driver *et al.*, 2012; DEA, 2013; Holness & Bradshaw, pers. comm.). However, increased global levels of CO₂, have not been considered in these predictions and will favour the growth of woody plants (shrubs and trees).

Other concerns associated with climate change include extreme risk of drought, as well as groundwater depletion and increased fire danger (though fires will depend on available fuel) (Le Roux *et al.*, 2019). Water demand is predicted to outstrip supply under high population growth scenarios, which will also impact local agriculture (Le Roux *et al.*, 2019). Should local flooding occur, a small amount of park infrastructure is at risk of flood damage (Coldrey *et al.*, 2022).



2.12.2 Topography

The park is situated between 740 m and 1,480 m AMSL which includes the Sneeuberg mountain range, with the world-renowned viewpoint of the Valley of Desolation as a part of the Sneeuberg mountain and the isolated Spandau hill as prominent features in the park's landscape.

According to the Land Type Survey Staff (2004) the topography of the park is dominated by three major landscape units, namely:

- The mountainous landscape terrain units are rugged terrain with plateau (1), steep scarp (2), steep midslope (3) and small floodplains (4) along the drainage lines (5) (Figures 1 & 2);
- The midslope landscape terrain units are low (<10 m) terraces with plateau (1) and steep midslopes (3) dominant, as well as footslopes (4) and drainage lines (5) surrounding these terraces (Figures 1 & 3); and
- The valley bottomlands landscape terrain units are low isolated tabletop terraces with plateau (1) and steep midslopes (3) as well as the dominant valley bottomlands (4) and drainage lines and Sundays River (5).

2.12.3 Geology and soils

The geomorphological landscape developed on the Adelaide Subgroup of the Beaufort Group (Karoo Supergroup) is a geological system consisting of very thick layers of near-horizontal strata of sedimentary rocks. It is characterised by sandstone layers separated from each other by thick shale and mudstone, red-purple to grey and grey-green in colour. This sandstone is generally rich in feldspar which is easily eroded under current climatic conditions, while the shales and mudstones are relatively unstable and erode chemically and mechanically. Plateau and gulley erosion can be seen on the talus steep midslopes and pediments. The material originating from this weathering process and the erosion process is usually clayey and rich in alkaline salts. The Adelaide Subgroup is further divided into the Balfour and Middleton geological units, the former consisting of grey mudstone, shale and sandstone, and the latter grey and red mudstone, shale and sandstone. The sedimentary deposits are intruded by Stormberg (Karoo Supergroup) dolerites to form sills and dykes. The largest part of the midslopes and footslopes are covered with colluvium, alluvium and aeolian sand. These tertiary to quaternary deposits are an important feature influencing the vegetation of the park (Palmer, 1989).

The topography can be divided into three distinctive landscape terrain units, summarised in Table 2 below (Land Type Survey Staff, 2004):

Table 2. Landscape terrain units occurring in the park.

1. Mountains of Camdeboo

The Ib261 land type is dominating the topography of the mountainous landscape terrain units.

The mountainous landscape terrain units are rugged terrain with plateau (1), steep scarp (2), steep midslope (3) and small floodplains (4) along the drainage lines (5). The soil landscape 5 is closely associated with the mountainous landscape terrain units that occur in the park (Figure 1) (Land Type Survey Staff 2004).

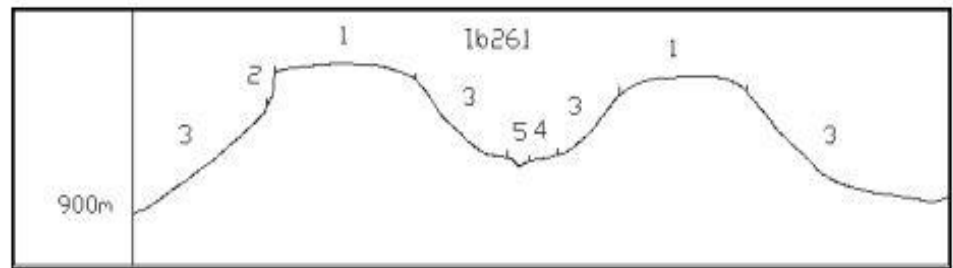


Figure 1: The terrain form sketch of the dominant Ib261 land type of the mountainous landscape terrain units.

2. Midslopes of Camdeboo

The Fc509 land type is dominating the topography of the midslopes landscape terrain units.

The midslopes landscape terrain units are low (<10m) terraces with plateau (1) and steep midslopes (3) dominant as well as footslopes (4) and drainage lines (5) surrounding these terraces. The soil landscape 6, 7 & 8 are closely associated with the midslopes landscape terrain units that occur in the park (Figure 2) (Land Type Survey Staff 2004).

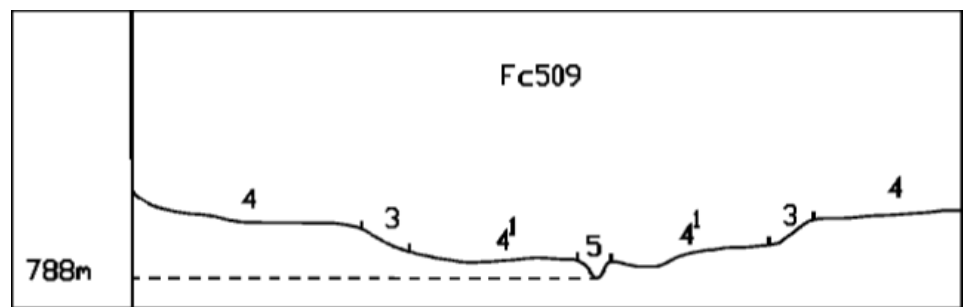
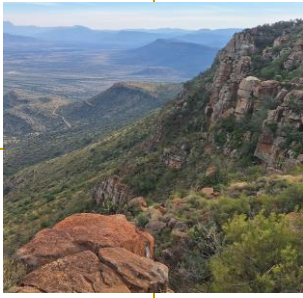


Figure 2: The terrain form sketch of the dominant Fc509 land type of the midslopes landscape terrain units.



3. Valley bottomlands of Camdeboo

The Fc508 land type is dominating the topography of the valley bottomland landscape terrain units.

The valley bottomlands landscape terrain units are low isolated tabletop terraces with plateau (1) and steep midslopes (3) as well as the dominant valley bottomlands (4) and drainage lines and Sundays River (5). The soil landscape 1, 2, 3, 4, 9 & 10 is closely associated with the valley bottomlands landscape terrain units that occur in the park (Figure 3) (Land Type Survey Staff 2004).

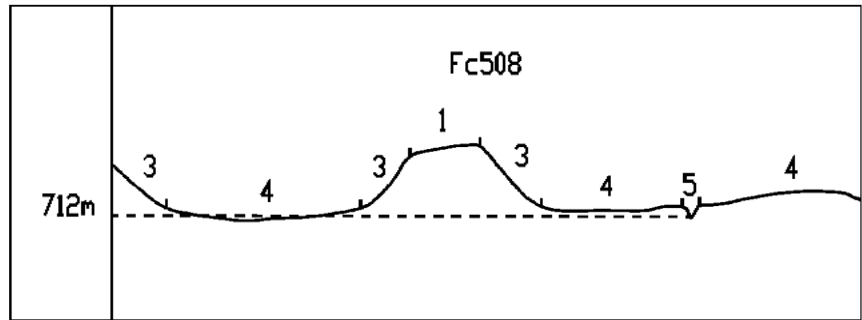


Figure 3: The terrain form sketch of the dominant Fc508 land type of the valley bottomlands terrain units.

Bezuidenhout & van der Riet (2006) identified 10 soil landscapes. In soil landscape 1 (Fc509 land type), the dominant terrain unit is the midslope (3) with shallow (100-150mm), moderate clay content (15-30%), the Glenrosa (Gs) soil form is the dominant soil, with rock outcrops sub-dominant. Soil landscape 2 is also associated with the Fc509 land type, the footslope (4) is described as shallow (100-200mm) high clay content (15-45%) with the Swartland (Sw) soil form being dominant, and sub-dominant soil forms of Oakleaf (Oa) and Hutton (Hu) are also present. Soil landscape 3 is also associated with the Fc509 land type. The floodplain (4(1)) is described as a moderately deep (500-1200mm), moderate clay content (15-35%), with the Oakleaf (Oa) soil form being dominant and the sub-dominant soil forms are Valsrivier (Va) and Dundee (Hu). Soil landscape 4 is associated with the Fc509 land type and the river and Ngweba Dam (5)) are described as a shallow (100-300mm), moderate clay content (15-30%), with Glenrosa (Gs) soil form being dominant and the sub-dominant soil forms are Hutton (Hu) and Swartland (Sw). Soil landscape 5 is associated with the Ib261 land type, the steep midslope (3) is described as a very shallow (50-100mm), rocky, low clay content (6-15%), with rocks being the dominant soil-rock complex and the sub-dominant soil forms are Mispah (Ms) and Glenrosa (Gs). Soil landscape 6 is associated with the Fc508 land type, the mountain plateau (1) is described as a very shallow (50-100mm), rocky, low clay content (6-15%), with the Mispah soil form being dominant and the sub-dominant soil forms are Glenrosa (Gs) and rocks. Soil landscape 7 is associated with the Fc508 land type, the mountain midslope (3) is described as a shallow (100-150mm), rocky, moderate clay content (15-35%), with the Glenrosa soil form being dominant and the sub-dominant soil forms are Mispah (Ms) and rocks. Soil landscape 8 is associated with the Fc508 land type, the mountain footslope (4) is described as a shallow (100-150mm), rocky, moderate clay content (15-35%), with Glenrosa soil form being dominant and the sub-dominant soil forms are Mispah (Ms) and Hutton (Hu). Soil landscape 9 is associated with the Ia117 land type, with the river / drainage line footslope (4) described as a moderate deep (600-1200mm), moderate clay content (15-35%). Oakleaf soil form is dominant and the sub-dominant soil forms are Mispah (Ms) and Valsrivier (Va). Soil landscape 10 is associated with the Da94 land type, the footslope plains (4) are described as a shallow (200-300mm), high clay content (>35%) with Valsrivier soil form as dominant and the sub-dominant soil forms are Oakleaf (Oa) and Swartland (Sw) (Adapted from the Land Type Survey Staff 2004). Landscape 99 is the Ngweba Dam.

2.12.4 Freshwater ecosystem

Rivers

The park falls within the Fish to Tsitsikamma Water Management Area and in the Sundays sub-catchment on the edge of the Great Escarpment forming part of the Sneeuberg mountain complex (Nel *et al.*, 2011a, 2011b). The hydrology of the park is largely based on its location at the edge of the Great Escarpment, from which six seasonal rivers (Sundays, Gats, Melk, Camdeboo, Pienaars and Erasmuskloof) drain into the Nqweba Dam in the central area of the park (Masubelele *et al.*, 2013). These rivers are generally seasonal, often persisting only as consistent riverbed pools fed by fountains. The majority of runoff occurs through these seasonal rivers and streams, which occurs during the sporadic and strong thunderstorms in spring and late summer. The condition of the Sundays and Pienaars Rivers are classified as “Category AB” (largely natural) and the Gats River as “Category D” (largely modified). There are no free flowing or flagship rivers in the park (Roux *et al.*, 2013; Roux *et al.*, 2023). The Nqweba Dam, located inside the park along the Sundays River, covering over 1,000 ha, is a popular tourism destination offering a variety of water activities such as boating, canoeing, fishing and windsurfing.

Issues of concern are flow alterations of the Sundays River because of the Nqweba Dam being located inside the park. This impoundment completely transforms the hydrology of this river system in the park. This is further exacerbated by the absence of environmental releases from the Nqweba Dam and the proposed construction of a new dam on the Gats River which will minimise flow to the Nqweba Dam. Sand mining in the Sundays, Gats and Pienaars Rivers outside the park results in increased siltation and turbidity. There are also invasive fish species that pose a threat to the indigenous fish species. (Russel *et al.*, 2009).

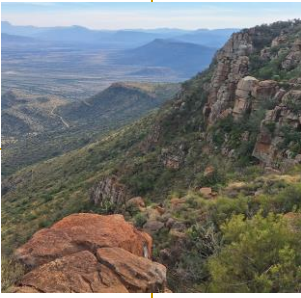
Groundwater

A total of 38 boreholes were identified during a hydro-census survey (Johnson, 2021), 13 of these are used as production boreholes, seven are collapsed and 18 boreholes are potential monitoring boreholes. The production boreholes supply water to animal drinking troughs, tourist and staff accommodation and the main office in the park. The water levels in the production boreholes ranged from 4.8 to 49.62 meters below the ground surface. Some production boreholes with active pumps showed a stable water level over time, indicating high yielding capacity or low abstraction rate. Further, monitoring boreholes had electrical conductivity (EC) values ranging from 522 to 3003uS/cm throughout the survey area, with only three inactive boreholes showing EC values higher than 2000uS/cm. Most of the boreholes exhibit freshwater quality, with EC values below 2000uS/cm. However, boreholes in higher elevations have electrical conductivity values below 550uS/cm, indicating less contact time between water and rock due to recharge through percolation from rainfall or snowmelt on top of the mountains. This process influences the salt content of groundwater through water-rock interactions.

2.12.5 Terrestrial flora

The vegetation of the park falls within three biomes namely Nama-Karoo (which covers the largest section of the park), relatively small sections of grassland and Albany thicket (Mucina & Rutherford, 2006; Appendix 2). For such a relatively small national park it is rare to be able to study the interface between these three biomes. The Upper- and Lower Karoo Bioregion units represent the Eastern Upper Karoo, Upper Karoo Hardeveld and the Eastern Lower Karoo vegetation units. The Dry Highveld Grassland Bioregion of the Grassland Biome is represented by the Karoo Escarpment Grassland vegetation unit. The Albany Thicket Biome is represented by the Camdeboo Escarpment Thicket. The Azonal Inland Saline Vegetation is represented by the Southern Karoo Riviere.

The vegetation could be described as three distinct physiognomic classes, namely shrubland, succulent thicket and dwarf shrubland. The shrubland is located on the sandstone-dominated uplands above 1,300 AMSL and displays a gradient from a mesic condition in which the shrubs are separated by grasslands, to a xeric condition in which the inter-clump cover is dominated by dwarf shrubs. The succulent thicket is a distinctive unit, dominated by shrubs and succulents of sub-tropical affinity. The dwarf shrubland is restricted to the bottomlands, where alkaline alluvial soil is encountered. It may be grassy, succulent or degraded, depending on the habitat specifics, the frequency of precipitation and the recent land use history (Palmer, 1989). Palmer (1989) described 11 plant communities reflecting a gradient from the warm, xeric conditions of the pediments to the cool, mesic conditions of the mountain ridges and plateaus. Palmer’s survey revealed some aspects of the Karoo vegetation, which include the nature of the integrated mosaic of shrubland, succulent thicket and dwarf shrubland. The mosaic could change over a very short distance which is closely related to the abiotic factors e.g. geology and soil. The previous land use was extremely intense, which degraded some of the vegetation, but this did not seem to have any effect on the plant species composition (Masubelele *et al.*, 2013).



The park has two conspicuous landscapes namely (i) the highland rugged mountains with rocky, shallow soil and (ii) the undulating, valley bottomland plains with a mosaic of shallow to moderate deep soil. These landscapes were further classified, described and mapped by Palmer (1989) and later updated by Bezuidenhout & van der Riet (2006). Nine plant communities were identified and mapped by Bezuidenhout (2014) namely:

- 1) Succulent thicket
- 2) Riparian thicket
- 3) Degraded grassland
- 4) Grassy open shrubland
- 5) Sparse shrubland
- 6) Open shrubland
- 7) Open dwarf shrubland
- 8) Closed shrubland
- 9) Succulent dwarf shrubland

Masubelele (2013), using repeat photo-monitoring, concluded that the vegetation within the Albany thicket and dwarf shrubland showed the least change in vegetation canopy cover, “whilst the Azonal vegetation and grassy dwarf shrubland were more dynamic in their response to rainfall and flood plain hydrology. Abiotic factors such as rainfall amount, changes in the distribution of rain between seasons and the occurrence of flood and drought events in combination with high temperatures appeared to have the greatest influence on growth form dynamics. Grasses generally responded to above-average rainfall events and because of their superior competitive ability, negatively influenced the cover of dwarf shrubs. Dwarf shrubs appeared less affected by drought conditions, whilst grass cover declined. The cover of tall shrubs and trees declined under drought conditions and increased significantly after major flood events, particularly within the flood plain associated with the Nqweba Dam. Biotic factors such as herbivory appear to have had a negligible impact on the vegetation of the park, at least in terms of how this could be determined from the photo-monitoring techniques used in this study. The lack of any visible impact is primarily because animal densities have remained low over the course of the study, relative to values for commercial livestock production systems in the area”.

A total of 327 indigenous plant species, together with nine alien plant species were collected by Palmer (1989) in the Karoo Nature Reserve, as it was previously known. These plant species represent 191 genera and 71 families. Analysis of the species list reveals that nine families account for 190 species, or 56,2% of all plant species. Palmer (1989) noted that 223 could be added to the plant species list but it was not sampled or some of the genera were under revision and therefore not listed. It was also noted that this plant species list represents 40-50% of the vegetation of the Reserve (Palmer 1989). Red data plant species that are classified as declining are *Crinum bulbispermum*, *Cineraria lobata* subsp. *lobata*, *Dioscorea elephantipes*, *Pelargonium sidoides*; endangered are *Haworthiopsis attenuata* var. *attenuata*, *Euphorbia obesa* subsp. *obesa*; rare are *Cineraria alchemilloides* subsp. *alchemilloides*, *Andromischus fallax*, *Anisodonteia malvastroides*, *Aloinopsis rubrolineata*; data deficient species are *Aloe longistyla*, *Hermannia repetenda* has been recorded according to SANBI (Golding, 2002). Spears *et al.* (2011) recorded 37 invasive alien plant species in the park.

2.12.6 Terrestrial fauna

The park is located in the typical Karoo landscape which provides habitat for a wide variety of endemic wildlife and hosts an array of fauna, with 274 bird species, 48 mammal species, 45 herpetofauna species and eight freshwater fish species.

Birds

The avifauna includes an interesting ecotonal mix including species typical of both the Great Karoo and Eastern Region albeit it not typical of the Great Karoo as a considerable number of eastern bushveld birds reach their western limits here (Marnewick *et al.*, 2015a). The park supports many important populations of threatened species, typical Namib-Karoo species and many other arid-zone birds. The park also has a good representation of raptors, including endangered species such as secretary bird *Sagittarius serpentarius*, martial eagle *Polemaetus bellicosus* and black harrier *Circus maurus*, as well as the Ludwig's bustard *Neotis ludwigii*. The park falls within one of South Africa's Important Bird and Biodiversity Areas (IBAs) which are sites of international significance for the conservation of the world's birds and other biodiversity (Marnewick *et al.*, 2015b). Many of the IBA trigger species are large terrestrial birds such as raptors, bustards and korhaans which often have large individual territories and therefore it is important that surrounding landowners and stakeholders are engaged to ensure these species can persist both within and outside the IBA (Wright, 2012; Marnewick *et al.*, 2015a)

Mammals

Mammal species include plains game typical of the Karoo landscape, such as gemsbok *Oryx gazella*, red hartebeest *Alcelaphus buselaphus caama*, eland *Tragelaphus oryx*, black wildebeest *Connochaetes gnou* and springbok *Antidorcas marsupialis*, as well as threatened species such as the mountain reedbuck *Redunca fulvorufula*, Cape mountain zebra *Equus zebra zebra* and African buffalo *Syncerus caffer* (Venter & Pardo, 2021). Furthermore, 15 carnivore species are present in the park, including threatened species such as the Cape clawless otter *Aonyx capensis* and brown hyena *Parahyaena brunnea* (Venter & Pardo, 2021).

Herpetofauna

Species richness in the Great Karoo appears to be low compared to other parts of South Africa, however due to the Great Karoo being a poorly sampled region this may rather be due to sampling (Telford *et al.*, 2022). Considering this, the park has a fairly rich herpetofauna consisting of 45 species, which includes three amphibians, five chelonian, 23 lizards and 14 snake species. However, future sampling is needed.

Fish

Camdeboo is one of five national parks occurring in the region of South Africa where predominantly Karroid fishes occur (Russell, 2011). Eight fish species, including two alien species *Gambusia affinis* and *Cyprinus carpio*, have established populations in the park (Russell, 2011). These fish species predominantly occur in the Sundays River and Nqweba Dam. The park forms part of the headwaters of the Sundays River and therefore it is suggested that certain fish species found in the park such as *Oreochromis mossambicus* and *Claria gariepinus* were translocated via the Inter Basin Transfers from the Great Fish River, which were originally translocated via the Orange-Fish tunnel from the Orange River (Jubb, 1977; Skelton, 1988; Russell, 2011).

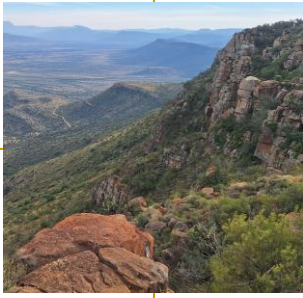
Invertebrates

The invertebrate fauna is largely unrecorded, although the biotic influences of brown locust *Locustana pardalina* outbreaks as well as the cyclical eruptions of the Karoo caterpillar *Loxostege frustalis* and the harvester termite on the vegetation are characteristic features of this ecosystem (Sithole *et al.*, 2021).

2.13 Archaeology and cultural heritage

In line with organisational policy and the concept of a cultural landscape, a project was undertaken in 2023 to compile a cultural heritage inventory (SANParks, 2023a). The park and its surroundings have provided home to many animals and people over the centuries. On the palaeontological front, the park is characterised by sedimentary rocks of the Beaufort Series. These rocks, approximately 230 million years old, are rich in the fossils of the two main groups of early Karoo reptiles: The Pareiasaurs were large bulky herbivores of primitive descent while the mammal-like reptiles (Therapsida) are well represented by Dicynodonts, which gave rise to the modern mammals (Cluver, 1987). Several fossilised bones of reptiles have been exposed on the slopes of the Karoo koppies and alongside river channels. It is often thought that the bones of these reptiles were washed into lakes or pools before they were immediately covered in mud. A number of these fossils have been found in the Graaff-Reinet area by one Mr Alex Bremmer over an 18-year period. This extensive collection is now on display at the Reinet Museum within Graaff-Reinet.

It was the Early Stone Age people who first settled in the area, as evidenced by their many cultural artefacts that were discovered in the area, particularly on the southeastern plains of the park. Among such cultural artefacts found in these sites are bored stones, percussion-made hand axes, scrapers, blades and grinding stones. Besides evidence confirming the presence of Early Stone Age people in the area, it is further known that hunter-gatherers and herders left evidence of their occupation during the Late Stone Age in the form of rock paintings which have been discovered in the eastern section of the park. It was not until the 1770s that White Settlers arrived (Coetzee, 1990). Over time, the Karoo landscape became threatened by overgrazing



that exacerbated the problem of soil erosion, as well as an increase in woody species or unpalatable plants because of exotic plants. It was the 1979 proclamation of the Karoo Nature Reserve that provided the much-needed opportunity to reclaim the natural appeal of the area.

Significant cultural heritage features include:

- **Gideon Scheepers monument**
This monument was erected in honour of Gideon Scheepers (aged 23) by the Graaff-Reinet Afrikaans Cultural Society. He was executed in the riverbed, approximately 100 m from the monument on 18 January 1902. The monument is comprised of three rocks, supporting a needle of stainless-steel symbolising hope and faith in God. The large base rock represents the steadfastness of the young Afrikaner nation. The two tilted boulders it supports, exemplify the Afrikaner nation suppressed, but not fallen. A fourth boulder bears an inscription, tombstone-like in design.
- **Andries Pretorius monument**
This monument was built in honour of Andries Pretorius, a Voortrekker who left the Cape to escape oppression by the British, with ox wagons as part of the Great Trek of the Voortrekkers. Due to threats on its integrity because of poor security and defacement over time, it was moved to its current location within the Camdeboo National Park in 2012. Prior to its relocation in 2012, the statue was getting vandalised with some people either painting it black or breaking the concrete blocks along the N9 where it originally was. The protected area was probably the most secured locality within the vicinity of the original place for the statue. While its relocation was approved by the Executive Management of SANParks, there is no known link between this monument and the existence of the park itself.
- **Valley of Desolation**
The Valley of Desolation was proclaimed by Notice 2116 of the Government Gazette dated 22 December 1939, as a national monument of geological and scenic significance. The piled dolerite columns viewed against the backdrop of the plains of Camdeboo, are the product of the volcanic and erosive forces of nature during the Jurassic Period. At this time (150 – 190 million years ago) dolerite sills and dykes intruded the Beaufort sediments of the Karoo Sequence.
- **Cupule boulder**
A granite boulder with several shallow circular depressions ground into the upper and lateral surfaces was discovered on the Gannaleegte boundary of the park. These circular depressions, known as cupules, are well-documented in the Limpopo region of the country, where they are found on sloping or vertical rock faces or on large boulders within rock shelters. Generally, their position on rock faces suggests that they were made for a specific ritual rather than mundane purposes, while their location and planar orientation on big boulders similarly imply a ritual and symbolic function. The apparent age alone of the cupules suggests that they were made by hunter-gatherers.
- **Winterhoek house and wagon shed**
The Winterhoek house and wagon shed are thought to have been built around 1844. This house, in an 1869 advertisement in the Graaff-Reinet Herald, was described as a 'splendid dwelling house'. Understandably for a building of its age, it has been modified and enlarged many times. Prior to the purchase of the farm 'Winterhoek' for the expansion of the park in 2007, the house was used as a homestead from where Mr Dickie van Rensburg and his family conducted their farming operations.

2.14 Socio-economic context

The park shares a common boundary with 12 farms and the DBNLM. The agricultural sector is the main economic sector that makes the biggest contribution to the local economy and is also a major employer in the region. The surrounding land use is typical of the eastern Karoo where most of the park's neighbours farm predominantly with cattle, angora and boer goats, as well as game.

Dr Beyers Naudé Local Municipality is a Category B municipality situated in the SBDM in the west of the Eastern Cape Province. The area is characterised by large tracts of commercial farmlands that are sparsely populated. It is the largest municipality of seven in the SBDM, making up half of its geographical area. Graaff-Reinet is the fourth-oldest town in South Africa and referred to as the 'Gem of the Karoo' and is a hub of agritourism activity. It is the seat of the municipal council and is also the centre where the largest concentration of the population lives and works. The DBNLM is strategically situated as a portal to the Karoo in an area renowned for its pristine natural environment, rich heritage, and diverse peoples and cultures. The area boasts several popular tourist attractions, beautiful landscapes and a healthy climate. Being situated in a semi-arid area the DBNLM faces many challenges, the biggest of which is water. Graaff-Reinet gets its supply from the Nqweba Dam, and when dry, the town is dependent on borehole water - an unreliable source as the water table drops drastically in drought periods.

The latest population data for the region reveal that approximately 81,151 people (around 20,357 households) reside in DBNLM. This accounts for 16.8% of the SBDM population of 483,822 people (134,440 households); 1.2% of the provincial population (6.7 million); and 0.1% of the national population of around 59.6 million. A large proportion of the DBNLM's population resides in the Camdeboo region, where more than two-thirds of people (64.6% or 52,445 people) with 12,697 households live. The DBNLM population grew at an annual average rate of -0.2% per annum between 2010 and 2020 (www.municipalities.co.za).

According to the latest figures, approximately 10.1% of the households in the DBNLM do not earn any income. This was lower than 12.7% in the SBDM, 15% in the EC, and 14.9% of the national households who had no source of income. This cohort comprises people who are not eligible for any grant. More than half of the DBNLM households (55.9%) earn an income of less than R 38 400 per year, which implies a below average monthly income of less than R 3,200. Consequently, in 2020 the DBNLM had approximately 33,799 beneficiaries of the South African Social Security grant and a projected 33,541 in 2021. The DBNLM experienced a slight decline in the unemployment rate from 21.0% in 2010 to 17.6% in 2020.

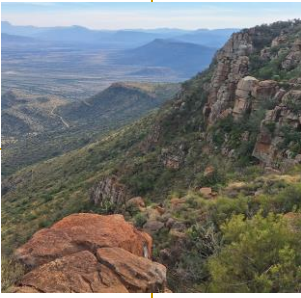
The park experiences several challenges originating from adjacent land uses. These include illegal grazing by stock from neighbouring farms and the towns, as well as marauding dogs. Poor waste management practices within the town result in the pollution of the surrounding environment while littering constitutes a serious problem, especially in those areas of the park adjacent to residential areas. With the park enclosing a community in the region of 87,000 people (82,197 in 2016) there is an appreciable level of undesirable activity within the boundaries which is ever increasing because of unemployment, shortfalls in law enforcement and the non-conviction of what seems to be classified as "petty crime". This includes, most significantly, poaching with the use of dogs, snares or traps, illegal wood collecting and theft, including the removal of material from fences. Breaking and entering and subsequent theft, as well as vandalism of a diverse nature throughout the park, are risks that must be considered in all management ventures.

Perceived negative impacts of the park on neighbours that requires careful management include the expansion of the park, seen by some neighbours to constitute a threat, and predator control. With regards to the latter, the newly erected game fence around the entire perimeter of the park should adequately prevent the movement of predators.

During the past 10 years the park contributed to the creation of temporary jobs in the DBNLM through the Expanded Public Works Programme (EPWP). These projects included upgrading and ongoing maintenance of several tourism facilities such as picnic sites and viewpoints, as well as the management of invasive alien plant species. The Presidential Employment Stimulus Fund expenditure in 2020/21 also contributed to temporary job creation with the appointment of contractors with teams to assist with infrastructure and general maintenance in the park.

2.15 Tourism

Camdeboo or Xamdeboo is a Khoi-khoi word that means "green valley". The park lies at the base of the Sneeuwberg mountain range and surrounds the historically significant and charming town of Graaff-Reinet. The main park gate is situated approximately four km out of the town en route to Middelburg on the N9 national



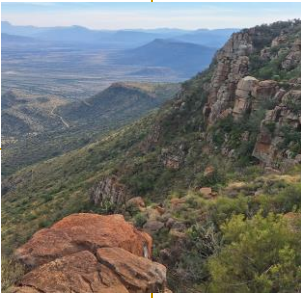
road. The park offers various adventure activities such as “The Valley of Desolation” which is the natural structure of piled dolerite columns towering over a deep rocky cleft. The Nqweba Dam attracts a wide variety of water birds and game viewing which provides visitors with of the opportunity to view a wide range of indigenous species in their natural habitats. The Khwalimanzi bird hide is nestled amongst reeds and overlooks the floodplains surrounding the dam and provides opportunities for watching both birds and game without any disturbance. Various walks and hikes are offered and a 4x4 route which leads to the top of the mountain provides outstanding views of the landscapes. The park also offers a unique overnight experience accommodation at the Lakeview tented camp and Nqweba camp site, as well as picnic sites. Table 3 summarises the overnight facilities available as well as the unit / room occupancy for the previous year.

Table 3. Overnight facilities and unit / room occupancy figures.

Accommodation summary as of 31 March 2022						
Camp	Description	Number of			Category	Unit occupancy (2022 / 2023 financial year)
		Units	Beds	Total beds person capacity		
Nqweba camp	Tents (2 bed)	4	2	8	Economy	48.1%
	Camping	15	6	90	Budget	38.7%
Total inventory	Units accommodation	19		98		
Overall occupancy		Accommodation				48.1%
		Camping				38.7%

During the 2022 / 2023 financial year, the park achieved a unit occupancy of 48.1% which is significantly lower than the SANParks average of 61.3 %. The park does not presently offer any guided activities. There was a total of 31,208 visitors in 2022 / 2023, of whom 85.8% were day visitors and 14.2% overnight visitors. Of these, 17.1% were international visitors, 3.4% from Southern African Development Community countries and 79.5% local. South African visitors are mostly from the Western Cape, Gauteng and Eastern Cape, and 5.7% of South African visitors were black. Of the international visitors, most were from Germany, the Netherlands and France.

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Section 3 – Legal and policy framework

3.1 Introduction

SANParks, like all protected area management authorities, is subject to the Constitution of the Republic of South Africa, international agreements and treaties, legislation, national policies and government priorities. The NEM: PAA states the following: The purposes of the declaration of areas as protected areas are (a) to protect ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes in a system of protected areas; (b) to preserve the ecological integrity of those areas; (c) to conserve biodiversity in those areas; (d) to protect areas representative of all ecosystems, habitats and species naturally occurring in South Africa; (e) to protect South Africa's threatened or rare species; (f) to protect an area which is vulnerable or ecologically sensitive; (g) to assist in ensuring the sustained supply of environmental goods and services; (h) to provide for the sustainable use of natural and biological resources; (i) to create or augment destinations for nature-based tourism; (j) to manage the interrelationship between natural environmental biodiversity, human settlement and economic development; (k) generally, to contribute to human, social, cultural, spiritual and economic development; or (l) to rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species.

Section 41 of the NEM: PAA requires that management plans be nested within the context of a Co-ordinated Policy Framework (CPF) (SANParks, 2023b). The CPF can be downloaded from the SANParks website using the following link www.sanparks.org/conservation/park_man/.

The CPF provides the organisational guidance required by the DEA guideline for management plans (Cowan & Mpongoma, 2010). This document will summarise the institutional, ecological, economic and social environment for park management and includes:

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

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

The relationship between the park-specific adaptive management planning cycles and the SANParks CPF is outlined in Figure 4, where the planning cycle for management plans in SANParks is 10 years. The programmes and costing could be revised at shorter time intervals, as required.

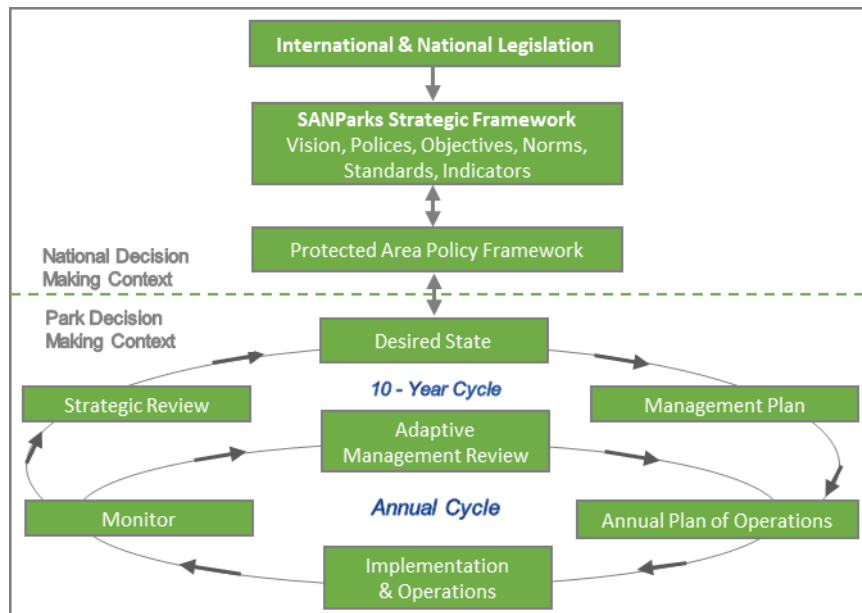


Figure 4. SANParks protected area planning framework.

3.2 Legislative context

Protected areas are subject to the principles and provisions of relevant international treaties and conventions, national legislation and policy, and any applicable contractual agreements. It is important to note that the park is a protected area in terms of the NEM: PAA. In terms of this Act, any conflicts with other legislation must be dealt with in accordance with article 7 of NEM: PAA. In essence it stipulates that where a provision of NEM: PAA specifically concerns the management or development of protected areas, and there is conflict with other national legislation, the relevant section of NEM: PAA prevails. The administration and management of the park is subject to the adherence to various legislative requirements. Figure 5 below outlines the relationship between the key pieces of legislation that govern the management of protected areas for which SANParks is responsible and the associated management plans.

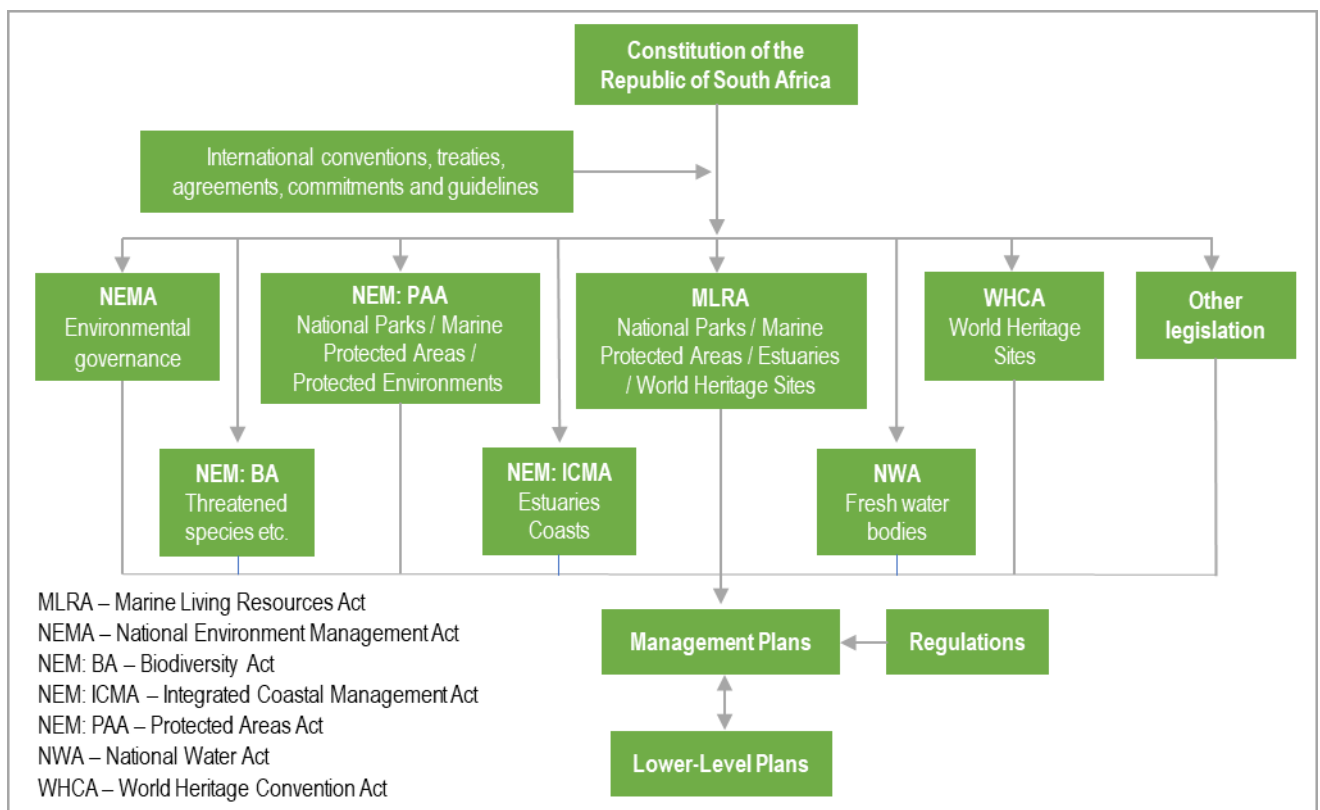
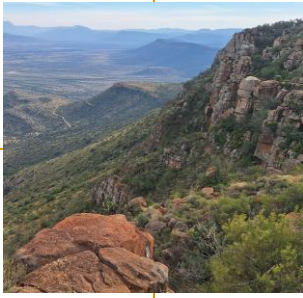


Figure 5. Key pieces of legislation that governs the management of protected areas.



3.3 White Paper on Conservation and Sustainable Use of South Africa's Biodiversity

The White Paper on Conservation and Sustainable Use of South Africa's biodiversity (gazetted on 14 June 2023) was developed to promote the conservation of the rich, diverse biodiversity and ecological infrastructure, which supports ecosystem functioning for livelihoods and the well-being of people and nature. It is envisaged that this White Paper will set the country on a strong path of sustainable development, considering the historical, socio-economic, and environmental context of South Africa, including the aspirations and needs of her people.

The White Paper has the following vision: *"An inclusive, transformed society living in harmony with nature, where biodiversity conservation and sustainable use ensure healthy ecosystems, with improved benefits that are fairly and equitably shared for present and future generations."* The White Paper is aspirational and advocates for a society where all people have a high quality of life, a voice, and a nurturing earth supporting them. As such, the policy sets out the following impact statement: "Thriving People and Nature".

The White paper has four overarching goals and intentions as follows:

Goal 1 Enhance Biodiversity Conservation: Conserve all biological diversity and its components. The intention of this goal is to improve the conservation of the unique megadiverse nature of our biodiversity, including the diversity of land- and seascapes, ecosystems, habitats, ecological communities, species, populations, and genes.

Goal 2 Sustainable Use: Ensure that sustainable use of all biodiversity values enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while environmental duty of care avoids, minimises, or remedies adverse impacts on biodiversity. The intention of this goal is to ensure that sustainable of all values of biodiversity use avoids, or minimises and remedies, adverse impacts on biodiversity, and enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being.

Goal 3 Equitable Access and Benefit Sharing: Ensure that benefits are derived and shared from the use and development of South Africa's genetic and biological resources, without compromising the nation's interests. The intention of this goal is to ensure that benefits derived and shared from the use and development of South Africa's genetic and biological resources are shared equitably and serve national interests.

Goal 4 Biodiversity Conservation and Sustainable Use is Transformative: Gives effect to the environmental right as contained in Section 24 of the Constitution, facilitates redress, and promotes transformation. The intention of this goal is to give effect to Section 24 of the Constitution, the environmental right, and other human rights, facilitate redress, and promote transformation. Furthermore, the intention of this goal is to capitalise and leverage on the megadiverse nature of biodiversity, and key biophysical attributes, and wild landscapes and seascapes to drive rural socio-economic development.

This park management plan aligns with all the goals of the White Paper with a major focus on Goals 1 and 4. Section 10 provides more detail on the strategic plan, projects and actions that will be implemented to achieve this. This management plan will contribute substantially to Goal 1 Enhance Biodiversity Conservation through the expansion of the protected area system and buffer zone management that is planned for the park. The management plan will also result in improved management effectiveness of the park overall. Bioregional integration through partnering with the MZCPE and mainstreaming of park buffer zone biodiversity values into municipal planning

processes (e.g. Integrated Development Plans, Strategic Development Frameworks and Land Use Zoning schemes) is also a key focus of investment. The management plan will also substantially contribute to Goal 4 Biodiversity Conservation and Sustainable Use is Transformative through associated job creation that in turn contributes to rural socio-economic development. The socio-economic opportunities programme aims to strive for equitable employment and business development by promoting fair access to a range of opportunities. This will be achieved through a significant, targeted and effective contribution to local economic development, economic empowerment and social development in communities and neighbouring areas adjacent to the park.

3.4 Strategic adaptive management

Protected areas are increasingly viewed as complex social-ecological systems. The social-ecological coupling acknowledges multiple interactions that take place between people and natural landscapes – even fenced-off protected areas are influenced by external social issues. These systems are regarded as complex because the results of interactions between the social and ecological components, as well as between components within each of these sub-systems, are often unpredictable. A further complication in the management of protected areas is that the suite of stakeholders may have widely varying or even conflicting expectations, based on different worldviews and values. Under these conditions of divergent stakeholder interests and limited predictability, it might be impossible to agree on an optimal solution and similarly it may be unrealistic to expect certainty in terms of management outcomes. Strategic Adaptive Management (SAM) has emerged as the SANParks approach of choice to deal with the complexity and multi-stakeholder tensions that characterise park management decisions (Figure 6). SAM is designed to be strategic (facilitate action with foresight and purpose), adaptive (facilitate learning whilst we are doing) and participatory (facilitate engagement and co-learning with stakeholders) (Grant *et al.*, 2008).

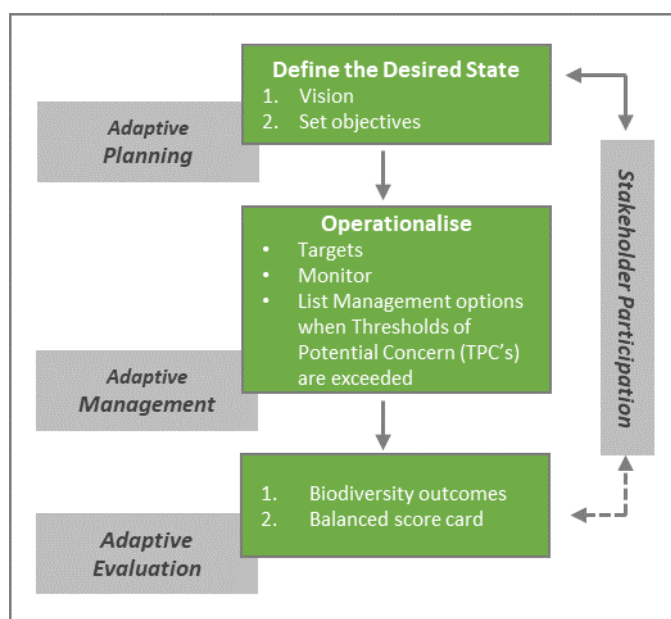


Figure 6. Steps in the adaptive management cycle as used by SANParks.

SAM begins with determining the desired future state of a particular social-ecological system (Figure 7). The aim of this step is to build a sense of common purpose among all relevant stakeholders and to develop a collective roadmap for moving from a current reality to a more desirable social-ecological system. This desired state or vision needs to be described within the context of associated stakeholders and their respective values, as well as social, technological, environmental, economic and political (V-STEPP) influences. Description of the future state is further enriched by deliberating the distinctive and special features (called vital attributes) of the park.

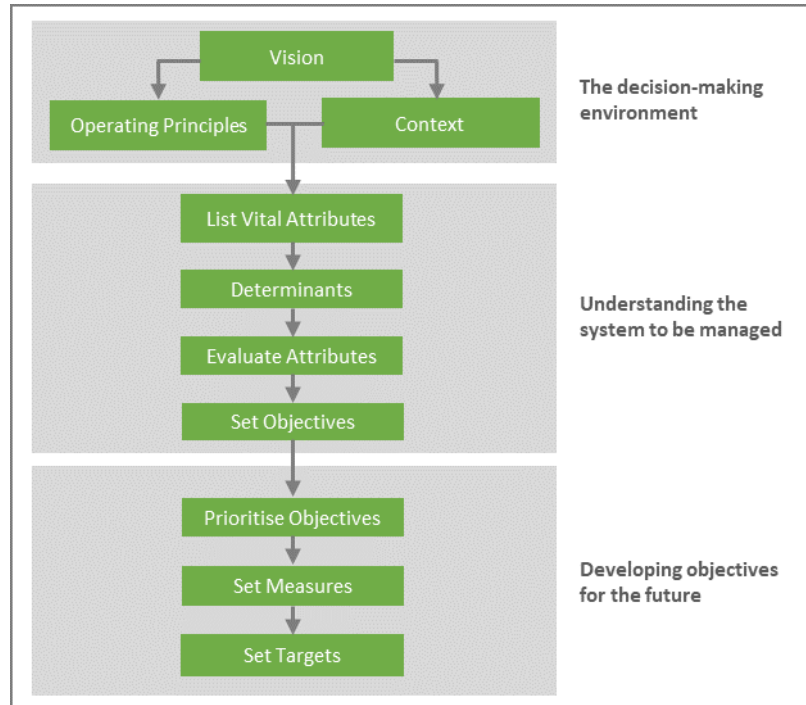
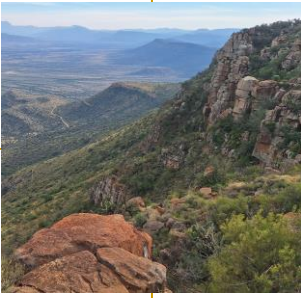


Figure 7. The adaptive planning process as used by SANParks.

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

A critical component of SAM is to monitor and evaluate the consequences of management decisions. Constant scrutiny of emerging results and evaluation against objectives are essential to allow strategy and methodology to be adjusted as new understanding and knowledge emerges (see section 10.8). Of critical importance is the participation and engagement of all relevant stakeholders. One central construct of SAM within SANParks over the last 20 years has been that of thresholds of potential concern (TPCs) (Biggs & Rogers, 2003). The challenge with TPCs has been that even if a state change is predicted, the approach does not always link the TPC to the hypothesised mechanisms of change explicitly (Ferreira *et al.*, 2011), and does not always consider the complex social and economic drivers affecting the ecological parameters and are often merely social preferences rather than ecological thresholds. TPCs are therefore now used in more predictable fields, such as river biotic responses and fire management and are coupled with a mechanisms approach in other instances.

3.5 Park regulations and internal rules

In addition to the regulations for the proper administration of special nature reserves, national parks and world heritage sites, as gazetted on 28 October 2005 in Government Gazette 28181, the park has also drafted applicable internal rules in terms of Section 52 of the NEM: PAA, (Appendix 5).

3.6 Park-specific framework

All park managers (except for Kruger National Park) report to the Managing Executive: Parks through a Regional General Manager. In the case of the park, reporting is done via the Regional General Manager for the Frontier Cluster. The park's future organogram (Figure 8) sets out the reporting structure in the park.

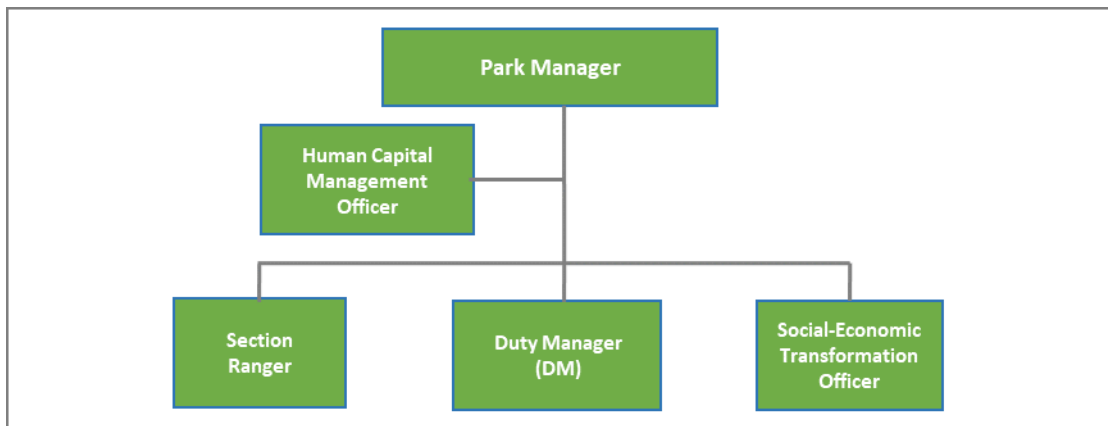
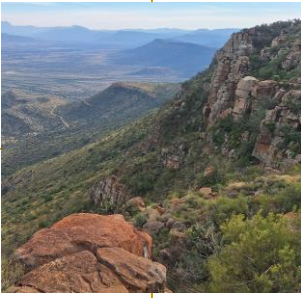


Figure 8. Camdeboo National Park organogram.

3.7 Support to the park

Park management is primarily supported by head office, providing human resource, financial, supply chain management, Tourism and marketing, review and auditing services. The park also receives support from functions such as park planning and development, veterinary wildlife service, scientific services, etc.



Section 4 - Consultation

SANParks recognises that parks must serve societal values and that parks 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 stakeholder concerns and aspirations are consistently understood and considered (SANParks, 2011). Therefore, affected and interested stakeholders were included in the revision process of the park management plan by notifying them of participation processes through mechanisms suitable for the different stakeholder groups. These processes provided the opportunity for input from all stakeholders within reasonable timeframes, with the emphasis on sharing of information and joint learning. Processes also aim to recognise all knowledge forms, as well as the diversity of values and opinions that exist between stakeholders. The commitment to the incorporation of public opinion into this plan is rooted in the park's management activities and is therefore geared towards promoting conservation values (and society's connection with those values, as also outlined in the NEM: PAA) and promoting this goal in part, by engaging the broader context in which the park is situated. The adaptive planning process that was followed was designed to (i) help stakeholders express opinions and values in a structured way, (ii) to use the opinions and expressed values to formulate a vision for the park, (iii) to translate the vision into management objectives that reflect the values as expressed by stakeholders and (iv) comment on the draft park management plan.

The objectives of the stakeholder participation process are to:

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

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

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

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

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

The stakeholder participation process followed during the revision process of this management plan is depicted in Figure 9 below.

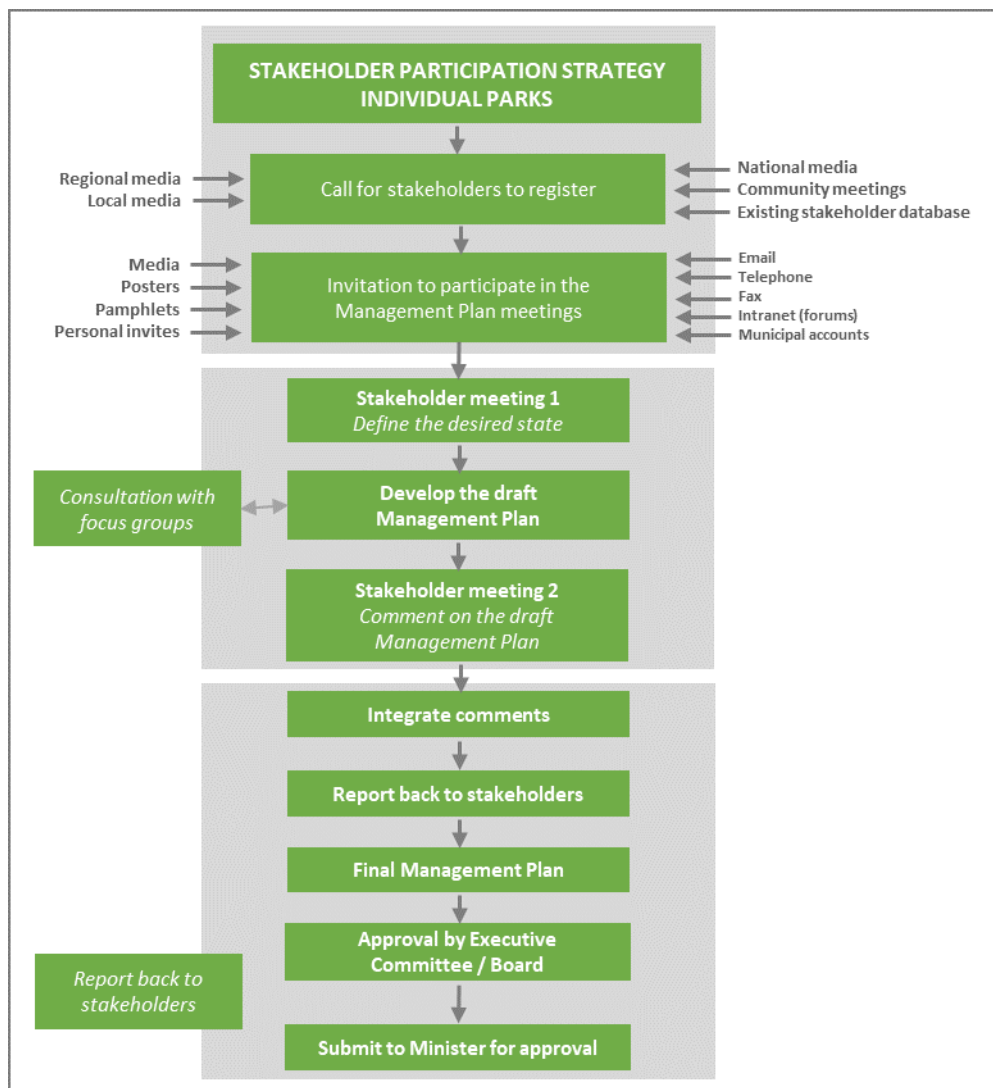
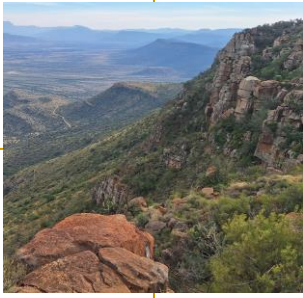


Figure 9. SANParks stakeholder participation process as applied in the CNP management plan revision process.

Details regarding the stakeholder process that was followed are outlined in Appendix 3.



Section 5 – Purpose and vision

5.1 Purpose of the park

The NEM: PAA requires that the park be managed in accordance with the purpose for which it was declared. The original purpose for the declaration of the Karoo Nature Reserve was to contribute towards the protection of the Karoo biome. SANParks will manage the CNP, firstly in accordance with its organisational vision, and secondly in accordance with the mission and objectives hierarchy that were derived through consultation with stakeholders, as set out in this section.

5.2 Desired state for the park

Reconciling the need for participatory planning and governance, and enabling ongoing adaptation, the adaptive planning process is an essential early component of strategic adaptive management. It is an easy and effective tool for enabling actual stakeholder participation in producing an effectively shared rationale or overall big picture ‘desired state’ for a national park. It requires an expression of the various stakeholders’ value systems and then builds on the shared values to consider all possible system drivers (V-STEOP - social, technological, economic, environmental and political). The process enables stakeholders to consider opportunities to strengthen the vital attributes of the park and to counter and constrain threats to these. These opportunities are formulated as the high-level objectives of the park management plan. This ensures that the desired state of the park, its vision and mission, and high-level objectives are co-constructed with stakeholders. This strategic-level guidance obtained through stakeholder consultation is then unpacked into further detail and articulated as sub-objectives, either in-house or with relevant experts.

For more than a decade SANParks has been using the adaptive planning process with stakeholders. This often requires dealing with individual and/or group values, prejudices and sensitivities. Nevertheless, the process provides all participants with a space to express their own views and understand others’ views. This ensures mutual understanding and commitment to both the process and the end product, namely the park management plan.

The purpose of the adaptive planning process is to source and incorporate stakeholder input into a more technical planning process. However, this purpose is situated within a broader context of forming and sustaining relationships with the public to secure mutual understanding and ongoing support and legitimacy. The desired state process reported here has therefore been an event in an ongoing, dynamic public engagement process.

5.2.1 Vision and mission

SANParks’ corporate vision for all national parks including CNP, is as follows:

VISION

“A world class system of sustainable national parks reconnecting and inspiring society.”

The mission of a national park defines its fundamental purpose, succinctly describing why it exists and what it hopes to achieve (i.e. the collective dream). The following mission was developed after consultation with stakeholders during a public workshop held on 30 May 2023:

MISSION

“To manage the park within the greater Camdeboo living landscape where local people of all communities meaningfully participate, with pride, to enhance nature, culture, livelihoods and compatible tourism and development.”

5.2.2 SANParks Annual Performance Plan

The SANParks Strategic Plan is focused on all aspects of management of the organisation from the core areas of the mandate to corporate governance and business operational support management. The Annual Performance Plan (APP) management approach has been followed to ensure consistent, effective and efficient execution of the organisational strategy and performance management regime. The APP sets out the organisation's key strategic objectives necessary for the effective and efficient delivery of the organisation's mandate. Park management must ensure an integrated approach is followed regarding the implementation of the SANParks APP and this management plan.

5.2.3 SANParks corporate vision of the desired state

Examined from the perspective of the entire system of national parks, SANParks has identified a broad vision and strategic direction for each individual park. This corporate strategic direction is intended to complement the role of other parks in adding overall value to South Africa's national park system in terms of biodiversity conservation, recreational opportunities and regional socio-economic contribution.

Thus, the following strategic direction for the park has also informed the programmes of implementation (Section 10) of this management plan:

Environmental education and awareness, as well as the diversity of tourism products, are to be improved. A focus will be on the status of socio-economic catalysts. There is moderate potential for generation of income through game sales. There is potential to become a major grasslands park through contractual arrangement with neighbouring landowners. Infrastructure requirements are confined to fences. It is anticipated that the next 20 years will see increased biodiversity value in the national context, but little change in the SANParks context. Biodiversity risks are low compared to most other parks.

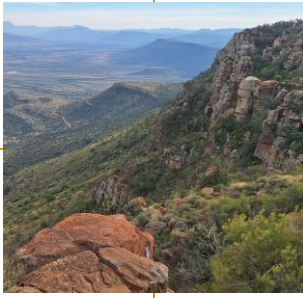
5.2.4 Operating principles or values

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

1. **Integrity** – I behave honourable, even when nobody is watching;
2. **Transparency** – I am transparent in my actions, decisions and communication;
3. **Respect** – I show due regard for the feelings, wishes and rights of others;
4. **Accountability** – I take responsibility for my own actions and work with others to get things done;
5. **Innovation** – I find new and better ways of doing things; and
6. **Leadership** – I inspire others to become their best selves;

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

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



At the above-mentioned workshop, the participants suggested adding additional values. SANParks agreed to adopt the following:

- Participation, consensus, rights of people;
- Being lawful;
- Honesty, transparency, accountability, responsiveness;
- Diversity of cultures and practices;
- Custodianship of nature and its benefits – this park is our park – “dorpspark”;
- Sharing knowledge and understanding with each other – Ubuntu; and
- A feeling of a sense of place and uniqueness.

The participants suggested adding additional principles. SANParks agreed to adopt the following:

- Transformation enhancing fair and equitable benefits from nature;
- Responsible sustainable use of all values of biological diversity;
- Good governance – cross link with values;
- Evidence-based decision, respecting and acknowledge all sources of knowledge;
- A duty of care - Reasonable measures should be taken to prevent harm from occurring to the environment and biodiversity. Harm that cannot reasonably be avoided or stopped, should be minimised and steps taken to rectify such harm.

5.2.5 Park context

The context refers to the current circumstances and the conditions that determine these circumstances. The context is therefore important as a set of agreed-upon realities that will influence the setting of management objectives. During the workshop, stakeholders were asked to reflect on the current and emerging context that is considered important for the development of the park management plan. All five STEEP categories were considered, namely social, technological, environmental, economic and political. The context is summarised under sections 2.1 to 2.15.

5.2.6 Vital attributes

The vital attributes of the park are the important characteristics and/or properties of the park that describe the key features of the park, or “what makes the park special?”. Vital attributes are in turn informed or strengthened by determinants and offset by constraints and/or threats. This information helps to focus the exact formulation of park objectives, which must strengthen positive determinants and reduce or mitigate threats, so that objectives are appropriate to the uniqueness and special nature of this national park. In this way, the management plan is customised in its fullest local extent, without detracting from some of its more generic functions. These are:

1. A national park interconnected with a heritage town and its people;
2. The park is part of the Mountain Zebra Camdeboo Protected Environment that promotes sustainable conservation in the region;
3. The Nqweba dam is an important feature of the park and town;
4. Tourism and educational experiences;
5. Unique Camdeboo vegetation associated with the Albany thicket, Nama Karoo and grassland biomes;
6. Iconic Camdeboo faunal species associated with the Albany thicket, Nama Karoo and grassland biomes;
7. The Camdeboo National Park important bird area;
8. Diverse cultural heritage; and
9. The Valley of Desolation, a geological phenomenon, within the Karoo landscape.

5.2.7 Determinants and risks to the vital attributes

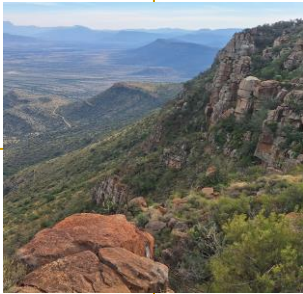
A major component of management's responsibility is to ensure the maintenance of the determinants or strengths of the vital attributes and to limit the influence of threats to the system.

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

1. A national park interconnected with a heritage town and its people	
Determinants: Long history of co-operation between communities, sense of belonging, local pride and compassion for one another, park surrounding the town, diversity of cultures, awesome natural surroundings largely undeveloped, park as a water source for the town	
Threats	
• Poor funding for small local municipalities • Inappropriate zoning and land use planning • Social unrest • Poor municipal governance	• Poor environmental management (water security and quality etc.) • Poor park management • Crime • Poor service delivery • Breakdown of partnerships and stakeholder relations

2. The park is part of the Mountain Zebra Camdeboo Protected Environment that promotes sustainable conservation in the region	
Determinants: Protected Environment status, compatible forms of land use, limited degradation, compatible land uses, several well-established private nature reserves, many of the farms have a game-farming component and conservation ethic, conservancies, formal recognition of each other, widespread appreciation for untransformed Karoo environment, willingness to co-operate across different land uses	
Threats	
• Stock theft • Poaching • Problem animals • Lack of cohesive bioregional vision • Conflicting objectives • Poor land use practises • Lack of financial resources	• Change of ownership (land use, lack of sense of permanency) • Inappropriate development • Public perception that changes regarding wildlife management (socio-economic implications) • Disease transmission to livestock • Alien and invasives species

3. The Ngweba dam is an important feature of the park and town	
Determinants: Rainfall, catchment condition, hydrology, confluence of rivers, associated with recreation, water provision to Graaff-Reinet, fishing (source of food and recreation), creating habitats, birdlife	
Threats	
• Security of the dam wall • Silt trap • Change in the priority in the use of the water • Poor catchment management	• Alien invasive species • Pollution • Increased demand for water • Climate change (i.e. drought) • Illegal water abstraction



4. Tourism and educational experiences

Determinants: Proximity of park to large urban community, capacitated staff, facilities, diverse environmental opportunities, good road network, tourism activities, viewing decks, bird hide, administration complex, accommodation, Winterhoek, maintenance budget, tourist and local business expectations, cultural heritage assets, palaeontological richness

Threats

- | | |
|---|---|
| <ul style="list-style-type: none"> • Lack of infrastructure maintenance link to limited budget • Potential threats (fire, water supply etc) | <ul style="list-style-type: none"> • Vandalism |
|---|---|

5. The Camdeboo National Park important bird area

Determinants: Diversity of habitats (vegetation, Nqweba dam, seeding grasses), criteria for IBA, part of the Karoo vulture safe zone

Threats

- | | |
|---|--|
| <ul style="list-style-type: none"> • Climate change • Loss of habitats • Habitat fragmentation / degradation • Inappropriate development • Power lines | <ul style="list-style-type: none"> • Disturbances of breeding sites • Mining (fracking, sand mining, etc.) • Wind farms • Poisoning and pesticides • Alien invasive species |
|---|--|

6. Unique Camdeboo vegetation associated with the Albany thicket, Nama Karoo and grassland biomes

Determinants: Geology, climate, soil, topography, herbivory, hydrology, characteristic and iconic species, fire regime

Threats

- | | |
|---|---|
| <ul style="list-style-type: none"> • Climate change • Inappropriate herbivory (illegal grazing and poor veld management) • Habitat destruction • Over-harvesting • Unregulated tourism • Park fragmentation | <ul style="list-style-type: none"> • Alien invasive species • Erosion • Inappropriate development • Illegal plant collection • Illegal grazing • Inappropriate water abstraction • Inappropriate fire regime |
|---|---|

7. Iconic Camdeboo faunal species associated with the Albany thicket, Nama Karoo and grassland biomes

Determinants: Vegetation, suitable diverse habitats

Threats

- | | |
|---|--|
| <p>Disease
Poaching and illegal collection of plants
Unsuitable habitat</p> | <p>Genetic contamination – inbreeding
Alien invasive species</p> |
|---|--|

8. Diverse cultural heritage

Determinants: Khoi, San and colonial influences, geological formations bearing fossils, sites, monuments and memorials, traditions, living cultural practises, link to astronomy, graves, generational legacies, oral history, Valley of Desolation

Threats

- | | |
|--|---|
| <ul style="list-style-type: none">• Vandalism• Loss of transmission of oral history• Undocumented history• Lack of maintenance• Semi-gration of younger generation | <ul style="list-style-type: none">• Intolerance of different cultures• Political priorities biased to certain cultures• Poor governance and bylaws• Gentrification |
|--|---|

9. The Valley of Desolation, a geological phenomenon within the Karoo landscape

Determinants: Geology (dolerite pillars), geomorphology, erosion, natural weathering, sense of place, scenic view, diversity of expectations

Threats

- | | |
|---|--|
| <ul style="list-style-type: none">• Vandalism• Lack of maintenance• Diversity of expectations | <ul style="list-style-type: none">• Incompatible tourism activities• Incompatible development• Air pollution |
|---|--|

5.2.8 High-level objectives

While the mission sets out the “Where do we want to go”, high-level objectives act as the roadmap to achieve the mission. These high-level objectives flow naturally from the vital attributes. The desired state is achieved by means of a hierarchy of objectives (Figure 10), starting with an overall objective aligned with SANParks’ organisational structure and the park’s vision and mission statements, to broad, high-level objectives (this Section) and to more detailed levels, ending with specific operational or management actions (Section 10). Discussions at the stakeholder meeting gave rise to an initial set of high-level objectives. These were refined to reflect the following:

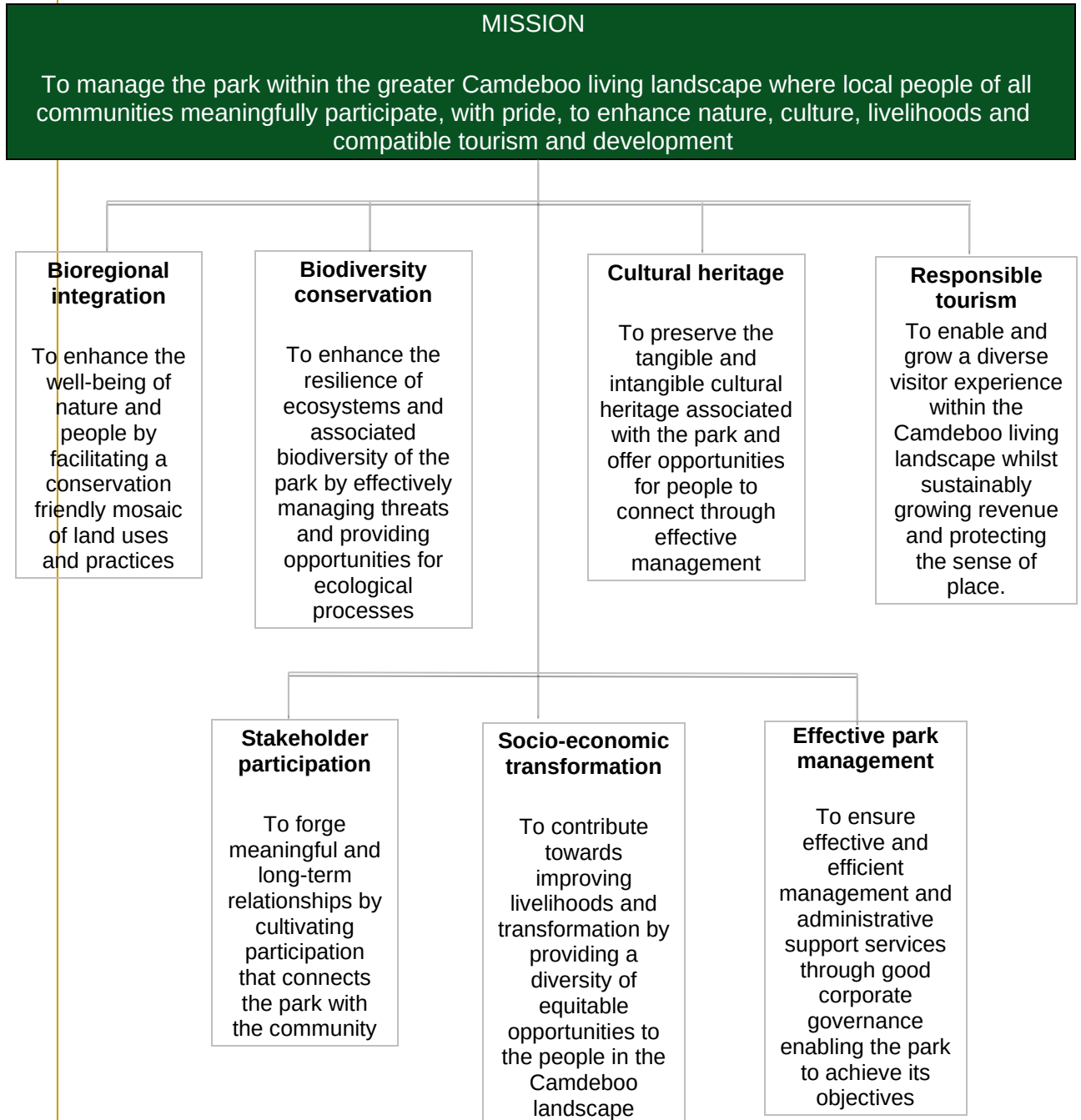
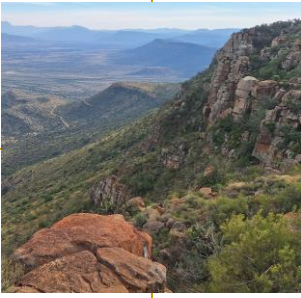


Figure 10. Park high-level objectives.

5.2.9 Unpacking the high-level objectives

The following unpacks the high-level objectives through a series of "objectives" of increasing focus. These are set out in Figures 11 to 17 below.

1. Bioregional integration high-level objective: To enhance the well-being of nature and people by facilitating a conservation friendly mosaic of land-uses and practices

1.1 Bioregional integration objective: To encourage collaborative best practice for sustainable benefits through integration and co-operation with local authorities and affected people

1.2 Park consolidation and expansion objective: To advocate connecting conservation-friendly land-uses within a mosaic of different landscapes through using a suite of stewardship mechanisms

Figure 11. Regional integration high-level objective and supporting objectives.

2. Biodiversity conservation high-level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes

2.1 Degradation and restoration objective: To improve degraded ecosystems by implementing rehabilitation and monitoring recovery

2.2 Invasive alien species objective: To reduce the impact of alien and invasive species by anticipating, preventing entry and controlling or eradicating alien species, where feasible

2.3 Fresh water ecosystems objective: To encourage sustainable water-use and ecological provisioning through integrated water resources management

2.4 Habitat management objective: To ensure robust veld condition and associated animal populations by applying good veld and wildlife (including invertebrates) management principles

2.5 Species of special concern objective: To contribute to the persistence and viability of key species by implementing prioritised species-specific monitoring, and where necessary management approaches

Figure 12. Biodiversity conservation high-level objective and supporting objectives.

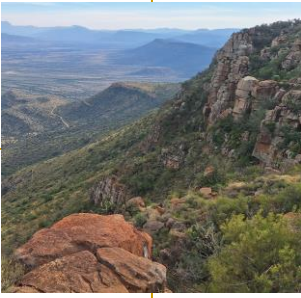
3. Responsible tourism high-level objective: To enable and grow a diverse visitor experience within the Camdeboo living landscape whilst sustainably growing revenue and protecting the sense of place

3.1 Responsible Tourism performance objective: To establish, maintain and continuously improve the park's Responsible Tourism performance, by implementing SANS1162

3.2 Visitor experiences objective: To continually enhance the authentic visitor experience within the park, through effective visitor management, interpretation and quality of facilities offered

3.3 Service excellence objective: To enable relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and preferences

3.4 Grow tourism revenue objective: To sustainably grow income through tourism by providing visitors with an appropriate and a diverse range of products and services, whilst protecting the tranquillity and sense of place



3. Responsible tourism high-level objective: To enable and grow a diverse visitor experience within the Camdeboo living landscape whilst sustainably growing revenue and protecting the sense of place.

3.5 Operational effectiveness objective: To enable cost savings within tourism operations, by ensuring effective management and controls

3.6 Promotion objective: To promote the unique natural landscape of the park by developing and implementing a variety of sales, marketing, and communication initiatives

3.7 Universal access objective: To enable appropriate access for differently-abled visitors by providing adequate infrastructure and services

Figure 13. Responsible tourism high-level objective and supporting objectives.

4. Cultural heritage management high-level objective: To preserve the tangible and intangible cultural heritage associated with the park and offer opportunities for people to connect through effective management

4.1 Heritage site accessibility objective: To provide access to heritage sites through facilitating sensitive and appropriate use of sites for tourism and education purposes

4.2 Site management objective: To identify and effectively manage cultural heritage sites through documentation, monitoring and conservation of identified sites

4.3 Intangible heritage objective: To preserve intangible heritage through identification, documentation, presentation and enabling access for cultural practices

4.4 Research objective: To improve and diversify the cultural heritage knowledge of the park through quality and inclusive research partnerships with communities, universities and researchers

Figure 14. Cultural heritage management high-level objective and supporting objectives.

5. Socio-economic transformation high-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape

5.1 Environmental education and awareness raising objective: To improve understanding and capacity for sustaining a safe and healthy environment through education and capacity-building programmes

5.2 Economic transformation objective: To promote and support skills development, employment and business opportunities by implementing and supporting identified initiatives

5. Socio-economic transformation high-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape

5.3 Stakeholder engagement and collaboration objective: To build mutually beneficial relationships and effective partnerships by creating linkages and facilitating engagement

Figure 15. Socio-economic transformation high-level objective and supporting objectives.

6. Stakeholder participation high-level objective: To forge meaningful and long-term relationships by cultivating participation that connects the park with the community

6.1 Stakeholder engagement and collaboration objective: To build mutually beneficial relationships and effective partnerships by creating linkages and facilitating engagement

Figure 16. Socio-economic transformation high-level objective and supporting objectives.

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

7.1 Environmental management objective: To strive for best practise and ensure compliance with environmental legislation through improved governance and environmental risk management

7.2 Risk management objective: To establish and maintain effective, efficient and transparent risk management systems by creating an enabling environment for the management of risk

7.3 Financial management and administration objective: To ensure sound financial management and administration through proficient budget management, effective internal controls and compliance to corporate governance prescripts

7.4 Human capital management objective: To ensure sufficient and effective staff capacity to achieve management objectives by adhering to legislation, corporate human capital management policies and guidelines

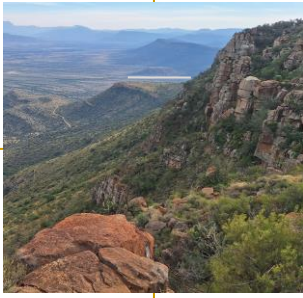
7.5 Information and records management objective: To achieve best practice in the field of information and records management by complying to the Records Management Legislative Framework and policies and thereby ensuring care of all vital records in SANParks

7.6 Infrastructure objective: To maintain, upgrade and develop new park infrastructure through proper planning and efficient management

7.7 Safety and security objective: To provide a safe and secure environment for both visitors and employees and to ensure the protection and integrity of natural, cultural and physical assets and resources, by implementing a Park Safety and Security Plan

7.8 Safety, health, environment and quality objective: To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Occupational Health and Safety management system

7.9 Communication objective: To build, maintain and constantly improve relations of the park by engaging and sharing information with internal and external stakeholders



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

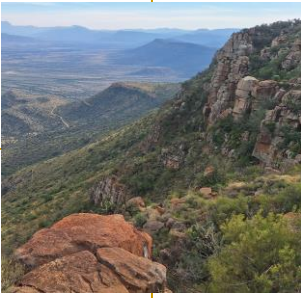
7.10 Disaster management objective: To ensure that all disaster situations that may occur in the park are addressed and managed through pre-determined contingency plans and pre-planned actions

7.11 Climate change objective: To adapt and mitigate negative impacts of climate change through monitoring, research and implementing the SANParks climate change preparedness strategy

7.12 Outcomes objective: To evaluate outcomes of management interventions related to protected area management through regular assessment

Figure 17. Effective park management high-level objective and supporting objectives.

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Section 6 - Zoning

6.1 Introduction

The primary objective of a park zonation plan is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives, and minimise potential conflict between activities. A zoning plan is also a legislated requirement of the NEM: PAA, which stipulates that the management plan, which is to be approved by the Minister, must contain “a zoning of the area indicating what activities may take place in different sections of the park and the conservation objectives of those sections”.

The zoning of the park was based on an analysis and mapping of the sensitivity and value of the park’s biophysical, heritage and scenic resources (SANParks, 2005a); an assessment of the regional context; and an assessment of the park’s current and planned infrastructure and tourist routes / products – all interpreted in the context of the park objectives. This was undertaken in an iterative and consultative process. This section – which is guided by the Conservation Development Framework (CDF) planning manual (SANParks, 2005b) – sets out the rationale for use zones, describes the zones, and provides management guidelines for each of the zones. The use zoning of the park is shown in Appendix 6, Map 5, and summarised in Table 4 below.

6.2 Synopsis of updates to the 2023 zonation

The overall pattern of use zones in the 2013 management plan has been retained, and in some areas, changes have been made based on development and visitor needs. These include:

- A High Intensity Leisure (HIL) zone was added around the entrance and office / admin area, and extended to including the Lake View camp site. This addition of a HIL zone is to facilitate for any future development and expansion of the CNP admin / office areas and parking lot; and
- The rest of the zones have remained the same based on future development needs and sensitivity.

The buffer zone of the park has been slightly updated as follows:

- The buffer zone was changed to the north of the park to align with the upper most footprint of the Camdeboo-Mountain-Zebra Protected Environment, and now stretches towards Rheboksfontein, Groot Driefontein and Bloupoort;
- In the south the buffer zone has been extended southward to meet up with the Addo Elephant National Park at Biesiefontein, Rooikop and Good Luck;
- Buffer zone categories have been aligned with provincial biodiversity plan (ECBCP, 2019);
- The buffer zone has been aligned with additional freshwater spatial data, particularly National Freshwater Ecosystems Priority Areas (Nel *et al.*, 2011a, 2011b), and the updated wetlands data from the National Biodiversity Assessment 2018 (Skowno *et al.*, 2019); and
- The buffer zone has been adjusted to align with the boundaries of existing designated Protected Areas (Eastern Cape Parks and Tourism Agency) nature reserves, private nature reserves and local reserves) in the area to ensure that those in close proximity, are included to their full extent.

6.3 Guiding principles underpinning the zonation

The principles underpinning the park zonation, as listed below, were informed by the SANParks CDF planning manual (SANParks, 2005b), the Guidelines for Strategic Environmental Assessment in South Africa, Integrated Environmental Management (DEAT, 2004) and the NEM: PAA. Accordingly, the zoning is based on the following:

- It is the foundation of all planning and development within a park, with the aim of ensuring its long-term sustainability;
- It accommodates strategic, flexible and iterative planning procedures;
- It provides a “framework for planning”, and not a “plan for implementation” (i.e. implementation is dealt with through lower-level plans and programmes);
- It is risk averse and promotes a cautious approach, which considers the limits of current knowledge about the consequences of decisions and actions;
- Zoning recognises that the mandate of SANParks is to conserve biodiversity and heritage resources of national and international significance, in terms of both the NEM: PAA and the National Heritage Resources Act;
- It ensures the integrity of the park’s scenic quality by limiting human intrusions into the landscape;
- Zoning accommodates a wide range of unique opportunities for experiences of solitude and nature-based recreation, limiting conflict with the desired social and environmental states;
- It confines development within the park to areas that are robust enough to tolerate transformation, without detracting from the “sense of place”;
- It rationalises and channels access into the park and internal movement through it;
- It sets limits of acceptable change to minimise the loss of biodiversity and to reduce conflict between different park uses;
- Zoning recognises that park boundaries are not static in time and that there are factors beyond the current or future boundaries that can positively or negatively influence the park; and
- It recognises that the park cannot exist in isolation and that planning needs to ensure that the park is integrated with the surrounding landscapes, as well as the economic and social structures at local and regional scales.

6.4 Rationale for use zones

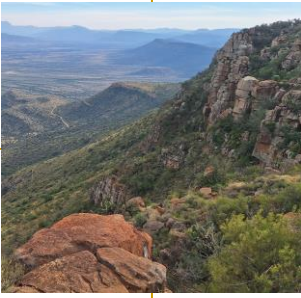
The primary function of a protected area is to conserve biodiversity. Other functions such as the need to ensure that visitors have access to the park, and that adjoining communities and local economies derive benefits from the park, could potentially contradict and compromise this primary function.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

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

6.5 The zoning system

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

- Use zones covering the entire park;
- Special management overlays covering portions of the park (where needed); and
- A buffer zone surrounding the park.

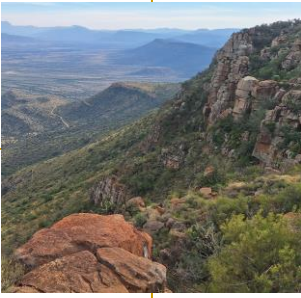


6.5.1 The zoning process and its linkage to the underlying environmental analysis

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

Table 4. Summary of use zone characteristics for the park.

	Remote	Primitive	Quiet
General characteristics	Retains an intrinsically wild appearance and character, or capable of being restored to such	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	This zone allows non-motorised access to areas which generally retain a natural appearance and character Access is not specifically controlled
Experiential qualities	Solitude and awe-inspiring natural characteristics	Experience wilderness qualities	Wide range of activities; relaxation in a natural environment
Interaction between user groups	None to very low	Low	Moderate to high
Types of access	For visitors, only access on foot	Foot; 4x4 vehicles	Unaccompanied non-motorised access
Types of activities	Hiking in small groups	Hiking, 4x4 drives, wildlife viewing	Hiking, walking, rock climbing, where relevant non-motorised aquatic activities, bird watching, possibly mountain biking and horse riding.
Types of facilities	Established footpaths where erosion may be a problem Essentially underdeveloped and roadless	Small, basic, self-catering or limited concessions with limited numbers (concession facilities may be more sophisticated); 4x4 trails; hiking trails	Hiking trails; footpaths; management tracks No accommodation; and no tourist access by vehicle
Limits of acceptable change: Biophysical	The zone should be kept near to natural state as possible with no impact on biodiversity pattern or processes Existing impacts on biodiversity either from historical use or originating from outside the zone should be reduced or minimised	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 zone should be maintained in a generally natural state, but some deviation from a natural/pristine state is allowed Infrastructure should only be allowed within a restricted development footprint, and infrastructure, especially paths and viewpoints should be designed to limit the impacts of large numbers of visitors on the biophysical environment
Limits of acceptable change: Aesthetics and recreational	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	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	The zone should retain a generally natural appearance and character, and activities which impact on this should be restricted In particular visitors are not allowed motorised access to this zone It is however recognised that the proximity of larger numbers of visitors and the adjacent facilities, may impact on the feeling of wildness found in this zone.
Guidelines for management infrastructure	Ideally, there should be no management infrastructure in this zone	Permanent management infrastructure is permissible in this zone, but these should be relatively small and isolated Park operations staff may need to service tourist facilities in this zone	Ideally, there should be no management infrastructure in this zone



	Low intensity leisure (LIL)	High intensity leisure
General 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	The main characteristic is that of a high-density tourist development node, with modern amenities, where more concentrated human activities are allowed
Experiential qualities	Comfortable facilities in a relatively natural environment	Comfortable and sophisticated facilities while retaining a natural ambiance
Interaction between user groups	Moderate to high	High
Types of access	Motorised self-drive access	Accessible by motorised transport (car/bus) on high volume transport routes, including delivery vehicles
Types of activities	Motorised self-drive wildlife viewing, picnicking, walking, cycling, rock climbing, hiking, adventure activities	As with LIL. Additional sophisticated infrastructure Larger, organised adventure activities (orienteering, fun runs) Dining at restaurants
Types of facilities	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 reasonably wild experience	High density tourist camps with modern amenities Footpaths, transport systems, accommodation, restaurants, curio and refreshment stalls, education centres High volume roads
Limits of acceptable change: Biophysical	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	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
Limits of acceptable change: Aesthetics and recreational	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	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
Guidelines for management infrastructure	Where HIL already exists, attempts must be made to concentrate the development of park management and operational infrastructure in the highest-usage zone of the park, where feasible, and especially when this is situated close to the boundary of the park Where it may be preferable to include non-industrial components of management infrastructure on the periphery of the park, these can be accommodated in LIL	As HIL is by definition a high-use area, and must be located in an area of low sensitivity, the development of management and operations infrastructure in this zone must be favoured

The sensitivity map (Appendix 6, Map 6) shows the relationship between the use zoning and the summary of the biodiversity and landscape sensitivity value analysis. This indicates that, in general, it was possible to include most of the environmentally sensitive and valuable areas into zones that are strongly orientated towards conservation rather than intensive tourist use. In addition, in numerous cases the boundaries between zones are based on changes in environmental sensitivity. Table 5 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 within each zone. This indicates that over 81% of the park is covered by zones that are strongly conservation orientated in terms of their objectives (i.e. remote and primitive). The table demonstrates a good correlation between the spatial distribution of environmentally sensitive areas and conservation-orientated zones, with over 94% of highly sensitive areas in the conservation-orientated zones. Conversely, the tourism-orientated zones cover just over 28% of the park while containing around 5% of sensitive areas.

Table 5. Percentage area of the park covered by each zone, as well as the percentages of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value-analysis) that are within each zone.

Zone emphasis	Use zone	Zone as a % of park area	% of highly sensitive areas that are in a zone
Conservation-orientated	Remote	23.4	55.0
	Primitive	48.2	39.5
Tourism-orientated	Quiet	0.4	2.0
	Low intensity leisure	27.8	3.5
	High intensity leisure	0.2	0

6.6 Overview of the use zones

6.6.1 Remote zone

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

Characteristics

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

Visitor activities and experience

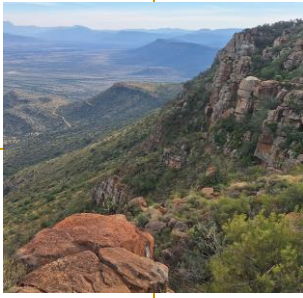
Activities: Access is strictly controlled and non-motorised. Groups must be small and can be either accompanied by a guide or unaccompanied. Several groups may be in an area at the same time, but if necessary densities and routes must be defined so that groups are unaware of each other. The principle of "Pack it in Pack it out" must be applied. Specially arranged once-off events such as an adventure race may involve higher visitor numbers for a brief limited period, but these events are not the norm.

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

Limits of acceptable change

Biophysical environment: Deviation from a natural / pristine state should be avoided or else minimised, and where unavoidable, existing impacts must be reduced.

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



Facilities

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

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

Audible equipment and communication structures: None.

Access and roads: Public access is non-motorised. Vehicular access and parking are provided in the adjoining zones. Established footpaths may be provided where erosion risks occur. Limited low specification management tracks (i.e. not built-up roads) are acceptable within this zone, though these tracks should be rationalised, and eventually removed.

Location in park

Remote areas in CNP are situated in the furthest east and furthest west parts of the park. The Remote Zone in the west stretches from Winterhoek to the boundary of the CNP. The Remote Zone in the east stretches all the way down to The Nook in the south of the park, adjacent to Shepards Tree farm.

Guidelines on management infrastructure and utilisation

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

6.6.2 Primitive zone

Objective

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

Characteristics

The primary characteristic of this zone is the experience of wilderness qualities with the emphasis on controlled access. Access is controlled in terms of numbers, frequency and group sizes. The zone shares the wilderness qualities of wilderness areas and the remote zone, but with the provision of small basic self-catering facilities with controlled access. It also provides access to

areas zoned as remote or wilderness. Views of human activities and development outside of the park may be visible from this zone.

This zone serves to protect sensitive environments from high levels of development, and acts as a buffer between conservation-orientated and tourist-orientated zones, e.g. Remote (or wilderness areas) and LIL respectively. Primitive zone may contain concession sites and other facilities where impacts are managed through strict control of the movement and numbers of tourists, for example, all tourists are in concession safari vehicles.

Visitor activities and experience

Activities: Access is controlled in terms of the number, frequency and group sizes. Activities include hiking, 4x4 drives and game viewing. In the park, access control is mostly passive, with 4x4 trails marked as restricted to 4x4 vehicles only, thus limiting visitor numbers on these routes. Access may also be controlled either through only allowing access to those with bookings for specific facilities, or alternatively through a specific booking or permit for a hiking trail or 4x4 route in more sensitive areas. Several groups may be in the area at the same time, but access should be managed to minimise interaction between groups.

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 to minimise these interactions.

Limits of acceptable change

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

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

Facilities

Type and size: Facilities are small, often basic and are distributed to avoid contact between users. To achieve this, camp development must be limited to 15 beds, alternatively facilities can be designed for high levels of luxury, but with limited visitor numbers (e.g. controlled access camps or concession sites).

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

Audible equipment and communication structures: None.

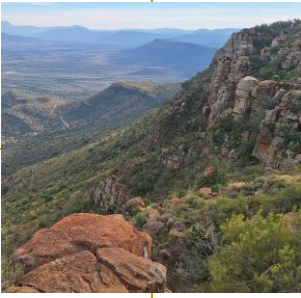
Access and roads: Vehicular accesses to facilities are mostly limited to low-spec roads, often 4x4 only. Tourist and game viewing roads are usually suitable for 4x4 vehicles only. Established footpaths are provided to avoid erosion and braiding.

Location in park

Primitive areas were designated to buffer remote areas and to protect most of the remaining sensitive areas from high levels of tourist activity. The primitive area in the east stretches from the N9 at the entrance, to The Nook in the south, buffering the Remote zone. On the western side of the CNP, the Primitive zone stretches from Winterhoek towards the N9 along Wildebees Kom.

Guidelines on management infrastructure and utilisation

Permanent management infrastructure is permissible in this zone, but these should be relatively small and isolated. Park operations staff may need to service tourist facilities in this zone. Examples may include non-improved management tracks, permanent bomas for wildlife, ranger camps and outposts, and possibly even permanent helipads. The responsibility is on park management to co-ordinate the tourist road network usage in such a way that tourists do not encounter management infrastructure in this zone, such as by using of no



entry signs. Low volume access gates or entrances to access 4x4 routes could be accommodated in this zone.

6.6.3 Quiet zone

Objective

The objective of this conservation-orientated zone is to allow non-motorised access whilst retaining a natural appearance and character through limited infrastructure development.

Characteristics

This zone is characterised by unaccompanied non-motorised access without specific access control and permits. Visitors are allowed unaccompanied (or accompanied) access, mainly on foot, for a wide range of experiences. Larger numbers of visitors are allowed than in the Primitive zone and contact between visitors is frequent. The main accent is on unaccompanied non-motorised access. Larger numbers of visitors are allowed and contact between visitors is frequent. It is important to note that this zone may have different interpretations in different parks and the CDF documentation for each park should set the objectives specific to that park. Thus, in some instances horses and mountain bikes could be accommodated. This zone can also provide non-motorised access within LIL and High Intensity Leisure (HIL) zones away from vehicular access roads.

Visitor activities and experience

Activities: Hiking, rock climbing, bird watching, self-guided constructed trails and walks.

Interaction with other users: Interaction between groups of users is frequent.

Limits of acceptable change

Biophysical environment: Some deviation from a natural/pristine state is allowed, but care should be taken to restrict the development footprint. Infrastructure, especially paths and viewpoints should be designed to limit the impacts of large numbers of visitors on the biophysical environment.

Aesthetics and recreational environment: Activities which impact on the relatively natural appearance and character of the area should be restricted, though the presence of larger numbers of visitors and the facilities they require, may impact on the feeling of “wildness” found in this zone.

Facilities

Type and size: Hiking trails, footpaths, bird hides. No accommodation. Ablution facilities may be provided in high-use areas. Heritage structures may be used for recreation purposes.

Sophistication of facilities: Where provided these should be basic.

Audible equipment and communication structures: Allowed, but should be managed to retain a relative level of solitude.

Access and roads: Essentially pedestrian access, but in certain parks horse and mountain bikes can be accommodated. No access for tourists by vehicle. The only roads are essential two-wheeled management tracks.

Location in park

The Quiet zone has two small areas in the park. The first is at the edge of the western section of the park far left of Winterhoek. The other patch of Quiet zone is around the Valley of Desolation as this site attracts many tourists. These Quiet zones provide active and passive non-motorised recreation space for the relatively large numbers of park visitors that will be accommodated there.

Guidelines on management infrastructure and utilisation

Ideally there should be no management infrastructure in the Quiet zone.

6.6.4 Low intensity leisure zone

Objective

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

Characteristics

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

Visitor activities and experience

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

Interaction with other users: Moderate to high.

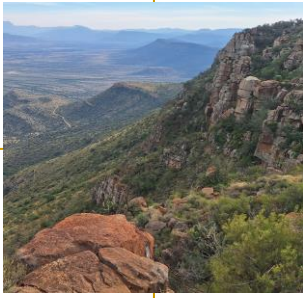
Limits of acceptable change

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

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

Facilities

Type and size: Picnic sites, view sites, information centres, ablution facilities, parking areas, education centres, etc. Small self-catering camps (including camping and caravanning) of low to medium density (up to 50 beds). Additional facilities can include swimming pools. Trails for 4x4 vehicles can also be provided. Small or seasonal (facilities are only open as required or during peak season) commercial facilities can be provided, such as kiosks, small tourist convenience stores, or tea gardens. However, these facilities must still fall within the general ambience of the zone— and as such may make use of converted or restored farmhouses. Larger commercial facilities and larger concessional operators (e.g. Cattle Barons and Mug & Bean), must be placed in the High Intensity Leisure (HIL) zone. Day visitor sites are not placed within the camps, and must be compliant with the general self-catering or smaller-scale catered characteristics of the zone.



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

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

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

Location in park

Low Intensity Leisure areas were designated to ribbons along current and planned access routes. Currently LIL areas are only in the part of the CNP that is situated to the west of the N9. This zone stretches from the HIL along the N9, includes the areas adjacent to the R63, which runs inside the CNP, west towards Winterhoek, with buffered road route towards the Valley of Desolation. The Nqweba Dam also forms a large part of this zone. The water in the dam is utilised by the municipality for the town of Graaff-Reinet.

Guidelines on management infrastructure and utilisation

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

6.6.5 High intensity leisure zone

Objective

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

Characteristics

The main characteristic is that of a high-density tourist development node with modern commercial amenities such as restaurants and shops. This is the zone where more concentrated human activities are allowed. High intensity leisure is accessible by motorised transport (car / bus) on high volume transport routes. More concentrated and commercialised (concessional) activities occur here than in LIL areas.

Visitor activities and experience

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

Interaction with other users: High

Limits of acceptable change

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

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

Facilities

Type and size: High-density camps providing tourist accommodation with diverse modern amenities, e.g. restaurants, shops, education / information centres, view sights, ablution facilities, parking areas and botanical gardens. Day visitor sites are provided outside of rest camps. Day visitor sites or picnic sites may provide catered facilities and kiosks. Where it may be necessary to provide high-density recreational sites with a wide range of intensive activities, an attempt must be made to concentrate these sites close to the periphery of the park. Staff villages and administrative centres must be restricted to core staff. Non-essential staff housing, administration and industrial infrastructure must, where possible, be positioned outside of or close to the periphery of the park.

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

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

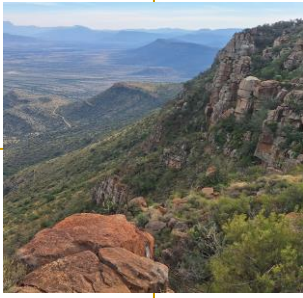
Access and roads: The zone is highly motorised, including busses and delivery vehicles on designated routes, which are often tarred. Care must be taken to distinguish between roads that serve as high-access delivery routes to camps, link roads between camps, and game viewing roads, to minimise conflict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

Location in park

High intensity leisure area is located at the entrance and office/ admin area. This addition of a HIL is to facilitate for any future development in an around this area.

Guidelines on management infrastructure and utilisation

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



6.7 Overview of the special management overlays

Special management overlays which designate specific areas of a park that require special management interventions (e.g. areas requiring rehabilitation). The only special management overlays for the CNP are for the alien vegetation rehabilitation areas, where rehabilitation efforts are underway or required in the park. The extent of this overlay has expanded to cover the increased area covered by Tamarix.

6.8 The park buffer zone

The buffer zone shows areas outside the park within which land use changes can affect the park. The buffer zone in combination with guidelines will serve as a basis for: (i) identifying focus areas in which park management and scientists must respond to Environmental Impacts Assessments (EIAs), (ii) helping to identify types of impacts that will be important at a particular site, and most importantly (iii) integrating long-term protection of the park into the spatial development frameworks (SDFs) of municipalities and other local authorities. Park management will interact with all spheres of government, whether local, provincial, or national, as required, to achieve a positive conservation outcome in the buffer zone. In terms of EIA responses, the buffer zone serves largely to raise red flags and does not remove the need for carefully considering the exact impact of a proposed development. In particular, it does not address activities with broad regional aesthetic or biodiversity impacts, e.g. renewable energy development projects. The buffer zones are aligned with the most applicable fine-scale systematic conservation plans in the area. In the park's case, these are the Critical Biodiversity Areas (CBAs) from the Eastern Cape Biodiversity Plan (ECBCP, 2019). From an aquatic perspective, the buffer zones are aligned with freshwater priority catchments, rivers and wetlands from the National Freshwater Ecosystem Priority Areas project (Nel *et al.*, 2011a, 2011b).

There are three main categories within the park buffer zone, namely priority natural areas (consisting of other protected areas, critical biodiversity areas and ecological support areas), water resource protection areas, and view shed protection areas (Appendix 6, Map 7).

6.8.1 Priority natural areas

This zone aims to ensure the long-term persistence of biodiversity, within and around the park, by identifying the key areas on which the long-term survival of the park depends. This includes areas important to both biodiversity pattern (especially reasonably intact high priority natural habitats) and processes (ecological linkages, catchments, intact hydrological systems, etc.). This does not imply any loss of existing rights (e.g. current agricultural activities or legal extractive biodiversity use such as fishing), but rather aims to ensure the park's 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.

The priority natural areas are designed to align with the best available fine-scale systematic conservation plan(s) for the area. For the park this is the Critical Biodiversity Areas map (ECBCP, 2019). These plans identify areas which must be kept intact (critical biodiversity areas) and areas which need to be kept at least functional (ecological support areas). The principal objective of critical biodiversity areas and ecological support areas is to guide decision-making about where best to locate development, informing land use planning, environmental assessment and

authorisations, and natural resource management, by a range of sectors whose policies and decisions impact on biodiversity.

Priority natural areas consist of three categories:

- *Other protected areas.* Protected areas managed by other agencies (e.g. Eastern Cape Parks and Tourism Agency) or by private landowners are included in this category. These areas contribute to meeting biodiversity targets for ecosystems, species and ecological processes, and for the purposes of buffer interventions should be treated as CBAs. Although these areas should be managed by their own NEM: PAA management plans, developments may impact on the park and park management should work with the respective managers of these areas to ensure alignment;
- *Critical biodiversity areas* from the Eastern Cape CBA map (ECBCP, 2019). Critical biodiversity areas are areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan. Within the buffer zone, these areas are additionally important for park expansion or for supporting biodiversity within the park and park landscape; and
- *Ecological support areas* from the Eastern Cape CBA map (ECBCP, 2019). Ecological support areas but play a key role in supporting the ecological functioning of critical biodiversity areas and / or in delivering ecosystem services. Within the buffer zone, these areas are additionally important for park expansion and for supporting biodiversity within the park and park landscape.

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

Response to development should be aligned with the guidelines for the spatial category in the appropriate conservation plan i.e. the Eastern Cape CBA map (ECBCP, 2019). Park management should ideally coordinate responses to development in consultation with the appropriate provincial authorities to ensure consistency in response to developments from different agencies.

Biodiversity offsets: These areas should be considered as offset receiving areas where possible, especially in identified park expansion areas.

6.8.2 Water resource protection areas

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

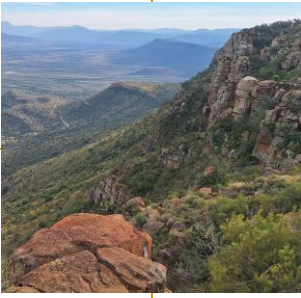
These areas consist of:

- Freshwater priority catchments, rivers and wetlands from the National Freshwater Ecosystem Priority Areas project (Nel *et al.*, 2011a, 2011b) and wetlands from the National Biodiversity Assessment (Skowno *et al.*, 2019). Freshwater priorities are largely located in the northern and southern expansion areas; and
- Other areas adjacent to the park where impacts on hydrological processes and water quality could impact on the park.

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

6.8.3 View shed protection

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



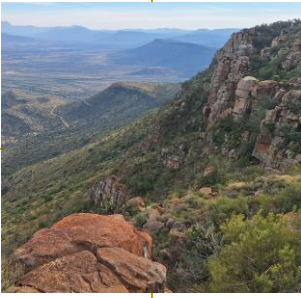
Development guidelines: Within these areas, any development proposals must be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone will be perfectly suited for development. Further, invasive developments outside this zone will also have to be considered.

6.9 Future improvements

6.9.1 General

Special management overlays which designate specific areas of a park that require special management interventions (e.g. areas requiring rehabilitation) may need to be identified.

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Section 7 – Access and facilities

7.1 Public access and control

Visitors traveling to the park will find the park in the Eastern Cape Province, approximately 260 km north of Gqeberha. The park virtually surrounds the historic town of Graaff-Reinet that lies at the junction of the R63 to Murraysburg, the N9 to Middelburg, the R75 to Gqeberha and the R61 to Aberdeen. The park is effectively divided by the R57 and by the N9 into an eastern section and a western section.

All access points are through controlled gates at three identified locations: the Lakeview gate, the Valley of Desolation gate and the game viewing area gate. Lakeview gate is the main administration office of the park where the reception office is located. Guests can explore the park in a vehicle, on a mountain bike, motor bike or walking on designated tourist roads and trails (maps available at reception).

- **Pay points** are staffed gates where a conservation fee is levied in exchange for an entry permit. There are pay points at the Valley of Desolation, the game viewing area and at Lakeview adjacent to the park main office. The park is a cash-free park;
- **Key control points** are unmanned points of access. Keys are required to access locked gates and can be obtained at the park administration office where a conservation fee is levied in exchange for an entry permit. There are five key control points in the park: at the Camdeboo environmental education centre, at the eastern section / Lootsfontein gate, at the eastern section / Skuinsveldhoek gate, at the eastern section / Kroonvale gate, at Nqweba dam / boating area;
- **Gateways** are points of access where there is no control over public entry. These are all public roads going through the park. Gateways in the park include those at the Erasmuskloof throughfare / N9 and at the Erasmuskloof throughfare / Broederstroom; and
- **Minor access points** are pedestrian access points open to the public where a conservation fee is levied in exchange for an entry permit available from the park administration office. The only minor access point in the park is at the Eerstefontein trail.

7.2 Areas with restricted access

The management tracks within the park are for management purposes only and indicated with no entry signs. The rest camp and Winterhoek guest house are exclusively for the use of overnighting guests.

7.3 Airfields and flight corridors

There are no airfields in the park. There is a municipal airfield adjacent to the game viewing area's eastern boundary (just off the N9 to Middelburg).

In accordance with section 47 (3A) of the NEM: PAA, SANParks has established a flight corridor for public purpose to allow aircraft to traverse the park's airspace (Appendix 6, Map 2). Pilots who stay within the confines of the flight corridor are exempted from the requirements of section 47 (3A). The corridor description and dimensions are as follows:

- **The Graaff-Reinet airfield (FAGR) flight corridor:** The flight corridor has been established to accommodate departing and arriving aircraft as well as aircraft in the circuit (Appendix 6, Map 2).

7.4 Facilities for vessels

There is one launch site in the park at the boat club (32°14'0.73"S, 24°31'45.30"E). There are no docking or mooring facilities.

7.5 Administration and other facilities

The facilities listed in Table 6 below are utilised for operational purposes enabling the park to fulfil its legal mandate. Map 8 in Appendix 6 shows all the infrastructure in the park.

Table 6. Current administrative infrastructure in the park.

Infrastructure	Current status	Zone
Boundary fence of 108 km	Operational	Various
Double pens with a circular kraal to hold buffalo		LIL
Field ranger outposts at Spandaunek and Skuinsveldhoek (include a self-sufficient rondavel for overnight operations in sensitive areas)		Primitive
Gannaleegte complex (a rondavel for BSP administration, a workshop, stores, garages and ablution facilities)		LIL
Lakeview administrative office complex (including workshop and storerooms and student accommodation)		HIL
Management road network of 10 km		Various
Water points supplied with windmills and / or solar pumps, some with storage reservoirs or tanks and drinking troughs		Various

7.6 Visitor facilities

Visitor facilities, including all non-commercial facilities and points of interest available to visitors, are set out in Table 7 below.

Table 7. Visitor facilities and points of interest in the park.

Infrastructure / visitor sites	Current status	Zone
Camdeboo environmental education centre, consisting of three dormitories, a lecture hall, kitchen, administration office, educators quarters, storeroom and two ablution blocks	Operational	LIL
Khwalimanzi hide on the eastern side of the Nqweba Dam		LIL
Three viewing decks (Lakeview, Valley of Desolation, Montego)		Various
Tourism road network of 60 km		Various
Two picnic sites, Impunzi – in the game viewing area and Ribbokberg – on the way to Valley of Desolation		LIL
Valley of Desolation		Quiet

7.7 Commercial activities

For the purposes of this management plan, commercial activities include all income-generating facilities, products and services offered.

7.7.1 Accommodation

Accommodation facilities in the park are currently limited. Existing facilities include those listed in Table 8, below.

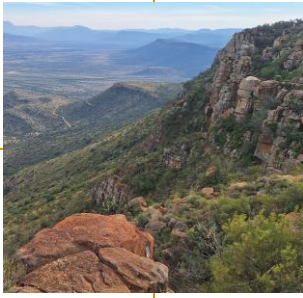


Table 8. Accommodation facilities available in the park.

Infrastructure	No of units	Current status	Zone
Lakeview Tented camp	4	Self-catering - serviced - economy accommodation	HIL
Nqweba camp site	15	Self-catering - budget accommodation	HIL
Waaiohoek wilderness camp site	1	Self-catering – budget accommodation	Primitive

7.7.2 Public private partnerships

There is currently (2025) no retail facility located in the park.

7.7.3 Retail and other facilities

There is currently (2025) no retail facility located in the park.

7.7.4 Activities

There are various non-income generating activities available in the park, and these are listed below:

- Koedoeskloof 4X4 route – unguided;
- Waaiohoek / Baakhoek 4X4 route – unguided;
- Diepkloof 4X4 route – unguided;
- Craig lizard hiking trail of 1.5 km - unguided;
- Eerstefontein hiking trail with route options: 5 km, 11 km and 16.5 km – unguided;
- Driekoppe hiking trail of 11 km – unguided;
- Gideon Scheepers hiking trail of 2 km – unguided;
- Self-drive game viewing;
- CompCare-Camdeboo Endurance horse race (40 km, 80 km and 120 km)
- Race to Desolation (mountain bike) ; and
- Tri the Karoo triathlon.

7.8 Cultural heritage sites

Currently (2025) there are five heritage sites accessible to visitors:

- Andries Pretorius monument;
- Gideon Scheepers monument;
- Valley of Desolation;
- Winterhoek; and
- Nqweba Dam wall.

7.9 Community use

Community members access the park to experience their natural and cultural heritage and sense of place. Fishing is permitted in designated areas allowing local community members to harvest alien fish from the Nqweba Dam.

7.10 Mining

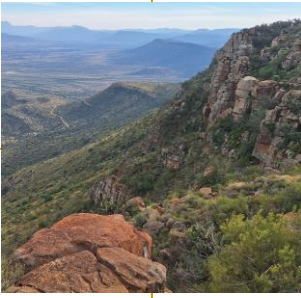
No commercial mining takes place in the park. No mining rights / permits have been issued on park property.

7.11 Servitudes

Servitudes allow landowners or representatives of organisations access to the park to perform certain duties. Table 9 provides a list of servitudes that have been registered against properties.

Table 9. Servitudes in the park.

Property description	Servitude diagram number	Type
Erf 4311, a portion of Erf 1814	5672/1988	Electric power line



Section 8 – Expansion / Consolidation

The expansion and consolidation of the park remains a strategic priority for SANParks, given its recognised biodiversity importance. In general, expansion and consolidation strengthen the ecological integrity, incorporate a more representative and resilient suite of areas that support biodiversity conservation (especially threatened species and ecosystems) that can contribute to national biodiversity targets and the protection of fresh water and marine environments (particularly Strategic Water Source Areas - SWSA), as well as support resilience to the effect of climate change.

Park expansion plans address objective SO1.1 of South Africa's National Biodiversity Strategy and Action Plan (NBSAP) (2015). The National Protected Area Expansion Strategy (NPAES) (2016) highlights that, despite some progress in protected area expansion, Fynbos Biome lowland ecosystem types remain amongst the least protected in South Africa. The National Biodiversity Assessment (2018) showed that many vegetation types in the area are endangered (Skowno *et al.*, 2019). This outcome seeks to secure a representative sample of ecosystems and species (biodiversity assets) in a network of protected areas and conservation areas that may be managed by government, private or communal landowners (Appendix 6, Map 4). Expansion also plays a key part in South Africa's contribution to meeting the "30x30" Target 3 of the of the United Nations Convention on Biological Diversity Kunming-Montreal Global Biodiversity Framework adopted in December 2022. This ambitious target calls for 30% of the earth's land and sea to be conserved by 2030 through the establishment of protected areas and other effective area-based conservation measures. The target aims to secure a representative 30% of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services and ensure that these are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures that are integrated into wider landscapes.

The objective is to create a park that represents under-protected ecosystems, climate change linkage priorities and important catchments and wetlands of the region and its linkages to the Sundays River catchment. Although all but one of the terrestrial ecosystem types in the area are not threatened (Skowno *et al.*, 2019), the area is largely under-protected. Hence, in line with the NPAES (2016) targets, expansion remains important for conserving under-represented ecosystems. The park's expansion area is extensive and spans from the eastern-most extent of the park to Mountain Zebra National Park (MZNP). The expansion footprint will thus provide a more appropriate scale to allow natural ecosystem processes to occur on an east to west gradient. The park's expansion footprint also overlaps substantially with the MZCPE footprint. The expansion of the park from 18,804 ha to a broader conservation protected area mosaic of 250,909 ha, including the current park, will significantly improve the ability to conserve ecosystem function and processes. This expansion would substantially increase the ecological value of the current park and ensure that it will remain ecologically meaningful under climate change.

The desired state for the park would include the consolidation of priority biodiversity areas in the buffer zone. It is envisaged to:

- Enhance the well-being of nature and people by facilitating a conservation friendly mosaic of land uses and practices;
- Advocate connecting conservation friendly land uses within a mosaic of different landscapes through using a suite of stewardship mechanisms;
- Use a diversity of inclusion methods (particularly contractual inclusions) to expand the park while diversifying opportunities for the economic development of the park's ecological assets; and
- Encourage collaborative best practice for sustainable benefits through integration and co-operation with local authorities and affected people.

The expansion footprint covers a complex of four biomes, including Grassland, Albany Thicket, Nama-Karoo and Alluvial Vegetation. Although the National Biodiversity Assessment (2018) highlighted that none of the ecosystem types in the area are threatened, with only one being Near Threatened, all but one are assessed as under-protected (Skowno et al., 2019). The expansion footprint encompasses seven ecosystem types, six of which are under-protected ecosystems. The Eastern Upper Karoo vegetation type is the only ecosystem type not currently found in the park. The expansion is also significant at a biome level, with the park potentially extending into substantial areas of Grassland biome, which is currently under protected nationally (Skowno et al., 2019, Driver et al., 2012). The expansion footprint strongly focusses on the opportunities for securing CBAs adjacent to the park. The landscape is mostly unfragmented, with large areas of Critical Biodiversity Area (CBA) and Ecological Support Areas (ESAs). Critical Biodiversity Areas of the Eastern Cape systematic conservation plan form an important basis for park expansion (ECBCP, 2019). The CBAs are required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan (SANBI, 2016). The expansion footprint strongly focusses on the opportunities for securing CBAs adjacent to the park. The expansion footprint supports 24 known threatened and endemic species, many of which are birds and plants of conservation concern, with some mammals of interest.

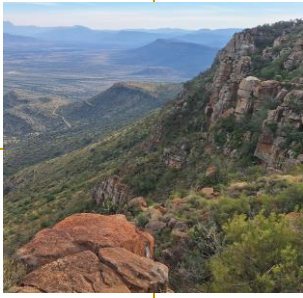
Additionally, as part of the importance of increasing ecosystem protection levels in this region, priority freshwater ecosystems and catchments, are included in the expansion. Emphasis has been placed on the protection of South Africa's water resources. The park has the potential to play a meaningful national role in the protection of Freshwater Ecosystem Priority Areas (FEPAs), especially if the park expands eastward towards MZNP. In addition to their water resource value, freshwater ecosystems have conservation value in their own right. Freshwater priority catchments, rivers and wetlands from the National Freshwater Ecosystem Priority Area (NFEPA) project (Nel et al., 2011a, 2011b) are located across the expansion footprint. To the north of the park, the Broederstroom River, is the only river classified as a NFEPA. There are two wetland types in the expansion footprint, according to the NBA 2018 (Skowno et al., 2019). The first wetland type is the Critically Endangered "depression" type and the second type, is the "channelled valley-bottom wetland", these are assessed as Endangered. There are no national surface or ground strategic water resource areas (SWSA) in the expansion footprint.

Climate change impacts, and their increasing threat to biodiversity, are important criteria that have been incorporated into the revised expansion plan using outputs from the Spatial Planning for Area Conservation in Response to Climate Change project (SPARC, 2019b). The focus for climate change is the extensive east – west corridor, which is critical to the long-term climate change adaptation capacity of the park. Potential linkages southwards, through to Addo Elephant National Park (AENP) should be explored to create landscape linkages to the coast and to other ecosystem types in the south, as well as for ecological river corridors. This connection to AENP is currently being explored via the GEF8 proposal to develop mega conservation area connecting AENP to MZNP and CNP. This would be important from a climate change perspective.

Furthermore, several heritage sites are located in the southern expansion footprint and have been integrated in the expansion footprint to conserve key cultural resources in the region.

Contractual agreements remain one of the options available for communities, private landowners and state entities to become part of the park and to improve ecosystem services and connectivity of the park, whilst contributing to other core functions such as responsible tourism, socio-economic benefits and management considerations, e.g. safety and security, invasive alien species management and countering other risk factors. The expansion of the park is anticipated to be almost entirely through contractual inclusion mechanisms, though limited land purchases (focused on consolidation areas) may take place. Land purchase capital costs are therefore not included. However, if funding can be secured, significant land purchases could be made to support range expansion for threatened species. Whether or not land purchase funds are made available, stewardship is nevertheless likely to be a key mechanism for expansion in the western areas. The programme is likely to be undertaken primarily in partnership with NGOs and willing landowners.

The approach that the park will follow can be found in section 10.2.2 on page 75.



Section 9 – Concept development plan

9.1 Long term development plan

Development within the park will only be embarked on to fulfil a real operational need or tourism opportunity. The park is not financially sustainable, however, it has the potential to improve its occupancy and to improve on current products to visitors with minimal expansion and development. The current development plan focuses on ways to attract additional visitors to the park. Currently the park is seen as a seasonal destination that is closely tied to school holidays and the traversing of tourists through Graaff-Reinet. The main tourism focus of park management during this term of the management plan is to maximise the current facilities, to ensure a higher standard of customer satisfaction of picnic sites, viewpoints, game viewing area and existing feel of the park. The construction of the universal access walkway at the Valley of Desolation is critical in achieving the above-mentioned focus, as well as the development of hiking, biking and trail-running trails throughout the park.

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

From a Responsible Tourism perspective, green building methods, energy efficiency technology and water savings measures will be implemented over time in both existing and new infrastructure.

9.2 Development nodes

There is no development node, and none has been identified.

9.3 Communication routes

Communication for official operations has improved in the park, however improvements required for both clients as well as operational needs, include but are not limited to two-way radio communication and free and metered Wi-Fi.

9.4 Service supply routes

The main service routes to the park are the N9 and R63 tar roads.

9.5 Infrastructure development proposals

All infrastructure development proposals, including activity development, are presented in Tables 8 to 12 below.

9.5.1 Administration and other facilities

The identified facilities set out in Table 10 below will be utilised for operational purposes.

Table 10. Proposed administrative infrastructure development in the park.

Infrastructure	Status	Zone	Priority	Probability
Rainwater harvesting at Lakeview office complex	New	HIL	Low	Low
20 km of upgrading 2.4 m game fencing	Existing	Various	Medium	Medium
Rewire Lakeview office complex and tented camp and camp sites	Existing	Various	High	High

9.5.2 Visitor facilities

Visitor facilities include all non-commercial and semi-commercial facilities and points of interest available to visitors are set out in Table 11 below.

Table 11. Proposed visitor facility development in the park

Infrastructure	Status	Zone	Priority	Probability
Valley of Desolation universal access	Existing	Quiet	High	High
Valley of Desolation water pipeline	Existing	Various	High	Medium
Buffalo viewing deck	New	LIL	Low	Low
Winterhoek, flooring, electricity	Existing	LIL	Medium	Medium

9.5.3 Commercial facilities and activities

There are a limited number of commercial activities that could be developed in the park, or that are currently in operation that could be expanded, to improve the tourism experience. All proposed opportunities will be investigated, and the priority determined based on feasibility and income potential. There may be opportunities for development that are excluded, as they are considered unlikely to be developed within the term of this plan. However, should the market change or a third party present an opportunity, products may be considered based on the agreed terms and locations, as per the park product development framework (Appendix 4).

9.5.3.1 Accommodation

The new accommodation infrastructure that is envisaged for the park is set out in Table 12 below.

Table 12. Proposed accommodation development in the park.

Infrastructure	Status	Zone	Priority	Probability
Construction of two family tents	New	HIL	Medium	Low

9.5.3.2 Public private partnerships

No public private partnerships are envisaged for the park.

9.5.3.3 Retail and other facilities

No retail infrastructure is envisaged for the park.

9.5.3.4 Activities

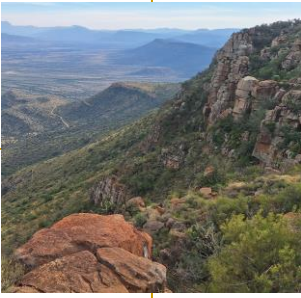
Leisure activities provide a mechanism for income generation, with the potential for community development and without the high capital investment required for accommodation. Key challenges regarding provision of leisure activities in future will be diversity of offering, customer demand and increasing the 'adventure' element of activities to engage the younger markets and markets with a high disposable income. Activity development will need to take the visual impact of each activity into account, to ensure the unique selling proposition of remoteness of the park is maintained. Certain activities will also need to cater for different product grades and visitor experience levels. Additional activities have been identified (Table 13) for possible development.

Table 13. Proposed activity development in the park.

Activities	Status	Zone	Priority	Probability
A network of hiking, mountain biking and trail-running trails (± 50 km)	New	Various	Medium	High

9.5.4 Cultural heritage sites

There is a need to enhance the interpretation of the existing cultural heritage sites and points of interest in the park. No new additional sites have been identified.



Section 10 – Strategic plan

10.1 Introduction

Sections 3, 4 and 5 of this document outline the policy framework, the consultation process and vision, mission and high-level objectives for the park. In this section the high-level objectives of the park are unpacked into objectives and sub-objectives and finally into operational actions. In this way, decision-making, even at the operational level, can be linked back with the core values and inputs from stakeholders on which they have been based. This approach conforms to the requirements of the NEM: PAA and the NEM: BA, SANParks policy and ratified international conventions.

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

- Bioregional integration;
- Biodiversity;
- Responsible Tourism;
- Cultural heritage;
- Engagement, access and benefits; and
- Effective park management.

Each programme is presented as follows:

- **Programme name:** A name describing the programme.
- **Background:** Overview of intent, guiding principles, description, outcome, research and monitoring and risk (all where applicable);
- **Tables:** Outline of objectives, initiatives and management actions within the scope of the objective with an indication if the programme is once-off, continuing or conditional on the availability of resources. These tables have the following headings:
 - **Objectives:** The various objectives derived from the hierarchy of 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;
 - **Portfolio of evidence (PoE):** Proof whereby the achievement of the objective can be evaluated. Where applicable, the PoE documents will be on official letterheads, dated and properly referenced. Documents will also be approved by the responsible staff member/s;
 - **Timeframe:** An indication of when the action is likely to be completed (indicated by year in the planning cycle); and
 - **References:** References to relevant programmes, lower-level plans (LLPs) or other documents.

In certain instances, a detailed LLP supports the individual programmes. These LLPs could be reviewed on a frequent basis depending on the changing circumstances and requirements.

The commitments outlined in the various programmes under section 10 are aligned with the performance management system of the operational staff. Progress and impact will be tracked, and the work plan will be reviewed annually to prioritise implementation activities, to be responsive to emerging matters and to inform the risk response strategy.

10.2 Bioregional integration

Regional integration promotes resilient regional outcomes across boundaries, through enabling institutional arrangements and co-operative support to bioregional programmes, growing a conservation domain through contractual and co-operative landscape planning and management, for sustainable benefits, socio-economic upliftment of communities and peace and stability in the region. This approach requires a systemic method for the integration of national parks into the broader economic and social landscapes through appropriate strategies, mechanisms and incentives and through encouraging complementary economic activity. It promotes and improves conservation and ecosystem services, allows for sustainable natural resource use, whilst unlocking direct commercial benefits to communities, and developing the necessary skills and capacity.

10.2.1 Bioregional integration programme

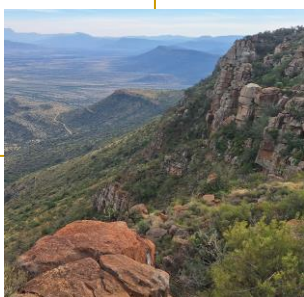
The purpose of the bioregional programme is to promote and conserve systems and processes through active engagement with governmental and non-governmental partners, institutional co-operation, stakeholder engagement and regional integration to promote resilient ecological and social sustainability. Within the park's buffer, the aim is to establishing corridors with specific reference to the MZCPE.

The park acts as a significant buffering mechanism to the mosaic of land uses within the surrounding living landscape, enhanced by its tranquillity and sense of place. The park has a favourable geographical position as it surrounds the town of Graaff-Reinet, while at the same time, being surrounded by the MZCPE and neighbours who participate in like-minded conservation management initiatives. A Memorandum of Agreement (MoA) between SANParks and the MZCPE specifies how the park will assist the MZCPE. This includes amongst others the MZCPE management plan revision and providing input regarding the conservation and restoration of biodiversity found within the MZCPE. The park will play a supportive and leadership role with the MZCPE as the latter embarks on the implementation of conservation management.

The park falls within the DBNLM and SBDM, and is recognised in both the local and district IDPs and SDFs as an important role-player in promoting and contributing to the region's tourist appeal, education, employment, and conservation initiatives. This is achieved through various programmes such as the DFFE's EPWP programme of which the Working for Water is implemented in the park. The park has established social linkages with communities through social programmes recognising the rich history and vibrancy of the communities of the greater Camdeboo area. The park utilises these interactions to strengthen biodiversity education, heritage learning and collaboration with the communities to enhance and evolve historic practices and secure resilience in ecology and social upliftment. The bio-regional value of ecosystem services in the park, its buffer zone and the wider region, remains a key component in the IDPs and SDFs of local, district and provincial authorities. This will ultimately ensure that biodiversity is a key aspect in land use planning and decision-making.

Various organisations, fora and agencies operate within the landscape, amongst others, the Graaff-Reinet Fire Protection Association (GRTFPA), heritage agencies, and private conservation entities including the MZCPE. The park is either part of, or actively engaging these organisations, whilst also serving on several municipal and district level structures. Similarly, these organisations serve on the Park Forum. This allows the park to collaborate with and support efforts of the various governmental and non-governmental partners in the region to achieve integrated implementation of activities and responses to the various impacts within the Dr Beyers Naude municipal and greater Camdeboo area.

Based on a recent analysis of land cover changes within and surrounding National Parks between 1990 and 2020 (SANParks, 2023c), most of the park still contains natural or semi-natural land cover, with >99% of park classified as natural/semi-natural. This natural / semi-natural land cover has remained stable between 1990 and 2020, with no noticeable land cover conversion noted within the park's current footprint. Note that the land cover classification does not consider the intactness of the natural/semi-natural cover (e.g. some natural cover areas may be degraded and/or in need of rehabilitation). Furthermore, land cover in the 10 km buffer around the park is mostly untransformed with 96.4% of the 10 km buffer classified as natural or semi-natural. The 3.6% transformed land cover in the park's 10 km buffer comprises of agriculture (2.4%) and built-up areas (1.2%). Most land cover conversion in the 10 km buffer around the park happened prior to 1990 and little change has been observed since then. The footprint of converted cover around the park is largely restricted to the agricultural areas around the Sundays River and built-up areas, with the town of Graaff-Reinet occurring between the two sections of the park.



With all the developmental pressures outside the park, the park is committed towards commenting on all the Environmental Impact Assessments (EIA) development applications, with the support from scientific services and park planning. The park is continually engaging and collaborating with authorities and other stakeholders and partners to ensure that important bio-regional aspects are addressed and potential impacts on the park are mitigated.

Through continued collaboration and integration at local and district level, opportunities, biodiversity issues, pressures, and threats related to the park, (such as illegal land invasion, the encroachment of invasive alien species, and pollution), and the protection of important ecological processes and ecosystem services, can effectively be addressed.

This programme links with high level objective 1 and objective 1.1 listed on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

BIOREGIONAL INTEGRATION PROGRAMME					
High-level objective: To enhance the well-being of nature and people by facilitating a conservation friendly mosaic of land uses and practices					
Objective: To encourage collaborative best practice for sustainable benefits through integration and co-operation with local authorities and affected people					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To promote ecological linkages across the landscape through contractual partnerships	Assist the MZCPE with the revision, and submission of their management plan	PPD, PM	E-mails, documentation	Year 2	SANParks – MZCPE MoA
	Support the MZCPE with the implementation of their management plan	PM, SR, PPD	Records	Year 2, ongoing	SANParks – MZCPE MoA
	Collaborate with relevant structures by communicating, participating with and contributing to activities as agreed	PM, SET Officer, PPD, SS	Minutes of meetings	As required	
	Implement actions that promote conservation outcomes in buffer zone and corridors as agreed for the GRTFPA, SDF and IDP	PM, SR, PPD	SDFs, IDPs FPAs, documentation	As required	
	Assist with the formal review of the MZCPE annual progress towards achieving the actions of their management plan.	PPD, PM, SR	MZCPE Management Plan monitoring sheet	Annually	MZCPE management plan
To minimise potential conflicts that arise from the different objectives of non-aligned land uses through responsible engagement with neighbours	Engage with all relevant land use planning processes within the buffer zone of the park to ensure that biodiversity priorities and objectives are addressed in EIA and land use change applications	PM,	Database of registered Interested / Affected Parties	Ongoing	
	Maintain the boundary fence to limit problem animals from escaping	SR	Number of boundary patrols	Ongoing	
	Provide assistance to neighbours and authorities with the investigation and follow-up in respect of stock theft incidents	SR	Monthly reports	As required	

BIOREGIONAL INTEGRATION PROGRAMME					
High-level objective: To enhance the well-being of nature and people by facilitating a conservation friendly mosaic of land uses and practices					
Objective: To encourage collaborative best practice for sustainable benefits through integration and co-operation with local authorities and affected people					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To minimise potential conflicts that arise from the different objectives of non-aligned land uses through responsible engagement with neighbours	Participate in IDP and SDF processes to influence decisions	PM, PPD, HODs	Minutes of meetings	Ongoing	IDP/SDF
	Communicate with neighbouring farmers associations regarding problem animal and possible solutions	PM	Farmers' association meetings attended	As required	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, PPD	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.2.2 Park expansion programme

The purpose of this programme is to achieve the SANParks goal of conserving ecological patterns and processes typical of the region by acquiring land suitable for conservation. The rationale for this programme can be found in section 8 on page 68.

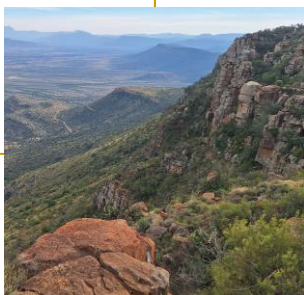
In line with the accepted expansion plan over the next ten years, SANParks will remain flexible to opportunities and as such, remain open to approaches from neighbouring landowners and state entities. This will mainly be achieved through contractual inclusion or purchase or by other means in line with the SANParks land acquisition framework.

The proposed short- and medium-term extensions of the expansion footprint include:

- Short- and medium-term northern expansion. The northern expansion area is 125,263 ha and most of the land is prioritised for short- and medium-term expansion. This area has five ecosystem types, all are under protected and thus expansion in this area would contribute to protected area targets;
- Short- and medium-term western expansion. The western expansion area is about 13,665 ha and most of the land is prioritised for short- and medium-term expansion. This section is adjacent to the park and is entirely covered by CBA and ESA, thus of high biodiversity value. It is a priority focus area identified in the NPAES (2016);
- Short- and long-term eastern expansion. The expansion to the east covers an area of 100,140 ha. This eastern expansion consists almost entirely of areas identified as CBAs and ESAs, thus making it priority biodiversity land. It is a priority focus area identified in the NPAES (2016).

The expansion is therefore well-motivated as the ecosystem inclusions will help achieve the national protected area targets for under-protected threatened ecosystems and improve the diversity of the park at an ecosystem level.

A detailed LLP outlining the rationale and operational approach supports this programme. This programme links with high-level objective 1 and objective 1.2 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.



PARK EXPANSION PROGRAMME					
High-level objective: To enhance the well-being of nature and people by facilitating a conservation friendly mosaic of land uses and practices					
Objective: To advocate connecting conservation friendly land uses within a mosaic of different landscapes through using a suite of stewardship mechanisms					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To acquire strategically identified properties that are of conservation importance to consolidate the park	Engage with local communities regarding the voluntary inclusion of some of their land in the park	PM, SET Officer, PPD	Documentation	As required	
	Motivate and prioritise contractual inclusions / acquisitions	PPD, PM	Land Inclusion Plan	Year 2, ongoing	Expansion LLP
	Target the incorporation of 10,000 ha over 10 years	PPD, PM	Contractual inclusions / purchase agreements	Ongoing	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, PPD	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3 Biodiversity conservation

South Africa is a signatory to the United Nations Convention on Biological Diversity (CBD) and therefore subscribes to the strategic plan for biodiversity (2011 - 2020) which includes the development and implementation of a NBSAP. Many of SANParks and the park's biodiversity conservation actions are therefore nested within South Africa's NBSAP. SANParks subscribe to the broad definition of biodiversity sensu Noss (1990) which includes structural, functional and compositional diversity at all scales. In managing the heterogeneity and diversity in the park it is emphasised that ecological systems function across a full hierarchy of physical and biological components, processes, and scales in a dynamic space-time mosaic (Pickett *et al.*, 1997). A challenge faced by park management is how to manage such a complex system, environmental challenges and climatic variables with limited management tools available. Park management therefor attempts to identify key agents, drivers and controllers of change that can be manipulated if the need to influence the nature and direction of heterogeneity change arises as Biggs & Rogers (2003) suggests. Experience has shown that allowing ecosystem processes and drivers to function as naturally as possible (or simulating such where need be), has better conservation outcomes than to only manage at a species level. As such, several biodiversity management programmes have been developed to effectively manage the diversity and patterns, as well as processes of the characteristic elements of a typical arid landscape.

10.3.1 Degradation and rehabilitation programme

The purpose of this programme is to identify degraded land and guide the implementation of ecological rehabilitation measures to restore the functionality of the degraded natural systems.

Desertification has been defined by the United Nations Convention to Combat Desertification (UNCCD) as "land degradation in arid, semi-arid and dry sub-humid areas through natural

processes as well as human activities". The natural factors are largely associated with climate variability, especially droughts, while human activities in the drylands are the major cause, especially in Africa. The national policy on the conservation and sustainable use of South Africa's biodiversity, produced by the DFFE calls for the identification of key sites for rehabilitation based on biological and socio-economic criteria, and the development and implementation of rehabilitation plans for identified sites. Similarly, the Convention on Biological Diversity lists rehabilitation as an important tool for promoting the conservation of biodiversity.

Typically, the bio-physical processes identified for assessment and monitoring of desertification are wind erosion, water erosion, waterlogging and other forms of chemical degradation of the land leading to soil quality degradation, degradation of soil physical condition, degradation of natural vegetation, desiccation of the land and other factors (Brown & Nickling, 2003). The acceleration of these processes beyond certain long-term threshold values can lead to excessive loss of soil cover and soil fertility, changes in vegetation ecology, and a host of other changes that result in a decline in land production and productivity (Brown & Nickling, 2003). These types of degradation are not only dealt with in the degradation and rehabilitation programme, but interlinked with other programmes such as habitat change, alien invasive plants, climate change, and freshwater ecosystems.

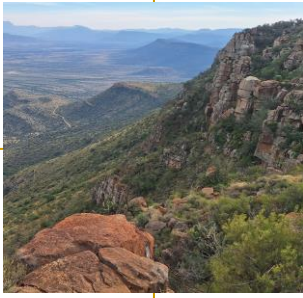
Arid ecosystems and species have developed unique strategies to cope with low and sporadic rainfall. They are highly resilient and recover quickly from prevailing disturbances such as herbivore pressure and drought. These attributes have great significance for the global system, especially in the context of climate change (Lean, 1995). A major driving force of biological diversification in dryland environments is relative aridity. Within each aridity zone, significant variations between sites are influenced by topography and geology and by variations in the most limiting factors such as water and soil nutrients. Types and intensities of these environmental drivers combine to determine the main selection pressures in arid ecosystems. These include low and highly variable rainfall in time and space; recurrent but unpredictable droughts that may persist for several consecutive years; high temperatures; inherently low soil fertility; high incidence of salinity; prevailing herbivore pressure; and fires. These stresses have been selected for a large diversity of adaptive traits.

Climate change including local climate variabilities has been identified as a serious risk to the Southern African region (Zietsman, 2011). Local climate variabilities are still tolerable, but extreme climatic events and prolonged climate change would prove to be serious in terms of the impact on natural biomes and ecosystems, and good governance structures and policies are needed to deal with these issues. Arid environments are defined by the dominant role of water in limiting the activities of life. Not only are water supply rates low, but they are also highly variable in time and space, reflecting local and regional precipitation patterns. Single rainfall events usually cause brief pulses of soil moisture with limited infiltration depth. However, precipitation events are never evenly spaced in time, and the probability that they will be clustered, increases during rainy seasons or floods (Loik *et al.*, 2004). Erodible soils may also be prone to degradation, especially during flash floods.

Under semi-arid climatic conditions, even a few degrees increase in temperature and a few millimetres decrease in rainfall could cause a decline in the biodiversity of plants and animals (Guo *et al.*, 2016a, b). In South Africa, for instance, about 10 million hectares, thus 8% of the land surface area of the country, are infested by invasive alien plants which use about 7% more water than native vegetation. It can be assumed that losses of species richness, the declining functionality of ecosystems, the invasion of new species, as well as changes to biomass production will continue and might accelerate in the future.

The most common transforming agents in the park have been agricultural operations, pastoralism and crop production. These land use practices have led to changes in the vegetation cover and infrastructural invasion. Areas that were historically used for livestock ranching have sparse shrubby vegetation. Former agricultural operations inevitably associated with infrastructural developments. The long-term aim of the rehabilitation programme is to return a transformed system to some form of cover or state that is protective, productive, aesthetically pleasing, or valuable in a conservation sense. The old, cultivated lands currently transformed to daisy field will be excluded in the rehabilitation plan as they are part of tourists' attraction during flowering season. In general, the level at which interventions will be made is determined by the system's current state in relation to biotic and abiotic thresholds.

The main causes of erosion identified in the park are exacerbated by water flow from the mountainous area leading to the development of rills and gullies. These areas are also characterised by sheet erosion resulting from the lack of vegetation cover, contributing to accelerated soil erosion. The park has contributed significantly to jobs for local communities through the Biodiversity Social Projects Working for Ecosystems in rehabilitation of degraded lands. In so doing, it contributes to the Land Degradation Neutrality targets for Succulent Karoo biome in South Africa. Restoration efforts recommended by SANParks Scientific Services and implemented by BSP has been evaluated using ecologically relevant methodology including Land



Function Assessment (LFA) as well as Remote Sensing. Evidence from the data collected since 2015 show how the prolonged drought of 2017 - 2019 impacted negatively on landscape productivity, heterogeneity and soil surface condition across the various rehabilitation treatments that included soil micro-catchments, silt netting, a mixture of the two compared to near pristine conditions. Most change occurred in Sandvlei compared to the other two sites followed by Melkboom. Erosion pegs have been installed to track soil accumulation and loss in the various treatments.

In relation to invasive alien species monitoring, the focus will be on the impact of bioclimatic variables influencing the distribution of alien invasive plants over time. Vegetation communities will also be monitored for degradation including soil degradation due to factors such as grazing pressure. Digitised natural history collection occurrence data from the Global Biodiversity Information Facility will be used to map the historical distribution and prediction of future distribution of the alien invasive species in the park area as influenced by climate change (cross-linked with alien invasive species and climate change programmes). The alien invasive species programme will focus on implementing the rehabilitation measures through Biodiversity Social Project (Working for Water) whereas Scientific Services will be responsible for monitoring and research.

A detailed lower-level plan outlining the rationale and operational approach is available. This programme links with high-level objective 2 and objective 2.1 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

DEGRADATION AND REHABILITATION PROGRAMME					
High-level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To improve degraded ecosystems by implementing rehabilitation and monitoring recovery					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To determine the spatial distribution of selected alien invasive species in the arid zone by predicting future suitable habitats using bioclimatic data	Map the occurrence of alien invasive species in the arid region, predict their future habitat suitability, and monitor emerging species	SS, BSP	Habitat suitability map of selected alien invasive species	Ongoing	Alien invasive species LLP, National Land Degradation Neutrality Targets, Desertification Land Degradation and Drought (DLDD)
	Source world climatic data for current and future climatic variables	SS	Bioclimatic data	Ongoing	Climate change LLP
To monitor areas affected by soil erosion (sheet, gully, rills) by assessing vegetation degradation in key areas experiencing grazing pressure	Use vegetation condition index (VCI) to detect vegetation change over time	SS	VCI maps	Annually	Habitat management & SSC LLPs
	Map soil degradation and prioritise severely affected areas for rehabilitation measures	SS, BSP	Soil degradation maps	Ongoing	

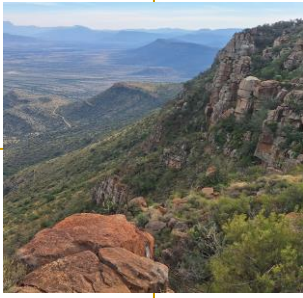
DEGRADATION AND REHABILITATION PROGRAMME					
High-level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To improve degraded ecosystems by implementing rehabilitation and monitoring recovery					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To monitor areas affected by soil erosion (sheet, gully, rills) by assessing vegetation degradation in key areas experiencing grazing pressure	Undertake LFA to assess ecosystem functionality and effectiveness of rehabilitation measures implemented	SS	LFA report and research undertaken	As required	
	Assess old lands and recommend best intervention measures to either promote daisy field on newly incorporated farmlands or restore to functional natural system	SS, SR, BSP	Degradation & rehabilitation plan	Year 3	Responsible tourism programme
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, SS, BSP	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3.2 Alien and invasive species programme

The purpose of this programme is to reduce impacts and mitigate threats that alien and invasive species (AIS) pose on the park and, where deemed necessary, from invasions within the immediate buffer area. Further objectives include preventing reinfestation of AIS into the park, as well as protecting the park from new and emerging invasive species. Due to the lack of resources, WfW funding is being allocated to the management of invasive plant species, the low threat of invasive animals as well as the free movement of the listed invasive animal species, no formal management of non-plant invasive species is undertaken in the park.

South Africa, as a signatory to the Convention on Biodiversity, as well as other international conventions, is required to manage AIS within its borders. In South Africa, the management of AIS is mandatory under the NEM: BA. There are 16 legislative statutes (national acts, provincial ordinances and municipal by-laws) that govern the management of AIS. Of these, the most relevant are the NEM: BA and the Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA) and regulations emanating from these acts. The CARA provides additional guidance for the management of AIS plants. The NEM: BA Alien and Invasive Species Regulations (2016) are of direct relevance. Further, the NEM: PAA requires that all protected areas have plans for the management of AIS. The SANParks policy for the management of AIS (2017) provides the context within which all management of AIS is implemented. Within SANParks the context for the management of AIS is set out in the SANParks Alien and Invasive Species Regulations (2018) and a framework for the management of AIP provided in the Standard Operating Procedure (SOP) for the Implementation of Invasive Alien Plant Management Projects (2017). The SANParks Alien and Invasive Species Regulations (2018) provides an integrated approach to alien and invasive species management. The framework includes five components, which have been incorporated into this plan, namely: (i) assessment and risk analysis, (ii) priority setting, (iii) early detection and rapid response, (iv) control and (v) restoration.

Protected areas are increasingly becoming islands in transformed landscapes where changes in land use across the wider landscape impact directly on the primary objectives of protected areas (Foxcroft *et al.*, 2019). Invasive alien species, specifically plants, impact on biodiversity by altering natural patterns and processes, competing for resources, altering nutrient cycles as well as change fire intensity and frequency resulting in native species population declines and extinctions (Lukács & Valkó, 2021; Foxcroft *et al.*, 2013; Foxcroft *et al.*, 2017). These impacts are often more cryptic in arid areas (Milton & Dean, 2010). Furthermore, invasive alien species negatively impact on ecosystem services (e.g. water quality and quantity) which potentially impacts directly on human wellbeing (Orimoloye *et al.*, 2021). The impact of invasive alien species on protected areas is not limited to ecological or human wellbeing; the financial cost of invasions on protected areas can be calculated through the cost of control and eradication programmes, as well as financial loss due to negative effects on revenue earning activities (e.g. tourism, cultural heritage sites) and physical infrastructure (Gallardo *et al.* 2019; Courtois *et al.*, 2018; Lukács & Valkó, 2021; Milton & Dean, 2010).



Effective management of AIP requires sound planning and implementation, which is dependent on well-grounded ecological knowledge, an understanding of risks and effective collaboration between interconnected and effected parties (Tu & Robison, 2013). The effectiveness of implementing management plans and the successful outcome thereof is dependent on sound management structures, adequate resources, structured monitoring, and reporting, with strategic adaptive management through feedback and communication loops (Foxcroft & McGeoch, 2011). The implementation of an effective rapid response mechanism is also important to mitigate the introduction of new species and thus its potential threats and impacts adjacent to and within the broader buffer of the park (Tu & Robison, 2013).

List of invasive species occurring in the park

A total of 61 alien and invasive species are listed for the park; 13 mammal, 46 plant and two fish species. Of these 37 are listed under NEM: BA (Category 1a = one, Category 1b = 29, Category 2 = six and Category 3 = one) (SANParks unpublished data, 2023). Thirty of the listed plant species are considered as potential transformer species (Foxcroft *et al.*, 2019) with seven species having registered biocontrol agents.

A process of prioritisation has been developed to focus management efforts on species that potentially have a greater impact on the park's objectives. Three levels of priority have been identified, category (A) are species of national concern, (B) those species that require "maintenance and control" and (C) high priority species not yet in the park, or in the process of being eradicated or where populations are small and receiving intense efforts to be reduced. Species may be added, removed or reprioritised within the list as knowledge on threat status and population dynamics informs change or when funding availability allows (see Table 14). All species reported on the 'watch list' that are detected within the park and where populations are limited enough in distribution and infestation rates are low (rare), should be considered as category C. Species may be moved to a higher category, if necessary, with new species added to category C if identified.

Table 14: Invasive alien plant species identified for priority control.

Category A	Category B	Category C
<i>Tamarix ramosissima</i>	<i>Cylindropuntia fulgida</i>	None
	<i>Cylindropuntia tunicata</i>	
	<i>Opuntia aurantiaca</i>	
	<i>Opuntia ficus-indica</i>	
	<i>Opuntia imbricata</i>	
	<i>Schinus molle</i>	
	<i>Trichocereus spachianus</i>	

Category B species must occur in the same delineated work area as Category A species, Category A species are the priority species driving the selection of areas for invasive alien plant management by the BSP.

Description of land infested and the extent of invasion of IAP

Tamarix and cacti species are the park's primary invaders and have the longest history of occurrence in the park, therefore these species have become well established. Other species are opportunistic to favourable ecological conditions proliferating and persisting across time. Tamarix is associated with the alluvial deposits of the Nqweba Dam and the Sundays River (920 ha) while the cacti species, but for *Opuntia ficus-indica*, are predominantly associated with the low-lying areas between the R63 and the N9, as well as the low-lying areas to the east of the N9 (11,125 ha) and the low-lying areas in the southeast of the park that interface with Graaff-Reinet's peri-urban

areas. In the upland areas, usually associated with rocky outcrops and cliff faces *O. ficus-indica* is the predominant invasive species.

Areas of concern within the buffer of the park is primarily the Sundays River, a source of *Tamarix*, as well as other invasive species such as *Schinus molle* and *Nicotiana glauca*, as well as annual and ruderal weed species. Monitoring of the Sundays River, as well as adjoining communal and municipal land is a prerequisite for the management of external threats.

Status report on the efficacy of past control measures

The management of alien and invasive plant species within the park has been carried out through SANParks BSP since 2007 / 2008. A total of R18.3 million has been spent in the park between 2007 / 2008 and 2022 / 2023, of which R15.3 million was spent during the last park management plan cycle (2013 – 2024). During this period, a total 62,703 person-days of work was achieved, including training, which equates to, on average nine full-time employment opportunities per financial year. The primary focus was on *Agave* species in and around homesteads. Additionally, *Opuntia* species, specifically *O. ficus-indica*, were targeted in the mountainous areas to the west of the park, specifically in areas accessed by tourists such as the 'Valley of Desolation' as well as accessible areas further north along the Sneeuberg Mountain range.

Initially, management efforts concentrating on controlling *Tamarix* focused on the Sundays River from where it enters the park in the northeast, adjacent to municipal property. Later management efforts expanded to areas around the Nqweba Dam when water levels allowed for access. Subsequently, the management focus shifted to preventing encroachment on the 'grazing lawns' between the core infestation and the dam to the south and selected denser stands.

The management of jointed cactus, specifically *Opuntia aurantiaca*, in the game viewing areas has been ongoing prior to the park's declaration and is considered largely successful. Other *Opuntia* species such as *O. imbricata*, *O. humifusa* and *Cylindropuntia fulgida* have more recently been placed under chemical control as well as, in some areas, biological control. A joint management initiative between SANBI Early Detection and Rapid Response (EDRR) and SANParks focussing on the communal areas was implemented in 2010, the SANBI EDRR programme, and has since been concluded.

While Masubelele *et al.* (2009) cautioned towards the threats posed by many of the alien and invasive species within the park, specifically the cacti species, and the woody invaders such as *Tamarix*. Masubelele *et al.* (2013) observed the efficacy of alien and invasive plant management, though noting that alien and invasive plant species remained a threat. Diligence in the monitoring and management of alien and invasive species going forward and awareness of potential novel invasions need to remain a management priority.

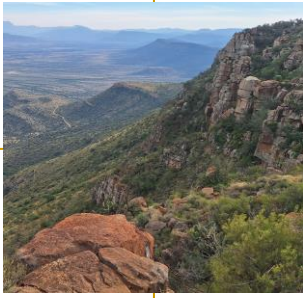
Current measures to monitor, control and eradicate invasive and alien species

There is currently active invasive alien plant management implemented within the park through the BSP WfW project. Funding is received through the extended public works programme (EPWP) and funding allocation is based on the needs as assessed through the annual plan of operation (APO) and funding received.

The framework set out in SANParks AIS management policy, as well as the SOP for the Implementation of IAP management projects, ensures that SANParks complies with legislation, including the identification and prioritisation of activities which include:

- a. Awareness of invasive alien species threats;
- b. Assessment of current and potential threats and pathways;
- c. Prevention practices and procedures;
- d. Early detection and rapid response;
- e. Management control and restoration; and
- f. Secured and maintained funding.

Monitoring is key for the management of AIS, specifically AIP dispersal into and within the park, and needs to be focussed on the potential pathways identified within the parks landscape. Foxcroft *et al.* (2019) identified a total of eight different potential pathways that AIS may follow to enter and/or disperse within a park, and the three primary pathways are (i) rivers and (ii) roads etc. and (iii) contaminated construction material, equipment and soils specifically in the surfacing of existing provincial roads transecting the park. In addition, (iv) agricultural areas adjacent to the park, as well as (v) movement of wildlife and possibly domestic animals between these areas and the park need to be monitored. (Foxcroft *et al.*, 2019). Non-ecological asset areas that need to be protected from the threats of AIP and other associated threats, include the park tourism and



management facilities. Monitoring is done through the BSP baseline data on invasive alien plants that is reviewed annually. Changes in the dynamics of species triggers management action. There is currently no scientific monitoring of impact mitigation or effectiveness of invasive species management. Long-term trends show that invasive alien plants are at relatively low density and control along the streams leading into the Orange River is effective if there is diligent follow-up. Eradication is not expected in the long term but extirpation in the dry river courses is feasible, especially in areas where streams originate within the park.

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

1. Initial treatment.

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

2. Follow-up treatment.

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

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

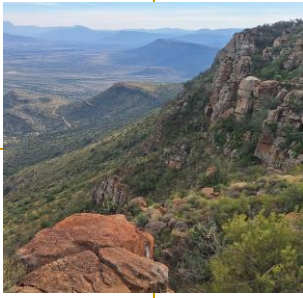
Due to the long history of incompatible land use within and adjacent to the park before its proclamation, coupled with the park's close proximity to the urban and peri-urban edge of Graaff-Reinet, agricultural activities across the broader landscape, the need for proactive management of alien and invasive species will continually remain a vital aspect of ongoing park management. Additionally, the increasing tourism activities add to the challenges, as it may inadvertently introduce and spread invasive species. Addressing these complex factors is crucial to preserving the park's ecological integrity and biodiversity. Therefore, a sustained and proactive approach to invasive species management is essential for effective conservation efforts requiring long-term funding through South Africa's Extended Public Works Programme (EPWP). To sustain the gains made in the management of AIP, it is essential that funding is secured over the long term to allow management to retain a focus on priority species and areas across the park and to monitor and respond to external threats identified through a proactive management approach. Monitoring progress in invasive species management and awareness of emerging threats from new alien and invasive species are essential. Relevant monitoring programmes are outlined in the park's NEM: BA Control Plan.

A detailed lower-level plan outlining the rationale and operational approach supports this programme. This programme links with high-level objective 2 and objective 2.2 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ALIEN AND INVASIVE SPECIES PROGRAMME					
High-level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To reduce the impact of alien and invasive species by anticipating, preventing entry and controlling or eradicating alien species, where feasible					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To better understand the potential threats of alien and invasive species, as well as comply to legislation	Update the alien and invasive plants baseline database	BSP, PM, BSP CM, SR,	AIP species database	Annually	
	Maintain a database of alien and invasive animal species with locality and species level counts	BSP, PM, SS	Geospatial database	Annually	
	Maintain a listing of alien and invasive species found within the buffer areas of the park through iNaturalist and SAPIA (baseline 2020) databases	SS, BSP	SANParks AIS database	Years 1, 5, 9	
	Update the NEM: BA CP	BSP SMI, BSP PM, BSP CM, SS, PM	Park NEM: BA Control Plan	Year 1, 5	NEM: BA
	Update the NEM: BA Cat. 2 species permits as required by legislation	BSP SMI, PM	Park NEM: BA Cat 2 permits	Year 1, assessed annually	NEM: BA
To leverage funding for the management of alien and invasive species	Submit a request for funding based on the alien and invasive species management needs	BSP PM, BSP CM, BSP IM	APO	Annually	DFFE NRM MOA
	Request funding based on the alien and invasive species (non-plant) management needs	PM, SS	Funding request	Annually	
	Implement the alien and invasive plant species management plans	BSP PM, BSP CM	Monthly and annual reports	Annually	APO and NEM:BA CP
	Implement the alien and invasive (non-plant) management plans	PM	Monthly and annual reports	Annually	Funding allocation and NEM: BA Control Plan
To reduce the risks of AIS invasion on the park	Implement monitoring (systematic or informal) as part of park management	SS, PM, BSP	Monitoring reports	Annually	NEM:BA
To foster a collaborative partnership between National Institutions (SANBI, CIB) as well as private landowners and general public	Facilitate involvement in relevant stakeholder meetings and 'environmental days'	SET Officer, BSP	Presentation and attendance registers	Annually	
	Engage with and encourage interventions to address management or non-management of AIS in the broader Camdeboo landscape	PM, BSP	Minutes of meetings	Annually	NEMBA
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, BSP	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3.2 Freshwater ecosystem programme

The purpose of the freshwater ecosystems programme is to promote sustainable water use practices through collaborative participation, research, monitoring, and effective management to ensure the persistence of freshwater systems and associated biota in the park through Integrated Water Resources Management (IWRM). This programme deals mainly with surface water (i.e. rivers) and groundwater due to the sensitive linkages and interconnectivity between these various entities. Aquatic ecosystems are complex systems with many interrelated components. Understanding these systems in a systemic way requires input from various disciplines, for example groundwater science, environmental chemistry, geomorphology, hydrology, entomology, ichthyology and increasingly also social sciences.



The National Water Act (NWA, Act No 36 of 1998; RSA, 1998a) and National Environmental Management Act (NEMA, Act No 107 of 1998; RSA, 1998b) provide the framework which governs water use and management. The water resources of South Africa, both as surface water within rivers and sub-surface in groundwater aquifers are under the custodianship of the national Department of Water & Sanitation (DWS), which is responsible for implementing the NWA and the principles of IWRM it embraces. South Africa is a signatory to several international conventions, agreements and protocols governing water resources. Therefore, SANParks' strategic plan, management plans and conservation policies are informed by the CBD Programme of Action on Protected Areas. The post-2020 CBD Global Biodiversity Framework's goals and targets, for the 2021-2030 decade, were finalised in December 2022. The newly adopted "Kunming-Montreal Global Biodiversity Framework" includes four goals and 23 targets for achievement by 2030. One of the overarching global goals is for the integrity, connectivity and resilience of all ecosystems to be maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050. Target 3 of the new framework is particularly relevant for protected areas: "Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed ...". Target 2 is similarly important: "Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity."

South Africa was proactive in adopting a freshwater conservation target in 2011. This target emerged from a series of participative workshops involving several government departments and national agencies (SANParks, the Council for Scientific and Industrial Research -CSIR- and SANBI), during which it was stated that at least 20% of each inland water ecosystem type should be conserved (Roux *et al.*, 2006). The endorsement of a quantitative target was followed by a national planning exercise to identify strategic spatial priority areas for satisfying the 20% target. The resulting conservation priorities, known as FEPAs, comprise 22% of South Africa's river lengths and 38% of wetland areas (Nel *et al.*, 2011a,b). These targets would be the start towards achieving the 30% by 2030 as stated in the paragraph above.

The DWS lists SANParks as an implementation partner of its National Water Resource Strategy. Relevant actions include: (a) investment in strategic water source areas, (b) strategic investment in the maintenance and rehabilitation of freshwater ecosystems, (c) maintenance of FEPAs in good condition, protected riparian and wetland buffers and critical groundwater recharge areas, (d) monitoring ecological health to inform management, and (e) establishing commitment to sustainable water resource management through e.g. stakeholder awareness programmes.

Freshwater ecosystems are highly connected systems and can be summarised as such:

- Longitudinal connectivity (along the length of a river): Rivers form ecological corridors from source areas all the way to the sea, with several environmental gradients along their lengths (e.g. in nutrient concentrations, temperature, flow dynamics, salinity and habitat structure) which is critical to their overall functioning and health;
- Lateral connectivity (from terrestrial to aquatic): The health of rivers and wetlands are susceptible to changes in runoff, as well as sediments and contaminants from upstream and upland runoff. Rivers and wetlands cannot be conserved without taking care of their surrounding environments. Of importance is to maintain buffers or riparian zones of natural vegetation around these ecosystems; and
- Vertical connectivity (between groundwater and surface water): Groundwater sustains river flows ("base flows") and supports refuge pools in the dry season. Refuge pools are critical in seasonal rivers, as they support water-dependent biota that would

otherwise not survive when the rivers dry up. Groundwater further supports a wide variety of groundwater dependent ecosystems such as wetlands. Reductions in groundwater stores as a result of abstraction, particularly from riverbeds, close to streams, and from shallow alluvial aquifers, will have a direct influence on river flow and on groundwater dependent ecosystems.

Park management aspires, with a long-term view, to achieve the progressive realisation to leverage influence with strategic water management authorities, stakeholders, and users to improve water security vulnerabilities and jointly develop a strategy for robust water resources management to sustain water for public health, the environment, and the economy in the DBNLM. This will necessitate that SANParks continually engages in hydrological and aquatic ecosystem analysis and interpretation with strategic stakeholders and the principal water authorities in the region such as the DWS, future Catchment Management Agency, provincial and local government agencies and non-governmental organisations in the region. There is also a need to foster river health constituency, which may be achieved through outreach activities and grassroots (local level) interaction through park initiatives and public forums. Co-learning and information sharing is essential for improved water management strategies in the region and to increase the public understanding of hydrological and water resources issues.

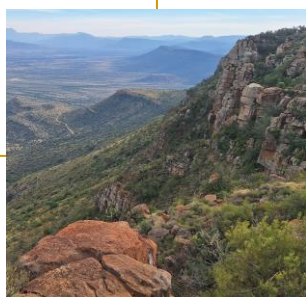
The River Health Programme (RHP) is a national programme through which the biological and habitat integrity of rivers is assessed. The RHP uses a suite of indices, namely, aquatic macro-invertebrates, fish, water quality parameters, riparian vegetation and geomorphological assessment to monitor the health of a river. Biomonitoring of rivers allows reporting on the ecological state of river systems in an objective and scientifically sound manner. Information obtained from RHP assists in the identification of areas where ecological deterioration occurs, and it serves as an early detection mechanism for pollution. Monitoring river health in SANParks is essential, but we are not able to cover all the rivers in all the parks. Monitoring in itself is also not useful if the data is not processed, interpreted and taken forward to initiate the required responses.

Groundwater is an important component of terrestrial systems' freshwater environment. These systems are dynamic and adjust continually to short-term and long-term changes in climate and groundwater withdrawal. To better understand and manage groundwater ecosystems and resources, SANParks completed a groundwater hydro-census in 2021 (Johnson *et al.*, 2021). Water level data collected over significant periods of time, from years to decades, are typically required to assess the effects of climate variability, to monitor the effects of regional aquifer development, or to obtain data sufficient for analysis of water-level trends, project future conditions of supply and provide the information necessary to effectively manage the resource. An integral part of this collaborative initiative revolves around the municipality's water abstraction, primarily centred on the Nqweba Dam, along with the associated borehole wellfield infrastructure situated within the park. The primary function of the dam is currently to provide potable water for the residents and businesses of Graaff-Reinet, serving both domestic and industrial needs. However, the dam is susceptible to drying up, especially during drought conditions, which necessitates the town's reliance on borehole water sources. The management of the dam, borehole wellfield, and related infrastructure falls under the jurisdiction of the Beyers Naude Local Municipality, with specific conditions outlined in the title deed and acknowledged by SANParks. However, given the park's status, it is important to note that the National Department of Environmental Affairs serves as the competent authority for activities requiring environmental approval.

Given the anticipated impacts of climate change, it is crucial that more systemic, medium to long-term water planning is undertaken across all associated municipalities in the region. As the area is likely to experience warmer and drier conditions, proactive planning becomes imperative to ensure the sustainability of water resources and continued support for both natural ecosystems and human communities.

The most effective way that SANParks can conserve freshwater systems within the park is through strategic relationships with catchment management agencies, other water management fora and stakeholder groups. Strategic relationships serve to facilitate co-operation, knowledge-sharing and resource mobilisation to advance effective conservation of aquatic ecosystems. Prominent activities would include, lobbying for and active participation in determination and implementation of ecological reserves; facilitating assessment of ecosystem and river health; providing information and insight obtained through research; monitoring to facilitate informed decision-making; and the successful implementation of catchment-scale adaptive management systems.

A detailed lower-level plan outlining the rationale and operational approach supports this programme. This programme links with high-level objective 2 and objective 2.3 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.



FRESHWATER ECOSYSTEM PROGRAMME					
High-level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To encourage sustainable water use and ecological provisioning through integrated water resources management					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To assess the ecological health of the rivers through basic monitoring	Determine which rivers to monitor, and at what frequency	SS, PM, SR	Short report on field visit and site selection for monitoring	Year 1	
	Implement basic visual assessments of river health through Stream Habitat Walk Assessment	SR	Completion of habitat stream assessment reports for selected sites	Annually	
	In case of events of concern, document changes (e.g. during flooding, pollution incidences, algal blooms, fish kills etc).	SR	Records	As required	
To observe groundwater level behaviour over time by regularly measuring borehole water levels	Monitor groundwater levels at priority boreholes	SS, SR	Groundwater level data	Year 3, 5, 10	Hydro-census reports
Participate in meaningful stakeholder engagements to leverage support and influence	Participate in river management forums	PM, SR	Attendance registers	As required	
To raise river awareness through education and outreach	Incorporate river awareness into education and outreach programmes and activities	SET Officer	Organised education and outreach programmes	Annually	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, SS	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3.4 Habitat management programme

The purpose of this programme is to allow natural processes to play out, and/or mimic these where necessary, to ensure robust veld condition and associated animal populations in the park by applying good veld and wildlife management principles. The focus will be on vegetation monitoring, as well as the impacts of the herbivores that utilise the vegetative resource. For the purpose of this LLP, herbivory will include both vertebrate and invertebrate herbivores. Managing herbivores requires an understanding of their impacts on vegetation as well as population dynamics and therefore veld condition assessments as well as herbivore numbers will assist in the decision-making process.

Habitats, with regards to vegetation, are impacted and influenced by other plants through competition and facilitation, as well as by herbivore pressure through grazing and browsing (Bothma *et al.*, 2004; Van Oudtschoorn, 2015; Al-Namazi, 2019). A thorough understanding of the

vegetation and the life cycle of the plant species is important. Certain grass species are not always good nutrient-rich food for the grazers, while some wildlife simply prefer certain grass species to others. With regards to interactions between plants, generally woody species have the tendency to limit and inhibit the growth of the herbaceous layer, however, some woody plants may enrich the surrounding soils and consequently improve the nutrient quality of the associated herbaceous layer (Hagos & Smit, 2005). Erosion has been identified as a key concern for the park, the understanding of the dynamics and integrated relationship of factors causing erosion, is essential. Soil type could also play a role in making some grass species more palatable than others.

Herbivores act as disturbance agents. Disturbance predicts maximised biodiversity at intermediate levels of disturbance. Keystone species have disproportionately high impacts on ecosystem function, including that of plants, given their biomass (e.g. locusts). Non-selective mega-herbivores (e.g. hippo *Hippopotamus amphibius*, Cape buffalo *Syncerus caffer*, giraffe *Giraffa camelopardalis*, and elephants *Loxodonta africana*) can serve as ecosystem engineers through structural changes they can induce. However, of these mega-herbivores, only the Cape buffalo occur in the park. Ecosystems recover from disturbances such as herbivory, through successional processes which help create diversity. In other words, the removal of herbivores leads to less diversity in the herbaceous layer.

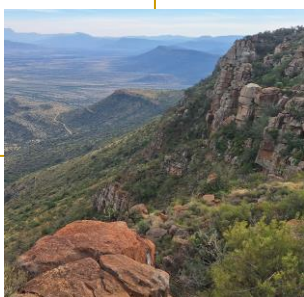
The art of habitat management is very important as it not only provides food for the animals in the park, but also provides shade and resting places (Bothma *et al.*, 2004; Van Oudtshoorn, 2015). The potential impact of grazing and browsing on the microclimate, microhabitats and soil properties, as well as the vegetation heterogeneity, has been well documented in literature. Successful veld management is thus dependent on the understanding of ecological principles that govern the ecosystem, e.g. vegetation and soil (Van Oudtshoorn, 2015). Conducting proper vegetation assessments annually is therefore essential for maintaining optimal browse and grazing conditions for the animals in a park, as well as for the protection of the biodiversity of the soil (e.g. degradation), vegetation (e.g. rare and endangered plant species) and associated faunal components (McGeoch *et al.*, 2011; Van Oudtshoorn, 2015). One of the main reasons for habitat management is to mitigate the impact of grazing and browsing by animals on the productivity of vegetation, for example, the increase in perennial, palatable forbs and grass species versus decrease in annual, unpalatable forbs and grass species.

Habitat management essentially aims to sustain or improve the existing habitat for the benefit of herbivores and enhances biological viability. Habitat management is inclusive of the vegetation, as well as the impacts of the herbivores that utilise the vegetative resource. Managing herbivores requires an understanding of their impacts on vegetation and habitat, as well as population dynamics. In addition to herbivore numbers, an evaluation of the veld condition assists with the decision-making process. SANParks assesses veld condition using qualitative and quantitative methods. The inclusion of remote sensing provides added perspective from a different spatial and temporal scale.

The park virtually encloses the town of Graaff-Reinet with its associated road (N9 separates the western and eastern portions) and rail links, which fragment the habitat available to plains game species in the park. The western portion has many flat areas, especially around Nqweba Dam with plains-loving game, while the eastern portion is mostly mountainous with good populations of Cape mountain zebra, kudu *Tragelaphus strepsiceros* and red hartebeest *Alcelaphus buselaphus*. In 2021, Bezuidenhout and Munyai assessed veld condition in the park and observed that many of the wildlife species were present in numbers that may jeopardise the longer-term integrity and resilience of the system. These species included ostrich *Struthio camelus*, Cape mountain zebra *Equus zebra zebra*, Cape buffalo *Syncerus caffer*, black wildebeest *Connochaetes gnou*, red hartebeest, gemsbok *Oryx gazella*, blesbok *Damaliscus pygargus phillipsi*, eland *Tragelaphus oryx* and springbok *Antidorcas marsupialis*. It should be noted however that 2021 was a period of below-average rainfall which may have exacerbated herbivore effects on vegetation. Furthermore, due to the small size of the park and park segmentation certain ecological processes are not fully functional and this programme will therefore attempt to mimic the outcome of these processes where necessary.

The Karoo system is prone to locust outbreaks under favourable conditions, and since these are considered natural and important processes of herbivory and ecological large-scale infrequent drivers of these systems, the third key objective focusses on monitoring the dynamics of locust outbreaks. Terrestrial processes in the park are also directly affected by both climate change and restoration efforts.

Annual veld condition assessments (VCA) are conducted at regular intervals to monitor change (i.e. composition, structure and biomass), impacts from herbivory and influence of rainfall (precipitation). The use of remote sensing in the form of Enhanced Vegetation Index (EVI) and Normalized Difference Vegetation Index (NDVI) enhances the assessment of the veld condition. These vegetation condition indices (VCI) are common indicators for determining vegetation change associated with drought and overgrazing.



This programme links with high-level objective, 2 and objective 2.4 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

HABITAT MANAGEMENT PROGRAMME					
High level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To ensure robust veld condition and associated animal populations by applying good veld and wildlife (including invertebrates) management principles					
Sub-objective	Actions	Responsibility	POE	Timeframe	Reference
To monitor short- and longer-term trends in key climate variables	Record climate, especially rainfall	PM	Monthly records	Ongoing	
To assess veld condition and use this to inform game management and/or restoration efforts	Survey veld condition which may include fixed point photography, or any other survey means, including NDVI/EVI	SS, SR	Veld condition assessment report / census report / Frontier satellite imagery product report	Year 2, 4, 6, 8, 10	
To maintain, restore or, where unfeasible, mimic the appropriate scale of migration and predation as a natural disturbance process	Wildlife monitoring and suggested offtakes or other management interventions (informed by census report)	SS, SR, VWS	Census report / WMC report	Year 2, 4, 6, 8 and 10	
To monitor locust population dynamics	During locust outbreaks, monitor the population dynamics	SS, SR	Report	Dependent on locust outbreak	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, SS	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.3.5 Species of special concern programme

The purpose of this programme is to support the persistence and viability of species of special concern (SSC) contributing to national and international initiatives, implementing species-specific management interventions and prioritising the resources available for species-specific monitoring and actions in this park.

As a member of IUCN, SANParks is committed to supporting the IUCN Species Survival Commission in its endeavours to prevent species extinctions. Species under threat of extinction are listed by South African National Biodiversity Institute (SANBI) in the IUCN Red Data Lists. National Environmental Management: Biodiversity Act, 2004 (NEM: BA, Act No. 10 of 2004) also has regulations relating to listed Threatened or Protected Species (TOPS). Other species of concern may be listed under National Forest Act, 1998 (Act No. 84 of 1998) or other relevant acts.

SANParks' biodiversity values stipulate that, except in crucial instances for the survival of globally critically endangered species, management for system integrity and biodiversity must take precedence over species management. However, within national parks, SANParks will strive to prevent the extinction of species on the International Union for the Conservation of Nature (IUCN) global critically endangered or endangered lists and will work with other conservation initiatives to

secure and strengthen the future of such species over their historic distribution ranges (IUCN, 2022). SANParks considers SSC to include, but not limited to, species that are endemic, threatened, locally threatened, in decline, reintroduced or a management concern (Rebelo *et al.*, 2011). Global environmental change drivers are often a cause of species becoming threatened and then listed as a species of special concern. Sensitive species, which are species at risk of being harvested, are also considered species of special concern.

Thus, emergence of illegal resource use is a key pressure on wild populations and species in recent times (Rebelo *et al.*, 2011) and emerging diseases may also pose new challenges. Invasive species, such as alien plants, and pollution may also pose threats to persistence of some species in some landscapes, while climate change impacts may affect species that are not able to adapt to or move in response to changing climates and increasingly unpredictable weather patterns. Within protected areas like CNP, habitat change is primarily driven by tourist development while ecological management approaches could impact on how resources that species use, are distributed or accessible.

Species of Special Concern in the park meet one or a combination of the following criteria:

- red list taxa from local to regional scales;
- taxa of importance for the park without a formal conservation status assessment or with insufficient data;
- species listed in the NEM: BA TOPS Regulations or on CITES appendices;
- species that are the subject of a biodiversity management plan as per NEM: BA and NEM: PAA;
- endemic taxa that have >80% of their range confined to CNP;
- reintroduced taxa that were extinct or threatened or indigenous species recently introduced; and,
- locally threatened populations of iconic or important species for this region.

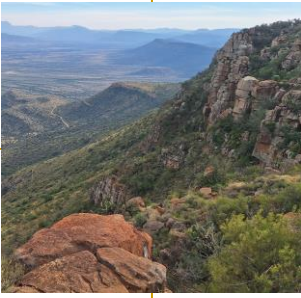
Bird species considered of conservation concern in this park include secretary bird *Sagittarius serpentarius*, martial eagle *Polemaetus bellicosus*, black harrier *Circus maurus*, and Ludwig's bustard *Neotis ludwigii*. An assessment of plant species of conservation concern needs to be done for the park.

SANParks recognises that it is important to establish a realistic framework of threat for the various biota to allocate resources sensibly and according to priorities. To this end, species which are considered to be of concern will be evaluated through a ranking procedure using pre-defined criteria and incorporating expert opinion (McGeogh *et al.* 2011; Rebelo *et al.*, 2011). This will identify species requiring monitoring or management attention and help prioritise available resources.

Management actions will concentrate on identifying SSC and developing appropriate surveillance or monitoring plans if deemed necessary. Resource use in the form of plant harvesting is a key element that needs to be considered in conjunction with surrounding communities for the identification and monitoring of key species.

A detailed LLP outlining the rationale and operational approach supports this programme. This programme links with high-level objective, 2 and objective 25 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented..

SPECIES OF SPECIAL CONCERN PROGRAMME					
High level objective: To enhance the resilience of ecosystems and associated biodiversity of CNP by effectively managing threats and providing opportunities for ecological processes					
Objective: To contribute to the persistence and viability of key species by implementing prioritised species-specific monitoring, and where necessary management approaches					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
Identification and prioritisation of species of conservation concern for CNP	Establish a list of potential SSC for the park (including plant and animal species) and prioritise these for surveillance or monitoring	SS, SR, PM, VWS	SSC report	Year 2	
	Develop and implement monitoring approaches for priority SSC species	PM, SR, SS	Document	Year 3	Habitat management LLP
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, SS	Assessment tool	Annually	SOP for the assessment of the implementation of management plans



10.4 Responsible tourism programme

The purpose of the responsible tourism programme is to grow diverse tourism experiences towards culture, experiential and nature-based responsible tourism in the park for the promotion of conservation, greater public enjoyment, constituency building and income generation.

SANParks, as a major provider of tourism accommodation and natural experiences in the country, recognises that, by implementing responsible tourism principles, the organisation will not only continue to benefit from enhanced income, but also from improved tourism products, better development and management practices, and higher levels of local involvement along with much needed sustainable benefits flowing to the Camdeboo living landscape.

This said, SANParks continually evaluates the alignment of policies, strategies and operations with the principles of responsible tourism and strives to put measures in place that will enhance this process. Following an extensive review of existing policies, guidelines and plans, as well as information gathered through interviews with personnel and stakeholders, the 2022 Responsible Tourism Strategy and Implementation Plan was approved in 2012. SANParks has adopted the national Responsible Tourism Standard, South African National Standard (SANS) 1162:2016. The responsible tourism programme thus looks at all aspects of the current and potential tourism product and service offering in order to ensure that the park meets the required standards for environmental and financial sustainability, local community beneficiation and customer service excellence, and this starts by establishing the park's responsible tourism baseline.

The establishment of this baseline serves to identify a clear point of departure from which to work. Customer service excellence is measured through criteria such as customer feedback, tourism quality standards, and universal access (UA) standards, as well as evaluating the visitor management and interpretation aspects relating to the park. The implementation of responsible tourism promotes operational efficiency and thus creates the environment for new product development, packaging and dynamic pricing in order to maximise yield, though challenges such as the availability of advanced technologies exist. In order to align the SANParks tourism operations to the 2022 Responsible Tourism Strategy, SANParks seeks to base all its planning and decision-making on the following guiding principles and values:

- Provide nature-based responsible, value for money tourism experiences, whilst promoting our biodiversity, cultural and where applicable, wilderness qualities, to our strategic advantage;
- Contribute to building a broad-based constituency for the long-term sustainability of conservation in a people-centric conservation; and
- Use appropriate nature-based responsible tourism as the best possible commercial opportunity to support and supplement conservation of biodiversity. This commercial aspect should never become the focal point and erode the core conservation values of the organisation. Viewed together with other commercial sources, the overall outcome must effectively enable SANParks to fulfil its constitutional mandate.

As stated above, park management must establish a responsible tourism baseline to measure progress of the effective implementation of the responsible tourism standard. Environmental damage must be minimised to maintain the ecological integrity of the park and counteract the potentially negative societal perceptions. Responsible tourism should maintain a high level of tourist satisfaction and ensure a meaningful experience to tourists.

Apart from the limitations of the biophysical environment and the park's desired state, park management recognises that tourist density and experiences must be managed through a strong

but flexible visitor management protocol that is informed by a sound research programme, as well as the experiential expectation and perceptions of the broader market environment. Furthermore, in partnership with its key stakeholders, the park will seek to provide real and tangible benefits to communities that lie adjacent to the park, thereby facilitating effective SET and growth.

During the park management plan revision process, stakeholders emphasised the following matters relating to SANParks and influencing its tourism business operations in the Camdeboo living landscape:

- Link with rural tourism or routes;
- Expand the tourism offering;
- Participate in a tourism hub in Graaff-Reinet;
- Provide information on activities and products in different languages;
- Strengthen collaboration and partnerships within the tourism industry;
- Develop domestic tourism;
- Enhance quality assurance and universal accessibility;
- Ensure a co-ordinated approach to product development;
- Grow business and events tourism;
- Ensure service excellence; and
- Improve community benefits from, as well as community participation in tourism.

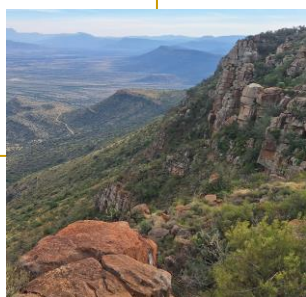
As a national park, with its unique sense of place, its geological formations, a rich cultural history and diversity, that is renowned for its geographical location surrounding the iconic town of Graaff-Reinet, and its palaeontology and hydrological significance, any new development must be aligned with the SANParks product development strategy and must conform to the zoning. This will ensure responsible tourism practices that balance conservation values with the need to generate income to sustain both their integrity and significance. The potential for new tourism products whereby the significance of the park's attributes can be showcased, is evident in the constant growth of visitor numbers. However, the impact of tourism must be monitored to identify potential threats that can be addressed in the management plan to avoid degradation of the pristine landscapes and unique natural assets.

The park currently hosts on average 34,192 visitors per year (based on the past 10 years statistics) lured by its incredible biodiversity and a sense of place. Products identified and listed in the management plan will feed into the product development framework that will, via a specific process, ensure sustainable product development. In this regard, all new developments will be considered within the approved zonation to maintain the sense of place in the park.

The development and improvement of tourism infrastructure are critical for sustainable growth. Aging infrastructure continues to be a challenge as this needs to be continuously upgraded to cater for the increase in demand and to keep up with the defined tourism standards. Visitor experience is particularly jeopardised by litter and the free movement of traffic through parts of the park.

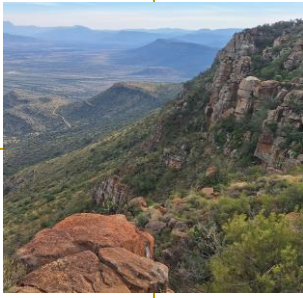
This programme links with high-level objective 3 and objectives 3.1 – 3.7 on pages 43 and 44. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To strive to be a unique tourism destination of choice by enabling and growing diverse visitor experiences whilst sustainably growing revenue and protecting the sense of place					
Responsible Tourism performance objective: To establish, maintain and continuously improve the park's responsible tourism performance, by implementing SANS1162:2016					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To develop a responsible tourism programme for the park that aligns with the SANParks Responsible Tourism Strategy	Develop a responsible tourism programme in line with the SANParks responsible tourism strategy	RTMM, PM, DM	Programme	Year 1	SANParks Responsible Tourism Framework, SANParks Responsible Tourism Strategy
	Communicate the responsible tourism programme to all park stakeholders	RTMM, PM, DM	Reports	Year 2	
	Educate and motivate staff in responsible tourism principles and enhance tourism capacity and skills base within staff complement	PM, DM	Training registers	Ongoing	



RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To enable and grow a diverse visitor experience within the Camdeboo living landscape whilst sustainably growing revenue and protecting the sense of place					
Visitor experiences objective: To continually enhance the authentic visitor experience within the park, through effective visitor management, interpretation and quality of facilities offered					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To manage and assess responsible tourism performance	Implement and monitor responsible tourism actions	RTMM, DM, PM	Report	Year 3, ongoing	
	Identify, review and mitigate the visitor impact on biodiversity, heritage and tourism resources	RTMM, SETO, DM, PM, SSR	Report	Year 2, ongoing	
To promote responsible tourism practice	Identify tourism programmes and projects benefiting communities	PM, DM, SETO	Documentation	Year 3	
	Implement projects as required	DM, SETO	Documentation	As required	
Use local resources sustainably, avoid waste and over-consumption	Measure, manage and monitor performance of water and electricity consumption by adhering to targets	DM, PM	Documentation	Annually	
	Set appropriate targets for reduction or recycling of waste produced	DM, SETO	Documentation	Annually	
Service excellence objective: To enable relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and preferences					
To improve the visitor experience by promoting the conservation values of the park through awareness programmes and effective visitor management	Develop and implement a visitor management plan	GM: Visitor Services, RTMM, DM, PM	Visitor management plan	Year 1	Visitor management protocol
	Update the visitor management plan taking changes in the environment into account	GM: Visitor Services, DM, RTMM	Updated visitor management plan	Year 3, 6, 9	Visitor management protocol
	Develop and implement a park interpretation plan, taking existing interpretation into account, and including priorities for implementation	GM: VM, PM	Interpretation plan	Year 1	
	Update the park interpretation plan taking changes in the environment into account	GM: Visitor Services, PM	Interpretation plan	Year 4, 9	
Align new and existing tourism infrastructure and tourism products with market demands and industry standards to enable revenue optimisation	Maintain tourism facilities and infrastructure according to tourism standards	DM, PM, RTMM	Documentation	Annually	
	Identify events, activities and facilities that may be considered for development within the park	RTMM, DM, PM	List of products	Annually	Product development framework

RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To enable and grow a diverse visitor experience within the Camdeboo living landscape whilst sustainably growing revenue and protecting the sense of place					
Service excellence objective: To enable relevant customer-focused service excellence, by understanding and responding appropriately to market expectations and preferences					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
Align new and existing tourism infrastructure and tourism products with market demands and industry standards to enable revenue optimisation	Identify opportunities to link up existing and new products with adjacent communities that are open to the park including CDNP	RTMM, DM, PM, SETO	List of products	Year 2, ongoing	
	To create discounts and packages that can be approved at the regional and park levels for local tourism	RTMM, DM, PM	Documentation	Ongoing	Sales and marketing strategy
Grow tourism revenue objective: To sustainably grow income through tourism by providing visitors with an appropriate and a diverse range of products and services, whilst protecting the tranquillity and sense of place					
Identify areas where communities could become beneficiaries of tourism projects	Identify and support appropriate product development by developing and implementing possible community beneficiation products	PM, DM, SET Officer	Documentation	Year 2	
Ensure optimal returns from commercial operations	Support retail outlets and restaurants in order to optimise revenue generation.	DM	Documentation	Ongoing	
Analyse and review pricing to optimise financial returns	Participate in annual review process to determine tariffs	DM, PM	Document	Annually	
Operational effectiveness objective: To improve tourism operations, by ensuring effective management and controls					
To ensure adequate, effective and accurate visitor communication within and on approach to the park to enable a quality visitor experience	Adhere to the corporate signage manual	DM, PM	Updated document	Annually	Branding guideline
	Develop a tourist map/guide document	DM, RTMM	Document	Year 2	Interpretation plan, sales and marketing strategy
	Ensure clear and accurate communication of park rules, rates and facilities on all platforms, including within the park, on correspondence, and on the website	RTMM, DM, PM	Park rules / information on website, reservation attachments, interpretive signage	Ongoing	Visitor management policy and protocols, Standard Operating Procedures (SOPs)
	Ensure all staff are adequately trained to communicate key park, tourism, cultural heritage and biodiversity information to visitors, and where appropriate access to information	DM, PM	Documentation	Ongoing	Park rules, visitor information
Promotion objective: To promote the unique natural landscape of the park by developing and implementing a variety of sales, marketing and communication initiatives					
To ensure optimal development and maintenance priorities to enable revenue optimisation	Identify events, activities and facilities that may be considered for development within the park	PM, DM, RTMM	Documentation	Year 1	
	Review development plan to ensure optimal tourism development priorities without eroding conservation values	PM, DM, SR	Document	Year 3, 6, 9	
	Develop and implement annual work plans to cover maintenance priorities	DM, PM	Schedules	Annually	



RESPONSIBLE TOURISM PROGRAMME					
High-level objective: To enable and grow a diverse visitor experience within the Camdeboo living landscape whilst sustainably growing revenue and protecting the sense of place					
Universal access objective: To enable appropriate access or differently-abled visitors by providing adequate infrastructure and services					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To enhance existing tourism attractions and develop new products within the park in line with the recommendations of the responsible tourism programme	Enhance Customer Service Standards, manage and resolve feedback from the public	DM, RTMM	Questionnaire responses	Ongoing	SANParks Housekeeping Standards,
	Review and analyse guest feedback to provide targets and improvement	DM	Documentation	Annually	Housekeeping Standards
	Conduct customer surveys to understand visitor numbers, expectations, preferences, park use and trends	RTMM	Reports	As required	
To create awareness of the importance of customer care among employees	Introduce employee awareness campaigns as part of the training and service commitment of employees	DM	Registers	Ongoing	
Ensure compliance and achievement of set Customer Care Standards	Continue monitoring and review of, as well as training programmes on processes, ensuring effective service delivery and customer satisfaction	DM	Survey results	Ongoing	
Assessment objective: To monitor and evaluate the impact of the implementation of this programme					
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HSM, DM, TO	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.5 Cultural heritage management programme

The purpose of the programme is to preserve the tangible and intangible cultural heritage associated with the park and offer opportunities for people to connect through effective management.

The management of cultural heritage resources is guided by national legislation, policies and procedures within SANParks. The National Heritage Resources Act No 25 of 1999 (NHRA) provides the framework for the maintenance and conservation of heritage resources in accordance with the standards and procedures set out by the South African Heritage Resources Agency. SANParks policies, such as the Cultural Heritage Policy (2021a), the Heritage Objects Collections Management Policy (2016), and Guidelines for Burials and Scattering of Ashes (2021b).

Cultural heritage is a finite resource that must be safeguarded for the benefit of future generations. While cultural heritage is the common thread among all countries, what differs are the ideologies that define the management of such resources of significance. The park however has a number of sites that are accessible to visitors (see section 2.14). The tangible and intangible cultural assets

associated with the park are captured in the SANParks cultural heritage online information system and information is being updated and maintained. The database includes asset and site inventories, maps and other relevant documentation.

Heritage sites will be continuously documented, monitored and conserved when necessary. This process will be monitored through the application of the online heritage information management system. Further emphasis will be placed on the identification, documentation, preservation, conservation, protection and appropriate presentation of heritage assets whilst also raising the cultural knowledge and awareness of local communities and visitors to the park.

Park management promotes access for cultural practices in collaboration with local communities and other relevant stakeholders through special events and organised excursions. The programme will improve and enhance visitor experience by providing interpretation and presentation of heritage sites in a way that cater for both leisure and educational visitors. Access to sites will also be facilitated for cultural/ spiritual practices. Improving visitor access will also include providing safe facilities where required.

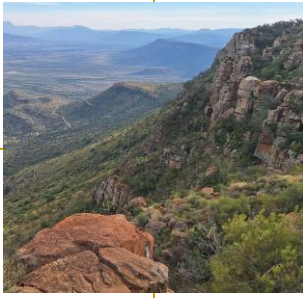
This programme aims to improve and diversify the cultural heritage knowledge of the park. Gaps in information will be identified on an ongoing basis and such will be addressed through research carried out in collaboration with communities, academic institutions and other researchers that will enhance the identification and promotion of park-related and cultural heritage research topics. The park will facilitate and support the research by providing access to available resources, information and documentation. Any research activities will significantly add value to our knowledge of cultural heritage within this landscape. Information generated through research will be used to update the park's cultural heritage inventory and to improve interpretation and presentation of heritage for park visitors.

This programme links with high-level objective 4 and objectives 4.1 – 4.4 on page 44. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

CULTURAL HERITAGE MANAGEMENT PROGRAMME				
High-level objective: To preserve the tangible and intangible cultural heritage associated with the park and offer opportunities for people to connect through effective management				
Objective: To provide access to heritage sites through facilitating sensitive and appropriate use of sites for tourism and education purposes				
Actions	Responsibility	PoE	Timeframe	Reference
Enhance visitor experience by improving the interpretation and presentation of sites	SET Officer	Display panels	As required	
Objective: To improve and diversify the knowledge of the parks' cultural heritage through quality and inclusive research partnerships with communities, universities and researchers.				
Identify gaps in research and support research initiatives that seek to address information gaps in relation to cultural heritage in the park	Manager: Archaeology	Gaps Identification report	Year 2, ongoing	
Objective: To identify and effectively manage cultural heritage sites through documentation, monitoring and conservation of identified sites				
Document and list all sites on the cultural heritage information system	SET Officer	Inventory	Ongoing	
Objective: To preserve intangible heritage through identification, documentation, presentation and enabling access for cultural practices				
Record oral history related to the park's heritage	SET Officer	Report	As required	
Objective: To ensure monitoring and evaluation of the implementation of the programme and its effectiveness				
Monitor and evaluate progress and impact against programme objectives and actions	PM, SET Officer	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.6 Engagement, access and benefits

The park wishes to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders, that will benefit the park's values, objectives and various programmes related to the different core functions. Park management strives to maintain existing relations and identify and implement new opportunities for enhancing relationships with surrounding communities, all spheres of government and other stakeholders to ensure that local and regional initiatives and developments contribute positively to the attainment of the overall desired state and objectives of the park and the social-ecological system within which it is embedded. Park management prioritises building and broadening strong, long-lasting support for conservation for greater sustainability through promoting co-operative, collaborative and mutually beneficial engagement opportunities. The conservation of biodiversity and culture has both an intrinsic and/or moral justification, as well as being important for maintaining the flows of natural and cultural ecosystem services



that arise from it. The sustainability of the park relies on the maintenance of ecological and cultural integrity, economic viability and social relevance, the latter being dependent on relationships and connectedness to the park. Benefits vary in their scale and scope, including both tangible and intangible aspects, often going hand in hand with costs. Benefits are perception-based, and the subsequent “value” of various conservation related benefits (and costs) are perceived (and felt) differently by different stakeholder groups based on their own world views. Various processes linked to sharing benefits associated with employment and business opportunities, capacity building (through training and environmental education), infrastructure support and a whole array of ecosystem services (provisioning, regulating, supporting and cultural services) that flow from the park, aim to facilitate both access to the park itself as well as access to opportunities for various stakeholders to benefit from the park and as such to grow a societal vested interest in supporting its long term sustainability.

10.6.1 Environmental education and awareness programme

The purpose of this programme is to build constituencies through knowledge transfer and awareness creation amongst people in support of SANParks’ conservation endeavours by playing a significant, targeted and effective role in promoting a variety of educational learning opportunities and initiatives.

SANParks has prioritised the provision of environmental education and environmental learning (SANParks, 2005; SANParks, 2017c). This is further underpinned by the Constitution, in which the ‘right to a healthy environment’ and the need for environmental protection, are clearly stated. The need for environmental education is further strengthened by the fact that the national school curriculum includes “the environment” as an integral focus in several learning areas. An integrated approach to environmental interpretation and awareness raising has been adopted by SANParks.

A broad stakeholder base is targeted and relevant programmes addressing a variety of issues are presented. Currently a good relationship exists between the park and the primary and high schools in the area. To build healthy community custodianship the park focuses on the schools in and around Graaff-Reinet promoting access to the park and participation in its education programmes. These programmes all strive to reconnect communities with nature as well as to build the capacity of local communities to find solutions for local environmental issues. This includes formal and non-formal environmental programmes tailor-made for a wide range of stakeholders.

The park interacts with NGOs and other community groups to engage in environmental education, interpretation and awareness for adults. The focus areas of this programme are:

- Raise awareness about the environment, with a focus on the system of national parks that represents both natural and cultural resources;
- Promote the use of parks as educational resources, while allowing access, specifically to previously marginalised people;
- Provide interactive programmes that will assist learners to form their own values and attitudes towards the environment;
- Assist learners to contribute to solving environmental issues while participating in park activities and to use the park environment as their laboratory for environmental learning;
- Enhance the experience of visitors to SANParks facilities through environmental interpretation and education to encourage repeat visits; and
- Encourage local communities to understand, appreciate and support the conservation work of SANParks.

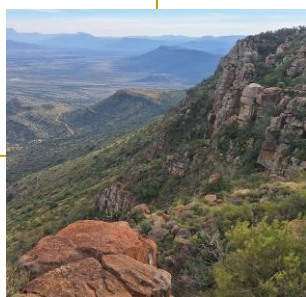
Both day and overnight programs are presented to all local schools as well as schools from outside the district. These programmes generally introduce groups to the park and its significant places, its ecological importance, as well as its species of special concern. Furthermore, the programmes create awareness of local environmental issues, such as climate change or pollution, and encourages schools to develop and environmental projects of their own back at school. Interventions take the form of organised, interactive activities which are categorised into formal and informal programmes. The current beneficiaries of this programme are mainly school and youth groups and special interest groups. The approach to environmental education within SANParks generally focuses on organised and interactive activities which include:

- **Formal programmes:** Target the formal education sector, directed at school groups visiting the park and learners in schools adjacent to the park. The programme enhances awareness and education among learners through the development of current learning material on environmental conservation for incorporation into the school curriculum. The National Kids in Parks programme and Calendar Days are examples; and
- **Non-formal programmes:** Implement community-oriented initiatives addressing relevant socio-ecological challenges and targeting appropriate stakeholders including farmers, traditional leaders, landowners, women and youth. This programme has the primary objective to build the capacity of communities to support the conservation mandate through raising awareness and sharing of information about conservation issues and promoting involvement.

The park's environmental education centre is located south of the Valley of Desolation. The centre plays a central role in the rollout of the programmes and may be utilised free of charge by schools, youth groups, clubs, churches, community and environmental groups, as well as or other groups for environmental programmes. It consists of dormitory style accommodation that can accommodate 54 attendees, male and female ablutions, kitchen, classroom, boma and swimming pool.

A detailed LLP outlining the rationale and operational approach, supports this programme. This programme links with high-level objective 5 and objective 5.1 on page 43. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ENVIRONMENTAL EDUCATION AND AWARENESS PROGRAMME					
High-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape					
Objective: To improve understanding and capacity for sustaining a safe and healthy environment through education and capacity building programmes					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To plan, develop and present formal education programmes for schools and other youth groups.	Develop and implement environmental education programmes offering for Schools (such as Kids in Parks, Junior Rangers)	SET Division Programme Manager, SET Officer	Learning resource documents, programme plans, reports	Ongoing	Dept of Education School Curriculum
	Plan and implement youth development through experiential training programmes such as Youth Environmental Service (YES), Environmental Monitors and Structured Job readiness programmes, Eco-guides training	SET Division Programme Manager, SET Officer	Learning resource documents, programme plans, reports	Year 3 - 5	
	Organise and conduct outreach programmes to capacitate youth and communities to address environmental issues in their own communities. (Such as Calendar Campaigns focusing on locally relevant conservation issues.	SET Officer	Reports	Year 6 - 8	
To plan, develop and present informal education programmes for youth, local communities and staff	Re-connect local communities to the park and nature through specially designed guided experiences with relevant themes introducing the park and its activities, through programmes such as Environmental Calendar campaigns and Open days hosted in the park	SET Officer	Reports	Year 1 - 2	



ENVIRONMENTAL EDUCATION AND AWARENESS PROGRAMME					
High-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape					
Objective: To improve understanding and capacity for sustaining a safe and healthy environment through education and capacity building programmes					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To plan, develop and present informal education programmes for youth, local communities and staff	Enhance public environmental awareness about themes such as ecosystem services and climate change, through programmes such as Environmental Calendar campaigns and Open days hosted in the park	SET Officer	Reports	Year 3-5	
	Plan and implement programmes for visitors as required, with reference to Holiday Programmes and activities arranged for Special interest groups.	SET Officer	Programme Documents and Reports	Ongoing	
Manage interpretation facilities and resources to enhance the authentic visitor experience within the park	Review and update current learning materials and activities to enhance Environmental Awareness ➤ Pamphlets, checklists, maps ➤ Signage and Displays ➤ Use innovative technologies to access interpretive resources	SET Officer	Up to date pamphlets and checklists, Signage, expert presentations and application off diverse technologies	As required	
	Develop the capacity of staff and tourism partners to present activities and/or give talks on behalf of SANParks with initiatives such as guides' development and the Ambassador Programme.	PM, SET Officer	Programme documents and reports	Year 2	
	Develop and maintain EE centre and interpretive facilities that is conducive to environmental learning and experiences that connect people with nature.	PM, SET Officer	Financial documents and reports	Year 5	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SET Officer	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.6.2 Socio-economic transformation programme

The purpose of this programme is to strive for equitable employment and business development by promoting fair access to a range of opportunities. This will be achieved through targeted and effective contribution to local economic development, economic empowerment and social development in communities and neighbouring areas adjacent to the park. This will furthermore be achieved by partnering with local government to form part of the IDPs, participating in government programmes such as the EPWP to contribute to local skills development by supporting

learnerships, implementing needs-related training programmes and by creating business opportunities.

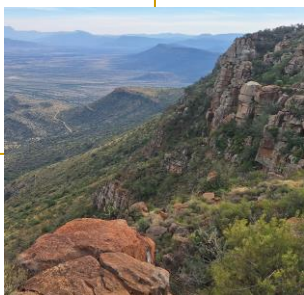
The government promised socio-economic transformation (SET) and stated its commitment to eradicate poverty by creating opportunities where the poor become involved in productive activities. This applies especially to those residing in rural areas. The promotion of Broad Based Black Economic Empowerment in various sectors is part of the government vision for the upliftment of previously disadvantaged individuals. The focus will be on their integration into viable sectors, which will potentially boost communities economically. Socio-economic empowerment is critical to meeting the government's development goals and will help to establish shared vision partnerships in the communities. With the right opportunities and essential business skills training, the communities will be empowered to understand mutually beneficial practises and to safeguard the sectors in which they are involved.

Park management is committed to ensure that a broad base of South Africans participate and get involved in biodiversity initiatives. All SANParks operations should also have a synergistic relationship with neighbouring or surrounding communities for the educational and socio-economic benefit of these communities, hence enabling the broader society to be connected to national parks. In line with the Annual Plan of Performance, park management commits to nation building, economic transformation and combatting the triple challenges of poverty, inequality and unemployment by aligning the SANParks socio-economic development strategy (2017c) to government programmes such as the National Development Plan, the Nine Point Plan for growing the economy, the DFFE Biodiversity Economy strategy etc. by creating economic opportunities and beneficiation through various mechanisms. The aforementioned strategy outlines SANParks' role in supporting the government mandate on radical socio-economic development which can be achieved by upholding corporate governance principles and working in unison with intergovernmental programs such as the EPWP, while also contributing to local skills and enterprise development.

The need to redefine its identity and usher in new ways of managing protected areas has increasingly been recognised in the management of protected areas. It has moved out of the 'island' mentality of management, with consideration of landscapes and seascapes, and the need to focus on the political, economic, and cultural aspects, as well as on the crucial biological values. Resources that can be used to unlock opportunities with a substantial contribution to the socio-economic development of communities exist in protected areas. Local communities have had long-standing traditions of conservation and restrained resource use, they thus have a wealth of traditional knowledge in conservation management and their involvement will provide the opportunity to restore and integrate this knowledge.

Several programmes are being implemented throughout SANParks to contribute to the development of local communities, including waste management, social legacy, the EPWP, environmental protection, infrastructure development, the wildlife economy and green and blue economy programmes. The green and blue economy programmes contribute to the development and growth of green sector industries in local communities through provision of access to and use of wildlife and marine resources in national parks. The establishment of viable ecotourism enterprises for the economic benefit of the local communities, is another key area of the programme. The sourcing of goods and services from local communities is also promoted through the identification and ring-fencing of opportunities for the benefit of these local enterprises. By partnering with neighbouring district and local municipalities and neighbouring local communities, the park has made strides towards enabling previously disadvantaged individuals and Small, Medium and Micro Enterprises (SMMEs) providing better access to park-related opportunities. Considering that CNP have daily and seasonal business operational needs, small SMMEs are encouraged to take advantage of business opportunities in the park. Park management will utilise small local businesses for catering, cultural group dancing and cultural instrument displays, to name a few. SMMEs are critical drivers of job creation and, more broadly, economic growth in South Africa. The government has prioritised SMME development as one of the strategies for economic development and job creation. The SANParks Enterprise Development Strategy will take a long-term view and place its primary emphasis on facilitating youth access to the benefits presented by national parks. Empowering young people is a national priority and skills development will enable young people to drive the reconstruction and development of our country.

The EPWP is a nationwide programme and covers all spheres of government and state-owned enterprises. It focuses on poverty alleviation and on labour intensive projects that create temporary jobs in the short term while simultaneously achieving biodiversity objectives. This programme provides an important avenue for labour absorption and income transfer to poor households in the short to medium-term. It specifically targets the creation of employment for poor, unemployed people who are either unskilled or poorly skilled. SANParks has implemented EPWP projects in the park since 2013. Two programmes namely Working for Ecosystems (WfE) and WfW are currently active in the park. Since inception 143 WfE and 252 temporary jobs were created, and R 22,728,513 has been spent on operations and the management of these programmes.



As a developing country, South Africa exhibits typical associated challenges and there are for example, communities, particularly in rural areas, without basic services such as clinics, water and sanitation, schools without the necessary infrastructure / equipment, high unemployment and low literacy levels. Most national parks are in rural areas that experience these problems. Communities living in these areas view SANParks as a catalyst for socio-economic development. National parks can therefore not grow in isolation without taking cognisance of the needs of the people living in the neighbouring communities. The SANParks social legacy programme contributes to government's mandate, as well as to the sustainable development goals on social development, through collaboration with local municipalities, provincial and national government departments by contributing towards the provision of much-needed facilities and services in communities bordering national parks. A dedicated fund has been established by SANParks to support the establishment of social investment in communities. The social legacy programme is used to develop and support sustainable programmes and projects that will have a long-lasting impact in local communities. The fund is used to provide facilities which support education.

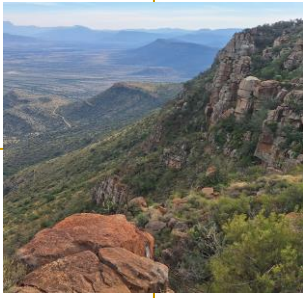
A detailed LLP outlining the rationale and operational approach supports this programme. This programme links with high-level objective 5 and objective 5.2 on page 44. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SOCIO-ECONOMIC TRANSFORMATION PROGRAMME					
High-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape					
Objective: To promote and support skills development, employment and business opportunities by implementing and supporting identified initiatives					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To facilitate local socio-economic opportunities through diverse initiatives	Identify opportunities to contribute to local economic benefit through Biodiversity Economy initiatives with the inclusion of Wildlife Economy, Natural Resource Use, Bioprospecting, where appropriate	SET Officer, PM	Project Proposals	Year 1	Protocol on implementation of the wildlife economy and bioprospecting programmes
	Develop strategic partnerships to develop and promote alternative energy / fuel saving resources, such as solar cookers, rocket stoves and hot boxes (wonder bags)	SET Officer	MOUs signed	Year 1	
	Facilitate feasibility studies to assess viability of proposed biodiversity economy initiatives such as harvesting of Aloe and game meat donation.	SET Officer, SS	Feasibility study reports	Year 2 - 4	
	Foster strategic partnerships for the implementation of the biodiversity economy projects, such as a local nursery to propagate and sell medicinal plants and spekboom.	SET Officer, PM	MOUs signed	Year 3 - 5	

SOCIO-ECONOMIC TRANSFORMATION PROGRAMME					
High-level objective: To contribute towards improving livelihoods and transformation by providing a diversity of equitable opportunities to the people in the Camdeboo landscape					
Objective: To promote and support skills development, employment and business opportunities by implementing and supporting identified initiatives					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To facilitate local socio-economic opportunities through diverse initiatives	Formalise a system for the harvesting of natural products such as firewood (Tamarix), Aloe or game meat donation through development of legally compliant mechanisms for implementation, with inclusion of harvesting prescriptions and participation criteria as well as consideration for security and safety measures relating to buffalo.	SET Officer, SS	Compliance documentation such as checklists for criteria and certification	Year 4 - 6	
	Implement biodiversity economy projects	SET Officer	Annual plans 100% implemented	Year 7 - 10	
Make local communities part of a more holistic park experience by developing and enabling local SMMEs that can benefit from park-based opportunities	Maintain a database of Black Economic Empowerment Small, Medium and Micro Enterprises operating in the Graaf-Reinette area.	SET Officer	Database	Ongoing	
	ID SMME opportunities, especially for youth and women that will support the ecotourism sector through the provision of innovative products and services; with reference to the growing youth and cultural heritage segments.	SET Officer	Number of SMME opportunities realized	Year 2	Responsible Tourism LLP
Implement the social legacy programme	Annual submission of legacy projects for EXCO approval; with inclusion of the National Water and Food security Programme	Regional SET, PM	Annually approved social legacy projects	Year 1	SANParks National Water and Food security Programme
	Implement annual social legacy projects, as approved.	SET Officer, Regional SET	Implementation plan and reports	Year 2 - 4	
Collaborate with regional and local municipalities, government departments and nongovernmental organisations on socio-economic opportunities stemming from the MZCPE	Develop an integrated "cross border" socio economic development programme	SET Officer, PM	Integrated socio-economic development programme	Year 5 - 7	Statement of intent for Bioregional Integration
	Implement cross border initiatives to the benefit of communities	SET Officer, PM	Number of initiatives implemented	Year 7 - 10	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SET Officer	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.7 Stakeholder engagement

SANParks recognises that national parks belong to the people of South Africa. As custodians of these national assets, stakeholder participation is encouraged to strengthen community-park relations by incorporating local communities in support of the management and conservation of our natural and cultural resources. Stakeholder engagement therefore takes place routinely through the ongoing activities of Park Forums and more broadly, during the development and revision of management plans. The park wishes to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders, that will



benefit the park's values, objectives and various programmes related to the different core functions. Park management strives to maintain existing relations and identify and implement new opportunities for enhancing relationships with surrounding communities, all spheres of government and other stakeholders to ensure that local and regional initiatives and developments contribute positively to the attainment of the overall desired state and objectives of the park and the social-ecological system within which it is embedded.

10.7.1 Stakeholder engagement and collaboration programme

The purpose of this programme is to build positive relationships with society by facilitating effective engagement and linkages to share conservation benefits through partnerships (e.g. government departments, NGOs, local communities and local community structures, Traditional Councils, parastatals, community-based organisations).

Stakeholder engagement between SANParks and society covers a range of different objectives at various scales, ranging from local to global. The NEM: PAA promotes the participation of local communities in the management of protected areas. It further contributes towards strengthening stakeholder-park relations by empowering stakeholders and local communities to participate in decision-making processes related to management and development issues in parks. SANParks has adopted an overarching park management approach to strengthen relationships with stakeholders in pursuit of the long-term "desired state" for the park. This requires continuous engagement with a range of stakeholders and sectors through various mechanisms. Park management's engagement with external stakeholders needs to be responsive in dealing with issues beyond internal operations, including the broader economic and integrated land use role of the park. The commitment to the incorporation of public opinion into park management is rooted in the recognition that the park must serve a conservation-oriented subset of societal values and that it is inevitably situated within a broader landscape and context.

SANParks has a mandate to conserve biodiversity and to promote the associated conservation values. Stakeholders also have an interest in the park and how it affects the surrounding and interested community and their activities. It is acknowledged that the sustained vibrancy and legitimacy of the park depend upon stakeholder understanding, support and involvement. For this reason, the park management wishes to engage stakeholders in an ongoing way, subsequently investing in stakeholder engagement and public participation processes.

Park management strives to maintain existing relations and to identify and implement new opportunities for enhancing relationships with surrounding communities, all spheres of government and other stakeholders. Co-operative partnerships pertain to many levels of stakeholders, including all three levels of government, international and national agencies (including conservation and development NGOs and research institutes), business partners, local communities, land claimants, employees, tourists and the media. Stakeholder engagement and co-operative partnerships are facilitated through a range of informal and formal structures. This in turn will ensure that local and regional initiatives and developments contribute positively to the attainment of the overall desired state and objectives of the park and the social ecological system within which it is embedded. Various programmes and projects implemented in and around the park aim to address this by fostering positive stakeholder relationships and establishing co-learning opportunities through environmental and cultural education and awareness. Restoring people's rights of access and to benefit from conservation land and/or associated businesses, remains an important focus within constituency building.

The Park Forum was established in 2013 and meetings take place quarterly. Broader interest groups such as municipalities, schools, churches, local businesses, adjacent conservation areas and other members of the public, is represented on the Park Forum. The Park Forum provides a

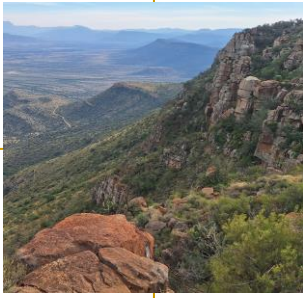
legitimate platform to communicate park / SANParks matters to ensure participation by all stakeholders on matters of mutual relevance affecting the park. It will also provide a platform to build constituencies in support of the natural and cultural heritage conservation goals of the park.

Park management has a close working relationship with the SANParks Honorary Rangers, especially with the newly formed Arid region. They contribute both in cash and in kind to the park programmes. Their expertise is used by the park to achieve the park's desired state. They contribute in the following ways, to name but a few:

- Support and assist in environmental education and community outreach programmes;
- Support logistical arrangements of major events;
- Fundraising initiatives;
- Participate in park operations during weekends and holidays when requested; and
- Participate and assist with holiday programmes.

A detailed LLP outlining the rationale and operational approach supports this programme. This programme links with high-level objective 6 and objective 6.1 on page 44. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

STAKEHOLDER ENGAGEMENT AND COLLABORATION PROGRAMME					
High-level objective: To forge meaningful and long-term relationships by cultivating participation that connects the park with the community					
Objective: To build mutually beneficial relationships and effective partnerships by creating linkages and facilitating engagement.					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To identify stakeholders that are likely to be affected by the activities and outcomes of SANParks initiatives.	Review and update stakeholder database	PM and SET	Stakeholder database	Year 2, 4, 6, 8, 10	
To ensure collaborative engagement with a broad range of government department stakeholders	Develop and maintain stakeholder engagement structures and processes of participation that ensure regular feedback on joint initiatives and partnerships, with the inclusion of the Park Forum, People and Park structures, Local Municipality and GRANAAT volunteer group.	PM and SET	Multi-faceted stakeholder engagement implementation document	Year 1, ongoing	SANParks Guidelines for Stakeholder Participation
To ensure effective engagement with a wide range of local community stakeholders	Develop and implement Community Stakeholder engagements to spread relevant information, with the inclusion of exhibitions and presentations at community venues. "Take Park to community"	PM and SET	Reports, minutes of meetings, workshops	Year 2, 4, 6, 8	
	Enable access to community stakeholders to meaningfully participate in park initiatives (e.g. understanding mandate and expectation, roles and responsibility) "Take community to Park"	PM and SET	Reports, minutes of meetings, workshops	Year 3, 5, 7, 9	
To promote park initiatives through effective media liaison.	Develop and implement a communication and media liaison plan making use of a range of methods (e.g. forums, social and written media and community notice boards)	PM, SET and Communication Manager	Standard operating procedure	Year 1, ongoing	SANParks' Communications Protocol, Media Policy & Procedures
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SET Officer	Assessment tool	Annually	SOP for the assessment of the implementation of management plans



10.8 Effective park management

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

10.8.1 Environmental management programme

The purpose of this programme is to mitigate potential negative environmental impacts on the park caused by development and operational activities, through effective risk management and assessment, legislative compliance and the implementation of environmental management tools.

Park management is required to practice sound environmental management in accordance with required standards of environmental best practice and in compliance with legislation. Several management tools are used to develop and manage the park, and form the basis of an environmental management framework.

In terms of section 24(2) of the NEMA, the Minister of the DEFF identified activities that may not commence without authorisation from the competent authority as stipulated by the NEMA: EIA Regulations. Further to the provisions of NEMA, park management will assess risk and implement Environmental Management Plans (EMPs) and Environmental Management Programmes to guide all construction and operational activities that are not listed under NEMA as an activity requiring an EIA process. The precautionary approach will be applied, as well as NEMA Section 28 (2) Duty of Care, which imposes a general duty and obligation on every person to avoid pollution and environmental degradation. 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.

Further to the provisions of NEMA, park management will develop standards of best practice to guide all operational activities that may have an impact on the environment. The park will therefore be guided by all legislative requirements in ensuring best practise towards environmental management and with minimum impact on the environment.

This programme links with high-level objective 7 and objective 7.1 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

ENVIRONMENTAL MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives.					
Objective: To strive for best practise and ensure compliance with environmental legislation through improved governance and environmental risk management.					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To manage and reduce the impact of park activities in accordance with legislation to prevent pollution and environmental degradation	Make environmental legislation available to relevant staff	PM, SR	Documents	Ongoing	
	Ensure that EIAs and specialist studies are completed for listed activities		Documents, reports	As required	

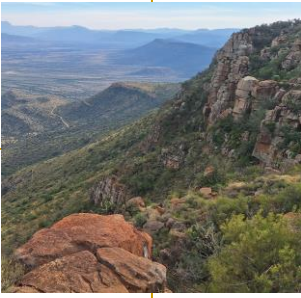
ENVIRONMENTAL MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives.					
Objective: To strive for best practise and ensure compliance with environmental legislation through improved governance and environmental risk management.					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To manage and reduce the impact of park activities in accordance with legislation to prevent pollution and environmental degradation	Implement internal environmental management programmes for non-listed activities / developments	PM, SR	Documents, reports	As required	
	Monitor compliance and enforce requirements as set out in the Environmental Authorisation for listed activities; and environmental management programmes for non-listed activities		Reports	As required	
To reduce the park's carbon footprint as a measure of the environmental and climate change impact of its operations and activities	Develop and implement a set of Standard Operating Procedures to manage all significant environmental impacts	HODs, SS	Documents	Year 2, ongoing	Ecosystem Based Adaptation Strategy and Guidelines, Draft National Adaptation Strategy, Draft Climate Change Bill, National Climate Change Response Policy
	Review the Standard Operating Procedures	HODs, SS	Documents	Year 3, 6 and 9	
	Adopt sustainable procurement principles by purchasing eco-friendly, biodegradable, energy-efficient products.	HODs	Documents	Year 2, ongoing	
	Investigate how to reduce energy usage through the use of green technology	TS	Document	Ongoing	
	Create awareness amongst staff and overnight visitors regarding energy usage and energy saving measures	SET Officer, HODs			
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.2 Risk management programme

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

In line with corporate governance best practices and as per the Public Finance Management Act, (Act No. 01 of 1999) (PFMA) requirements, the Board of SANParks has formalised the risk management processes by adopting a Corporate Risk Management Framework (CRMF). As its foundation, the risk management framework follows an enterprise-wide risk assessment process, based on the thorough understanding of the environment in which the organisation operates and the strategic corporate objectives it intends to deliver upon.

The main aim of the CRMF is to instil a culture of corporate risk management awareness and risk ownership, which is 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 basis for the effective management of all risks to remain within the risk appetite of the organisation.



Acknowledging that all activities within the organisation are exposed to various types of risks, the focus of this framework is on the optimal balance between potential risks and the potential rewards that may emanate from both proactive and conscious risk-oriented actions. As such, SANParks maintains a corporate profile of the identified key strategic challenges the organisation faces. This profile is communicated to the Board and is reviewed on an ongoing basis. The risk profile reflects, among others the risks identified, as well as how each risk is addressed and / or monitored. At park level, the general managers are responsible for risk management. As the link between the operational activities and its environment on the one hand, and the corporate support and management structure on the other, the general managers are in many instances responsible for implementation of corporate initiatives, programmes, management plans and other projects that form part of the SANParks strategy to address or mitigate issues of risk. Similarly, the SANParks Strategic Plan and Annual Performance Plan must be incorporated to ensure that strategic initiatives are achieved. 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. The park may also, from time to time, experience extreme environmental / weather conditions (i.e. droughts, floods, runaway fires) as part of the normal cycle. An appropriate response to each of these events will be addressed in the disaster management plan.

The heads of departments need to ensure that emerging issues of risk, that can jeopardise achievement of the park's (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 staff and its existing resources, or the matter is elevated to a corporate level, where a specific risk management strategy is agreed upon, resources allocated where applicable, and a risk management or monitoring plan is implemented.

This programme links with high-level objective 7 and objective 7.2 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

RISK MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective	Actions	Responsibility	PoE	Timeframe	Reference
To establish and maintain effective, efficient and transparent risk management systems by creating an enabling environment for the management of risk	Review and revise the Risk Response Plan on an annual basis	HODs, PM	Document	Annually	CRMF
	Implement the risk response initiatives, review and update this as required	HODs, PM	Document	As required	CRMF
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.3 Financial management and administration programme

The purpose of this programme is to ensure sound financial management and administration. As a public entity, SANParks manages the public funds entrusted to the organisation in accordance with the Public Finance Management Act (Act No 1 of 1999) (PFMA), and it is listed as Schedule 3 Part

A: 25 Other Public entity.

The finance division supports operations and projects of the park and ensures that these are managed in accordance with sound financial principles and effective internal controls. The finance division also ensures that the financial accounting and administration activities comply with the PFMA), Generally Recognised Accounting Practise, and Preferential Procurement Policy Framework, National Treasury Regulations and organisational policies and procedures. All tender processes and procurement opportunities to local communities are guided by the SANParks policy framework.

The Frontier Region Finance Division reports directly to the General Manager Parks Finance who further reports to the Chief Financial Officer while providing support to the Frontier Region Parks, consisting of Addo Elephant National Park, Camdeboo National Park, Karoo National Park and Mountain Zebra National Park.

The financial management and administration support function entails the following activities:

- Budgeting management;
- Financial accounting;
- Financial administration;
- Asset management and
- Supply Chain Management (SCM).

The financial division manages the consolidation of the annual budget for the park, which includes both the operational and the capital expenditure budgets. Furthermore, quarterly reporting on the actual budget performance against allocated budget for the period is provided. It is also responsible to guide and provide the necessary assistance with the budget process to all cost centre managers in the park. The SANParks annual budget guideline informs a zero-based approach, which implies that every category must be critically assessed and evaluated before the budget proposal is submitted.

Financial administration entails the day-to-day processing of financial transactions such as processing and payment of invoices, account reconciliations, processing of debtors' invoices, etc.

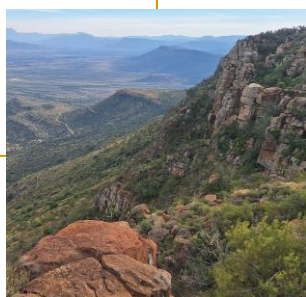
The park has a moveable asset (non-living) base with a book value of R 7,695,667. It is therefore critical that all the assets of the park are correctly accounted for. It is also critical that the assets are managed effectively according to the asset management policy and procedure. All procurement for goods and services is done in accordance with the National Treasury guidelines as per the PFMA and Preferential Procurement Policy Framework.

There are certain core functions and activities performed in the park that are dependent on external funding from different donors. This includes support through the EPWP and Environmental Protection and Infrastructure Programmes for natural resource management and infrastructure development programmes. The financial sustainability of these core functions and activities therefore needs to be critically reviewed on an ongoing basis, since funding through these programmes and donations are mostly short to medium-term. This might pose a major financial risk to the park, should alternative funding sources not be secured. This requires that innovative mechanisms for financial sustainability be investigated to ensure that the core functions are maintained, including the increasing burden as a result of the much-required safety and security operations, the ability to respond to regional drivers and threats through the regional land use programme, and the commitment towards delivering tangible socio-economic development opportunities to communities.

The following challenges have been identified:

- The annual operational budget allocated is not sufficient to cover all operational costs;
- Whilst the budget methodology is based on zero-based budgeting, there is a limitation of available financial resources to fund additional activities, which often requires that operations are prioritised in order to carry out new initiatives;
- The increase in the lawlessness impacts on the operational costs to the park; and
- The cost of the vehicle fleet for the park.

This programme links with high-level objective 7 and objective 7.3 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.



FINANCIAL MANAGEMENT AND ADMINISTRATION PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To ensure sound financial management and administration through proficient budget management, effective internal controls and compliance to corporate governance prescripts					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To attain effective financial management	Ensure less than 1% variance on cost of operations	PM, HODs, BSP: Cluster Manager, Regional Finance Manager	Statements with <1% variance	Annually	
	Ensure sound financial management of special projects – BSP		Budget targets achieved	Quarterly / annually	
	Participate in the independent audit of financial records		Audit report	As required	
	Address audit findings		Audit findings report	As required	
To grow revenue (Including alternative sources of revenue)	Identify possible external funding to supplement current income streams	PM, HODs	Funding proposals	Annually	
To improve the management of financial resources	Prepare accurate and realistic annual budgets in consultation with the management team that are in line with the sound management plan objectives	Regional Finance Manager, PM, HODs Regional Finance Manager, PM, HODs	Annual budgets	Annually	
	Provide timely quarterly financial reports		Reports	Quarterly	
	Review the insurance schedule and submit to corporate		Documents	Annually	
	Submit insurance claims as and when required		Claims	As required	
To ensure proper asset and SCM	Verify and manage asset registers	Regional Finance Manager, PM, HODs, SCM Practitioner	Asset register	Bi-annually	
	Assist with the procurement of goods and services		Documentation	As required	
	Provide input when contracts are sourced		Documentation	As required	
	Ensure sound management of vehicle fleet (i.e. logbooks, services, licencing, fuel management)		Logbooks, service records, fuel card statements	Monthly	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.4 Human Capital Management programme

The purpose of this programme is to ensure that the park has an adequate human capital function to render effective conservation, visitor and supporting services, whilst also ensuring that it provides human capital development support to surrounding communities.

SANParks has developed corporate human capital policies, guidelines and procedures to guide park management and its workforce in an effectively organised structure while delivering the outputs of the management plan. The park views itself as an equal opportunity employer. This is

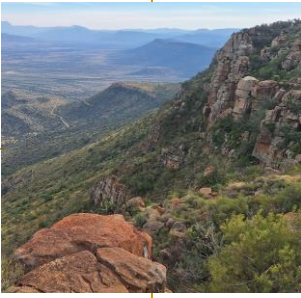
achieved through non-discriminatory practices in the work environment, availability of equal opportunities for employees and prospective employees, respect for diversity and gender differences, and the commitment to uphold and implement the Employment Equity Act (Act No. 55 of 1998).

By adhering to corporate policies, guidelines and procedures, the park ensures that competent staff are appointed, and that current staff are managed in an effective manner to keep them positive, proactive and committed to their tasks and responsibilities. This also ensures that human capital management complies with the relevant national legislation. Park human resource capacity is not only defined by the development of current staff but requires the holistic management of the appropriate human capital. This includes the creation of a learning environment, developing leadership skills, sharing of knowledge and experiences, and making staff wellness programmes available to employees. This assists staff in dealing with the negative effects of lifestyle illnesses and other lifestyle challenges (i.e. financial planning). The Human Capital and Administration Officer reports on new appointments, resignations, attendance registers, overtime claims, leave, etc. This informs a salary instruction which is prepared for processing of monthly salaries. Park management reviews training needs on an annual basis and submits the training need analysis and requirements for approval to Head Office. The compilation of training needs starts with the Individual Development Plans for each staff member, followed by training, skills development and performance appraisals. Park management encourages all staff to improve their levels of skills and qualifications in their relevant field of expertise through study bursaries and training on an on-going basis.

The park currently (2023) has 30 permanent employees and six employees that are on fixed-term contracts.

This programme links with high-level objective 7 and objective 7.4 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

HUMAN CAPITAL MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To ensure sufficient and effective staff capacity to achieve management objectives by adhering to legislation, corporate human resource policies and guidelines					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To ensure the park attracts and retains the most suitable human capital	Preparation and processing of monthly salaries and employee benefits and leave management	HCM	Salary instructions	Monthly	
	Ensure implementation of the prescribed disciplinary code and procedures		Documentation	As required	
	Conduct regular employment equity and skills development forum meetings		Minutes of meeting	Quarterly	
	Fill vacancies with suitably skilled and experienced candidates within agreed timelines as per employment equity targets		Statistics	As required	
	Ensure all post are evaluated and graded		Job Descriptions	As required	
	Develop human capital in the fields of tourism, conservation and administration through the internship programme		Contracts	Annually	
To ensure the park attracts and retains the most suitable human capital	Preparation and processing of monthly salaries and employee benefits and leave management	HCM	Salary instructions	Monthly	
	Ensure implementation of the prescribed disciplinary code and procedures		Documentation	As required	
	Conduct regular employment equity and skills development forum meetings		Minutes of meeting	Quarterly	
	Fill vacancies with suitably skilled and experienced candidates within agreed timelines as per employment equity targets		Statistics	As required	



HUMAN CAPITAL MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To ensure sufficient and effective staff capacity to achieve management objectives by adhering to legislation, corporate human resource policies and guidelines					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To ensure the park attracts and retains the most suitable human capital	Ensure all post are evaluated and graded	HCM	Job Descriptions	As required	
	Develop human capital in the fields of tourism, conservation and administration through the internship programme		Contracts	Annually	
To implement workplace wellness programmes	Participate in wellness awareness workshops	HCM, HODs	Documents	Annually	Wellness Policy OHS Act
	Provide facilities within the park to enable employees' access to the wellness programme		Facility	As required	
	Refer employees that require assistance through the employee wellness programme		Number of referrals	As required	
	Participate in occupational health and safety (OHS) awareness and health related workshops		Registers	Ongoing	OHS Act
	Commemorate events related to wellness (e.g. AIDS day, world blood donor day, days of activism on non-violence against women).		Registers	Annually	Wellness policy
	Administer injury on duty cases		Report	As required	OHS Act, Housing policy, Wellness policy
	Administer staff housing		Document	As required	
	Provide access to clinics, school, and emergency medical services		Reports, registers, documents	As required	
To manage labour relations matters and provide sound employee relation	Handling of grievances, disputes, disciplinary matters and Commission for Conciliation, Mediation and Arbitration cases	HCM	Reports	As required	Disciplinary and Grievance Policies and Procedures; and LRA
To create and maintain a sound working environment through fair and equal treatment of all employees and stakeholders to deliver SANParks strategic objectives	Implement and manage Management and Shop Stewards committees	HCM, PM, HODs	Minutes of meetings	Monthly	Organisational Rights Agreements
	Participate in labour relations-related training interventions		Registers	Annually	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.5 Information and records management programme

The purpose of this programme is to preserve the institutional memory of SANParks, by establishing a database of park information. Information and records management is applied to promote accountability, transparency and good corporate governance.

Management of parks requires that appropriate information be collected, preserved and made accessible to a range of internal and external stakeholders for the smooth running of operations at SANParks. The programme also aims to manage knowledge generated so that it benefits the organisation.

Information is not only essential to formulate effective long-term management objectives, plans, programmes and systems, but also to educate and inform residents, associations, user groups, local authorities, provincial and national decision- and policymakers, international organisations and aid / donor agencies. SANParks however, shall always hold the intellectual property right of all such information that is generated by any of its employees in their official capacities.

This programme links with high-level objective 7 and objective 7.5 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

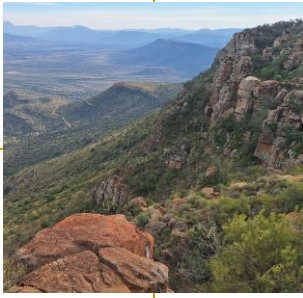
INFORMATION AND RECORDS MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To achieve best practice in the field of information and records management by complying to the Records Management Legislative framework and policies and thereby ensuring care of all vital records in SANParks					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To develop and implement a records management and file plan for the park in accordance with SANParks policies and procedures	Review the existing records management and file plan of the park and implement a single file plan	HODs, PM, HR/Admin Officer	File plan	Year 2	National Archives and Records Services Act
	Implement the records management and file plan		Records and documents filed	Year 3, ongoing	Corporate file plan, Records Management Policy
	Ensure appropriate access to park files and records in accordance with corporate records management policy and guidelines		Access procedures	Ongoing	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.6 Infrastructure programme

The purpose of this programme is to effectively direct the maintenance and improvements (day-to-day and scheduled) of the park's infrastructure. This is primarily to ensure that the park's infrastructure (buildings, roads, fences, etc.) and services (provision of water, electricity and waste management) are well maintained and continually improved in order to provide safe, reliable, increasingly environmentally friendly and affordable products to visitors and employees. The key responsibility of the technical department, in conjunction with the general workers and the rangers corps, is the delivery and implementation of departmental programmes and the realisation of set goals regarding the above.

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

Management policies and procedures ensure that infrastructure is maintained, renovated, upgraded and replaced at the required intervals and according to specific design norms and standards, including national construction regulations. This includes the "green building" and "touch the earth lightly" principles, importance of implementing measures to save water and electricity and to minimise waste and waste management. The 10-year maintenance plan addresses issues related to securing funding for upgrading, renovation /



maintenance and replacement. Technical services continue to periodically review and assess performance to align activities and allocate resources. The total estimated replacement value of the park's infrastructure is R 82,912,051. There is a shortfall in addressing the maintenance backlog, annual maintenance, upgrading and new capital development. The required infrastructure maintenance budget for 2025 / 2026 is R 1,237,928 however, only R 524,694 has been allocated.

SANParks acknowledges the global concerns around climate change impacts and the need for local action. In addition, South Africa committed to cut emissions by 34% from business as usual by 2020 and by 42% by 2025 under the Copenhagen Accord, thus committing to transform to a low carbon energy economy. In support of this, SANParks has also set out to contribute to national targets by reducing 2% of fossil fuel-generated energy consumption year-on-year towards achieving carbon neutral operations for the organisation (Phophe & Masubelele, 2020). This will be achieved through the implementation of the SANParks Green Energy Strategy (SANParks, 2022b) to reduce the reliance on fossil fuel-based power generation and its associated adverse economic and environmental consequences. There are three focus areas. Firstly, energy efficiency measures will be implemented, including technological and social / behavioural interventions. Secondly, investment into and promotion of renewable energy technologies will directly address and reduce the organisational carbon footprint. This will contribute to reduction in air, soil and water pollution, biodiversity loss and thus mitigation of climate change. Thirdly, the increased use of renewable energy sources will contribute to a more sustainable and efficient mix and use of energy and to the reduction of energy costs in the long-term.

Detailed LLPs outline the rationale and technical aspects to this programme. This programme links with high-level objective 7 and objective 7.6 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

INFRASTRUCTURE PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To maintain, upgrade and develop park infrastructure through proper planning and efficient management					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To plan and design all projects to comply with legislation, standards and client requirements	Identify project needs, design specifications and the scope of compliance projects	TS, PM	Documents	Ongoing	IDP programme, CAPEX and OPEX
	Ensure all building projects are designed according to the National Building Regulations and Building Standards Act (Act No. 103 of 1977)		Documents	Annually	Technical services approval procedure
To ensure sound contract and project management to enhance good governance	Appoint suitable staff, contractors and consultants who will implement projects in accordance with approved Contracts Management SOP	TO	Documents	As required	Supply chain and recruitment policy
To ensure the implementation of the 10-year roads and fence maintenance plan	Reprioritise the Road Maintenance Plan at the beginning of every financial year according to the budget allocation.	TS, PM	Documents	Annually	Roads Maintenance Plan
	Implement rehabilitation and routine maintenance on roads	TS, PM	Reports	Ongoing	
	Identify sections of the fence to be maintained, upgraded or removed	SSR, PM	Reports	Annually	

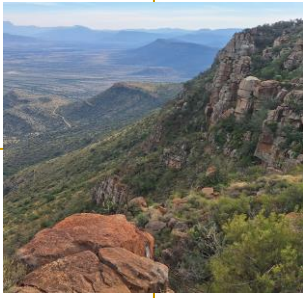
INFRASTRUCTURE PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To maintain and develop all electro-mechanical works and transportation management by implementing specific programmes.					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To ensure that all solid waste site infrastructure in the park is maintained and upgrade to a desired state	Compile an inventory of all infrastructures in the park and determine the extent of maintenance required	TS	Inventory	Year 1	
	Implement the annual work plan	TS	Documents	Annually	
To ensure that electrical and mechanical equipment and two-way radio communication equipment are serviced and maintained to acceptable standards	Compile an inventory of all mechanical and electrical equipment in the park, determine replacement programme	TO, PM	Inventory	Year 1	
	Develop and implement annual maintenance schedule and service intervals for all equipment		Schedule	Annually	
	Continuously improve skills, and knowledge of maintenance staff		Register	Annually	
	Ensure that legal inspections / scheduled services are conducted accordingly		Report	As required	
To ensure that all vehicles in the park vehicle fleet comply with applicable legislation and comply with prescribed service intervals and are replaced accordingly.	Service all vehicles according to service / maintenance plan at prescribed intervals	SR SR, DM, SET	Records	Quarterly	
	Compile necessary documentation to keep record of e.g. km utilisation, inspection records and annual vehicle replacement schedule budget		Reports	Annually	Approved replacement cycle
To ensure that all vehicle accidents and incidents are investigated, and damage repaired.	Ensure all accidents / incidents are reported, evaluated and repaired as per prescribed documentation	SR	Reports	Monthly	Fleet management procedure
To ensure that all water purification plant infrastructure in the park is maintained to a desired state	Document the scope of maintenance needs in accordance with relevant specifications to guide contractors	TO	Documents	Annually	
To reduce water-use in the park.	Determine and implement a baseline for each water usage group.	TO, HR/Admin Officer, SS	Reports	Monthly, annually	
	Monitor surface and underground water abstractions.		Reports	Monthly, annually	National Water Act
To ensure that all solid waste site infrastructure in the park is maintained and upgraded to a desired state	Compile an inventory of all infrastructures in the park and determine the extent of maintenance required	TO	Inventory	Year 1	
	Implement the annual maintenance plan	TO	Documents	Annually	
Objective: To monitor and evaluate the impact of the implementation programmes and adapt as required					
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.7 Safety and security programme

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

This programme is aligned to the overarching SANParks Safety and Security Strategy. It outlines the safety and security principles applicable to SANParks' environmental assets, staff, contractors, visitors, infrastructure and facilities, including entrance gates and the area within the park.

Crime generally constitutes significant risk, and as such poses a major threat to an organisation such as SANParks to deliver on its mandate. This includes the successful protection of all assets (natural, cultural and physical) under its custodianship, as well as the products and services delivered to its customers. Any perception that it is unsafe to visit the park will affect the mandate of SANParks.



To ensure a safe environment and experience for visitors, SANParks must execute the safety and security programme with due consideration of the perceived intrusive nature of mitigating interventions to address the risks associated with a safety and security programme.

SANParks implements and enforces the requirements contained in legislation and organisational policies. The primary legislation and organisational policies include:

- National Environmental Management: Biodiversity Act;
- NEM: PAA and its Regulations;
- Safety and Security Strategy and Procedures;
- Criminal Procedures Act (Act No. 51 of 1977);
- Control of Access to Public Premises and Vehicles Act (Act No. 53 of 1985); and
- Firearms Control Act (Act No. 60 of 2000).

The Safety and Security Plan comprehensively addresses both the strategic and operational aspects of visitor and staff safety, as well as environmental / and cultural heritage asset protection and area integrity. Proactive consideration is given to issues such as working hours, law and order, high-risk areas, personnel, infrastructure, resources, equipment, staff training, reporting, data capturing, record keeping, monitoring, information and intelligence.

Park management has a good working relationship with the South African Police Service (SAPS) and other government agencies. In co-operation with SANParks, joint operations relating to safety and security interventions in the park, as well as the adjacent surrounding areas, are planned and implemented.

In addition to this, several reactive measures have been developed, including immediate action drills, emergency procedures and evacuation plans. Information regarding these emergency procedures is available in the various facilities.

The overall poaching risk is high. Poaching activity involves the use of dogs and snares, which target indiscriminately, and poses a risk to wildlife. Proactive patrolling and operational plans are implemented to protect the biodiversity assets. Certain plant species sought after for their medicinal qualities could also be at risk. Unregulated wood collection can further contribute towards ecosystem degradation.

A detailed LLP supports this programme. This programme links with high-level objective 7 and objective 7.7 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SAFETY AND SECURITY PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To provide a safe and secure environment for both visitors and SANParks employees as well as to ensure the protection and integrity of natural, cultural and physical assets and resources, by implementing a Park Safety and Security Plan					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To provide environmental asset protection for natural and cultural resources and infrastructure, whilst improving capacity	Implement the SANParks Safety and Security Strategy	PM, SR	Report	Annually	Safety and Security Strategy
	Conduct regular proactive and reactive interventions i.e. patrols and surveillance operations to ensure that area integrity is maintained	SR	Document	Ongoing	

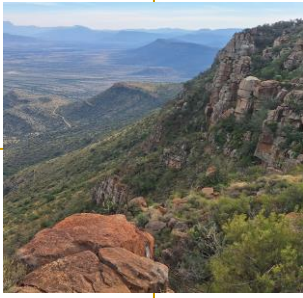
SAFETY AND SECURITY PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To provide a safe and secure environment for both visitors and SANParks employees as well as to ensure the protection and integrity of natural, cultural and physical assets and resources, by implementing a Park Safety and Security Plan					
Sub-objectives	Actions	Responsibility	PoE	Timeframe	Reference
To provide environmental asset protection for natural and cultural resources and infrastructure, whilst improving capacity	Ensure that all SANParks personnel involved with law enforcement operations receive the appropriate advanced / specialised training in operational tactics, investigations and crime scene management	SR	Training records, reports	Ongoing	
	Provide law enforcement officers with an all-inclusive legal support service	SR, legal services	Reports	Ongoing	
	Ensure appointment and appropriate designation of Environmental Management Inspectors status for law enforcement officers	SR	Documentation	As required	EMI status reports
	Ensure boundary and facility fence-line integrity and maintenance	PM, SR	Documentation	As required	Infrastructure LLP
	Report environmental concerns in the adjacent areas	PM, SR	Reports	Monthly	
To provide a safe and secure environment with due regard for the safety and security of people	Ensure regular visible patrolling	SR	Reports	Ongoing	
To develop a proactive relationship with safety and security authorities and alliance partners to assure quick and deliberate safety and security response actions	Improve overall park safety and security through regular interactions with relevant stakeholders	SR	Documentation	Ongoing	
	Participate in problem and damage-causing animal investigations	SR	Documentation	As required	DCA policy
	Participate in relevant operational forums	PM, SR	Minutes of meetings	Ongoing	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.8 Safety, health and environment programme

The purpose of the current occupational health and safety OHS programme is to prevent, minimise and manage occupational accidents and occupational illnesses and diseases.

This programme is required by the Occupational Health and Safety Act (Act No. 85 of 1993), to ensure that workplace hazards are always managed and controlled to guarantee a safe working environment, including contractor activities on site. The OHS programme is guided by the SANParks Safety, Health, Environment (SHE) policy statement and framework (SANParks, 2023d) and includes the elements required by the occupational health and safety legislation as a minimum but is also based on the ISO 45001 Occupational Health and Safety management system standard.

SANParks' commitment to the health, safety and the well-being of all its employees and the environment is an integral element of SANParks' business model. SANParks aims to continually improve its performance with the efficient use of natural resources with no harm to people and the environment. In this regard, safety, health and environment risks are identified, assessed and managed to mitigate the impact on employees, visitors and the environment with suitable control measures. SANParks has adopted the internationally recognised and best practice ISO 45001 standard. Under this standard, the park is expected to align with and implement best practice processes and norms. The environment and quality components of the SHEQ programme will be developed over the next five to eight years.



The ISO 45001 standard consists of six elements:

- Identification of hazards and risks;
- Identification of legal and other requirements;
- Determination and development of objectives and programmes;
- Operational control;
- Emergency preparedness and response; and
- Internal audit.

The ISO 45001 will be phased in with the first phase (2025/26 – 2029/30) focussing on the first three bullets listed above. Phase two (2030/31 – 2034/35), will focus on the last three bullets listed above.

This programme links with high-level objective 7 and objective 6.8 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

SAFETY, HEALTH, ENVIRONMENT AND QUALITY PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To continuously reduce the disabling injury frequency rate through the implementation of an efficient and effective Occupational Health and Safety management system					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To implement the ISO 45001 standard	Identify hazards and risks	Technical Officer, SR, OHS Chairperson and reps, PM	Register	Year 2, ongoing	
	Identify legal and other requirements		Register	Year 2, ongoing	
	Establish, implement and maintain programmes to mitigate identified hazards and risks		Documents	Year 2, ongoing	
	Develop and implement standard operating procedures to manage identified hazards and risks		Documents	Year 4, ongoing	
	Develop and implement emergency preparedness and response plans		Documents	Year 5, ongoing	
	Conduct regular self-audits	Technical Officer, SR, OHS Chairperson and reps, PM	Reports	annually	
	Support internal audits			As required	
	Support external audits			As required	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.9 Communication programme

The purpose of this programme is to build and maintain good relationships and a positive park image. It aims to provide key stakeholders, descendent communities, the general public and staff with relevant and accurate information pertaining to the park's operations through media relations and event initiatives.

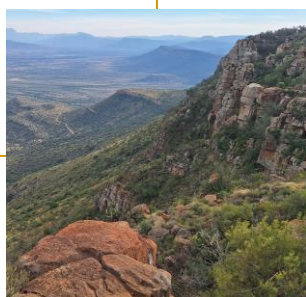
This will be achieved through:

- **External communications**
Media relations will ensure that the park is adequately and well presented in the media (both electronic and print) in order to create and maintain a positive image for the organisation. This will be achieved by managing media coverage of contentious issues, educating the public about the park, its cultural heritage values and emerging conservation issues, as well as ensuring that conservation debates receive prominent media coverage.
- **Internal communications**
Internal communication is important to facilitate an effective two-way communication process within an organisation. Employees, as the internal stakeholders of the park, have a right to information and therefore the internal communications section exists to ensure that staff members, management and businesses operating within the park, are always well informed about the business activities, processes and new developments in the park.

The programme is intended to ensure transparency and ongoing stakeholder relationship building. A future focus will be to build more capacity to engage in a more meaningful basis with social media.

The communication programme closely links with the stakeholder structures programme and is implemented in close collaboration with all departments and their associated programmes. This programme links with high-level objective 7 and objective 7.9 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

COMMUNICATION PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To build, maintain and constantly improve relations of the park by engaging and sharing information with internal and external stakeholders					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To strengthen collaborative multi-stakeholder partnership	Develop a communication plan based on the Stakeholder Engagement Plan	RCM, all departments	Document	Year 1	Stakeholder engagement LLP
	Disseminate a range of media products based on the respective internal and external stakeholder groups and programmes		Media products	Annually	Communications Plan, Stakeholder engagement LLP
	Identify interested and affected stakeholders and develop a joint communication strategy and programmes on themes of joint interest		Document	Year 1	
	Implement the Communication Strategy		Media products	Annually	
To inform the public through mass media about major developments or incidents that take place in the park	Issue relevant media releases and alerts and ensure timely response to media queries	RCM, PM	Media statements and alerts issued	As required	SANParks Strategic Plan and APP Communications and Marketing Annual Plan Filming and Photography Protocol
	Write feature articles / opinion pieces on topical issues		Articles published		
	Build and maintain relations with media houses across various platforms		Updated media database		



COMMUNICATION PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To build, maintain and constantly improve relations of the park by engaging and sharing information with internal and external stakeholders					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To inform the public through mass media about major developments or incidents that take place in the park	Engage on social media platforms	RCM, PM	Online interactions	As required	SANParks Strategic Plan and APP Communications and Marketing Annual Plan Filming and Photography Protocol
	Administer and maintain photography and filming permits		Number of permits issued		
	Ensure up-to-date online content on the SANParks platforms		Number of updates posted		
To facilitate a speedy flow of information between park management and staff using bulletins and internal newsletters, as well as to respond to general customer queries	Develop an annual Communication Plan	RCM	Document	Annually	SANParks Strategic Plan and APP Communications and Marketing Annual Plan
	Issue timely internal bulletins and information broadcast		Number of internal bulletins and information broadcasts issued	As required	
	Ensure all staff members have access to information through communication forums and newsletters		Newsletters published	Annually	
	Encourage line management to share and clarify fresh information		Reports	As required	
	Respond timely and accurately to queries both internally and externally		Reports		
To improve the park's image amongst its stakeholders through the provision of well-planned, managed and coordinated events	Promote environmental calendar days, corporate and brand awareness events	RCM	Number of events executed	Annually	SANParks Strategic Plan and APP Communications and Marketing Annual Plan
To monitor and evaluate the impact of the programme and adapt as required	Monitor and evaluate the impact of the Communication Plan and the support to various programmes	RCM	Report	Annually	Communications Plan
	Adapt / review the Communication Plan based on the respective internal and external programmes and stakeholder groups, as informed by monitoring and evaluation processes		Document review	Year 4, 7, 10	Stakeholder engagement LLP
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, HODs, RCM	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.8.10 Disaster management programme

The purpose of this programme is to identify potential disaster risks, and to develop a disaster management plan that provides risk mitigation plans, risk response plans and risk recovery plans.

The programme provides for an integrated and co-ordinated disaster management approach that focuses on preventing and reducing the risk of disasters, mitigating the severity of disasters, and concentrates on emergency preparedness, rapid and effective response to disasters and post-disaster recovery as required by the Disaster Management Act (Act No. 57 of 2002). The programme will also emphasise the training of staff and provide emergency procedures to manage disaster events, i.e. droughts, flooding, infrastructure fires.

This programme links with high-level objective 7 and objective 7.10 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

DISASTER MANAGEMENT PROGRAMME					
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives					
Objective: To ensure that all disaster situations that may occur in the park are addressed and managed through pre-determined contingency plans					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To ensure appropriate preparedness	Develop a disaster management Pplan	PM	Documents	Year 1	
	Hold regular disaster management meeting	PM, HODs	Minutes of meetings	As required	
	Conduct an annual disaster management plan assessment	PM, HODs	Report	Annually	
	Plan and liaise with provincial structures	PM, HODs	Minutes of meetings	As required	
To ensure monitoring and evaluation of the implementation of the programme and its effectiveness	Monitor and evaluate progress and impact against programme objectives and actions	PM, SR, BSP, SS	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

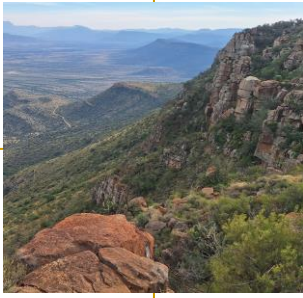
10.8.11 Climate change programme

The purpose of this programme is to apply best practice to identify, adapt to and mitigate against the impacts of climate change through monitoring and research and by implementing the SANParks Climate Change Preparedness Strategy (SANParks, 2022b).

For the purpose of this programme, climate change refers to a significant and long-lasting shift in normal weather conditions that affect average conditions, as well as the occurrence of extremes. Current climate change is thought to be to the result of increased earth surface temperatures, often referred to as global warming, that are accelerated by human-induced or anthropogenic activities which release greenhouse gases. Climate change can be mitigated by either reducing the use of, and/or reliance on, fossil fuel and energy-intensive processes and through the restoration of natural processes that lead to carbon storage in terrestrial and aquatic systems. Climate change adaptation refers to anticipating the negative effects of climate change and taking appropriate actions to prevent or minimise the damage they can cause or optimising opportunities that may arise to reduce vulnerability. This programme focusses on both aspects of climate change response.

The climate of the park is semi-arid, with 32% of the average annual total of 336 mm of rain falling between February and April. Fog occurs frequently over the higher areas, predominantly from February to April, and contributes to moisture availability in these areas. Frost is usually experienced from April to September, with occasional winter snow in high lying areas. Maximum air temperatures during summer may exceed 43°C, with winter minima falling below -3°C. Rainfall is known to be variable (<200mm in some years, with >600mm in others) (Van Wilgen and Herbst, 2017).

While the change in temperature over the past decades has not been calculated, increases of between 1.8°C to 2.8°C are predicted by 2050 (Le Roux *et al.*, 2019). While the predicted changes seem small, these increases can result in up to 25 more days – almost a whole month – above 35 degrees and a moderate increase in heat stress by 2050 (Le Roux *et al.*, 2019). The naturally high variation in rainfall makes predicting future conditions particularly difficult, although it is likely that rainfall will remain variable year on year. Changes could however be quite substantive, with wetter periods up to mid-century and drying later (Le Roux *et al.*,



2019). Predictions of the type of biome that will be favoured in the future are therefore also highly variable, with the hottest and driest scenario encompassing conditions more frequently associated with savanna than karoo (Turpie *et al.*, 2021). Increased levels of CO₂ being experienced globally, are expected to interact with rainfall and temperature change to drive change in plant species. Higher CO₂ levels will favour the growth of woody plants (shrubs and trees), over grassy plants. Increased tree growth is predicted in the region of the park (Turpie *et al.*, 2021).

The Green Book, published by the CSIR (Le Roux *et al.*, 2019, Van Niekerk *et al.*, 2020), includes a tool to look at local climate change projections for municipalities (<https://riskprofiles.greenbook.co.za/>), including the following: (1) population growth projections for the entire municipality and per settlement, (2) maps of current and future climates showing four key variables, namely temperature, rainfall, extreme rainfall events and very hot days under two future pathways, (3) the key hazards relating to these climate changes (flooding, heat stress, wildfire, increased wind speed, drought, groundwater depletion, surface water depletion and biodiversity loss) and their impact on water supply, economy, agriculture, forestry and fishery. Adaptation options for each of these stressors are also suggested.

The Camdeboo region is particularly vulnerable to changes in climate because of water scarcity and being situated on the boundary between four dominant biomes (Nama-karoo, thicket and grassland) and therefore susceptible to loss of species and character and sensitive to change. Climate change is a threat accelerator that will place additional stress on many species, particularly those on the fringe of their distribution, while certain alien species may be advantaged. Use of freshwater and groundwater is also expected to increase under climate change. Land use change is likely to have the largest impact, particularly if fracking had to become a reality. The interaction between drought, fracking and increased requirement for water could be devastating. The MZCPE plays a critical role in the long-term preservation of biodiversity and systematic conservation assessment indicates that the majority of the MZCPE has some identified value for supporting climate change resilience.

The park has several inherent spatial vulnerabilities, as well as opportunities, including close proximity to a large town and water-stressed farming areas; spillover of urban crime; incompatible land use and the possibility of fracking, but also opportunities for collaborative climate change adaptation through the protected environment. Being a relatively small park, the impact of drought on herbivores and their effects on vegetation during drought are two key aspects for monitoring and management. Given the many other pressures on the park from the surrounding community (e.g. unauthorised harvest of plants and animals), other options for access to sustainable resource use need to be investigated to enable a holistic response to climate change. A key focus for the park will be assessing how stewardship and creation of biodiversity friendly practices, rehabilitation and fire management can be promoted in areas around the park (Turpie *et al.*, 2021).

SANParks recognises that climate change is likely to influence the distribution of species, with implications for diversity of particular groups. While new species are expected to arrive for more mobile taxa, the fate of those that do not disperse easily is less certain and may require active management. SANParks thus recognises that managing climate change means managing for change and dealing with uncertainty. Climate change will also affect infrastructure and staff and visitor safety through extreme events such as heat waves, drought, floods and storm surges. The actions to be implemented seek to mitigate against identified threats in such a way that future biodiversity potential is maximised, and negative social and financial implications are minimised. At the same time, we seek to increase awareness of climate change and response strategies among staff and visitors. To do this, SANParks undertakes to expand the park to include appropriate features (e.g. wetlands, water sources and elevational gradients) and corridors, to reduce the park's carbon footprint, facilitate species movement, restore ecosystem processes through, for

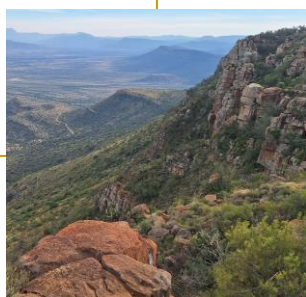
example, soil and wetland restoration, and have appropriate disaster risk reduction strategies and communication plans in place.

The following was inter alia achieved:

1. The park's carbon footprint was quantified in 2020 (Phophe & Masubelele, 2021). The assessment presents a comprehensive audit analysis of the emission sources linked to daily organisational activities and the extent of carbon dioxide emissions that result from these activities. Results show that the park produces an average of 162 tons of carbon dioxide equivalent (tCO₂e) annually, accounting for only 0.22% of SANParks' total carbon footprint (Phophe & Masubelele 2021). This amount of tCO₂e is roughly equivalent to 2.1 tanker trucks of petrol or 375 barrels of oil, or the amount of carbon sequestered by about 2679 tree seedlings grown for 10 years. The largest contribution to the park's carbon footprint comes from electricity, accounting for 79 tCO₂e (49% of the total park emissions);
2. Restoration work, covered in more detail in the Degradation and Rehabilitation LLP contributes towards climate change adaptation;
3. Available rainfall data was analysed, and trends summarised up until 2009. An automatic weather station was installed in the park in 2022 to assist in continued monitoring of the local climate; and
4. A climate change vulnerability assessment was completed for the park in 2021.

This programme links with high-level objective 7 and objective 7.11 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

CLIMATE CHANGE PROGRAMME					
High level objective: To strive for effective management and administrative support services through good corporate governance enabling the park to achieve its objectives					
Objective: To adapt and mitigate negative impacts of climate change through monitoring, research and implementing the climate change strategy					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To monitor changing climate in Camdeboo by collecting and archiving weather data daily	Collect climate data, error check and archive with meta-data	SS, SRs	Completed spreadsheets, database update	Ongoing	SANParks biodiversity monitoring system
	Assess trends in temperature, rainfall and extreme events	SS, SRs	Documents, reports	Ongoing	SANParks biodiversity monitoring system
To develop and implement an Adaptation Response Plan by assessing appropriate actions to alleviate vulnerabilities	Develop (as appropriate based on vulnerability assessment), implement and review park adaptation response plan, including drought response, herbivore management, as well as fire risk	SS, PM, SR	Report	Year 3, ongoing	South African National Climate Change Response White Paper (2011), SANParks Climate change Preparedness Strategy
To reduce the park's carbon footprint as a measure of the environmental and climate change impact of its operations and activities, by monitoring carbon outputs and implementing the green energy strategy	Update assessments of the park carbon footprint	Technical Services, Risk, SS	Estimate of annual carbon output Carbon footprint reduction	Ongoing	SANParks Climate change Preparedness Strategy SANParks Green Energy Strategy Regional planning South African National Climate Change Response White Paper (2011) Climate change bill Carbon tax
To develop and implement an Adaptation Response Plan by assessing appropriate actions to alleviate vulnerabilities	Implement the SANParks Green Energy Strategy and monitor carbon savings	PM	Green Building Principles; Green power and energy plans	Ongoing	SANParks Green Energy Strategy Climate change bill



CLIMATE CHANGE PROGRAMME					
High level objective: To strive for effective management and administrative support services through good corporate governance enabling the park to achieve its objectives					
Objective: To adapt and mitigate negative impacts of climate change through monitoring, research and implementing the climate change strategy					
Sub-objective	Actions	Responsibility	PoE	Timeframe	Reference
To communicate climate change adaptation using appropriate tools for staff and visitors	Encourage implementation of measures for adaptation and mitigation with communities surrounding parks, including sharing, supporting and facilitating, if possible, relevant climate change related information, projects and programmes of relevance, with communities. Create awareness amongst staff and overnight visitors regarding energy usage and energy saving measures.	SET, PM	Meetings, facilitation	Year 3 - 10	
To monitor and evaluate the impact of the implementation programme and adapt as required	Monitor and evaluate progress and impact against programme objectives and targets	SS, SR, PM	Assessment tool	Annually	SOP for the assessment of the implementation of MPs

10.8.12 Outcomes programme

Protected areas are under increasing threat from a range of external and internal pressures. Monitoring is an essential component of measuring the outcomes of management interventions. Various tools and processes have been adopted to track progress.

The Management Effectiveness and Tracking Tool (METT) provides an overarching framework for assessing the management effectiveness of protected areas worldwide. The assessment provides guidance for protected area managers and tracks progress towards the effective management of protected areas. Assessment is conducted biennially to measure strategic achievements. An agreement was reached with the DEA regarding the assessment intervals. Parks that score below 67 % will perform annual assessments while those that score above 67 % will perform biennial assessments.

The State of Area Integrity Management (SoAIM) assessment evaluates the operational ability of a park to perform its required function effectively and efficiently with strong focus on safety, security and biodiversity issues related to law enforcement and compliance. This assessment ensures that people, systems, processes, and resources are in place and in use to ensure integrity to achieve the desired ecological and security status of a park. This is conducted on a biennial basis to allow for parks to address shortcomings.

All the programmes in the management plan are expected to be implemented to achieve the park's desired state. It is therefore vital that park management tracks progress towards achieving these outcomes. SANParks has designed a management plan implementation assessment tool, adopted from the METT scoring model. The total score of 67 % and above is used as a guideline to determine sound management. Lessons learnt should be fed back into the adaptive management planning cycle (see Section 10.9). These evaluation criteria are also complemented

by engagements at science-management forums where progress on implementation of biodiversity programmes is continuously assessed and adaptive management is applied to achieve the expected outcomes.

This programme links with high-level objective 7 and objective 7.12 on page 45. To achieve the purpose of this programme, the actions listed in the table below will be implemented.

OUTCOMES PROGRAMME				
High-level objective: To ensure effective and efficient management and administrative support services through good corporate governance, enabling the park to achieve its objectives.				
Objective: To evaluate outcomes of management interventions related to protected area management.				
Actions	Responsibility	PoE	Timeframe	Reference
Participate in the METT assessment	PM, HODs, SS	Report	As required	
Participate in the SoAIM assessment	SR	Report	Biennially	
Evaluate the implementation of the park management Plan	PM, HODs, SS	Assessment tool	Annually	SOP for the assessment of the implementation of management plans

10.9 Evaluation and learning

10.9.1 Introduction

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

The need for reflection and adaptation (i.e. adaptive learning) comes from acknowledging that the world of conservation is complex, and that the existing knowledge base is imperfect. Complexity implies that feedback between components of the conservation system is likely to change in unpredictable ways and the only way to stay abreast of such changes is through ongoing learning and adaptation. Lack of effective feedback and reflection is the predominant underlying cause of failure of strategic adaptive management, and hence failure to realise the desired outcomes of the park. Evaluation should furthermore test the appropriateness of an intervention and monitor the predictive capacity, societal acceptability and accomplishment of broad goals (Kingsford & Biggs, 2012; Figure 18).

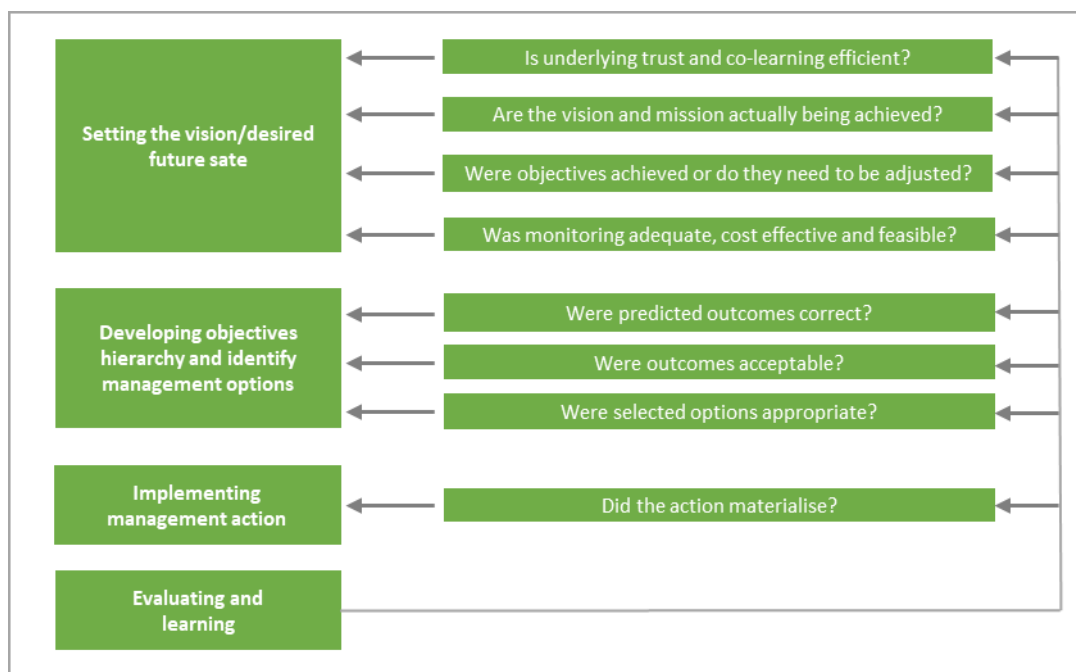
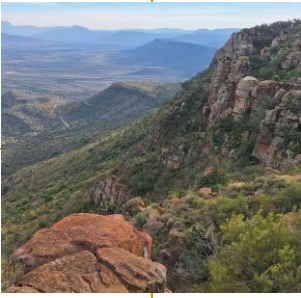


Figure 18. Feedback questions essential for adaptive learning (from Kingsford and Biggs, 2012).



10.9.2 Operationalisation

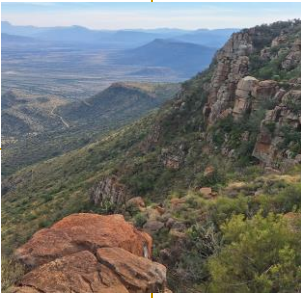
Given the desired state, and the programmes outlined in Section 10, specific action and annual operational plans need to inform the Key Performance Areas of staff members (applicable personnel working in the Parks, Conservation Services and Tourism Divisions) to ensure that the outcomes are achieved.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

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

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

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

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



Section 11 - Costing

11.1 Introduction

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

The park will adhere to the guiding principles listed below:

- Responsibly manage the allocation of budget, revenue raising activities and expenditure;
- Ensure that solid financial management supports the achievement of the objectives in this plan;
- Comply with the Public Finance Management Act as well as SANParks' financial policy and procedures.

A funding estimate of the activities in this management plan was derived, using the zero-based budgeting approach. 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.).

The programmes and actions in this management plan are dependent upon the allocation of funds, both in terms of operational and capital requirements. It must be stressed that the costing (see below), is an indication of the resources required to implement this management plan. The budget that is annually allocated to the park might not be adequate to fully implement the identified programmes and actions. The budget, current and future, is reliant on the Medium-Term Expenditure Framework allocations, any adjustments to this allocation and overall SANParks tourism income and could ultimately impact the implementation of this management plan. This costing and future budget allocations does not consider any emergency or disaster which could also impact the implementation of this management plan.

11.2 Income

SANParks manages 22 national parks as part of the national park system. Not all these parks are financially viable, and currently only five national parks i.e. Addo Elephant National Park, Augrabies Falls National Park, Kalahari Gemsbok National Park, Kruger National Park and Table Mountain National Park make a profit. SANParks receives an annual grant from the DFFE to carry out its mandate, but this is not sufficient to cover the management costs. The organisation utilises its own revenue derived from commercial activities to subsidise the shortfall. The surplus generated by the aforementioned parks is used to fund management costs across all national parks. An organisation of this magnitude also has overhead costs relating to support services such as human resources, tourism and marketing, finance, conservation support etc. that are not allocated to individual parks and must be funded by the revenue generated in financially viable parks.

The income is categorised as follows; accommodation, conservation fees, concession fees, activities, other tourism income and wildlife sales. Total income for the park for 2025 / 2026 is budgeted at -R 3,363,659 increasing to an estimated -R 4,246,542 in 2029 / 2030. A summary is presented in Table 15.

Table 15. A summary of the total estimated income budgeted for the park management plan over the next five years.

	2025 / 2026	2026 / 2027	2027 / 2028	2028 / 2029	2029 / 2030
Total income	-R 3,363,659	-R 3,565,478	-R 3,779,407	-R 4,006,171	-R 4,246,542

11.3 Expenditure

11.3.1 Once-off costs

In addition to the above there is a further once-off cost estimated at R 14,050,000 over the period 2025 / 2026 – 2029 / 2030 as can be seen in Table 16 below.

Table 16. The estimated once-off cost of the various programmes.

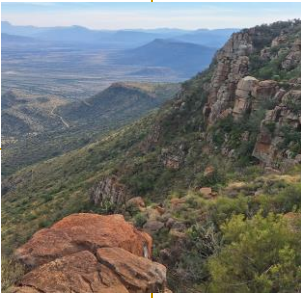
Programme	Estimated budget
Infrastructure	R 9,050,000
Park expansion	R 5,000,000
Total	

11.3.2 Recurring costs

The annual directly allocated cost (including staff salaries, travel, supplies and tools) is estimated at R 14,934,089 for 2025 / 2026. These ongoing costs are split according to the programmes listed in Table 17 below.

Table 17. The estimated annual operational costs for the park for 2025 / 2026.

Programme	Amount	Percentage of total
Rehabilitation	R 4,713,981	31.57%
Alien invasive species	R 2,518,608	16.86%
Infrastructure	R 1,734,119	11.61%
Habitat management	R 1,571,200	10.52%
Safety and security	R 1,138,363	7.62%
Environmental interpretation & awareness	R 933,833	6.25%
Human capital	R 578,832	3.88%
Fin admin	R 476,031	3.19%
Employment, business opportunities & skills development	R 215,378	1.44%
Environmental management	R 180,008	1.21%
Species of special concern	R 178,219	1.19%
Information management	R 116,635	0.78%
Aquatic systems	R 109,928	0.74%
Outcomes	R 100,860	0.68%
Stakeholder engagement	R 84,075	0.56%
Climate change	R 67,924	0.45%
Bioregional integration	R 54,800	0.37%
SHEQ	R 51,149	0.34%
Cultural heritage	R 32,442	0.22%
Disaster management	R 25,823	0.17%
Risk	R 22,766	0.15%
Communication	R 17,520	0.12%
Park expansion	R 11,595	0.08%
Total	R 14,934,089	100%



11.3.3 Unallocated fixed costs

The unallocated fixed costs applicable but not allocated in Table 16 above for 2025 / 2026 amounts to R 65,420.

11.3.4 Maintenance

A breakdown of the infrastructure, both existing and new with their replacement value and an estimate of the ongoing annual maintenance for 2025 / 2026 is provided in Table 18. The projected maintenance for existing infrastructure is estimated at R 1,030,740 in 2025 / 2026. If the new planned infrastructure is developed, it will add a further R 195,510 (at 2025 / 2026 rates) to this annual maintenance budget, increasing it to R 1,226,249. The maintenance requirement was calculated as a percentage of the replacement value.

Table 18. The estimated replacement value of the existing infrastructure and any new infrastructure required with the estimated annual maintenance budget for the existing and new infrastructure in the park.

	Estimated replacement value			Estimated maintenance		
	Existing (R)	New (R)	Total (R)	Existing (R)	New (R)	Total (R)
Buildings	25,853,828	4,340,700	55,885,649	372,295	62,506	434,801
Electricity	311,640	612,150	1,709,800	15,582	30,608	46,190
Fencing	25,603,452	5,119,800	56,864,240	421,793	102,396	524,189
Roads and tracks	20,034,000	0	37,080,000	200,340	0	200,340
Sewerage	116,865	0	216,300	2,337	0	2,337
Trails	262,946	0	486,675	5,259	0	5,259
Water system	656,670	0	1,215,400	13,133	0	13,133
Total	72,839,401	10,072,650	153,458,064	1,030,740	195,510	1,226,249

11.3.5 Replacement of minor assets

While many of the vehicles are leased along with the computers, it 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 is based on their original purchase price and the estimated budget required annually making provision for their replacement. Management should thus make provision for about R 1,630,169 in 2025 / 2026, and this figure is presented in Table 19.

Table 19. The total value of various categories of minor assets and replacement thereof (based on the original purchase price).

Asset type	Asset value	Provision for replacement
Air conditioners	R 271,218	R 17,627
Computer equipment	R 4,169,782	R 136,795
Firearms	R 103,599	R 4,860
Furniture	R 574,278	R 110,694
Mechanical equipment	R 40,807	R 262,447
Office equipment	R 650,585	R 58,344
Vehicles and trailers	R 1,542,491	R 993,255
White goods (appliances)	R 342,909	R 46,146
Total	R 7,695,667.92	R 1,630,169

11.4 Summary

It is estimated that the park will require an annual operating budget of R ?? for 2025 / 2026, increasing to R ?? in 2029 / 2030. In addition to this amount, the park will also require R over the next five-year period for once-off costs. A summary is presented in Table 20.

Table 20. A summary of the annual and once-off costs that are required to fully implement the activities in the management plan over the next five years.

	2025 / 2026	2026 / 2027	2027 / 2028	2028 / 2029	2029 / 2030
Once-off costs over five years	R 14,050,000				
Annual cost	R 21,325,098	R 22,178,102	R 23,508,788	R 24,919,315	R 26,414,474
SANParks expenditure budget	R 19,066,222	R 20,210,196	R 21,422,807	R 22,708,176	R 24,070,666
Shortfall	R 2,258,876	Subject to budget allocation			

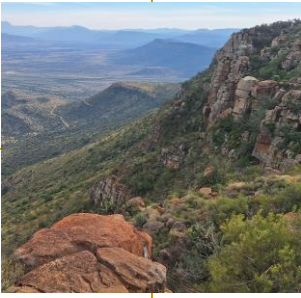
The shortfall can be broken down as follows:

- An additional amount of R 1,480,169 is required for the replacement of assets;
- An additional amount of R 713,234 is required for the maintenance of infrastructure; and
- An additional amount of R 65,473 is required to cover operational expenses.

11.5 Implications

Should the park be unsuccessful in securing the shortfall amount of R 2,258,876 then the following programmes will be affected:

- Assets: The park will be unable to replace assets that have reached the end of their life span, operations could be adversely affected and thereby increasing the risk profile;
- Infrastructure programme: The park will be unable to maintain the current infrastructure to a high standard; and
- Operational expenses: Various programmes will be negatively affected to a lesser degree. This funding is required mainly for vehicle and operational expenses.



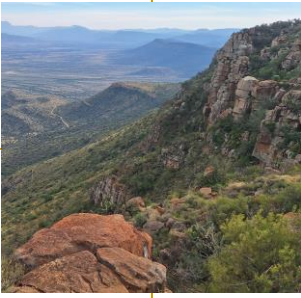
11.6 Future

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

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

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

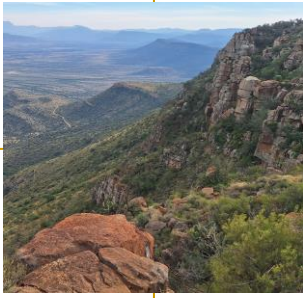
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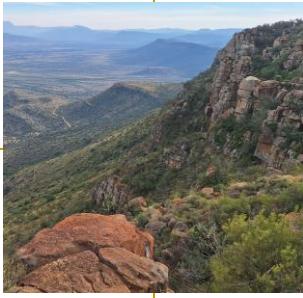
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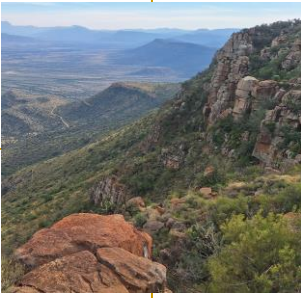
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Appendix 1 - Declarations

1. Land declared

Government Notice 1070 in Government Gazette 28185 of 28 October 2005 proclaimed the following land as part of the Camdeboo National Park in terms of the National Parks Act, 1976 (Act No. 57 of 1976):

1. Erf 4311, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 7,693.1067 ha in extent, as described in SG Diagram 1548/1988;
2. Erf 3908, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 2,359.1783 ha in extent, as described in SG Diagram 8779/1981;
3. Erf 3569, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 2,230.0292 ha in extent, as described in SG Diagram 790/1977;
4. Erf 1920, Graaff-Reinet Registration Division, measuring 54.3331 ha in extent, as described in SG Diagram 3860/1939;
5. Erf 3570, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 1,586.1569 ha in extent, as described in SG Diagram 791/1977;
6. Erf 3866, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 311.5285 ha in extent, as described in SG Diagram 3417/1980; and
7. Erf 5289, a portion of Erf 1814, Graaff-Reinet Registration Division, measuring 221.9590 ha in extent, as described in SG Diagram 7314/1990.

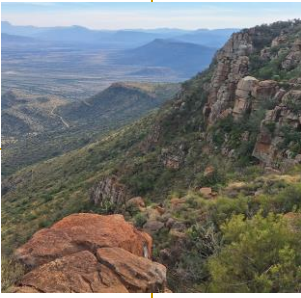
Government Notice 152 in Government Gazette 35073 of 02 March 2012 gave notice of the intention to declare the following land as part of the Camdeboo National Park in terms of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003):

1. Portion 3 of the Farm Pienaars River No. 208, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 122.2142 ha in extent, held by Deed of Transfer No. T71460/2006;
2. Portion 4, a portion of portion 1, of the Farm Grasrand No. 334, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 112,9771 ha in extent, held by Deed of Transfer No. T71460/2006;
3. Remainder of the Farm Winterhoek No. 269, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 3,983.2293 ha in extent, held by Deed of Transfer No. T71460/2006;
4. Farm No. 271, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 119.8031 ha in extent, held by Deed of Transfer No. T71460/2006;
5. Farm No. 272, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 46.3241 ha in extent, held by Deed of Transfer No. T71460/2006;
6. Remainder of the Farm Annex Comdale No. 335, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 71.7303 ha in extent, held by Deed of Transfer No. T71460/2006; and
7. Farm Annex Winterhoek No. 336, Graaff-Reinet Registration Division, Eastern Cape Province, measuring 33.4390 ha in extent, held by Deed of Transfer No. T71460/2006.

Government Notice 3222 / Government Gazette 48338 of 30 March 2023 declared the following land to be part of the Camdeboo National Park in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003):

1. Erf 5380, Graaff-Reinet Registration Division, measuring 109.1400 hectares in extent, held by the Deed of Transfer No. T39368/1994.

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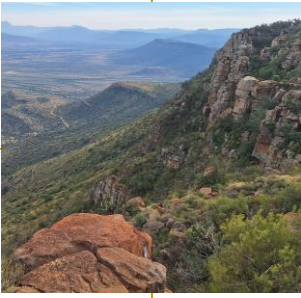


Appendix 2 – VegMap classification

Table 21. VegMap classification for the park.

Biome	Nama-Karoo	
Bioregion	Upper Karoo	
Vegetation type	Upper Karoo Hardeveld Nku 2	Eastern Upper Karoo Nku 4
Vegetation and landscape features	Steep slopes of koppies, butts, mesas and parts of the Great Escarpment covered with large boulders and stones supporting sparse dwarf Karoo scrub with drought tolerant grasses of genera such as <i>Aristida</i> , <i>Eragrostis</i> and <i>Stipagrostis</i> .	Flats and gently sloping plains (interspersed with hills and rocky areas of the Upper Karoo Hardeveld, Besemkaree Koppies Shrubland and Tarkastad Montane Shrubland). It is dominated by dwarf microphyllous shrubs, with grasses (genera: <i>Aristida</i> and <i>Eragrostis</i>)
Conservation value	Least threatened	Least threatened
Bioregion	Lower Karoo	
Vegetation type	Eastern Lower Karoo NKI 2	
Vegetation and landscape features	Plains interrupted by some dolerite dykes, butts and mesas. The dominated vegetation is low to middle-height microphyllous shrubland with drought resistant grass species becoming abundant in places, on sandy and silty bottomlands. Leaf succulent dwarf shrubs of the families Aizoaceae and Crassulaceae can also be encountered	
Conservation value	Least threatened	
Biome	Albany Thicket	
Bioregion	-	
Vegetation type	Camdeboo Escarpment Thicket AT 14	
Vegetation and landscape features	Occurs on the rugged, broken and steeply sloping escarpment and mountain slopes of the region where it forms a 2-3m tall, largely succulent thicket of <i>Portulacaria afra</i> dominated clumps. Heavy browsing by goats reduces <i>P. afra</i> and low trees (<i>Pappea capensis</i> and <i>Boscia oleoides</i>) remain.	
Conservation value	Least threatened	
Biome	Grassland	
Bioregion	Dry Highveld Grassland	
Vegetation type	Karoo Escarpment Grassland Gh 1	
Vegetation and landscape features	Mountain summits, low mountains and hills with wiry, tussock grasslands, usually dominated by <i>Merxmuellera disticha</i> . Other common species include the grasses typical of dry grasslands. An important low shrub component occurs throughout this grassland unit.	
Conservation value	Least threatened	

Biome	Azonal Vegetation
Bioregion	Inland Saline Vegetation
Vegetation type	Southern Karoo Riviere Azi 6
Vegetation and landscape features	Narrow riverine flats supporting a complex of <i>Vachellia karroo</i> or <i>Tamarix usneoides</i> (wrong identification by Palmer - it should be the alien <i>Tamarix ramosissima</i>) and fringed by tall <i>Salsola</i> species dominated shrubland, especially on higher clay content soil. In the sandy drainage lines <i>Stipagrostis namaquensis</i> may occasionally also dominate.
Conservation value	Least threatened



Appendix 3 – Stakeholder participation report

THIS SECTION WILL BE COMPLETED AFTER THE STAKEHOLDER PARTICIPATION PROCESS HAS BEEN COMPLETED.

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Appendix 4 – Tourism product development framework

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

Similarly, whilst specific products or activities may be developed within the park, they will be restricted to specific areas within the park or on the periphery (adjoining buffer zone, with land use activities determined by the municipal land use management scheme (LUMS)). For any development to be supported within the delineated buffer zone, the permissible LUMS as per the Spatial Planning and Land use Management Act (Act No. 16 of 2013), and relevant development application processes must be adhered to.

The park is zoned into various visitor use zones, based on its environmental sensitivity, as described in the legend below, and products are applicable to the various use zones accordingly.

LEGEND		
No.	Visitor use zones	Description
1	Wilderness / remote	Wilderness conforms to the legal definition. Pristine natural environment, essentially undeveloped and roadless. Controlled non-motorised access - usually on foot.
2	Primitive	Almost completely natural state to be maintained. Development footprints absolute minimum. Controlled access - 4x4s, horse-riding. Small basic overnight facilities.
3	Quiet	General natural state to be maintained. Only non-motorised access. Access not specifically controlled. Ablution facilities can be allowed.
4	Low intensity leisure	Motorised self-drive with basic facilities. Small - medium sized camps. Infrastructure should be minimised in order to maintain natural state.
5	High intensity leisure	High density tourism development node with concentrated human activities. High volume roads, high density camps with modern amenities.
6	Buffer / adjoining	Land in the delineated buffer zone or adjacent to national parks. Products indicated are those with which SANParks is comfortable to be associated with as long as it does not conflict with the LUMS.

For the purposes of this management plan, the focus of the framework listed in Table 20 is to indicate which products already exist, which new products may be allowed, and in which visitor use zones these may occur.

Table 22. Tourism product development framework for the park.

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

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under development?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
		YES	NO	YES	NO	1	2	3	4	5	6
Camping	Camping bush rustic (protected) (budget facilities)		✓	✓			✓		✓	✓	✓
	Camping bush rustic (protected) (premium facilities / self-sufficient)		✓	✓			✓		✓	✓	✓
	Camping bush rustic (unprotected) (self-sufficient)	✓		✓			✓		✓	✓	✓
Overnight facilities	Game / bush / safari / boutique lodge - under 20 beds		✓	✓			✓		✓	✓	✓
	Game / bush / safari / boutique lodge - 20 beds plus		✓		✓						✓
	Conference lodge / hotel - 21 - 50 beds		✓		✓						✓
	Conference lodge / hotel - 50 beds plus		✓		✓						✓
	Houseboat		✓	✓			✓		✓	✓	✓
	Luxury tented safaris		✓	✓			✓		✓	✓	✓
	Remote camp / fly camp / platform / sleep Out		✓	✓			✓		✓	✓	✓
	Overnight train rides		✓		✓						✓
	Additional services	Cook and guide provided		✓	✓		✓		✓	✓	✓
		Cook, guide and OSV provided		✓	✓		✓		✓	✓	✓
		Meal packages e.g. breakfast, half board or full board		✓	✓		✓		✓	✓	✓
	4x4 Eco-trails (multi-day, self-drive, basic facilities)		✓		✓						✓
	4x4 Eco-trails (multi-day, self-drive, no facilities)		✓		✓						✓
Leisure / recreational	4x4 trails (full day / half-day / guided or unguided)	✓		✓			✓		✓	✓	✓
	Abseiling / rappelling		✓	✓			✓		✓	✓	✓
	Animal interaction activities (limited)		✓		✓						✓
	Animal tracking activities		✓		✓						✓
	Archery		✓	✓					✓	✓	✓
	Base jumping		✓	✓			✓	✓	✓	✓	✓
	Bird watching	✓		✓		✓	✓	✓	✓	✓	✓
	Boat cruises		✓	✓			✓		✓	✓	✓
	Boat cruise - birding		✓	✓			✓		✓	✓	✓
	Boat cruises - sunset		✓	✓			✓		✓	✓	✓
	Botanical sightseeing	✓		✓		✓	✓	✓	✓	✓	✓
	Bouldering		✓		✓						✓
	Bungee / bungee jumping		✓		✓						✓
	Cableway		✓		✓						✓
	Canoe trails (Varying facilities)		✓		✓						✓
	Canoeing		✓	✓			✓		✓	✓	✓
	Canopy tour (acrobranch)		✓		✓						✓
	Canopy tour (boardwalk)		✓		✓						✓
	Canopy tour / flying fox (treetop / cliff to cliff)		✓		✓						✓
	Caving / spelunking/ potholing		✓		✓						✓
	Clay-pigeon / clay target shooting		✓		✓						✓
	Coasteering		✓		✓						✓
	Cruise - birding		✓	✓			✓		✓	✓	✓
	Cycling	✓		✓			✓		✓	✓	✓
	Cycling (downhill cycling)		✓	✓			✓		✓	✓	✓
	Cycling (BMX track area)		✓	✓					✓	✓	✓
	Diving (scuba)		✓		✓						✓
	Dog walking		✓	✓					✓	✓	✓
	Elephant backed rides / safaris		✓		✓						✓

PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under development?		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
		YES	NO	YES	NO	1	2	3	4	5	6
Leisure / recreational	Fishing (catch and release)	√		√			√		√	√	√
	Funicular		√		√						√
	Game drives - night drive		√	√			√		√	√	√
	Game drives - night drive (Night Vision aided)		√	√			√		√	√	√
	Game drives - premium		√	√			√		√	√	√
	Game drives - standard		√	√			√		√	√	√
	Game drives - UA		√	√			√		√	√	√
	Games facilities (e.g. table tennis, pool, etc.)		√	√					√	√	√
	Geocaching		√	√			√	√	√	√	√
	Golf		√		√						√
	Golf club membership		√		√						√
	Green hunting / darting safaris		√		√						√
	Hang gliding		√	√			√	√	√	√	√
	Hiking	√		√		√	√	√	√	√	√
	Hiking trails - Wilderness (full service)		√		√						√
	Hiking trails - Wilderness (no facilities) (backpack)		√		√						√
	Hiking trails (budget)		√	√		√	√	√	√	√	√
	Hiking trails (premium)		√	√		√	√	√	√	√	√
	Horse riding		√	√		√	√	√	√	√	√
	Horse riding trails (varying facilities)		√	√		√	√	√	√	√	√
	Jet skiing		√	√			√		√	√	√
	Jogging / running	√		√			√	√	√	√	√
	Kayaking / paddling		√	√			√	√	√	√	√
	Kayaking / paddling trails		√	√			√		√	√	√
	Kitesurfing / kiteboarding / fly surfing		√	√			√		√	√	√
	Kloofing (guided)		√		√						√
	Mini golf / putt-putt		√		√						√
	Model aircraft flying		√		√						√
	Motorcycle trails (varying facilities)		√		√						√
	Motorcycling		√	√			√		√	√	√
	Motorcycling - off-road		√		√						√
	Motorised boating	√		√			√		√	√	√
	Mountain bike trails (varying facilities)		√	√			√	√	√	√	√
	Mountain biking	√		√			√	√	√	√	√
	Mountain biking - unicycling		√	√			√	√	√	√	√
	Mountaineering		√	√		√	√	√	√	√	√
	Paddle boards		√	√			√		√	√	√
	Paddle boats		√	√			√		√	√	√
	Paddle skiing		√	√			√		√	√	√
	Paragliding	√		√		√	√	√	√	√	√
	Parasailing		√	√			√		√	√	√
	Park and ride	√		√			√		√	√	√
	Photography	√		√			√	√	√	√	√
	Picnicking (basic facilities)	√		√			√		√	√	√
	Picnicking (full facilities)		√	√			√		√	√	√

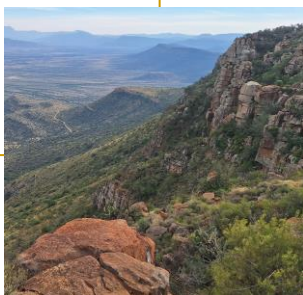
PRODUCT CATEGORY	PRODUCT OR SERVICE	Is Product currently AVAILABLE or under development		Is Product APPROPRIATE for the applicable National Park?		ZONING FOR WHICH PRODUCT IS APPROPRIATE					
						Within boundaries of national-/ contractual park					Buffer / adjoining
		YES	NO	YES	NO	1	2	3	4	5	6
Leisure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

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		YES	NO	YES	NO	1	2	3	4	5	6
Interpretive	Tours - specialist (fauna and flora)		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - tree (dendrology)		✓	✓		✓	✓	✓	✓	✓	✓
	Trail - mobility impaired		✓	✓		✓	✓	✓	✓	✓	✓
	Trails - brail		✓	✓		✓	✓	✓	✓	✓	✓
	Trails - sensory		✓	✓		✓	✓	✓	✓	✓	✓
Cultural / historical	Cleansing ceremonies (including baptism)	✓		✓		✓	✓	✓	✓	✓	✓
	Cultural dances		✓	✓		✓	✓	✓	✓	✓	✓
	Cultural points of interest	✓		✓		✓	✓	✓	✓	✓	✓
	Cultural village		✓		✓	✓	✓	✓	✓	✓	✓
	Gold panning (recreational)		✓		✓	✓	✓	✓	✓	✓	✓
	Historical points of interest	✓		✓		✓	✓	✓	✓	✓	✓
	Mountain worship	✓		✓		✓	✓	✓	✓	✓	✓
	Museums		✓	✓		✓	✓	✓	✓	✓	✓
	Religious facilities (prayer or otherwise)		✓		✓	✓	✓	✓	✓	✓	✓
	Storytelling		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - battlefield / military		✓		✓	✓	✓	✓	✓	✓	✓
	Tours - cultural		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - historical		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - medicinal plants		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - rock art		✓	✓		✓	✓	✓	✓	✓	✓
	Tours - South African struggle		✓	✓		✓	✓	✓	✓	✓	✓
Medical / health	Health spa		✓		✓	✓	✓	✓	✓	✓	✓
	Gymnasium		✓		✓	✓	✓	✓	✓	✓	✓
	Wellness centres		✓		✓	✓	✓	✓	✓	✓	✓
Developmental	Astronomy training		✓	✓		✓	✓	✓	✓	✓	✓
	Birding course		✓	✓		✓	✓	✓	✓	✓	✓
	Botany course		✓	✓		✓	✓	✓	✓	✓	✓
	Bush homeopathy		✓	✓		✓	✓	✓	✓	✓	✓
	Bush skills		✓	✓		✓	✓	✓	✓	✓	✓
	Field guide training		✓	✓		✓	✓	✓	✓	✓	✓
	Firearm skills		✓		✓	✓	✓	✓	✓	✓	✓
	First aid		✓	✓		✓	✓	✓	✓	✓	✓
	Game capture training		✓	✓		✓	✓	✓	✓	✓	✓
	Nature / wildlife photography course		✓	✓		✓	✓	✓	✓	✓	✓
	Nature based hospitality training		✓	✓		✓	✓	✓	✓	✓	✓
	Off-road driving skills training		✓		✓	✓	✓	✓	✓	✓	✓
	Orienteering		✓	✓		✓	✓	✓	✓	✓	✓
	Rope skills course		✓	✓		✓	✓	✓	✓	✓	✓
	Scuba diving skills		✓		✓	✓	✓	✓	✓	✓	✓
	Specialised training / courses		✓	✓		✓	✓	✓	✓	✓	✓
	Survey and mapping skills		✓	✓		✓	✓	✓	✓	✓	✓
	Survival skills		✓	✓		✓	✓	✓	✓	✓	✓
	Tracking skills		✓	✓		✓	✓	✓	✓	✓	✓
	Training - ranger		✓	✓		✓	✓	✓	✓	✓	✓
	Volunteering		✓	✓		✓	✓	✓	✓	✓	✓

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		YES	NO	YES	NO	1	2	3	4	5	6
Developmental	Wilderness search and rescue		✓	✓		✓	✓				✓
Children / youth	Babysitting		✓		✓	✓					✓
	Childcare centres in camps		✓		✓	✓					✓
	Children activity centres (jungle gym)		✓	✓		✓			✓	✓	✓
	Children encounter zone		✓	✓		✓			✓	✓	✓
	Children game drives		✓	✓		✓	✓	✓	✓	✓	✓
	Children holiday programmes in camps		✓	✓		✓		✓	✓	✓	✓
	Children trails		✓	✓		✓	✓		✓	✓	✓
	Learner programmes		✓	✓		✓	✓		✓	✓	✓
	Paint ball		✓		✓	✓					✓
	Youth camps (KampKwena, "summer" camps)		✓	✓		✓			✓	✓	✓
	Events - any	✓		✓		✓	✓		✓	✓	✓
Business tourism and events	Events - adventure	✓		✓		✓	✓		✓	✓	✓
	Festivals		✓	✓		✓	✓		✓	✓	✓
	Fundraising events e.g. WWF Swim for Nature		✓	✓		✓	✓		✓	✓	✓
	Lapas / bomas (to rent)		✓	✓		✓			✓	✓	✓
	MICE (Meetings, Incentives, Conventions and Exhibitions)		✓	✓		✓			✓	✓	✓
	Musical concerts		✓	✓		✓	✓		✓	✓	✓
	Photographic shoots and filming		✓	✓		✓	✓		✓	✓	✓
	Product launches		✓	✓		✓	✓		✓	✓	✓
	Races / competitions - marathons / trail running		✓	✓		✓	✓		✓	✓	✓
	Races / competitions - mountain-biking		✓	✓		✓	✓		✓	✓	✓
	Races / competitions - other		✓	✓		✓	✓		✓	✓	✓
	Races / competitions - adventure / expedition racing		✓	✓		✓	✓		✓	✓	✓
	Scientific conferences		✓		✓	✓					✓
	Team building		✓		✓	✓					✓
	Weddings		✓		✓	✓					✓
Retail / services	Apparel outlets		✓		✓	✓					✓
	Airport / aerodrome / airstrip		✓		✓	✓					✓
	Banking - Bank or ATM		✓		✓	✓					✓
	Rental - bicycle		✓	✓		✓			✓	✓	✓
	Camping equipment rental		✓	✓		✓			✓	✓	✓
	Rental - car		✓		✓	✓					✓
	Car wash		✓		✓	✓					✓
	Casinos		✓		✓	✓					✓
	Clinics / Doctor/ first aid		✓		✓	✓					✓
	Outlets - community curios		✓		✓	✓					✓
	Outlets - curios		✓		✓	✓					✓
	Essential commodities in camps (ice, wood, etc.)	✓		✓		✓			✓	✓	✓
	Fast moving consumer goods (FMCG) outlets		✓		✓	✓					✓
	Fuel stations		✓		✓	✓					✓
	Gas equipment hire		✓		✓	✓					✓
	Hop-on guides		✓	✓		✓	✓	✓	✓	✓	✓
	Internet café / Wi-Fi hotspot		✓	✓		✓			✓	✓	✓

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						1	2	3	4	5	6
Retail / services	Laundromats and laundry service		✓	✓					✓	✓	✓
	Pharmacies		✓		✓						✓
	Photo booth		✓		✓						✓
	Pop-up retail		✓		✓						✓
	Postal services		✓		✓						✓
	Proshop		✓		✓						✓
	Road emergency services		✓		✓						✓
	Shuttle services		✓	✓					✓	✓	✓
	Vending machines		✓	✓					✓	✓	✓
	Vendors		✓		✓						✓
	Wi-Fi facilities (free service)		✓	✓					✓	✓	✓
Food and beverage	Bars		✓		✓						✓
	Boma / lapa meals		✓	✓					✓	✓	✓
	Bush meals		✓	✓					✓	✓	✓
	Coffee shops / tea rooms		✓	✓					✓	✓	✓
	Fast-food outlets		✓		✓						✓
	Game drives picnic baskets		✓	✓					✓	✓	✓
	Local cuisine		✓	✓					✓	✓	✓
	MICE catering		✓	✓					✓	✓	✓
	Picnic baskets		✓	✓					✓	✓	✓
	Pop-up food, retail		✓		✓						✓
	Restaurants		✓		✓						✓
	Room service		✓		✓						✓
	Sports bar		✓		✓						✓
Non tourism related activities											
Mining/ Exploratory	Prospecting		✓		✓						
	Mining		✓		✓						
Consumptive / Subsistence	Fishing (non-release)		✓	✓			✓		✓	✓	✓
	Hunting (lethal)		✓		✓						✓
	Sustainable harvesting of resources	✓		✓			✓		✓	✓	✓

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Appendix 5 – Internal rules

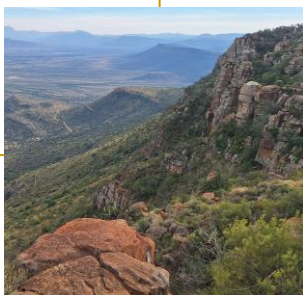
To ensure a safe and joyful visit, kindly adhere to the park rules. Transgression of the park rules as summarised below, may result in prosecution or penalties, or both.

1. All visitors to the park are required to complete the indemnity forms when entering the park and provide either their identity numbers or passport numbers;
2. Visitors may only enter or exit the park through the main entrance gates at either Lakeview gate, Valley gate or the game viewing area gate;
3. Exiting your vehicle is done at your own risk;
4. Remain on designated visitor roads. Do not enter a road that has a no entry sign;
5. Only valid driver's licence holders may drive in the park;
6. Although high clearance vehicles are suitable for access to most of the park, only 4X4 vehicles may be used on the designated 4x4 routes / roads;
7. The speed limit of 40km/h is permitted in the game viewing area;
8. Unmanned aircraft / drones are prohibited in the parks unless authorised by Park Management;
9. No animals (excluding guide dogs), domestic or otherwise, may be brought into the park;
10. Traveling within the park may only occur between stipulated gate hours;
11. The Valley of Desolation gate operating hours are as follows:
 - January – February: 6:00 - 20:00;
 - March: 6:00-19:30;
 - April: 06:30-19:30;
 - May: 07:00-18:30;
 - June: 07:00-18:00;
 - July & August: 07:00-18:30;
 - September: 06:30-19:00;
 - October: 6:00-19:30;
 - November: 6:00-20:00;
 - December: 6:00-20:30;
12. The game viewing area gate closes 30 minutes before the Valley of Desolation gate;
13. All conservation levies and other payments must be made to reception prior leaving the park;
14. Fishing permits are available at reception. Stick to designated fishing areas only; and
15. Any person who contravenes or fails to comply with the regulations is guilty of an offence and liable for a fine as per the NEM:PAA.

All employees are subject to the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as amended, together with any Regulations and Specific Park Rules made in terms of this Act:

- Staff are responsible for their guests and are to ensure that all rules and regulations are always adhered to;
- Staff and their visitors may only enter or exit the park through the main entrance gates at either Lakeview gate, Valley gate or the game viewing area gate;
- The speed limit of 40km/h is permitted in the game viewing area;
- No alcohol is to be consumed in front of visitors to the park;
- Only valid driver's licence holders may drive in the park;
- Smoking is only allowed in designated areas; and

- Any person who contravenes or fails to comply with the regulations is guilty of an offence and liable to disciplinary action as per SANParks' disciplinary policy and procedures or a fine as per the NEM:PAA.



Appendix 6 - Maps

Map 1: Regional context

Map 2: Physical features

Map 3: Land tenure

Map 4: Park expansion

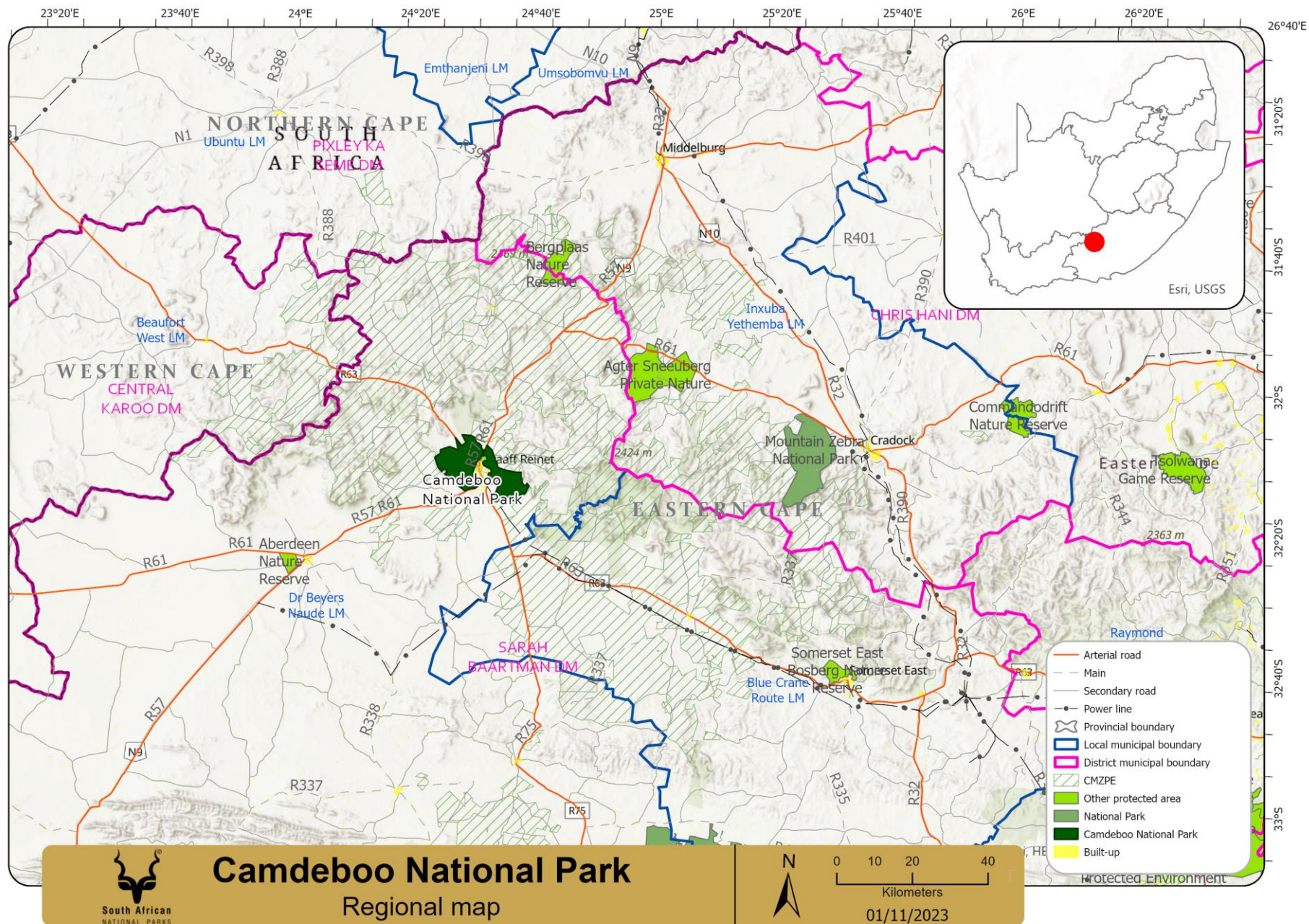
Map 5: Zoning

Map 6: Zoning with sensitivity value

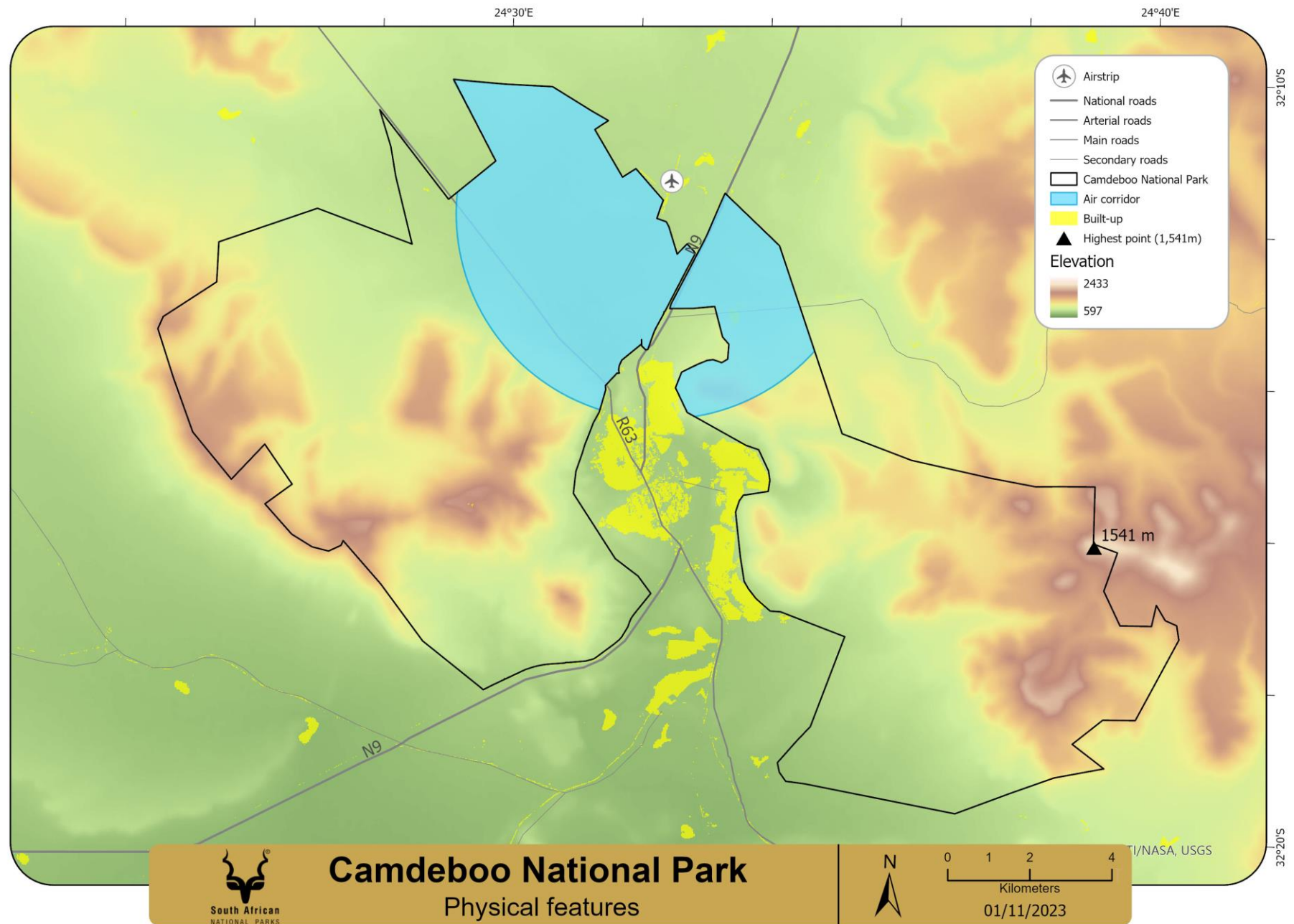
Map 7: Buffer areas

Map 8: Infrastructure

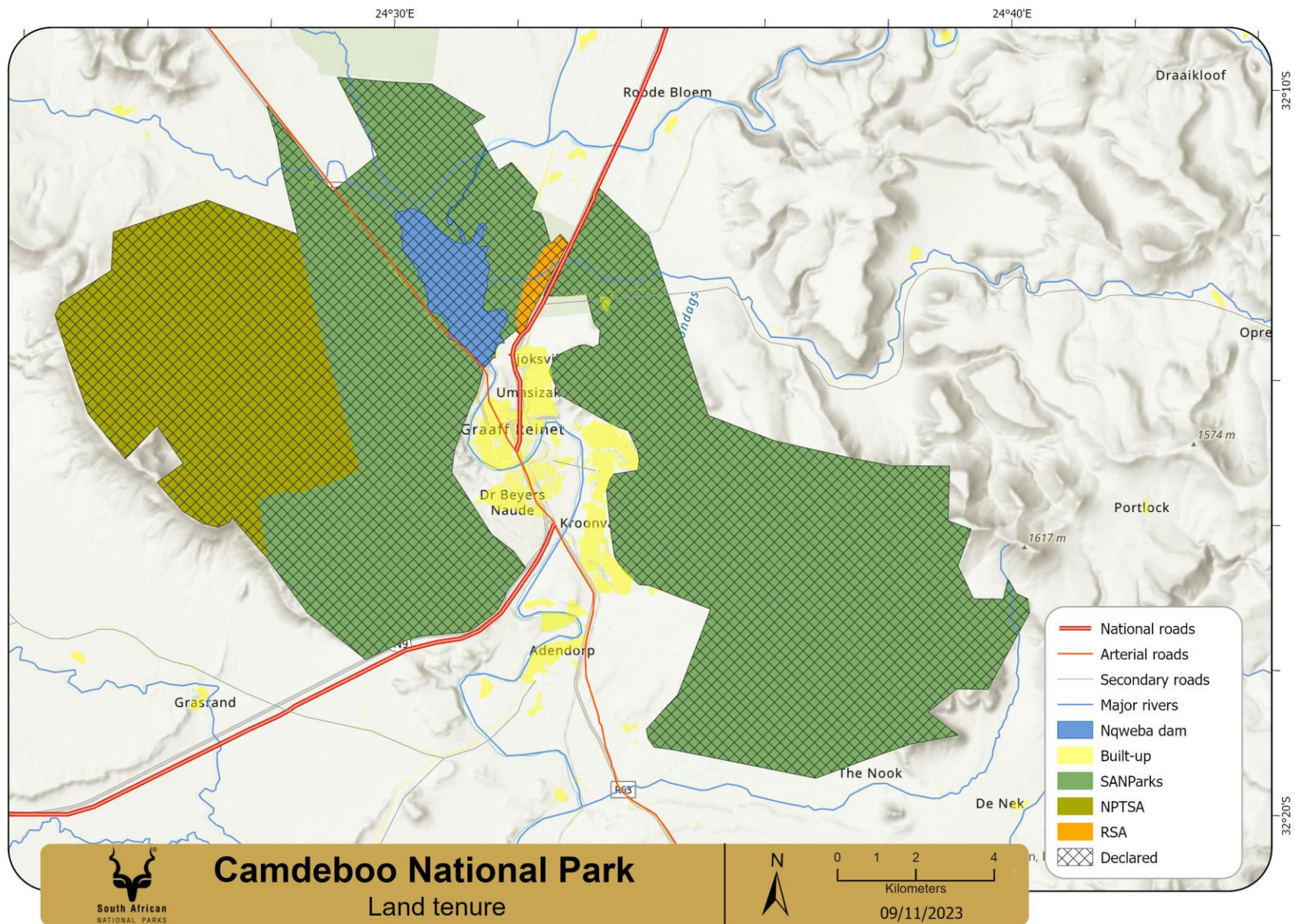
Map 9: Vegetation



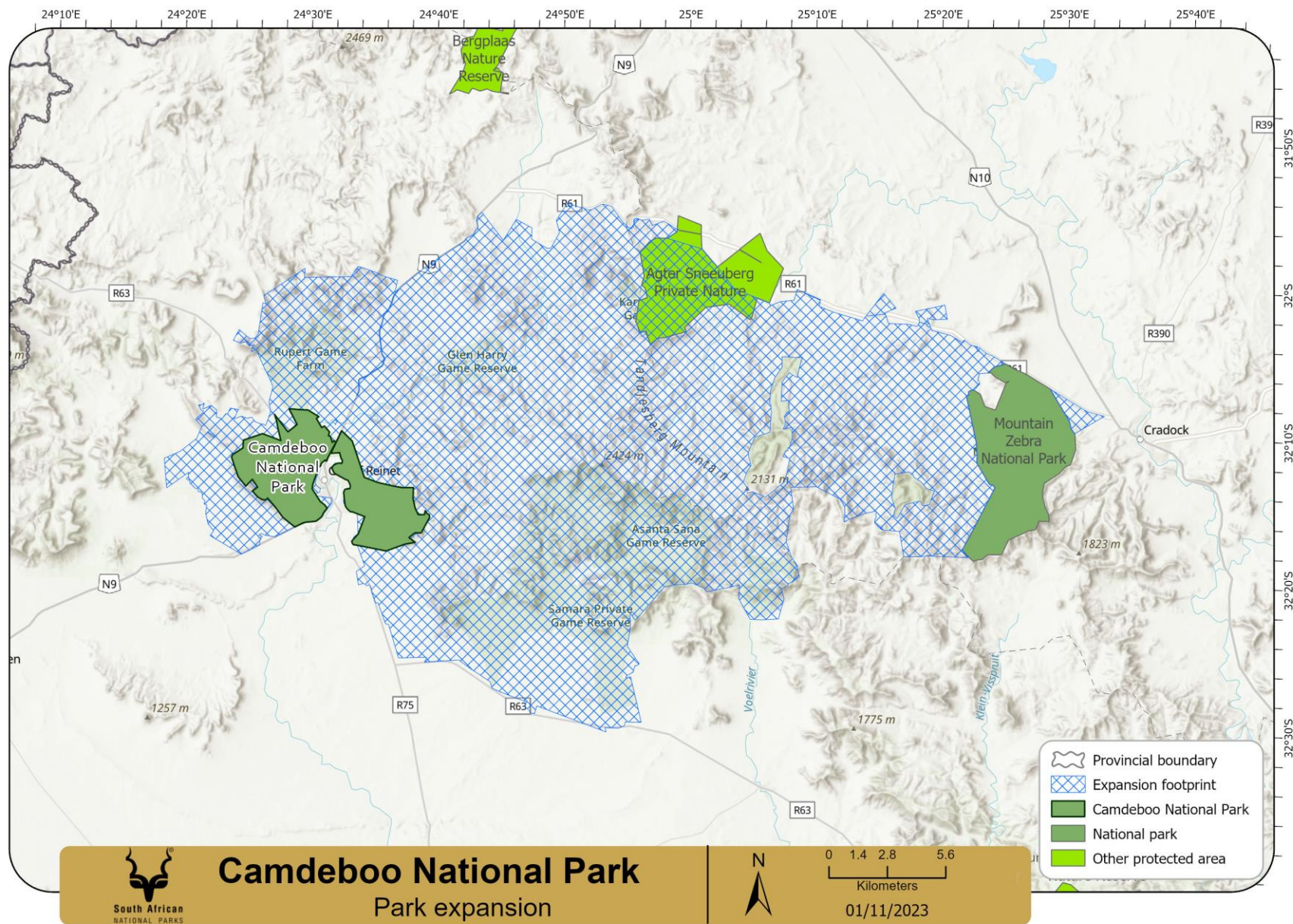
Map 1: Regional context



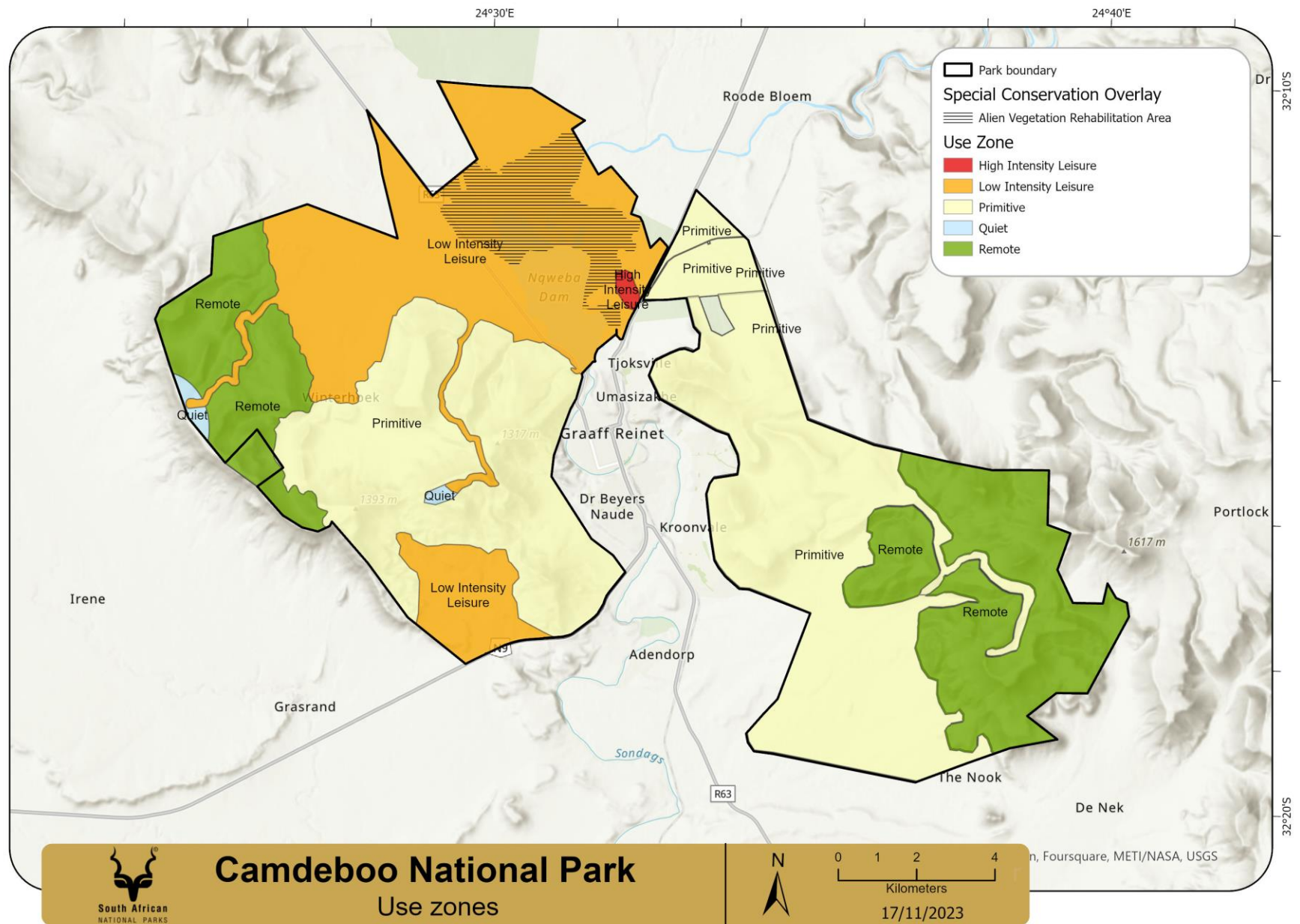
Map 2: Physical features



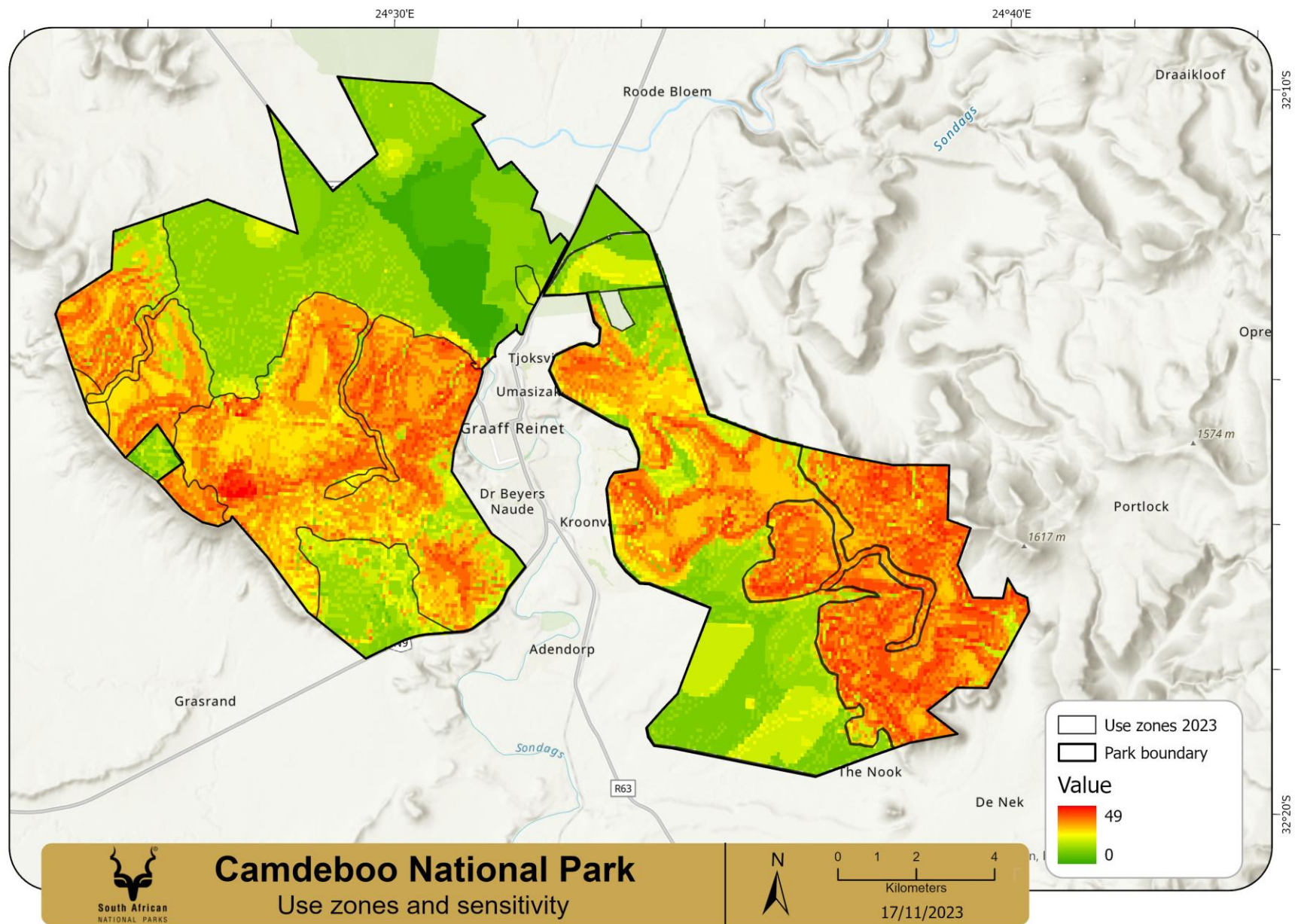
Map 3: Land tenure



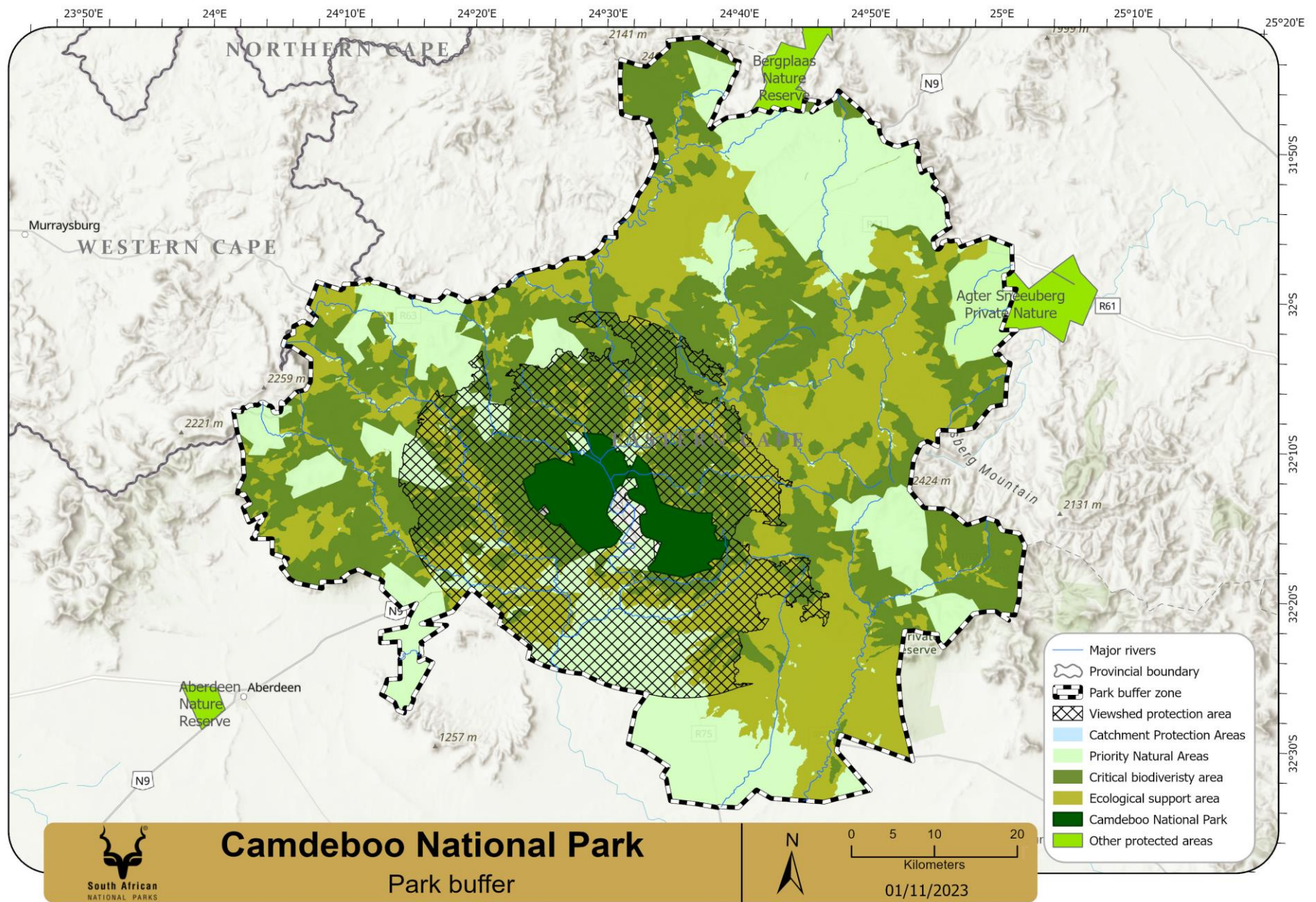
Map 4: Park expansion



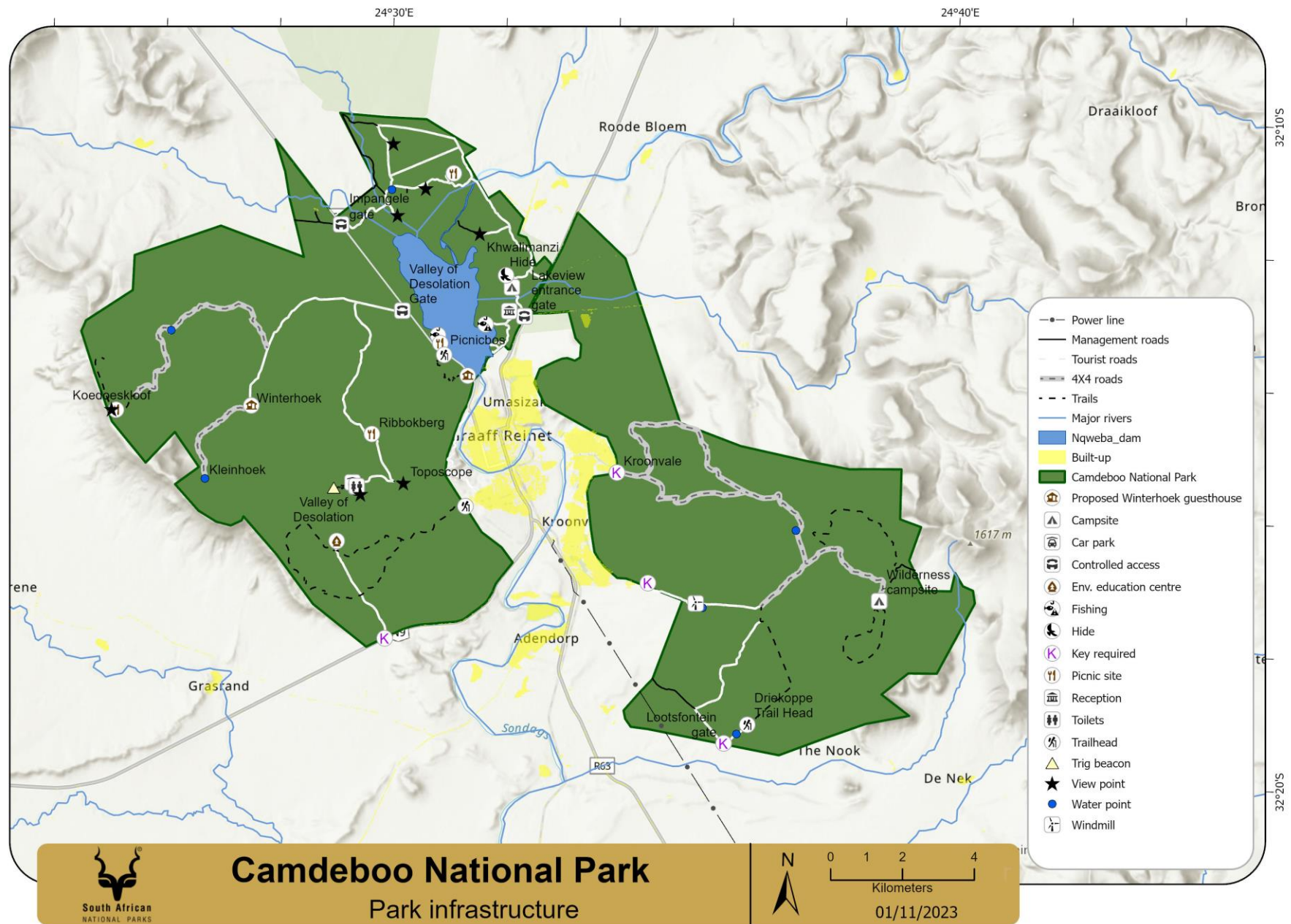
Map 5: Zoning



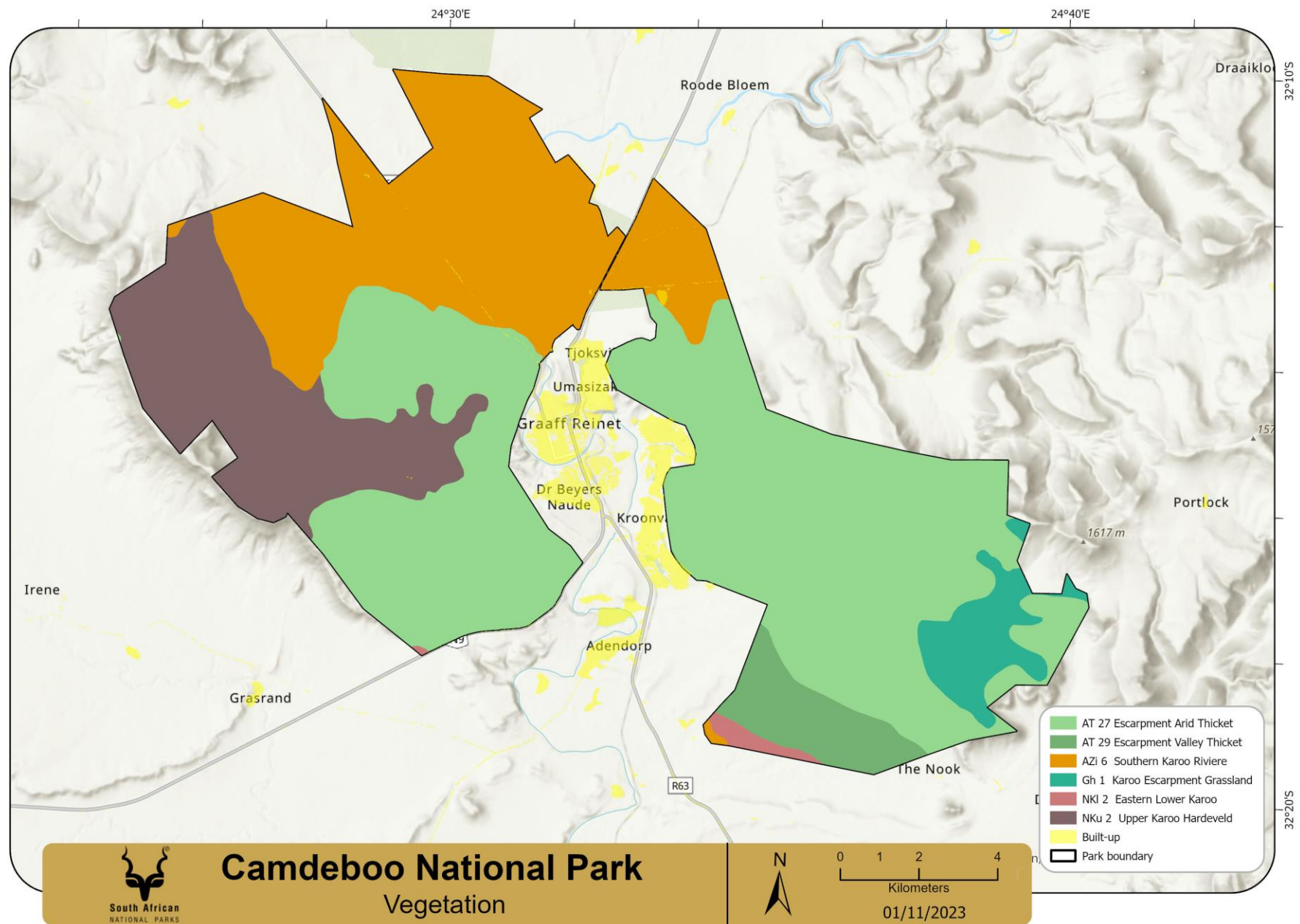
Map 6: Zoning and sensitivity



Map 7: Buffer zone



Map 8: Infrastructure



Map 9: Vegetation